LEITH CONSULTING

Land Surveying | Environmental Planning

Resource Consent Application

4-lot Subdivision

Lawrence Fay

10 March 2023

APPLICATION FOR RESOURCE CONSENT UNDER SECTION 9 OF THE RESOURCE MANAGEMENT ACT 1991

TO: KĀPITI COAST DISTRICT COUNCIL

1. **Lawrence Fay** hereby applies for the subdivision consent described below.

2. **A description of the activity to which the application relates is:**

To undertake a 4-lot fee simple residential subdivision at 126-130 Rosetta Road, Raumati.

The application is more fully described in the Assessment of Effects and plan attached to and forming part of this resource consent application.

3. **The legal description and names of the owners of land to which the application relates are as follows:**

4.

Owner:	Cobie Trading Limited
Address:	126-130 Rosetta Road, Raumati
Legal Description:	Lots 1-2 DP 18137
Total Site Area:	2424m^2
Record of Title:	WN824/62

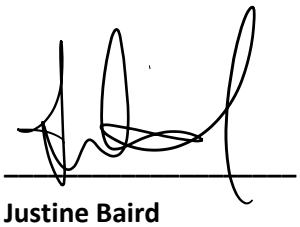
5. **The location of the proposed activity is as follows:**

Those portions of the site legally described above. The extent of the application site is shown on the plan in **Appendix One.**

6. **No other RMA consents are required** in relation to the activity. Resource consent is not triggered under any of the National Environmental Standards.

7. **In accordance with the Fourth Schedule of the Resource Management Act 1991,** please find attached an assessment of environmental effects in the detail that corresponds with the scale and significance of the effects that the proposed activity may have on the environment.

8. **Payment of the $2,934 (including GST) application deposit fee** has been made via online transfer on 21 January 2022 referencing **"RM126Rosetta"**. It is requested that the remainder of this deposit is used for this application.



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1 EXECUTIVE SUMMARY

This report presents an assessment in accordance with Section 9 and the Fourth Schedule of the Resource Management Act 1991 ("the Act" or "the RMA"). It is in support of a resource consent application from Lawrence Fay to undertake a 4 lot fee simple residential subdivision at the properties of 126-130 Rosetta Road, Raumati, together with consequential land use consents. The proposal will trigger a non-complying activity status under the Kāpiti Coast District Plan ("the Plan").

This report sets out a full description of the proposed activity, the site and surrounding locality and an assessment of effects and policies against the relevant provisions of the Plan.

The assessment finds that the application is able to be granted on a non-notified basis.

This report should be read in conjunction with the following Appendices:

- Appendix One: Scheme Plans
- Appendix Two: Architectural Plans
- Appendix Three: Record of Titles
- Appendix Four: Liquefaction Report
- Appendix Five: Engineering and Infrastructure Report
- Appendix Six: Conceptual Stormwater Disposal Report
- Appendix Seven: Topographical Survey
- Appendix Eight: Landscaping Plan

2 THE SITE AND EXISTING ENVIRONMENT

2.1 The Application Land

The application site comprises 126 & 130 Rosetta Road, which are adjoining allotments within the same Record of Title. The application site is located on the eastern side of Rosetta Road, within the Raumati area, with Raumati Beach located approximately 120m to the west. The property is rectangular in shape, with a 35m frontage to Rosetta Road, and 3.5m frontage to Renown Road.

Figures 1 & 2: Application site and surrounding area

The vehicular access to the application site is via a vehicle crossing at the south west corner of the property, from Rosetta Road. The property has a second vehicle crossing formed at the north western corner of the site, leading to the concrete garage. There is no formed pedestrian footpath on this side of Rosetta Road, with the footpath located on the opposite (western) side of the road carriageway. The access from Renown Road is approximately 3.5m wide for a length of 25m and there is currently no formed access from the Renown Road vehicle crossing to within the application site. It is noted that the adjoining site of 71A Renown Road is currently occupying this strip of land with small-scale structures and as an extension of their outdoor area; there is no physical delineation of this portion of the boundary.

A two-storey dwelling currently occupies the middle of the site, situated approximately 25m back from the front boundary adjoining Rosetta Road. A garage (to be removed) is located to the south of the dwelling, with a maneuvering area and additional carparking located to the west of the dwelling and garage. An in-ground swimming pool is located to the east of the garage, and this is to remain. The eastern portion/rear of the property has vegetation cover, with those adjoining sites to the east not visible from the application site due to the trees. This area also slopes down steeply

towards the eastern/rear boundary. A concrete garage is allocated at the north western corner of the site, against the front boundary and northern boundary lines. This concrete structure is built into the slope of the property.

The highest point of the site is 19m Above Mean Sea Level (AMSL), near the middle of the site where the existing dwelling is situated. The property slopes down to the west towards Rosetta Road where the level of the road carriageway is 10.5m AMSL, and east towards Renown Road where the level of the road carriageway is 4.5m AMSL.

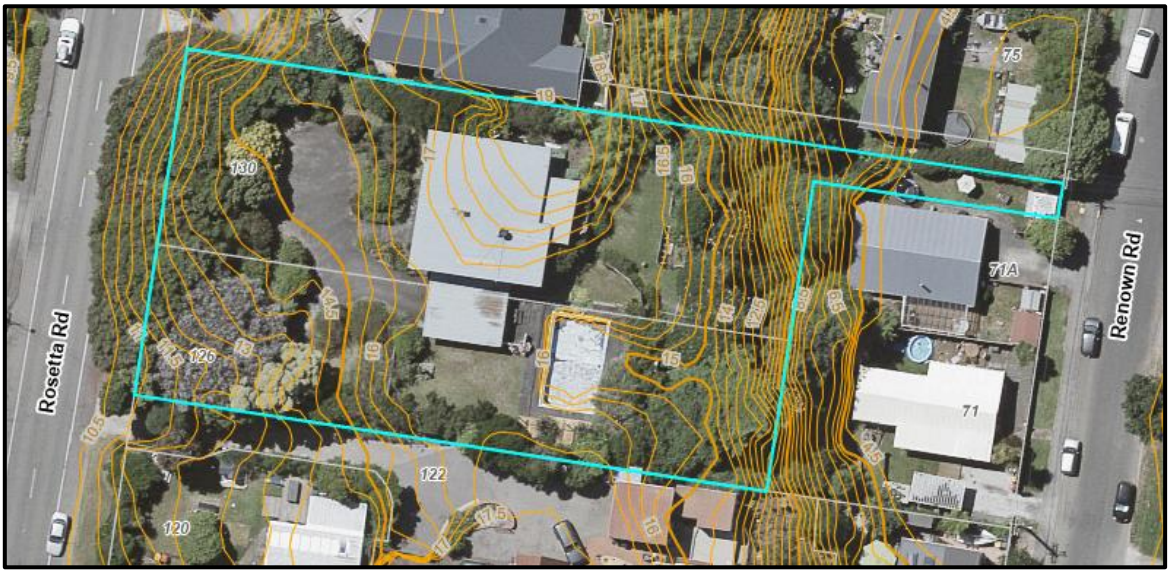

Fig. 3: Topography of the application site, as shown on Contours GIS Map, KCDC.

The application site is legally described as Lot 1-2 DP 18137 and held in Record of Title WN824/62. There are no interests registered on the title that are affected by this proposal.

2.2 The Local Environment

All surrounding sites are also zoned General Residential Zone, within the Beach Residential Precinct. Surrounding sites comprise mostly of singles dwellings within their own allotment, although there are instances of two dwellings within the same property (i.e, 133 & 133A Rosetta Road, 139 & 139A Rosetta Road, 113, 115B & 115A Rosetta Road). The application site is one of the larger properties within the immediate area, with those other sites typically ranging from 370m^2 to 1800m^2. The surrounding area is residential in nature with the exception of a café opposite the application site, which has been constructed up to and over the front boundary adjoining Rosetta Road.

2.3 District Plan Zoning and Overlays

126-130 Rosetta Road is zoned General Residential Zone, within the Coastal Environment. It is within PREC3- Beach Residential Precinct and has a Flood Hazard- Fill Control Overlay which affects the eastern access leg from Renown Road only. The site adjoins Rosetta Road which is classified as a Major Community Connector Road and Renown Road which is classified as a Local Road and Neighbourhood Access Route. Under PC2, the application site is within the Coastal Qualifying Matter Precinct.

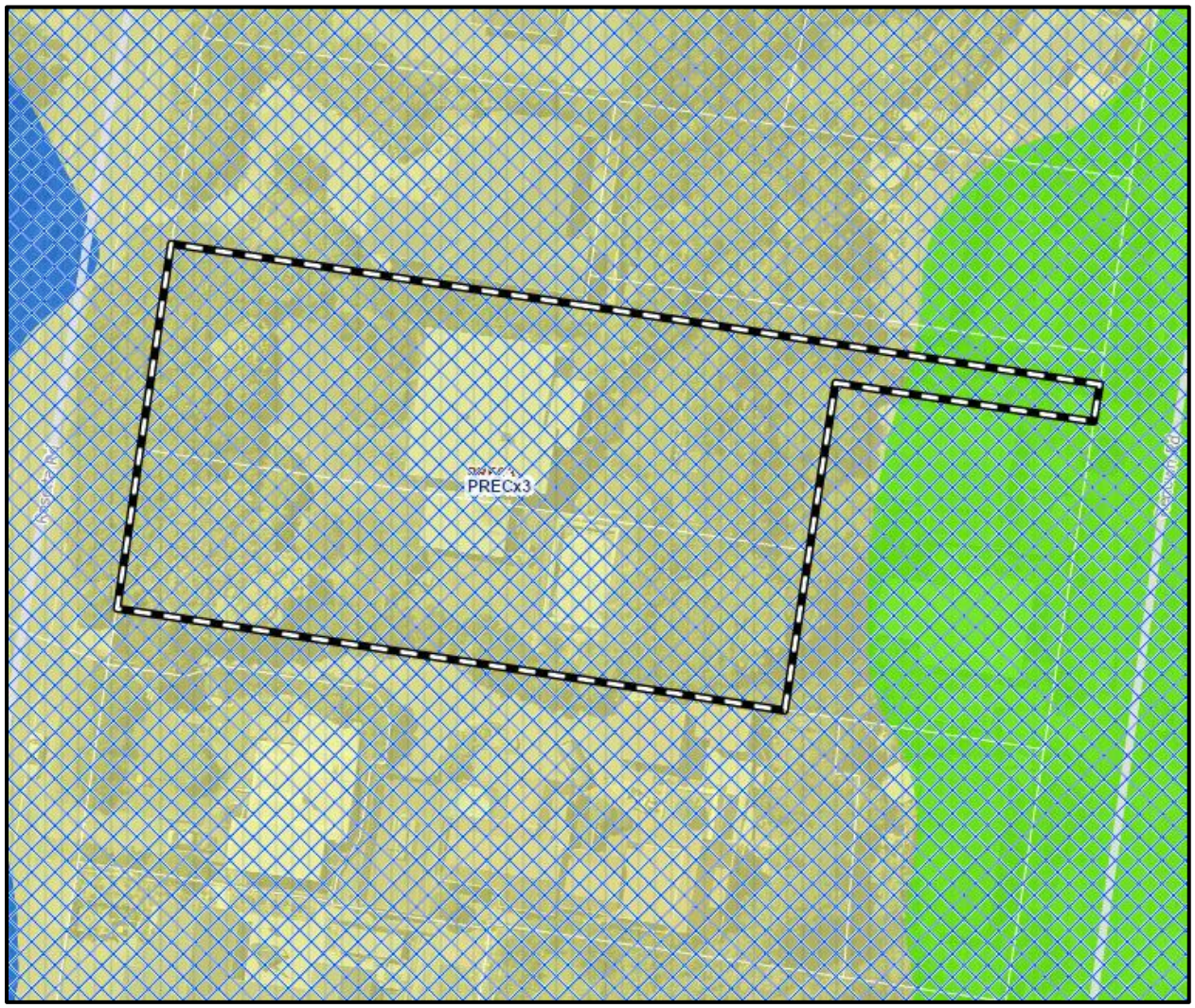

Fig. 4: Zoning of application site

3 THE PROPOSED ACTIVITY

Subdivision

Resource consent is sought to undertake a 4 lot subdivision of the application land at 126-130 Rosetta Road, and construct three additional dwellings.

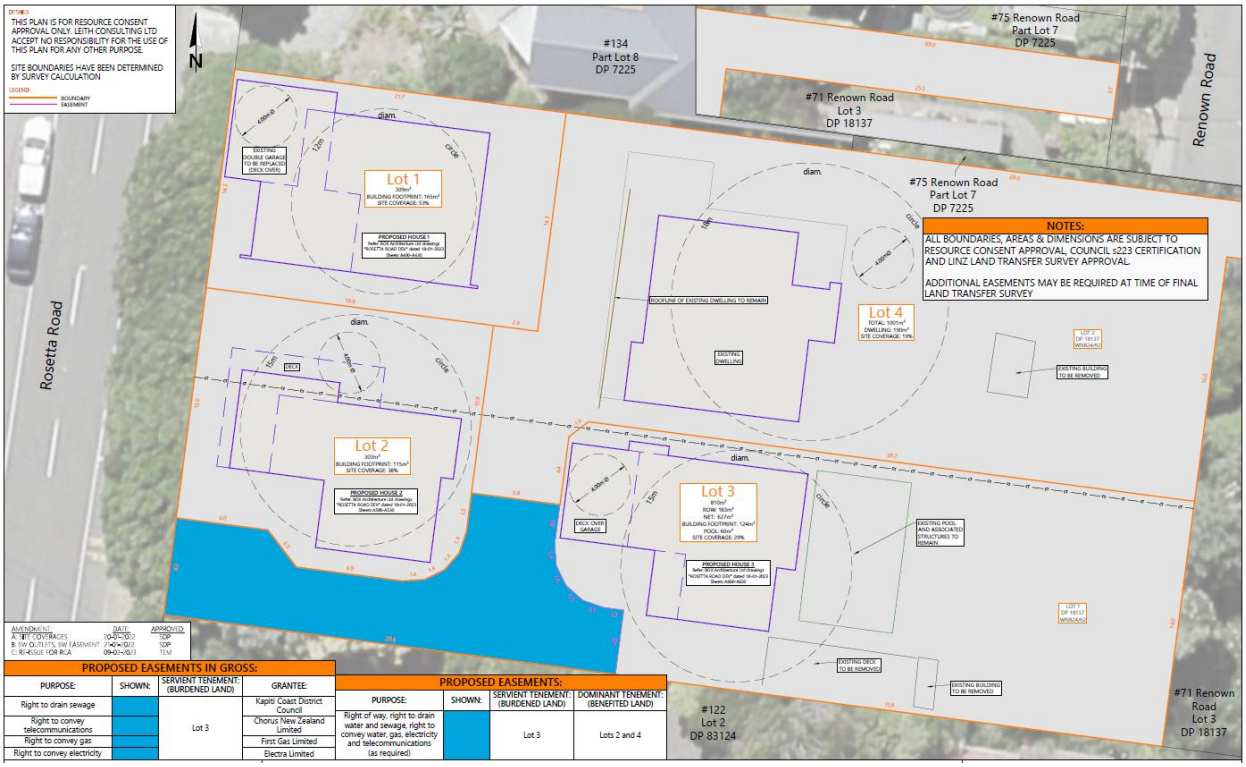

Fig. 5: Proposed Scheme Plan

Proposed Lot 1 will contain the north western corner of the application site, including where the existing concrete garage is located (and to be demolished). This allotment will be 409m^2 in area with a 14.3m frontage to Rosetta Road. Proposed Lot 1 will have the dimensions to contain a 12m diameter circle. The southern boundary of this allotment will be shared with Proposed Lot 2, and the western boundary shared with Proposed Lot 4. Vehicle access will be in the north western corner of the allotment, in a similar location to the existing (to be demolished) garage with access off Rosetta Road.

A dwelling is proposed to be constructed on this allotment, to have a footprint of 165m^2 and resultant site coverage of 53.4%. The garage for this dwelling will be 0.25m from the front boundary and 0.63m from the northern boundary, similar to the existing situation. Above the garage is to be a terraced area which will provide a 33m^2 dedicated outdoor living area to the

west of the dwelling. The rest of the dwelling will be setback 1.9m-2.6m from the front boundary, 1.9m from the northern boundary, 2.2m from the proposed southern boundary and 4.7m from the proposed eastern boundary.

The ground floor will contain one bedroom with ensuite and the double garage, which will be accessed directly from Rosetta Road. The first floor will contain 2 bedrooms including master with ensuite, bathroom facilities and an open plan kitchen, dining and lounge area. The terrace over the ground floor garage will be accessible from the lounge/living area.

Fig 6: 3D rendering of development showing Proposed Lot 1, with vantage point from the north western corner of the application site

Servicing details are fully outlined in the submitted Plans, Infrastructure and Engineering Report and Conceptual Stormwater Disposal Report attached as appendages to this report.

Proposed Lot 2 will adjoin the southern boundary of Proposed Lot 1 and have a 15m long frontage to Rosetta Road. This allotment will have an area of 303m^2. Vehicle access will be via the south western vehicle crossing, which will lead to a right of way that will service Lots 2, 3 & 4. A three storey dwelling with a footprint of 115m^2 is proposed, resulting in a site coverage of 38%. The dwelling will be setback 3m from the front boundary adjoining Rosetta Road, 4.9m from the proposed northern boundary shared with Proposed Lot 1 and 3.58m from the proposed eastern boundary.

The first floor will contain the garage and entryway, leading towards stairs to the second storey. The second storey will contain one bedroom with ensuite, WC, and open plan kitchen, dining and living area. Above the garage and on the lawn will be a decked area, to be used as an 44m^2 outdoor living area. Due to the topography of the land, the top of the garage will be relatively

level with the ground level of the second floor. The third storey will contain three bedrooms with two bathrooms and a 26m^2 decked area above the decked area directly below. The garage will have a capacity for 2 vehicles, and will be oriented towards the right of way, providing maneuvering area for a forwards exit onto Rosetta Road.

Fig 7: 3D rendering of development showing Proposed Lot 2, with vantage point from the south western corner of the application site

Proposed Lot 3 is to be the south eastern allotment with a total land size of 810m^2, right of way area of 183m^2 and net site area of 627m^2 . The proposed dwelling is to have a building footprint of 124m^2, with a resultant site coverage of this allotment of 29%. The right of way will provide vehicle access for Lots 2 and 4, as well as Lot 3.

A 2 storey dwelling with a building footprint of 124m^2 is proposed on this allotment, with a site coverage of 29%. The existing swimming pool on the application site, to the south of the existing dwelling, will remain and be retained within the boundaries of Proposed Lot 3. The ground floor of the dwelling will include three bedrooms, one with ensuite, bathroom, access to the first floor and double garage. The second storey will have the master bedroom with ensuite, WC and open plan kitchen, dining and lounge area. The terrace outdoor living area, 22m^2 in area, above the garage will be accessible from this area.

Fig 8: 3D rendering of development showing Proposed Lot 3, with vantage point from the middle of the southern boundary, directed eastwards

Proposed Lot 4 will be formed from the remaining land of the application site and contain the existing dwelling on the site. This allotment is to be 1001m^2 in area, and will include the access leg to Renown Road. Additions and alterations have been undertaken on this dwelling, which are compliant with District Plan permitted activity standards and forms the existing environment for the application land.

Vehicle access will be via the Right of Way from Rosetta Road, which serves Proposed Lot 2 and 3 also. A carpad for the exclusive use of Lot 4 will be accessed from the right of way, between Lots 2 & 3, which will also be the main access to the existing dwelling. No changes or alterations to the access from Renown Road are proposed as a part of this application, with no works proposed within the fill control area.

Land Use Consent

Each of the proposed dwellings on the allotments will require associated land use consent and the details of these non-compliances are detailed in Section 4 of this report. The non-compliances include permeable surfaces, site coverage, maximum height and number of stories, height in relation to boundary, floor area ratio, outdoor living areas and yard setbacks.

Earthworks are required to provide level building platforms for the proposed dwellings, and for the formation of the Right of Way and driveways. A total of 935m^3 of earthworks is required over

an area of 986m^2, consisting of 883m^3 of cut and 52m^3 of fill. The maximum cut depth will be 4.4m and the maximum fill height will be 1.2m. The details of the earthworks are summarized in the table below, and the area of the works shown in figure 9:

PROPOSED EARTHWORKS:	
TOTAL EARTHWORKS AREA	986m^2
OVERALL SITE AREA	2425m^2
PROPORTION OF SITE	41%
MAX CUT	4.4m
MAX FILL	1.2m
CUT VOLUME	883m^3
FILL VOLUME	52m^3
BALANCE	831m^3 (excess cut)
NOTE: VOLUMES EXCLUDE COMPACTION	

Table 1: Earthworks summary

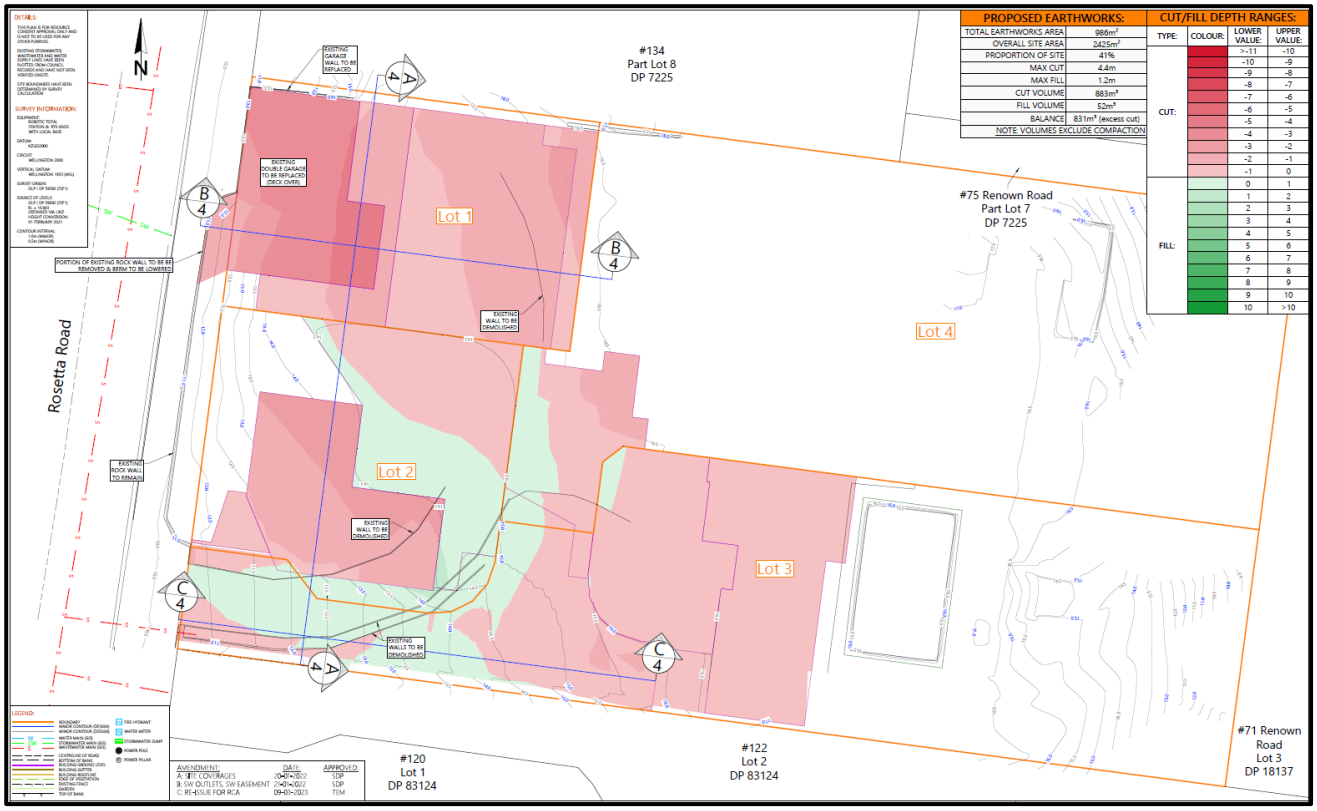

Figure 9: Earthworks Plan

4 PLAN COMPLIANCE ASSESSMENT

4.1 Context

The Council has publicly notified proposed changes to the District Plan, known as Plan Change 2 (PC2)- Intensification (Intensification Planning Instrument). This incorporates changes in relation to national direction on the Medium Density Residential Standards, enables increased levels of development around Kāpiti's centres and transportation hubs, rezones some areas to General Residential Zone, proposes new design guides, replaces references to Council's Subdivision and Development Principles and Requirements 2012 with references to the Land Development Minimum Requirements April 2022 document and provides for qualifying matter areas.

The application site is subject to the Coastal Qualifying Matter Precinct and the Operative District Plan rules continue to have legal effect for subdivision and development of the site with the objectives and policies of Plan Change 2 and the Operative District plan having legal effect.

4.2 District Plan Compliance Assessment

The following assesses the proposal against the relevant rules and standards of Kāpiti Coast Operative District Plan:

Rule	Requirement	Relevance
Part 2: District-Wide Matters: Subdivision		
Restricted Discretionary Activity **SUB-DW-R5: Subdivision of land creating new allotments in the living zones and working zones that complies with all restricted discretionary activity standards under rules SUB-RES-R27, SUB-RES-R28, SUB-WORK-R40, SUB-WORK-R41, SUB-WORK-R42, SUB-WORK-R43, SUB-WORK-R44, SUB-WORK-R45, SUB-WORK-R46, SUB-WORK-R47, SUB-DEV1-R63, SUB-DEV2-R67, SUB-DEV2-R68, SUB-DEV2-R69, SUB-DEV2-R70, SUB-DEV2-R71.**	Standards: **Hydraulic neutrality** 1. Stormwater systems must be designed to ensure that the stormwater runoff from all new impermeable surfaces will be disposed of or stored on-site and released at a rate that does not exceed the peak stormwater runoff when compared to the pre-development situation for the 50%, 20%, 10% and 1% Annual Exceedance Probability flood events. 2. Existing waterways and stormwater detention areas must be retained, and be enhanced with plantings to create attractive features.	**Will comply- refer to attached Engineering and Infrastructure Report in Appendix 5 and the Conceptual Stormwater Disposal Design Report in Appendix 6**

Rule	Requirement	Relevance
	Underground Services 3. Where any subdivision of land involves the construction of a new road or the extension of an existing road all electric, gas and telecommunication services to the land in the subdivision shall be reticulated underground.	**Will comply- new services will be reticulated underground**
	Water Supply 4. All new allotments, other than allotments for access, roads, utilities or reserves, where the allotments are in or adjoining areas which are served with a Council reticulated water supply, must be provided with a connection to the Council reticulated water supply laid to the boundary of the allotment.	**Will comply- refer to attached Engineering and Infrastructure Report in Appendix 5**
	Effluent Disposal 5. All new allotments, other than allotments for access, roads, utilities or reserves, where the allotments are in or adjoining areas which are served by the public wastewater reticulation and treatment system must be provided with a piped sewage outfall for disposing of sanitary sewage to a reticulated system, laid to the boundary of each allotment.	**Will comply- refer to attached Engineering and Infrastructure Report in Appendix 5**
	Telecommunication and electricity supply 6. Provision must be made to the boundary of each proposed allotment for a connection to a telecommunication network and energy supply network.	**Will comply- refer to attached Engineering and Infrastructure Report in Appendix 5**
Restricted Discretionary Activity **SUB-DW-R9: Subdivision (excluding boundary adjustments or subdivision of land where no additional allotments are created) of land with peat or sand soils.**	**Standards** 1. Geotechnical information must be provided by a suitably qualified and experienced person (to building consent level) on liquefaction risk.	**Complies- a Geotechnical Report on the liquefaction risk is provided in Appendix 4**

Rule	Requirement	Relevance
	2. Proposed building areas with a minimum dimension of 20 metres must be identified for each allotment.	**Cannot comply- the proposed allotments cannot all accommodate a 20m diameter circle shape factor**
Part 2: District-Wide Matters: Subdivision in Residential Zones		
Restricted Discretionary Activity **SUB-RES-R27: Any subdivision of land (excluding land within a Focused Infill Precinct) which is not a controlled activity under SUB-RES-R25 or SUB-RES-R26.**	**Standards** 1. Each allotment must have legal and physical access to a legal road.	**All proposed allotments will have physical and legal access from Rosetta Road**
	Minimum and average allotment sizes Each allotment must meet the following minimum requirements: i. for all other land in the General Residential Zone where the land to be subdivided is less than 3,000m^2 in area: i. the minimum allotment area shall be 450m^2 (exclusive of access); and k. in addition to the minimum allotment area requirements in standards (i) and (j) above, the following overall average allotment sizes (exclusive of access) shall be achieved: ii. 700m^2 or greater in the Beach Residential Precinct at Raumati.	**The proposed allotments are to be:** **Lot 1: 309m^2** **Lot 2: 303m^2** **Lot 3: 810m^2, 627m^2 exclusive of access** **Lot 4: 1001m^2** **The average allotment area will be 560m^2**
	Shape factor 3. Each allotment must be capable of accommodating an 18 metre diameter circle. 4. Where a rear allotment is created, the shape factor circle for the front	**Proposed Lot 4 can accommodate an 18m diameter circle. Lots 1-3 cannot comply.**

Rule	Requirement	Relevance
	allotment(s) may extend over the access leg for the rear allotment by up to 3 metres.	
	Wastewater disposal – non-sewered lots	**N/A- application site is serviced**
	Block length	**N/A- no blocks are proposed**
	Esplanades 7. The Esplanade Reserve and Esplanade Strip provisions of SUB-DW-Table 1 must be complied with.	**N/A- no esplanade reserves or strips are required or proposed**
	Financial Contributions 8. Compliance with FC-Table 1.	**Will comply**
Part 2: District-Wide Matters: Earthworks		
Permitted Activity **EW-R2: Earthworks, excluding those listed in EW-R3, in all areas except areas subject to flood hazards, outstanding natural features and landscapes, ecological sites, geological features, areas of outstanding natural character, areas of high natural character.**	**Standards** 1. Earthworks must not be undertaken: a. on slopes of more than 28 degrees; or b. within 20 metres of a waterbody, including wetlands and coastal water.	**Earthworks are likely to be undertaken on slopes greater than 28 degrees, due to the existing topography of the site. There are no waterbodies within 20m of the application site**
	2. In all other areas except as provided for in Standard 3, earthworks must not: a. disturb more than 50m³ (volume) of land per subject site in residential zones, working zones, natural open space zones and open space zones (excluding the Private Recreation and Leisure Precinct) within a 5 year period; c. alter the original ground level by more than 1 metre, measured vertically.	**Does not comply- 935m³ of earthworks are proposed, consisting of 883m³ of cut and 52m³ of fill.** **Does not comply- the maximum cut depth is to be**

Rule	Requirement	Relevance
		4.4m and the maximum fill height will be 1.2m
Part 2: District-Wide Matters: Transport		
Permitted Activity **TR-R3: Site access and loading for vehicles**	Standards 1. Access - every site must provide vehicular access over land or by mutual right of way or service lane for parking and/or loading and shall be in accordance with TR-Diagram - 2.	**Complies- all allotments are accessable from either Rosetta Road directly, or via the shared right of way off Rosetta Road.**
	2. Access - all vehicle accesses must be designed, constructed and maintained to ensure that: a. they are able to be used in all weather conditions; b. they have no adverse impact on the roadside drainage system; and c. surface water and detritus (including gravel and silt) does not migrate onto the highway pavement.	**Complies- the driveways and right of way will be sealed for use in all weather, and stormwater managed through an appropriate stormwater system, as shown within the submitted plans and infrastructure and engineering reports.**
	3. Access- all accesses must meet the following: a. be a minimum of 3.5 metres wide, except as set out in TR-Table 1. b. be a maximum of 9 metres wide, except in the Beach Residential Zone at Waikanae Beach where the maximum shall be 6.0 metres wide.	**Complies- the access for Lot 1 will be 6.0m wide and the right of way that serves Lots 2-4 will be 4.2-6.3m wide.**
	Standards 4-11	**N/A**
	12. Manoeuvring a. Private residential access- unless the driveway accesses directly from a Neighbourhood Access Route, sufficient	**Lots 2-3 complies, with the right of way providing sufficient space to allow for a forwards exit** **Lot 1 does not comply**

Rule	Requirement	Relevance
	manoeuvring space must be provided on-site to ensure no reversing onto the road is necessary.	
	Standards 13-14	**N/A**
	14. Landscaping- all landscaping adjoining the road boundary of subject sites, must be designed and maintained so that visibility to and from the crossing point complies at all times with the minimum standards sight distances set out in TR-Table 3Sight Distance Dimensions	**Complies- any landscaping will be maintained within these parameters.**
Part 3: Area Specific Matters- Residential Zones		
Permitted Activity **GRZ-R1: Any activity that is a permitted activity under rules in this chapter**	**Standards** 1. The activity must not cause offensive or objectionable odour, dust or smoke at or beyond the boundary of the site on which it is occurring. 2. Each allotment must have a permeable surface area that is not covered by buildings, paving or other impermeable objects of not less than 30% of the total allotment area. 3. Any lighting must be directed so that the spill of light is contained within the boundaries of the site on which the activity occurs. Light level from the activity must not exceed 10 lux, when measured 1.5 metres inside the boundary of any other site located in the Residential Zones or Rural Zones. This standard does not apply to street lighting on legal roads.	**Complies- the activity will not create offensive or objectionable odour, dust or smoke** **Complies:** **Lot 2- 43 %** **Lot 3- 46%** **Lot 4- 62%** **Does not comply:** **Lot 1- 21%** **All lighting will be contained within the application site**
Permitted Activity	**Standards** **Maximum number of residential units**	

Rule	Requirement	Relevance
GRZ-R6: New buildings, and any minor works, additions or alterations to any building	2. For any allotment in the General Residential Zone which is not in a focused infill precinct, no more than one residential unit may be erected, except that:	**Complies- each proposed allotment will have one dwelling**
	Minor residential units	**N/A- no minor residential units are proposed**
	Coverage 5. The maximum building coverage of any allotment shall be 40%, except in the Beach Residential Precinct where it shall be 35%	**Complies:** **Lot 3: 29%** **Lot 4: 19%** **Does not comply:** **Lot 1: 53%** **Lot 2: 38%**
	Height 7. The maximum height of any building shall be 8 meters except: c. any building in the Beach Residential Precinct, except for any accessory building or minor residential unit (excluding a minor residential unit contained within the primary residential building), shall have a maximum height of 8 metres and no more than two storeys; 8. Any building or structure must fit within a height in relation to boundary envelope which is made up of recession planes which commence at a point 2.1 metres above the original ground level at the site boundary and inclines inwards at an angle of 45 degrees.	**The dwellings on Lots 1 & 3 comply. The dwelling on Lot 4 is existing.** **The dwelling on Lot 2 will have a maximum height of 8.62m at the south east corner of the dwelling** **The dwelling on Lot 2 will consist of three stories.** **Lot 1- the dwelling and balustrade will breach the envelope by a maximum of 2.6m with a depth of 8.2m along the northern boundary** **Lot 2- the dwelling will breach the envelope by a maximum of 1.114m along the proposed eastern (internal) boundary by a maximum of 2.9m and depth of 3.3m.**

Rule	Requirement	Relevance
		Lot 3- the dwelling will breach the envelope along the western boundary, shared with Proposed Lot 2, with the terrace breaching by 2.2m for a depth of 2.8m, and the second storey by 2m for a depth of 2m. The envelope along the northern boundary, shared with Proposed Lot 4 will also be non-compliant, with a maximum breach of 3.1m for a depth of 3.3m **Lot 4- the proposed southern boundary, shared with Proposed Lot 3, will introduce a non-compliance of approximately 2.4m.**
	Floor area ratio Any allotment in the Beach Residential Precinct shall have a maximum floor area ratio of 0.6:1.0, excluding the Beach Residential Precinct at Waikanae Beach where it shall be 0.5:1.0.	**Will comply:** **Lot 3- 0.33:1.0** **Lot 4: 0.31:1.0** **Will not comply:** **Lot 1: 0.67:1.0** **Lot 2: 0.73:1.0**
	Outdoor living areas 10. The primary residential building must have an outdoor living space. Outdoor living space must: a. have a minimum area of 40m^2 except in any focused infill precinct where the minimum area shall be 30m2; b. contain no dimension less than 4 metres, except in any focused infill precinct where…	**Lots 2 & 4 will have compliant outdoor living areas.** **Lot 1 will not comply with the minimum area requirement, with an area of 33m^2 supplied** **Lot 3 will not comply with the minimum area requirement, with 22m^2 provided as decking. A**

Rule	Requirement	Relevance
	c. be located to the north, west or east of any primary residential building; d. be screened by a fence or vegetation to provide privacy from the ground floor windows and the outdoor living space of other primary residential buildings; and e. have direct access to an internal habitable room in the primary residential building.	**larger area is provided to the east of the dwelling, although the direct access from the dwelling does not achieve the 4m minimum dimension**
	Yards and building location 11. Any allotment must meet the following minimum yard requirements: b. for any front yard in the Beach Residential Precincts: i. any building, structure, or above ground water tank must be set back at least 4.5 metres from any road boundary; and ii. any eave which intrudes into the front yard by no greater than 0.6 metres shall be excluded, except where the eave would overhang any easement c. Side and rear yards: i. any residential building and any habitable room within any accessory building, must be setback from side or rear boundaries such that the following minimum dimensions are achieved: a. if located on front allotment - 3 metres rear yard, 3 metres one side yard, and 1.5 metres all other side yards; and b. if located on rear allotment- 3 metres all yards; ii. any accessory building, excluding habitable rooms within the accessory building or structure, must be setback from side or rear boundaries such that	**Lot 1: The garage will be set back 0.25m from the front boundary, and will be 0.63m from the northern boundary. The rest of the dwelling will be set back 3m from the front boundary and 1.9m from the northern boundary.** **Lot 2: The garage will be located 3m from the front boundary adjoining Rosetta Road. The southern façade of the dwelling will be 1.4m from the southern boundary, shared with the Right of Way and 1.2m from the eastern boundary also shared with the right of way.** **Lot 3: The dwelling will be set back 03.28m from the western boundary shared with Lot 2 and 0.89m from the northern boundary shared with Lot 1** **Lot 4: The dwelling will not be set back 3m from the**

Rule	Requirement	Relevance
	rear and side yards have a minimum width of 1 metre; iii. any building used for non-residential activities (excluding home businesses and home craft occupations) must be set back from side or rear boundaries by a minimum of 4 metres; and iv. any eave which intrudes into the side or rear yard by no greater than 0.6 metres shall be excluded, except where the eave would overhang any easement;	**southern boundary shared with Lot 3.**

4.3 Activity Status

Subdivision

The subdivision of 126-130 Rosetta Road, located within the General Residential Zone, is a **Non-Complying Activity** under Rule SUB-RES-R32 which reads:

Any subdivision of land which is not a controlled activity under SUB-RES-R25 or SUB-RES-R26, a restricted discretionary activity under SUB-RES-R27, or a discretionary activity under SUB-RES-R30.

The application sites are identified as having peat or sand soils. As no proposed allotments can provide a 20m minimum diameter building platform, the subdivision is considered to be a **Discretionary Activity** under Rule SUB-DW-R15 which reads:

Any activity listed as a controlled or restricted discretionary activity in this section which does not comply with one or more of the associated standards, unless otherwise specified

Land Use

Lot 1 cannot comply with the permitted activity standards for manoeuvring under TR-R3(12), and is therefore considered to be a **Discretionary Activity** under Rule TR-R11 which reads:

Any activity which is not a permitted, controlled, restricted discretionary or non-complying activity

The volume and height/depth of the earthworks across the application sites cannot comply with the permitted activity standards, and it is likely that a portion of the works will occur on slopes

greater than 28 degrees. Therefore considered to be a **Restricted Discretionary Activity** under Rule EW-R5 which reads:

Earthworks not complying with one or more of the permitted activity standards in EW-R2 or EW-R3.

The matters of discretion are listed as:

- *The degree of compliance with the Kāpiti Coast District Council Subdivision and Development Principles and Requirements 2012.*
- *The effects on water collection areas.*
- *The degree of compliance with any applicable Environmental Management Plan or Structure Plan applicable to the development.*
- *Ecological effects.*
- *Visual and amenity effects.*

As the dwellings on each allotment do not comply with all the yard setback requirements, the application is considered to be a Restricted Discretionary Activity under Rule GRZ-R16 which reads:

Any building (excluding minor buildings), and any additions or alterations to any building (excluding minor buildings and any listed historic heritage building) in the Beach Residential Precincts that does not comply with the permitted activity standards for yard setbacks.

The matters of discretion are listed as:

- *The consideration of effects with regard to Council's Subdivision and Development Principles and Requirements 2012 and Streetscape Strategy and Guideline.*
- *Compatibility with adjacent development.*
- *The imposition of conditions to manage visual, character,*
- *Amenity and cumulative effects.*
- *Landscaping.*
- *The imposition of financial contributions in accordance with the Financial Contributions Chapter.*
  Note: other contributions may be applicable under the provisions of the Local Government Act 2002.
- *The Ōtaki Beach, Waikanae Beach, Raumati, Paekākāriki Special Character Areas Design Guidelines in Appendix 3.*

With the non-compliances of permeable surfaces, site coverage, maximum height, 2-storey limit, height in relation to boundary envelope and floor area ratio, the application is considered to be a Discretionary activity under Rule GRZ-R18 which reads:

Any building, minor works, and any additions or alterations to any building, which does not comply with one or more of the permitted activity standards under GRZ-R6.

Due to the principle of bundling, the overall activity status for this application is considered to be **non-complying.**

4.4 National Environmental Standards

Under the **National Environmental Standards for Assessing and Managing Contaminants in Soil to Protect Human Health ("NES-CSHH"),** if a site has been the subject of an activity or industry described in the Ministry for the Environment's Hazardous Activities and Industries List ("HAIL") then the NES-CSHH warrants further consideration. No previous activities are known to have occurred on the application site which are identified on the HAIL. As such, the proposal does not warrant further assessment of the NES-CSHH.

It is considered that the other National Environmental Standards currently in force, namely those pertaining to air quality, freshwater, electricity transmission activities, plantation forestry, telecommunication facilities and water quality for human consumption, are also not applicable to this application.

4.5 Other Consents

I am not aware of any other resource consents being required for the proposed activity.

5 STATUTORY CONSIDERATIONS

5.1 Duties and Restrictions under the RMA

Section 9 of the Act sets out the duties and restrictions relating to activities in terms of consenting authorities. These sections provide the basis for which consent in this application is sought. Of relevance to this proposal is Section 9 (restrictions on use of land).

Section 9 of the Act sets out that any use of land may not proceed in a manner that contravenes:

- *national environmental standard;*
- *regional rule; or*
- *district rule,*

unless expressly allowed by a resource consent or by Sections 10, 10A or 20A of the Act.

The proposed activity is not allowed by any national environmental standards or other regulations and, as outlined above, it is provided for as a non-complying activity in the District Plan. The proposal requires resource consent and shall be assessed in accordance with the following provisions of the Act.

5.2 Consideration of Application

Section 104(1) of the Act sets out the matters which must be considered by a consent authority in considering applications for resource consent. It is considered that in this instance, regard shall be had to:

- *any actual or potential effects of allowing the activity (section 104(1)(a));*
- *any relevant objectives, policies, rules, or other provisions of a national environmental standard, other regulations, a national policy statement, a New Zealand coastal policy statement, a regional policy statement or proposal regional policy statement, a plan or proposed plan (section 104(1)(b)); and*
- *any other relevant matters reasonably necessary to determine the application (section 104(1)(c)).*

Section 104B is the relevant statute for a consent authority when assessing a discretionary or non-complying activity. In respect to the current application, Section 104B states:

A consent authority—

(a) may grant or refuse the application; and
(b) If it grants the application, may impose conditions under section 108.

Section 104D is the relevant statute for a consent authority when assessing a non-complying activity. In respect to the current application, Section 104D states:

> *A consent authority may grant a resource consent for a non-complying activity only if it is satisfied that either—*
>
> *(c) the adverse effects of the activity on the environment (other than any effect to which section 104(3)(a)(ii) applies) will be minor; or*
>
> *(d) the application is for an activity that will not be contrary to the objectives and policies of—*
>
> *i. the relevant plan, if there is a plan but no proposed plan in respect of the activity; or*
>
> *ii. the relevant proposed plan, if there is a proposed plan but no relevant plan in respect of the activity; or*
>
> *iii. both the relevant plan and the relevant proposed plan, if there is both a plan and a proposed plan in respect of the activity.*

The assessment of the actual and potential effects is set out below in Section 6, and an assessment of relevant Objectives and Policies follows in Section 7.

Section 106 of the Act states that a Territorial Authority may refuse to grant a subdivision consent if it considers that:

- *There is significant risk from natural hazards; or*
- *Sufficient provision has not been made for legal and physical access to each lot created by the subdivision.*
- *An assessment of the risk from natural hazards requires a combined assessment of –*
- *The likelihood of natural hazards occurring (whether individually or in combinations); and*
- *The material damage to land in respect of which the consent is sought, other land, or structures that would result from natural hazards; and*
- *Any likely subsequent use of the land in respect of which the consent is sought that would accelerate, worsen, or result in material damage.*

The District Plan identifies land with sand or peat soils, like the application land, as being liquefaction prone. A geotechnical assessment of the liquefaction risk has been undertaken by CGW Consulting Engineers. The assessment comprises a desktop study as well as on-site investigations and confirms the application site is suitable for further residential development, with the site not considered to be at risk of fault rupture, slope instability or inundations. The application is potentially prone to liquefaction and settlement, with Specific Engineering Design (SED) and deeper piled foundations recommended for residential development. A copy of this report is attached in Appendix 4.

The application land is not subject to any specifically identified natural hazards under the District Plan except for containing a limited area of fill control area. It is not proposed to undertake

earthworks or locate a building/structure within this fill control area that could have the potential to exacerbate flooding for neighbouring properties.

Council holds information which identifies that the property is subject to coastal erosion, based on modelling in a year 2120, 1.25 RSLR scenario. It is noted that this timeframe has been identified as uncertain outcomes is terms of the accuracy of the information and resultant greater possible ranges. In the Council's Section 32 report (for Plan Change 2) which provides evidence for enabling subdivision in the Coastal Qualifying Matter Area at a minimum lot size of 450m² (exclusive of access), with a minimum average of 700m²(exclusive of access) it states:

> *The purpose of the Coastal Qualifying Matter Precinct is to maintain the status quo level of development enabled by the provisions of the operative District Plan in the relevant area, to ensure that the management of coastal hazards can be appropriately addressed through the future coastal environment plan change process, while avoiding intensification in areas that may need to be subsequently reversed as part of this process. This approach is consistent with policy 3 of the NZCPS which requires the Council to adopt a precautionary approach to use and management of coastal resources potentially vulnerable to effects from climate change so that avoidable social and economic loss and harm to communities does not occur. Further to this:*
>
> - *The precinct is intended as an interim measure and it is expected that the purpose, extent and provisions associated with the precinct will be reviewed as part of the future coastal environment plan change process. This may include providing for more or less development to occur within the area covered by the precinct.*
> - *The precinct is not intended to restrict development to less than what is permitted by the rules of the operative District Plan (although the precinct does not preclude such an approach being considered as part of a future coastal environment plan change process);*
>
> *The precinct is not intended to prejudice or predetermine the range of planning options to manage coastal hazard risk that may be considered during the Takutai Kāpiti and subsequent plan change process. It is also not intended to predetermine the spatial extent of these options (particularly in relation to the range of scenarios included within the Kāpiti Coast Coastal Hazards Susceptibility and Vulnerability Assessment.*

Although the minimum average allotment size across this subdivision is less than 700m² the buildings will be located within areas modelled as future 'highly unlikely' risk of coastal erosion issues.

Both legal and physical access can be provided to all allotments within this subdivision.

I therefore consider that the matters outlined in Section 106 of the Act have been met and that Council's ability to grant resource consent to the proposed subdivision is not impacted by Section 106 of the Act.

6 ASSESSMENT OF ENVIRONMENTAL EFFECTS

6.1 Overview

The overall activity status of this application is non-complying, and as such there is not restriction on the matters that can be assessed. The earthworks and yard setback non-compliances within the Beach Residential Precinct are restricted discretionary, and those matters of discretion have been used as guidance in the overall assessment of the development. I consider that the potential or actual effects of this development are related to:

- Design and layout of the subdivision
- Visual and amenity effects
- Shading and privacy Effects
- On-site amenity
- Effects on the surrounding Beach Residential Character
- Traffic effects
- Earthworks effects
- Liquefaction risk

6.2 Effects Assessment

The design and layout of the subdivision

The proposed subdivision will result in two undersized allotments, being 309m^2 and 303m^2 in area, with three allotments unable to contain an 18m diameter circle. The average allotment size will also be 560m^2, which is less than the standard of 700m^2. The proposed subdivision has been designed around the existing dwelling on the application site, which is to be contained within Proposed Lot 4, which has resulted in these allotments not meeting the subdivision performance standards in this development.

This dwelling will be renovated with alterations and additions to the existing building footprint, retaining the underlaying design of the dwelling. As a result of the retention of this dwelling, two of the other three allotments proposed are undersized in terms of the standards for a subdivision with the General Residential Zone (Beach Residential Precinct).

The subdivision will make use of the existing vehicle crossings, one at the south western corner of the site which is currently utilised for the existing dwelling on the application land, and the vehicle crossing at the north western corner of the site which leads to the double concrete garage location upon the front boundary. The northern most vehicle crossing will provide access for only Lot 1, while Lots 2-3 will utilise the southern vehicle crossing and Right of Way.

The allotment sizes, although smaller than the restricted discretionary activity standard, can provide for the specifically designed dwellings for each allotment. The topography of the site presents a physical constraint challenge, with the design of the dwellings and location of the boundaries taking this into account. The earthworks required for this development are limited to the building footprints and right of way/driveways of the proposed allotments and allow for the practical use of the application land.

All of the proposed allotments can be adequately serviced with new water and wastewater connections for each allotment, and on-site stormwater systems. The details or the services arrangement are proposed as shown in the submitted plans and Engineering and Infrastructure reports.

Visual and amenity effects

The application site is of a sufficient size to provide for 3 dwellings and associated accessory buildings, as a permitted activity under GRZ-R6. However, due to the topography of the land, and the location of the existing dwelling and swimming pool which is to be retained as a part of this proposal, the allotment sizes do not achieve the minimum dimensions, and there are a number of non-compliances associated with the dwellings.

The overall development, although non-compliant, could be reasonably anticipated within this zone, due to the large size of the application site, which is indicative of one of the larger properties within the immediate vicinity. It is considered that the overall property will not be perceived to be overdeveloped, and that the proposed undersized allotments are in response to the existing constraints on the site, noting that three dwellings could be constructed on the site as a permitted activity (subject to relevant building bulk and location standards). Furthermore, the vast majority of the proposed earthworks consists of excavation, with the building platforms to be set lower than the existing ground level, reducing the perceived visual dominance of the dwellings. If the development were to be redesigned to provide the minimum allotment areas, it is anticipated that more works (including demolition of the existing dwelling and swimming pool) and substantial earthworks would be required for practicality.

It is acknowledged that the resultant built form will differ greatly from the existing situation, with the existing vegetation within the front half (west) of the property to be removed to allow for works to be undertaken. This change is likely to, at first, appear to be visually dominant, when the comparison is the existing dense vegetation. With the exception of the garage located flush against the boundary in the north western corner, no buildings are visible when viewed from the streetscape. Landscaping is proposed to replace the existing vegetation along the front boundary, with a Landscaping Plan attached in Appendix 8 of this report.

However, as noted above, the application site is of a size and shape that could provide for 3 dwellings as a permitted activity. Regardless of the size of the allotments, the visual effects of the resultant built environment, being a density of 4 dwellings on the application site, is considered to

be reasonably anticipated in this location. The overall site coverage proposed will be within the permitted standards for the overall site, being a cumulative coverage of 24% (594m^2 total building footprint). The majority of the bulk of the rear dwellings will be visually screened from view from Rosetta Road, due to both the presence of the dwellings on the front allotments and the topography of the application site. It is not uncommon along Rosetta Road for dwellings to be at a much higher elevation than the road carriageway, due to the topography of the surrounding area.

The dwelling on Lot 1 will have its garage flush against the front (western boundary), in a similar manner to the existing concrete garage in this same approximate location, which is to be removed to facilitate this development. The portion of the dwelling that is to be within the front yard setback includes the single storey garage with patio atop, and the western façade of the dwelling which is to be located 3.0m from the front boundary. The design of the dwelling is such that the garage portion will appear as only single storey, and the western façade of the dwelling, although double storey, will have the resultant height of a single storey building, with the dwelling recessed into the slope of the land. As such, it is considered that this front yard non-compliance, although representing a vastly different vista, will not be visually domineering in terms of what can be undertaken as a permitted activity.

The dwelling on Lot 1 will breach the height in relation to boundary envelope along the northern boundary, shared with 134 Rosetta Road by a maximum of 2.6m. The area on the adjoining site that this relates to is a large paved area use for vehicular access and manoeuvring, with landscaped vegetation. This will create a visual break in the built form when view from Rosetta Road, and those properties opposite the application land.

Furthermore, as stated in Section 3 of this report, the application site does not have a pedestrian crossing along the eastern side of Rosetta Road. The pedestrian footpath is located on the western side of Rosetta Road only for this stretch of the road, with a physical separation distance created by the road carriageway of approximately 13m from the front boundary.

The dwelling on Proposed Lot 2 will be set back 3m from the front boundary at its closest point. This will be the garage portion of the dwelling with the outdoor living area atop it, in a similar layout to the dwelling on Lot 2. The line of this dwelling will not extend out from that dwelling on Lot 1, and it is considered that the effects will be similar to those described above. This dwelling on Lot 2 will also have non-compliances in regard to the two-storey limit and the height recession plane along the proposed southern and eastern boundary, both of which are internal to the application land. The first floor of the dwelling is considered to be a basement level, with the main living areas located on the first and second floors. The lower level will be recessed into the current ground level, with excavation proposed, to allow for this level to be at a lower elevation to the rest of the dwelling. When viewed from Rosetta Road, only a small portion of the garage will be visible, and the ground/basement level entryway. The overall height of the dwelling will be within the 8m high limit.

The height recession plane non-compliances on Lot 2 are internal to the application land and won't be visually obvious when viewed from the streetscape or adjoining and surround ding properties. The dwelling will breach the maximum height limit by 0.6m within the south western corner of the dwelling, due to the shape of the roof and the topography of the land. It is not considered that this will be visually discernible from the permitted baseline height of 8m due to the small area and small degree of this non-compliance.

Both of the dwellings on Lots 3 & 4 will also have internal height in relation to boundary breaches, and it is considered that the effects of this will be internal to the application site. The overall effects of the height in relation to boundary non-compliances will not be readily visible due to the separation between the internal breaches and any external boundaries, as well as separation distance created by the right of way. The existing topography and terrain of the application site contributes to the height in relation to boundary non-compliances associated with this development.

Shading and Privacy Effects

The height in relation to boundary non-compliances have the potential to give rise to adverse effects on shading and privacy internally, and for those adjoining sites. Internally, it is considered that those effects will be acceptable, with each allotment to have adequate provision for sunlight access and privacy.

In terms of potential shading effects, the dwelling on Lot 2 will breach the maximum height by 0.6m in the south western corner and the dwelling on Lot 1 will breach the height in relation to boundary standard along the northern boundary. The dwelling on Lot 2 will be set back approximately 6m from the southern boundary, and adjoining this boundary is an access leg to a rear property. It is therefore considered that any potential shading effects and privacy effects on the southern adjoining sites are less than minor.

Lot 1 & 2 both have a portion of the dwelling and/or garage located within the front yard setback, as well as outdoor living areas in the form of a patio or deck. This could potentially impede on the privacy of those users of Rosetta Road, creating overlooking effects. However, as described previously, there is not pedestrian crossing on the eastern side of Rosetta road at the location of the application site. The majority of users of Rosetta Road will either be pedestrians walking on the other side of the road, or vehicular users who will be travelling past the application site. It is not considered that the appearance of these outdoor living areas will adversely affect the privacy of passers-by due to the separation distance and limited sight-time during driving. Furthermore, it is considered that the configuration of these front allotments will allow for passive surveillance of the street, incorporating SPTED principles.

On-site amenity

Lots 1 & 4 will not have fully compliant outdoor living areas, with areas of 33m^2 and 22m^2 provided, respectively. These areas can comply with the minimum 4m diameter dimension, as well as the other requirements for an outdoor living area. Both the allotments also have areas to the west of the dwelling that can be utilised for outdoor space, which are easily accessible. It is considered that both allotments will have an acceptable level of on-site amenity, despite their undersize allocated outdoor living area, with those areas being of a size of shape that is practical for use as well as the other areas on site of an appropriate size and shape for practical use. Furthermore, the application site is within close proximity to a number of public green spaces, including the coast which is located approximately 100m from the property.

Effects on the surrounding Beach Residential Character

The application site is located within the Beach Residential Precinct of the General Residential Zone, which is characterised by typically lower densities with single/double storey dwellings with lower site coverages. The surrounding area also has undulating topography in accordance with the underlying remnant sand dunes, with dwellings constructed typically in accordance with the underlying landscape. The proposed development seeks to establish 4 allotments on the application site, with the two front allotments to contain dwellings that are located between 0.2m and 3m from the front boundary setback with Rosetta Road

It is acknowledged that the surrounding dwellings are typically setback from the boundary, however there are instances of structures close to the front boundary, such as the café diagonally across the road which encroaches over the front boundary setback, the consented studio building on the southern site at 120 Rosetta Road which has been granted consent to be 2m from the front boundary, and further south there is also a large solid concrete wall close to the boundary. The impacts of these have been considered appropriate for the area as the pedestrian footpath is located only on the opposite side of Rosetta Road, with effects on the pedestrian users considered to minimal. The eastern side of Rosetta Road is also characterised by upwards sloping topography, with the resultant buildings located at a much higher level than the road carriageway.

Vegetation removal is required to facilitate the development, and it is acknowledged that this will result in a vastly different streetscape along this stretch of Rosetta Road. The application site currently has dense vegetation along the front boundary which does visually obscure the existing dwelling on the site from the streetscape. This vegetation is not protected under the District Plan and can be removed as of right. Landscape planting is proposed as a part of this development, and a landscaping plan can be found in Appendix 8 of this report.

The proposed dwellings have been designed to be recessed into the slope of the property, with the lower levels of the dwellings on Lots 2 & 3 to be roughly at the same level as the road carriageway, and the existing (to be removed) concrete garage at the north western corner of the site. As stated previously, the application is of a size and shape that could accommodate up to 3 dwellings (if the existing dwelling were to be removed), and it is thus considered that the density of the

development is comparable and not entirely inconsistent to what could be expected on this site, with an additional dwelling proposed over and beyond what could theoretically occur as a permitted activity. The application site is one of the larger properties along Rosetta Road, and although the development will result in a visual change to the streetscape, the size and shape factor of the property is such that this would not be considered to be an overdevelopment of the site.

Traffic effects

The dwelling on Lot 1 contains a double garage that is located close to the front boundary (0.2m) with no on-site provision to allow for manoeuvring to achieve a forwards exit onto Rosetta Road. The location of this garage is located where the existing garage is on-site, with the same limited manoeuvring area whereby a reverse onto Rosetta Road is required. At the point of this vehicle crossing, Rosetta Road is straight with no corners or intersections within 200m and it is considered that there is clear visibility to allow for a vehicle to reverse from the garage safely. Further, there is no pedestrian pathway along this side of the road which will limit the potential for any adverse pedestrian safety effects.

The right of way provides sufficient space for all dwellings to achieve a forwards exit onto Rosetta Road, and it is considered that Rosetta Road has the capacity to accommodate the additional vehicle movements associated with the additional allotments proposed.

Earthworks Effects

986m^3 of earthworks are proposed over an area of 986m^2, consisting of 883m^3 of cut and 52m^3 of fill. The deepest cut is to be 4.4m, and the maximum fill will be 1.2m. The earthworks will be concentrated under the proposed building footprints, and their associated accessways. The earthworks within the front of the site, being within proposed Lots 1 & 2 will have the greatest areas of cut, consistent with the topography of the site. The dwellings have been designed to be recessed into the slopes of the application land, with the majority of those works to be obscured from view with the final built form of the site. It is considered that the earthworks proposed will not be readily obvious in the final development, with the retaining to be within the building footprint of the dwellings, or at the rear of site where it will not be visually dominant when viewed from the streetscape or neighbouring properties.

The works required for the construction of the right of way will not majorly alter the overall topography of the site, and will allow for a practical slope to be constructed for the safe operation of the right of way. Many of the surrounding sites have long driveways or right of ways to the dwellings on those properties, for instance the right of way/driveway that adjoins the southern boundary of the site, and it is not considered that this resultant form will appear to be inconsistent with the surrounding area.

The proposed earthworks, although not meeting the permitted activity standards of the District Plan, are considered to be consistent with Part 3 (C) of the Kāpiti Coast District Council Subdivision

and Development Principles and Requirements 2012. Appropriate erosion and sediment control measures will be implemented, and the accidental discovery protocol will be observed. It is therefore considered that the earthworks required to facilitate this development will have less than minor effects in terms of sediment and silt control, and visual amenity of the resultant retaining wall structures.

Liquefaction Risk

CGW Consulting Engineers have undertaken a geotechnical assessment of the liquefaction risk of the site, as required by the District Plan, given it contains sandy soils. The assessment comprises a desktop study as well as on-site investigations and confirms the application site is suitable for further residential development, with recommendations for foundation design to reduce the liquefaction risk to a suitably minor degree. A copy of this report is attached in Appendix 4.

On this basis, it is considered that any actual or potential adverse effects on the environment associated with the site containing sandy soils will be suitably minimised and therefore less than minor.

Coastal Hazards

The site is also identified as being located within the Coastal Qualifying Matter area and will potentially be subject to coastal erosion in a worst case, low probability scenario in 100 years. Plan change 2 provides for subdivision within the Coastal Qualifying Matter area with a minimum allotment area of 450m² and an average allotment size of 700m² for the Beach Residential Precinct at Raumati where an 18 metre diameter circle can be accommodated. The subdivision does not meet all these requirements and expectations for subdivision within this qualifying matter area under Plan Change 2. However, it should be considered that the property is only affected by coastal erosion at the 2120, 1.25 RSLR scenario (an upper level scenario in terms of sea level rise and longest time horizon which is considered unlikely to occur). The lower RDLR level scenarios of 0.6m and 0.85 at 2120 have the property outside of the coastal erosion area which has a higher probability of occurring. In addition, the property's flood hazard profile remains unchanged based on coastal inundation modelling by Council's consultants.

Servicing Effects

All of the proposed allotments can be fully serviced, with the specific measures outlined in the Infrastructure and Engineering Report and Conceptual Stormwater Design Report, attached in Appendix 5 & 6. Lot 1 will not comply with the permeable surface area of 30%, with 21% provided. The report outlines methods in concept in which stormwater can be appropriately managed for all of the proposed allotments, with final detailed design to be determined at a later stage, including the continued use of some systems that currently exist for the dwelling and swimming pool on site.

The Infrastructure and Engineering concludes that all of the proposed allotment can be fully serviced. It is therefore considered that the application site is appropriate for the proposed development.

6.3 Effects Assessment Conclusion

On the basis of the above assessment, the actual or potential adverse effects of the proposal on the surrounding natural and physical environment are considered to be less than minor in terms of the Resource Management Act 1991.

7 POLICY ASSESSMENT

In the following section, the proposal is assessed in relation to the relevant policy framework of the District Plan and Regional Policy Statement.

7.1 Operative District Plan 2021

AThe Objectives and Policies of the Operative District Plan of most relevance to this application are considered to be:

- *District Objectives: DO-03 – Development Management, DO-04 Coastal Environment, DO-05- Natural Hazards, DO-08- Strong Communities, DO-011 – Character and Amenity Values, DO-012- Housing Choice and Affordability,DO-013- Infrastructure, DO-014- Access and Transport, DO-C16- Centres;*
- *District-Wide Matters – Infrastructure Policies: INF-GEN-P4- Managing Adverse Effects, INF-GEN-P7 – Infrastructure and Growth Management, INF-GEN-P11 – Quality of Infrastructure Design and Services, INF-MENU-P17 – Hydraulic Neutrality – Stormwater, INF-MENU-P20– Water Supply, INF-MENUP21– Wastewater, .*
- *District-Wide Matters- Natural Hazard Policy: NH-EQ-P17 – Liquefaction Prone Land;*
- *District-Wide Matters- Subdivision in Residential Zones Policy: SUB-RES-P1;*
- *District Wide Policies: DW 1 Growth Management, DW 3 Housing Choice DW4 Managing Intensification, DW5 Residential Density;*
- *District-Wide Matters- Earthworks Policies: EW-P1- Earthworks*
- *Area Specific Matters- General Residential Zone Policies: GRZ-P3 Special Character Areas, GRZ-P4 Beach Residential Precincts, GRZ-P7 Development and Landforms, GRZ-P9– Residential Activities, GRZ-P10 – Residential Amenity, GRZ-P11 – Residential Streetscape;*

Taking these into account collectively, it is considered the proposed activity is suitably aligned with these policy directions because:

- The proposed subdivision will ultimately result in 4 allotments with specifically designed dwellings, all within fee simple titles, providing additional land to contribute to the housing stock of the area;
- All of the proposed allotments will have physical and legal access to Rosetta Road and can be fully serviced;
- The application site is of a size that could accommodate up to 3 dwellings as a permitted activity, if all existing structures and the dwelling were to be removed, and it is therefore considered that the proposed resultant density can be reasonably anticipated on this property;
- The development, although not strictly following the Special Character Areas Design Guidelines, does employ some aspects of this, in addition to the specific character of the immediate surrounding area, which is characterised by no pedestrian walkway on the

eastern side of Rosetta Road and a number of other properties with structures up to (and encroaching in the case of the café) the front boundary;

- Landscaping will be undertaken to allow for a softened final built appearance of the application site;
- The earthworks required to facilitate the subdivision will appropriately managed to avoid or mitigate erosion and silt and sediment runoff;
- A geotechnical report has been commissioned as a part of this proposal and no significant liquefaction risks were identified, if any development of the site takes into account the mitigating recommendations as set out in the report.

7.2 Operative District Plan: Special Character Areas Design Guidelines

The below table assesses the proposed development against the objectives and guidelines within the Special Character Areas Design Guidelines.

Special Character Areas: Design Guidelines	
4.1 Building location, frontage setbacks and building relationship to the street	
Objective	**Assessment**
To reinforce the character of the street frontage by encouraging new development that is responsive to the local street conditions and creates an attractive, defined and coherent streetscape	♦ The eastern side of Rosetta Road has no pedestrian footpath, with this located on the opposite side of the road. The close proximity of the proposed buildings are therefore not considered to negatively impact the enjoyment of the users of Rosetta Road ♦ The existing vegetation along the front boundary of the application site will be removed to allow for the development. However, it is proposed that plantings will be undertaken to assist in softening the resultant built form ♦ The curbing of Rosetta Road is set back 3.5-4m from the front boundary of application site, creating an existing setback. The majority of the bulk of the proposed dwellings on the front allotments will be set back 3m from the front boundary, creating a separation distance of 6.5-7m from the curb of Rosetta Road ♦ All of the garages proposed are incorporated into the bulk of the dwelling, and are set into the topography of the land
4.2 Landscaping setting and built form	
Maintain the integrity of the existing landscape (landform and vegetation; Minimise earthworks and manage potential visual effects of the earthworks on the	♦ The proposed dwellings have been designed in accordance with the topography of the land, and are considered to blend into the natural landform. ♦ The earthworks proposed comprise primarily of excavation to allow the lower levels of the proposed dwelling to be recessed into the slope to assist in reducing the visual dominance of the final built form ♦ The topography of the land, and the existing vegetation prevents the application land from being developed with minimal earthworks. The

public/visual environment; Promote a sensitive relationship between the built and natural environment (in particular the relationship between buildings, the sand dunes and the coast)	earthworks are focussed within the building footprint areas and the for the vehicle accesses. ♦ Any retaining walls will be largely obscured by the built form of the dwellings, or by landscaping features. Large retaining walls will not be visually dominant when viewed from the streetscape ♦ The configuration of the proposed dwellings, with two front dwellings and two rear dwellings will assist in obscuring some of the visual bulk of those rear dwellings. It is recognised that due to the slope of the land, those rear dwellings are likely to be visible. However, the separation distance between hose rear dwellings and the streetscape is considered to be a mitigating factor in the potential visual dominance effects.
4.3 Building bulk, form and scale	
To facilitate the scale relationship between new development and irts context and ensure that new buildings are sympathetic to and do not dominate their landscape setting and/or their neighbours	♦ The proposed new dwellings are considered to have a built form that is similar to the existing dwelling on the application, creating a cohesive built form for the application land ♦ With the exception of the dwelling on Lot 2, the dwellings will comply with the 2-storey and 8m height limit. The dwelling on Lot 2 will have the ground level floor recessed into the slope ♦ The proposed dwellings have multiple features to the front boundary facing facades, with decking and recessed features, which is considered to break up the visual dominance effects, and provide visual interest ♦ The proposed roofing style is considered to reduce visual dominance effects by ensuring that the majority of the dwellings remain under the 8m height limit and allow for design flexibility
4.4 Building character and façade treatment	
To create buildings that are coherently designed and of good design quality; To ensure that new development contributes to the safety, amenity and visual character and collective identity of the local environment	♦ A number of façade treatments are proposed, utilising a mix of materials to provide visual interest. As shown in the submitted plans, a range of neutral colours are proposed for panelling, as well as glass treatments and brick design ♦ Passive surveillance created through outdoor living areas oriented towards the street and at a higher level to allow for residents privacy ♦ Windows between the dwellings within the development are staggered both vertically and horizontally to provide privacy ♦ Façade articulation is achieved through the staggering of the different levels of the proposed dwellings and the locations of outdoor living areas including decking

7.3 Greater Wellington Regional Policy Statement

Taking the objectives and policies of the Greater Wellington Regional Policy Statement into account collectively, it is considered that the proposal is generally consistent with these directives because it:

- Will not adversely impact on air quality, historic heritage, indigenous ecosystems or soils and minerals;
- Will not restrict public access to the beach or rivers;
- Will not result in any significant modifications to the natural landform;
- Will not impact on natural hazards or unnecessarily increase risk to people from natural hazards;
- Will not result in degradation of the coastal landscape; and
- Supports a consolidated regional form, design and function through its location within an established urban area and within walking distance to public transport routes, public reserves, community facilities, a public school and kindergarten, and local shops.

7.4 National Policy Statements

The National Policy Statements pertaining to Freshwater Management, Renewable Electricity Generation and Electricity Transmission are not relevant to this particular application.

With regard to the **New Zealand Coastal Policy Statement**, the proposal will not impact on the integrity, form, functioning and resilience of the coastal environment nor will it impact on the natural character of the coastal environment or those associated natural features and landscape values. In addition, the site is not identified as being subject to any coastal hazard risks with a medium to high probability of occurring and does not propose development in line with the MDRS policy 3 which has been enabled in other qualifying matter areas.

Policy 3 (which requires the Council to adopt a precautionary approach) and Policy 25 of the NZCPS are relevant to the proposal. Enabling an increase in the level of development that could occur in an area potentially susceptible to coastal erosion hazard over at least the next 100 years would reduce the degree to which the District Plan gives effect to this policy 25. Specifically, enabling more people to live in (and more assets to be located in) areas potentially affected by coastal erosion hazard would result in an increase in the risk of social, environmental and economic harm, as well as exposure to adverse effects, from coastal hazards. Policy 25 of the NZCPS directs the District Plan to avoid this outcome. Policy 3 of the NZCPS also requires the Council to take a precautionary approach so that avoidable social and economic loss and harm to communities does not occur. Until the District Plan is updated to fully give effect to the NZCPS, the level of development provided for by the operative District Plan more appropriately gives effect to these NZCPS policies than the level of development that would otherwise be required by the MDRS and policy 3 of the NPS-UD.

The spatial extent of the Coastal Qualifying Matter Precinct is based on the 2120 P10 projected future shoreline position using the RCP 8.5+ (with -3mm/year vertical land movement) relative sea level rise scenario. This scenario is the most landward scenario modelled by Jacobs, and while it is described as highly unlikely, this scenario does have the potential to occur.[1]

Overall, the level of development proposed is still in keeping with the allotment sizes for the Coastal Qualify Matter Area and is below the level of intensification that would otherwise be in keeping with MDRS and policy 3 of the NPS-UD meaning it is not inconsistent with the outcomes sought by the New Zealand Coastal Policy Statement.

The **National Policy Statement on Urban Development** is relevant to the consideration of this proposal for a two lot residential subdivision development. The Statement's relevant policies with regard to this proposal are considered to be Policies 1 and 6. These are now addressed in turn.

Policy 1: *Planning decisions contribute to well-functioning urban environments, which are urban environments that, as a minimum:*

- *a) have or enable a variety of homes that:*
  - *(i) meet the needs, in terms of type, price, and location, of different households; and*
  - *(ii) enable Māori to express their cultural traditions and norms; and*
- *b) have or enable a variety of sites that are suitable for different business sectors in terms of location and site size; and*
- *c) have good accessibility for all people between housing, jobs, community services, natural spaces, and open spaces, including by way of public or active transport; and*
- *d) support, and limit as much as possible adverse impacts on, the competitive operation of land and development markets; and*
- *e) support reductions in greenhouse gas emissions; and*
- *f) are resilient to the likely current and future effects of climate change.*

The proposal is considered to be consistent with Policy 1. The site is zoned for residential development and can be serviced by existing infrastructure. Furthermore, the climate change coastal erosion scenario projected for the site is not considered to be likely, with coastal erosion modelled for 2120 with a 1.25m RSL which is not considered to be certain due to timeframes of the modelling.

Policy 6: *When making planning decisions that affect urban environments, decision-makers have particular regard to the following matters:*

- *a) the planned urban built form anticipated by those RMA planning documents that have given effect to this National Policy Statement*
- *b) that the planned urban built form in those RMA planning documents may involve significant changes to an area, and those changes:*

(i) *may detract from amenity values appreciated by some people but improve amenity values appreciated by other people, communities, and future generations, including by providing increased and varied housing densities and types; and*

(ii) *are not, of themselves, an adverse effect*

c) *the benefits of urban development that are consistent with well-functioning urban environments (as described in Policy 1)*

d) *any relevant contribution that will be made to meeting the requirements of this National Policy Statement to provide or realise development capacity*

e) *the likely current and future effects of climate change.*

The proposal is considered to be consistent with Policy 6. The site is located within an activity area that allows for residential development. The land is located close to public transport, public reserves, amenities, schools and shops and therefore is a highly appropriate site for development. The proposed development design ensures people, communities and future generations can provide for their wellbeing. The site is located within an existing urban area and the proposed development is able to be serviced by the existing infrastructure in the local environment. The proposed development is also occurring outside of an area where the current and future effects of climate change are likely.

Given the scale of the proposed development, it is considered that the associated benefits and costs are at the local level. In this regard, the proposal is considered to have benefits, as the proposal would provide new housing within an area that is desirable for development.

7.5 Section 104D- Particular Restrictions for Non-Complying Activities

As shown in the assessment of environmental effects in section 6 of this report, the proposal will result in less than minor effects on the environment. As per the above policy assessment, the proposal is consistent with, and not contrary to the objectives and policies set out in the Operative Plan. It is therefore considered that this proposal passes the gateway test on both matters.

7.6 Overall Conclusion

Based on the above assessment of actual or potential effects (Section 6), it is considered the proposal will be generally consistent with the policy framework of the District Plan and the Regional Policy Statement.

8 PART II MATTERS

The purpose of the RMA under **Section 5** is to promote the sustainable management of natural and physical resources. Sustainable management means managing the use, development, and protection of these resources in order to enable people and communities to provide for their social, economic, and cultural well-being and for their health and safety while –

(a) Sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and
(b) Safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and
(c) Avoiding, remedying, or mitigating any adverse effects of activities on the environment.

The proposal is considered to achieve the sustainable management purpose of the Act as it will allow for the application land to be developed in accordance with its intended purpose and without giving rise to any unacceptable adverse environmental effects.

None of the matters of national importance contained within **Section 6** of the Act are considered to be relevant to this application.

In terms of **Section 7**, this application has given particular regard to the following matters:

(b) the efficient use and development of natural and physical resources:
(c) the maintenance and enhancement of amenity values; and
(f) maintenance and enhancement of the quality of the environment.

Taking into account the principles of the Treaty of Waitangi, as directed by **Section 8** of the Act; it is my understanding that the proposal will not impact on iwi as:

- The application site is not identified within the District Plan as having any cultural or historical significance, or containing any historical or outstanding natural features;
- Appropriate measures will be put in place to ensure minimal silt or sediment runoff
- No discharges are proposed; and
- There are no watercourses in the vicinity of the application site that could be impacted by the proposed activity.

9 NOTIFICATION

Section 95 of the Act requires the consent authority to determine whether a resource consent application should be notified. The Act details two four-step processes which must be followed to reach this decision and sets out the triggers for requiring and precluding notification of applications in certain circumstances.

The assessment below follows the prescribed four-step processes for determining public notification and limited notification under sections 95A and 95E, respectively.

9.1 Public Notification Assessment

Pursuant to section 95A of the Act, this section follows the prescribed 4-step process to assess whether public notification is required for the proposed activity:

Step 1: Mandatory public notification in certain circumstances (sections 95A(2) and (3)

Determine whether the application meets any of the following criteria –

- *The applicant has requested that the application be publicly notified;*
- *Public notification is required under Section 95C; or*
- *The application is made jointly with an application to exchange recreation reserve land under section 15AA of the Reserves Act 1977.*

The applicant has not requested that the application be publicly notified, public notification is not required under Section 95C, and the applicant has not jointly made an application to exchange recreational reserve land.

Public notification is therefore not required under Step 1, and the test continues at Step 2.

Step 2: If not required by step 1, public notification precluded in certain circumstances (sections 95A(4) and (6)

Determine whether the application meets any of the following criteria –

- *The application is for a resource consent for 1 or more activities, and each activity is subject to a rule or national environmental standard that precludes public notification:*
- *The application is for a resource consent for 1 or more of the following, but no other, activities:*
  - *a controlled activity;*
  - *a restricted discretionary, discretionary, or non-complying activity, but only if the activity is a boundary activity;*

The proposed activity is not a controlled activity or a boundary activity, and therefore public notification is not precluded under Step 2 and the test continues to Step 3.

Step 3: If not precluded by Step 2, public notification required in certain circumstances

Determine whether the application meets any of the following criteria –

- *The application is for a resource consent for 1 or more activities, and any of those activities is subject to a rule or NES that requires public notification;*
- *The consent authority decides, in accordance with section 95D, that the activity will have or is likely to have adverse effects on the environment that are more than minor.*

The application is not subject to a rule or NES that requires public notification, and any potential adverse effects on the environment have been assessed as being less than minor.

Step 4: Public notification in special circumstances (section 95A(9))

Determine whether special circumstances exist in relation to the application that warrant the application being publicly notified.

Special circumstances have been defined as circumstances that are unusual or exceptional but may be less than extraordinary or unique. This application relates to the undertaking of a 4-lot residential subdivision and the construction of dwellings within an established residential area. The proposal has not been identified as having any unusual or exceptional circumstances that warrant public notification in this case.

Public notification is therefore not required under Step 4.

9.2 Limited Notification Assessment

Pursuant to section 95B of the Act, this section follows the prescribed 4-step process to assess whether limited notification is required for the proposed activity:

Step 1 – Certain affected groups/persons must be notified

Determine whether there are any—

- *Affected protected customary rights groups; or*
- *Affected customary marine title groups (in the case of an application for a resource consent for an accommodated activity).*

Determine—

- *Whether the proposed activity is on or adjacent to, or may affect, land that is the subject of a statutory acknowledgement made in accordance with an Act specified in Schedule 11; and*

- *Whether the person to whom the statutory acknowledgement is made is an affected person under section 95E.*

There are no affected protected customary rights groups and the application is not for an accommodated activity. The proposed activity is not in the vicinity of land that is the subject of a statutory acknowledgement.

Limited notification is therefore not required at Step 1, and the test continues at Step 2.

Step 2 – Limited notification is precluded in certain circumstances

Determine whether the application meets any of the following criteria –

- *The application is for a resource consent for 1 or more activities, and each activity is subject to a rule or national environmental standard that precludes limited notification:*
- *The application is for a controlled activity (but no other activities) that requires a resource consent under a district plan (other than a subdivision of land).*

The proposed activity is not subject to a rule or national standard that precludes limited notification and is not a controlled activity.

Limited notification is therefore not precluded under Step 2 and the test continues at Step 3.

Step 3 – Certain other persons must be notified

If limited notification is not precluded under step 2, limited notification is required for any persons found affected under s95E.

- *In the case of a boundary activity, determine in accordance with section 95E whether an owner of an allotment with an infringed boundary is an affected person*
- *In the case of any other activity, determine whether a person is an affected person in accordance with section 95E.*

The proposed activity is not a boundary activity. I have considered whether the proposal could adversely affect any other persons and I consider there to be no affected persons as the actual or potential environmental effects will be less than minor for the reasons set out in Section 6 of this report.

Limited notification is therefore not required under Step 3 and the test continues at Step 4.

Step 4 – Limited notification is required under special circumstances

Determine whether special circumstances exist in relation to the application that warrant notification of the application to any other persons not already determined to be eligible for limited

notification under this section (excluding persons assessed under section 95E as not being affected persons.

Special circumstances have been defined as circumstances that are unusual or exceptional but may be less than extraordinary or unique. This application relates to the undertaking of a 4-lot residential subdivision and the construction of dwellings within an established residential area. The proposal has not been identified as having any unusual or exceptional circumstances that warrant limited notification in this case.

Limited notification is therefore not required under Step 4.

9.3 Notification Conclusion

Having had regard to the 4-step processes set out within sections 95A and 95B of the Act, it is considered that limited notification of this applicant is not required.

10 CONCLUSION

Resource consent is sought to undertake a 4 lot residential 126-130 Rosetta Road, Raumati, and to construct dwellings on the newly created allotments which do not comply with all the District Plan permitted activity standards.

The actual or potential adverse effects of the proposed activities on the environment have been duly considered and assessed to be less than minor. The design and layout of the subdivision, visual effects and amenity values, infrastructure and servicing, natural hazards, earthworks effects have all been considered and assessed in Section 6 of this report.

No persons have been identified as being affected by this proposal

In addition, the proposal is considered to be suitably aligned with the policy directives of the District Plans and the Regional Policy Statement. An assessment under Part II of the Act considering its purpose and principles has found that the proposal is consistent with the enabling provisions of the Act while ensuring that sustainable management is upheld.

Based on the above, the application is able to be granted on a non-notified basis.

APPENDIX ONE: Scheme Plans

DETAILS:

THIS PLAN IS FOR RESOURCE CONSENT APPROVAL ONLY. LEITH CONSULTING LTD ACCEPT NO RESPONSIBILITY FOR THE USE OF THIS PLAN FOR ANY OTHER PURPOSE.

SITE BOUNDARIES HAVE BEEN DETERMINED BY SURVEY CALCULATION

LEGEND:

BOUNDARY
EASEMENT

N

Rosetta Road

Renown Road

#134
Part Lot 8
DP 7225

#75 Renown Road
Part Lot 7
DP 7225

69.0

25.3

3.7

#71 Renown Road
Lot 3
DP 18137

#75 Renown Road
Part Lot 7
DP 7225

69.0

21.7

14.3

18.8

2.9

4.00m Ø

EXISTING DOUBLE GARAGE TO BE REPLACED (DECK OVER)

12m diam. circle

Lot 1
309m²
BUILDING FOOTPRINT: 165m²
SITE COVERAGE: 53%

PROPOSED HOUSE 1
Refer: BOX Architecture Ltd drawings
"ROSETTA ROAD DEV" dated 18-01-2023
Sheets A400-A430

18m diam. circle

4.00mØ

ROOFLINE OF EXISTING DWELLING TO REMAIN

EXISTING DWELLING

Lot 4
TOTAL: 1001m²
DWELLING: 190m²
SITE COVERAGE: 19%

LOT 2
DP 18137
WN824/62

EXISTING BUILDING TO BE REMOVED

15m diam. circle

DECK

4.00m Ø

15.0

10.9

1.6

16.0

Lot 2
303m²
BUILDING FOOTPRINT: 115m²
SITE COVERAGE: 38%

PROPOSED HOUSE 2
Refer: BOX Architecture Ltd drawings
"ROSETTA ROAD DEV" dated 18-01-2023
Sheets A500-A530

39.7

4.4

5.8

6.0

3.0

6.9

1.4

2.5

4.00m Ø

DECK OVER GARAGE

15m diam. circle

Lot 3
810m²
ROW: 183m²
NET: 627m²
BUILDING FOOTPRINT: 124m²
POOL: 60m²
SITE COVERAGE: 29%

PROPOSED HOUSE 3
Refer: BOX Architecture Ltd drawings
"ROSETTA ROAD DEV" dated 18-01-2023
Sheets A600-A630

EXISTING POOL AND ASSOCIATED STRUCTURES TO REMAIN

LOT 1
DP 18137
WN824/62

EXISTING DECK TO BE REMOVED

EXISTING BUILDING TO BE REMOVED

29.6

35.8

#122
Lot 2
DP 83124

#71 Renown Road
Lot 3
DP 18137

NOTES:

ALL BOUNDARIES, AREAS & DIMENSIONS ARE SUBJECT TO RESOURCE CONSENT APPROVAL, COUNCIL s223 CERTIFICATION AND LINZ LAND TRANSFER SURVEY APPROVAL.

ADDITIONAL EASEMENTS MAY BE REQUIRED AT TIME OF FINAL LAND TRANSFER SURVEY

AMENDMENT:	DATE:	APPROVED:
A: SITE COVERAGES	20-01-2022	SDP
B: SW OUTLETS, SW EASEMENT	21-01-2022	SDP
C: RE-ISSUE FOR RCA	09-03-2023	TEM

PROPOSED EASEMENTS IN GROSS:

PURPOSE:	SHOWN:	SERVIENT TENEMENT: (BURDENED LAND)	GRANTEE:
Right to drain sewage		Lot 3	Kapiti Coast District Council
Right to convey telecommunications			Chorus New Zealand Limited
Right to convey gas			First Gas Limited
Right to convey electricity			Electra Limited

PROPOSED EASEMENTS:

PURPOSE:	SHOWN:	SERVIENT TENEMENT: (BURDENED LAND)	DOMINANT TENEMENT: (BENEFITED LAND)
Right of way, right to drain water and sewage, right to convey water, gas, electricity and telecommunications (as required)		Lot 3	Lots 2 and 4

LEITH CONSULTING
Land Surveying | Environmental Planning

WWW.LEITHCONSULTING.CO.NZ

PROJECT: 4 LOT SUBDIVISION
LOT 1 & 2 DP 18137
126-130 ROSETTA ROAD

CLIENT: LAWRENCE FAY

TITLE: SCHEME PLAN - LEGAL

SCALE: A1: 1:100 A3: 1:200

DRAWING SET NO: KAP-0460-SCH

SHEETS: 1 OF 4

REVISION: C

STATUS: FOR RCA APPROVAL

SURVEYED:	JLL	10-02-2021
DRAWN:	SDP	12-01-2022
DESIGNED:	SDP	12-01-2022
CHECKED:	JLB	18-01-2022
APPROVED:	JLB	18-01-2022

DETAILS:

THIS PLAN IS FOR RESOURCE CONSENT APPROVAL ONLY AND IS NOT TO BE USED FOR ANY OTHER PURPOSE.

EXISTING STORMWATER, WASTEWATER AND WATER SUPPLY LINES HAVE BEEN PLOTTED FROM COUNCIL RECORDS AND HAVE NOT BEEN VERIFIED ONSITE.

SITE BOUNDARIES HAVE BEEN DETERMINED BY SURVEY CALCULATION

SURVEY INFORMATION:

EQUIPMENT:
ROBOTIC TOTAL STATION & RTK GNSS WITH LOCAL BASE

DATUM:
NZGD2000

CIRCUIT:
WELLINGTON 2000

VERTICAL DATUM:
WELLINGTON 1953 (MSL)

SURVEY ORIGIN:
OLP I DP 59593 (F2F1)

SOURCE OF LEVELS:
OLP I DP 59693 (F2F1)
RL = 10.643
OBTAINED VIA LINZ HEIGHT CONVERSION 01 FEBRUARY 2021

CONTOUR INTERVAL:
1.0m (MAJOR)
0.5m (MINOR)

N

#134
Part Lot 8
DP 7225

#75 Renown Road
Part Lot 8
DP 7225

#75 Renown Road
Part Lot 7
DP 7225

Lot 1

Lot 2

Lot 3

Lot 4

PROPOSED VEHICLE CROSSING

NEW WASTEWATER CONNECTION

LOT 1 TO UTILISE EXISTING WATER CONNECTION

225mmØ CONCRETE SUMP LEAD (GIS)

SW OUTLETS TO KERB FROM ATTENUATION TANKS

Rosetta Road

150mmØ AC WASTEWATER MAIN (GIS)

150mmØ AC RETICULATION MAIN (GIS)

NEW WATER CONNECTION

NEW WASTEWATER CONNECTION

2x NEW WATER CONNECTIONS SERVICING LOTS 3 & 4

EXISTING CROSSING TO BE WIDENED

NEW WASTEWATER MANHOLE

6.00

2.20

PASSING BAY DIMENSIONS IN ACCORDANCE WITH NZS4404:2010 CL 3.3.1.3

'L' TURNING HEAD IN ACCORDANCE WITH NZS4404:2010 FIG 3.4

NEW WASTEWATER CONNECTION

NEW WASTEWATER CONNECTION

NEW WASTEWATER MANHOLE

PROPOSED SUMP OUTLET TO KERB

EXISTING POWER & TELECOM SUPPLIES

PROPOSED SUMP

EXISTING WASTEWATER CONNECTION TO BE CAPPED

LOW (<1.1m) RETAINING WALL (DETAILS TBC) BEHIND KERB

PROPOSED 150Ø GRAVITY MAIN TO ROSETTA ROAD

LOW (<0.5m) RETAINING WALL (DETAILS TBC) BEHIND KERB

#120
Lot 1
DP 83124

#122
Lot 2
DP 83124

#71 Renown Road
Lot 3
DP 18137

LEGEND:

- BOUNDARY
- MAJOR CONTOUR (DESIGN)
- MINOR CONTOUR (DESIGN)
- WATER MAIN (GIS)
- STORMWATER MAIN (GIS)
- WASTEWATER MAIN (GIS)
- CENTRELINE OF ROAD
- BOTTOM OF BANK
- BUILDING GROUND LEVEL
- BUILDING GUTTER
- BUILDING ROOFLINE
- EDGE OF VEGETATION
- EXISTING FENCE
- GARDEN
- TOP OF BANK
- FIRE HYDRANT
- WATER METER
- STORMWATER SUMP
- POWER POLE
- POWER PILLAR

AMENDMENT:	DATE:	APPROVED:
A: SITE COVERAGES	20-01-2022	SDP
B: SW OUTLETS, SW EASEMENT	21-01-2022	SDP
C: RE-ISSUE FOR RCA	09-03-2023	TEM

LEITH CONSULTING
Land Surveying | Environmental Planning

PROJECT: 4 LOT SUBDIVISION
LOT 1 & 2 DP 18137
126-130 ROSETTA ROAD

CLIENT: LAWRENCE FAY

TITLE: SCHEME PLAN - SERVICES

SCALE: A1: 1:100 A3: 1:200

DRAWING SET NO: KAP-0460-SCH

SHEETS: 2 OF 4

REVISION: C

STATUS: FOR RCA APPROVAL

SURVEYED:	JLL	10-02-2021
DRAWN:	SDP	12-01-2022
DESIGNED:	SDP	12-01-2022
CHECKED:	JLB	18-01-2022
APPROVED:	JLB	18-01-2022

DETAILS:

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CIRCUIT:
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VERTICAL DATUM:
WELLINGTON 1953 (MSL)

SURVEY ORIGIN:
OLP I DP 59593 (F2F1)

SOURCE OF LEVELS:
OLP I DP 59693 (F2F1)
RL = 10.643
OBTAINED VIA LINZ
HEIGHT CONVERSION
01 FEBRUARY 2021

CONTOUR INTERVAL:
1.0m (MAJOR)
0.5m (MINOR)

PROPOSED EARTHWORKS:	
TOTAL EARTHWORKS AREA	986m²
OVERALL SITE AREA	2425m²
PROPORTION OF SITE	41%
MAX CUT	4.4m
MAX FILL	1.2m
CUT VOLUME	883m³
FILL VOLUME	52m³
BALANCE	831m³ (excess cut)
NOTE: VOLUMES EXCLUDE COMPACTION	

CUT/FILL DEPTH RANGES:			
TYPE:	COLOUR:	LOWER VALUE:	UPPER VALUE:
CUT:		>-11	-10
		-10	-9
		-9	-8
		-8	-7
		-7	-6
		-6	-5
		-5	-4
		-4	-3
		-3	-2
		-2	-1
		-1	0
FILL:		0	1
		1	2
		2	3
		3	4
		4	5
		5	6
		6	7
		7	8
		8	9
		9	10
		10	>10

#134
Part Lot 8
DP 7225

#75 Renown Road
Part Lot 7
DP 7225

#120
Lot 1
DP 83124

#122
Lot 2
DP 83124

#71 Renown Road
Lot 3
DP 18137

Rosetta Road

EXISTING GARAGE WALL TO BE REPLACED

EXISTING DOUBLE GARAGE TO BE REPLACED (DECK OVER)

PORTION OF EXISTING ROCK WALL TO BE BE REMOVED & BERM TO BE LOWERED

EXISTING ROCK WALL TO REMAIN

EXISTING WALL TO BE DEMOLISHED

EXISTING WALLS TO BE DEMOLISHED

Lot 1

Lot 2

Lot 3

Lot 4

LEGEND:

BOUNDARY
MAJOR CONTOUR (DESIGN)
MINOR CONTOUR (DESIGN)
WATER MAIN (GIS)
STORMWATER MAIN (GIS)
WASTEWATER MAIN (GIS)
CENTRELINE OF ROAD
BOTTOM OF BANK
BUILDING GROUND LEVEL
BUILDING GUTTER
BUILDING ROOFLINE
EDGE OF VEGETATION
EXISTING FENCE
GARDEN
TOP OF BANK
FIRE HYDRANT
WATER METER
STORMWATER SUMP
POWER POLE
POWER PILLAR

AMENDMENT:	DATE:	APPROVED:
A: SITE COVERAGES	20-01-2022	SDP
B: SW OUTLETS, SW EASEMENT	21-01-2022	SDP
C: RE-ISSUE FOR RCA	09-03-2023	TEM

LEITH CONSULTING
Land Surveying | Environmental Planning
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PROJECT: 4 LOT SUBDIVISION
LOT 1 & 2 DP 18137
126-130 ROSETTA ROAD

CLIENT: LAWRENCE FAY

TITLE: SCHEME PLAN - EARTHWORKS

SCALE: A1: 1:100 A3: 1:200

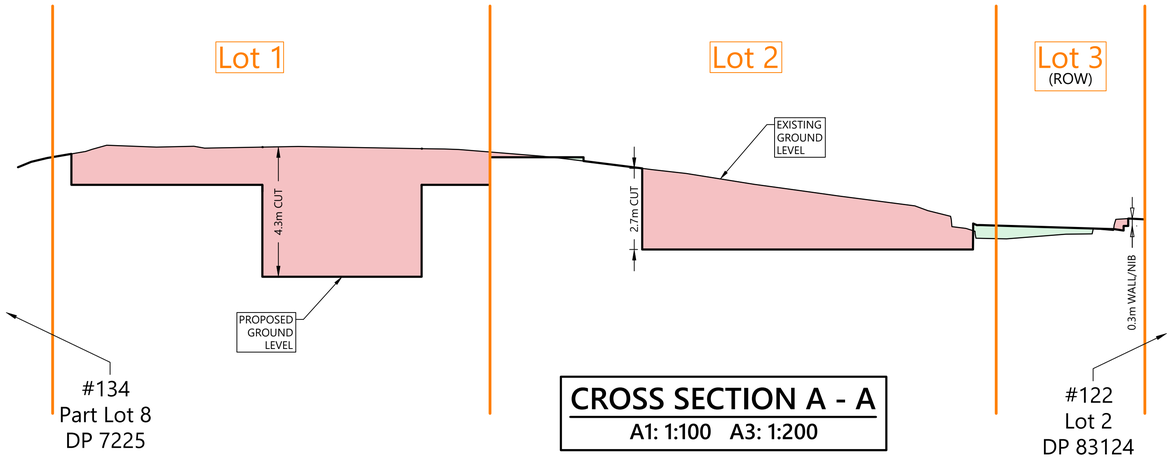
DRAWING SET NO: KAP-0460-SCH

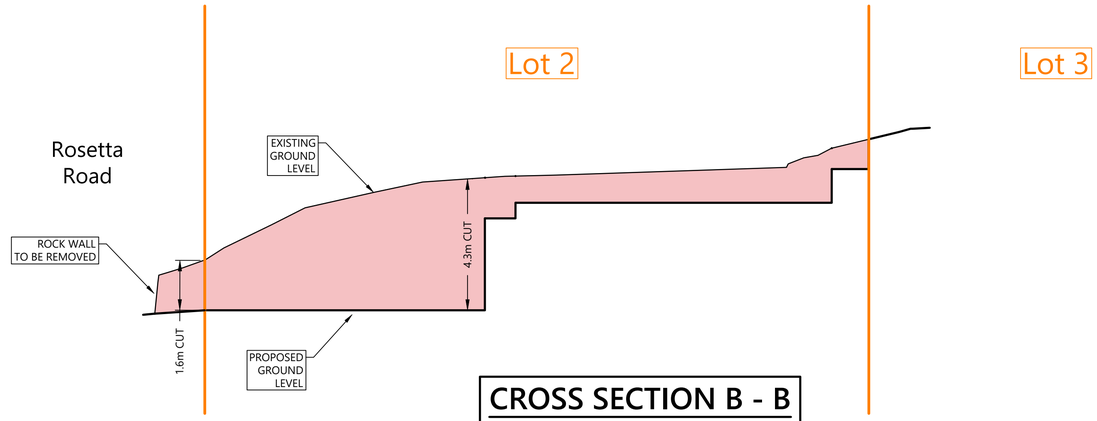
SHEETS: 3 OF 4

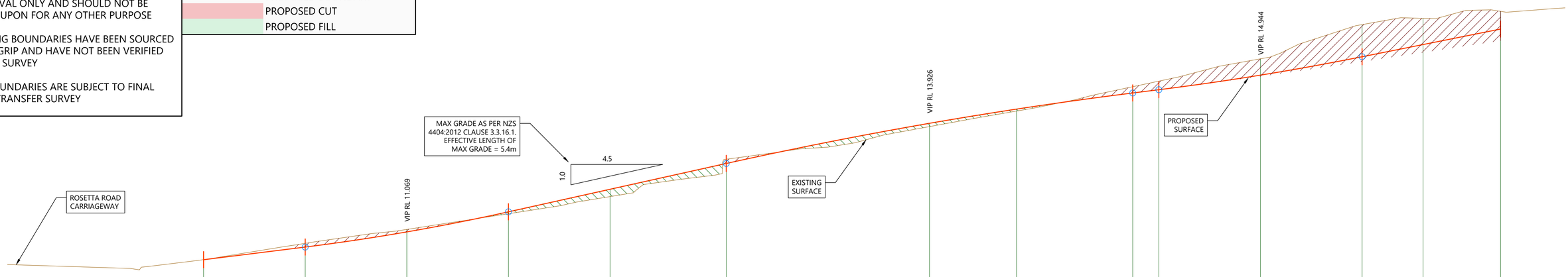
REVISION: C

STATUS: FOR RCA APPROVAL

SURVEYED:	JLL	10-02-2021
DRAWN:	SDP	14-01-2022
DESIGNED:	SDP	14-01-2022
CHECKED:	JLB	18-01-2022
APPROVED:	JLB	18-01-2022







CROSS SECTION A - A

A1: 1:100 A3: 1:200

CROSS SECTION B - B

A1: 1:100 A3: 1:200

DETAILS:

THIS PLAN IS FOR RESOURCE CONSENT APPROVAL ONLY AND SHOULD NOT BE RELIED UPON FOR ANY OTHER PURPOSE

EXISTING BOUNDARIES HAVE BEEN SOURCED FROM GRIP AND HAVE NOT BEEN VERIFIED BY SITE SURVEY

ALL BOUNDARIES ARE SUBJECT TO FINAL LAND TRANSFER SURVEY

LEGEND:

—	PROPOSED BOUNDARY
🟥	PROPOSED CUT
🟩	PROPOSED FILL

DATUM RL = 7.900

FINISHED SURFACE LEVEL	10.445	10.757	11.130	11.625	12.180	12.815	13.805	14.154	14.551	14.632	14.991	15.444	15.744	16.125
EXISTING SURFACE LEVEL	10.445	10.848	11.191	11.578	12.000	12.918	13.723	14.106	14.706	14.843	15.393	16.235	16.390	16.562
CUT / FILL DEPTH	-0.000	-0.092	-0.061	0.047	0.180	-0.103	0.082	0.048	-0.155	-0.211	-0.402	-0.791	-0.646	-0.437
CONTROL LINE CHAINAGE	0	2.5	5	7.5	10	12.858	17.858	20	22.858	23.5	26	28.5	30	31.906

LONG SECTION B - B

A1: 1:50 A3: 1:100

AMENDMENT:	DATE:	APPROVED:
A: SITE COVERAGES	20-01-2022	SDP
B: SW OUTLETS, SW EASEMENT	21-01-2022	SDP
C: RE-ISSUE FOR RCA	09-03-2023	TEM

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PROJECT: 4 LOT SUBDIVISION
LOT 1 & 2 DP 18137
126-130 ROSETTA ROAD

CLIENT: LAWRENCE FAY

TITLE: SCHEME PLAN - EARTHWORKS SECTIONS

SCALE: A1: VARIES A3: VARIES
DRAWING SET NO: KAP-0460-SCH
SHEETS: 4 OF 4
REVISION: C

STATUS: FOR RCA APPROVAL

SURVEYED:	JLL	10-02-2021
DRAWN:	SDP	14-01-2022
DESIGNED:	SDP	14-01-2022
CHECKED:	JLB	18-01-2022
APPROVED:	JLB	18-01-2022

APPENDIX TWO: Architectural Plans

ROSETTA ROAD DEV.

JOB NUMBER:

22-006

FOR: **COBIE TRADING LIMITED**

ADDRESS: **126-130 ROSETTA ROAD, RAUMATI BEACH**

ISSUE DATE: **18/01/2023**

DRAWING LIST

SHEET	DISCRIPTION	REV.
A000	COVER PAGE & INDEX	2
A100	EXISTING AERIAL SITE IMAGE	2
A200	PROPOSED SUBDIVISION PLAN	2
A205	PROPOSED DWELLING STORMWATER	2
A210	PROPOSED BUILDING PLATFORMS	2
A300	PROPOSED R.O.W SECTION	2
A400	HOUSE 01 - VIEW	2
A410	HOUSE 01 - PLAN L0	2
A411	HOUSE 01 - PLAN L1	2
A420	HOUSE 01 - ELEVATIONS	3
A421	HOUSE 01 - ELEVATIONS	2
A430	HOUSE 01 - SECTION	2
A500	HOUSE 02 - VIEW	2
A510	HOUSE 02 - PLAN L0	2
A511	HOUSE 02 - PLAN L1	2
A512	HOUSE 02 - PLAN L2	2
A520	HOUSE 02 - ELEVATIONS	2
A521	HOUSE 02 - ELEVATIONS	2
A530	HOUSE 02 - SECTION 02	2
A600	HOUSE 03 - VIEW	2
A610	HOUSE 03 - PLAN L1	2
A611	HOUSE 03 - PLAN L2	2
A620	HOUSE 03 - ELEVATIONS	2
A621	HOUSE 03 - ELEVATIONS	2
A630	HOUSE 03 - SECTIONS	2

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EMAIL: mark@boxarchitecture.co.nz

1 EXISITNG SITE - AERIAL IMAGE

SCALE: 1 : 200

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EMAIL: mark@boxarchitecture.co.nz

PROJECT
ROSETTA ROAD DEV.

CLIENT
COBIE TRADING LIMITED

126-130 ROSETTA ROAD, RAUMATI BEACH

PROJECT STATUS	RESOURCE CONSENT	
SCALE AS INDICATED	DATE 18/01/2023	
DESIGN -	DRAWN MD	
PROJECT NO. 22-006	SHEET NO. A100	REV 2

1 PROPOSED SITE SUBDIVISION

SCALE: 1 : 200

TOTAL LAND AREA: APPROX. 2424m²

LOT 01 (HOUSE 01)

LAND AREA: 309m²
FOOTPRINT: 165m²
PERMEABLE AREA: 65m²

SITE COVERAGE (%): 53%
PERMEABLE AREA (%): 21%

TOTAL FLOOR AREA: 209m²

LOT 02 (HOUSE 02)

LAND AREA: 303m²
FOOTPRINT: 115m²
PERMEABLE AREA: 130m²

SITE COVERAGE (%): 37%
PERMEABLE AREA (%): 42%

TOTAL FLOOR AREA: 222m²

LOT 03 (HOUSE 03)

LAND AREA: 627m²
FOOTPRINT: 124m²
POOL AREA: 60m²
PERMEABLE AREA: 289m²

SITE COVERAGE (%): 29%
(Including Pool)
PERMEABLE AREA (%):46%

TOTAL FLOOR AREA: 209m²

LOT 04 (EXISTING)

LAND AREA: 1001m²
FOOTPRINT: 190m²
PERMEABLE AREA: 626m²

SITE COVERAGE: 19%
PERMEABLE AREA(%): 62%

TOTAL FLOOR AREA: 317m²

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PROJECT	ROSETTA ROAD DEV.
CLIENT	COBIE TRADING LIMITED
	126-130 ROSETTA ROAD, RAUMATI BEACH
PROJECT STATUS	RESOURCE CONSENT
SCALE	AS INDICATED
DATE	18/01/2023
DESIGN	–
DRAWN	MD
PROJECT NO.	22-006
SHEET NO.	A200
REV	2

1 **PROPOSED DWELLING STORMWATER ATTENUATION**

SCALE: 1 : 200

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PROJECT
ROSETTA ROAD DEV.

CLIENT
COBIE TRADING LIMITED
126-130 ROSETTA ROAD, RAUMATI BEACH

PROJECT STATUS	RESOURCE CONSENT		
SCALE AS INDICATED		DATE	18/01/2023
DESIGN		DRAWN	MD
PROJECT NO. 22-006	SHEET NO. A205	REV	2

ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED.
CHECK AND VERIFY ALL DIMENSIONS AND LEVELS ON SITE PRIOR TO WORK COMMENCING. ALL WORK TO COMPLY WITH NZBC, NZS3604:2011 AND LOCAL TERRITORIAL AUTHORITY REGULATIONS.
DRAWINGS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DOCUMENTATION.
DO NOT SCALE OFF DRAWINGS.

1 **SITE - PROPOSED BUILDING PLATFORMS**
SCALE: 1 : 200

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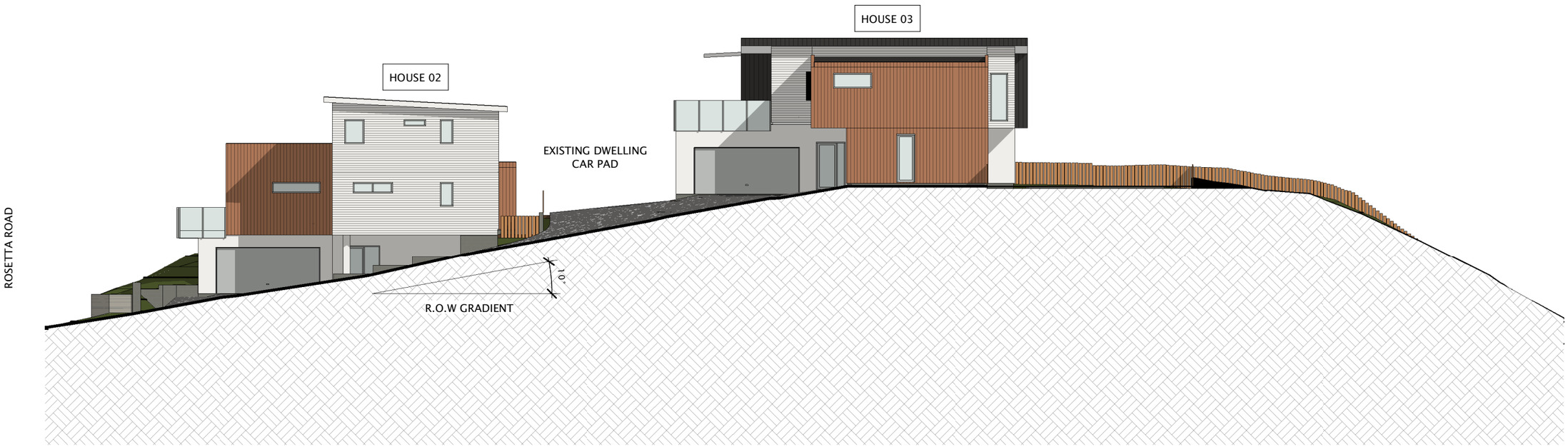
PROJECT	ROSETTA ROAD DEV.
CLIENT	COBIE TRADING LIMITED
	126-130 ROSETTA ROAD, RAUMATI BEACH
PROJECT STATUS	RESOURCE CONSENT
SCALE	AS INDICATED
DATE	18/01/2023
DESIGN	-
DRAWN	MD
PROJECT NO.	22-006
SHEET NO.	A210
REV	2

ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED.
CHECK AND VERIFY ALL DIMENSIONS AND LEVELS ON SITE PRIOR TO WORK COMMENCING. ALL WORK TO COMPLY WITH NZBC, NZS3604:2011 AND LOCAL TERRITORIAL AUTHORITY REGULATIONS.
DRAWINGS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DOCUMENTATION.
DO NOT SCALE OFF DRAWINGS.



1 **DRIVEWAY SECTION 01**
SCALE: 1 : 200

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PROJECT
ROSETTA ROAD DEV.
CLIENT
COBIE TRADING LIMITED
126-130 ROSETTA ROAD, RAUMATI BEACH

PROJECT STATUS	RESOURCE CONSENT	
SCALE AS INDICATED	DATE 18/01/2023	
DESIGN –	DRAWN –	
PROJECT NO. 22-006	SHEET NO. A300	REV 2

HOUSE 01

1 **3D VIEW – HOUSE 01**

SCALE: 1 : 1

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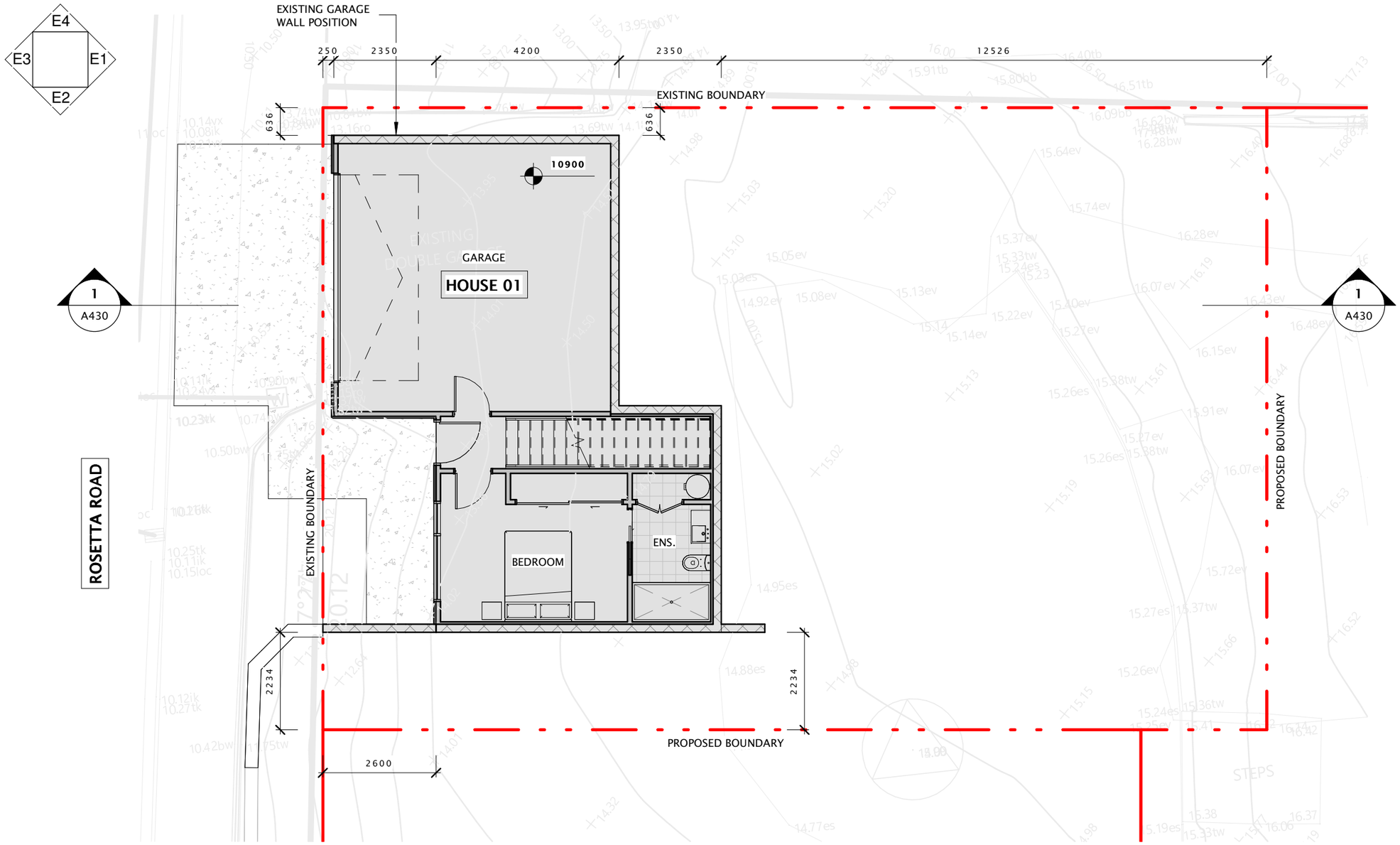
PROJECT
ROSETTA ROAD DEV.

CLIENT
COBIE TRADING LIMITED

126-130 ROSETTA ROAD, RAUMATI BEACH

PROJECT STATUS	RESOURCE CONSENT	
SCALE AS INDICATED	DATE 18/01/2023	
DESIGN –	DRAWN –	
PROJECT NO. 22-006	SHEET NO. A400	REV 2



1 HOUSE 01 - GROUND FLOOR

SCALE: 1 : 100

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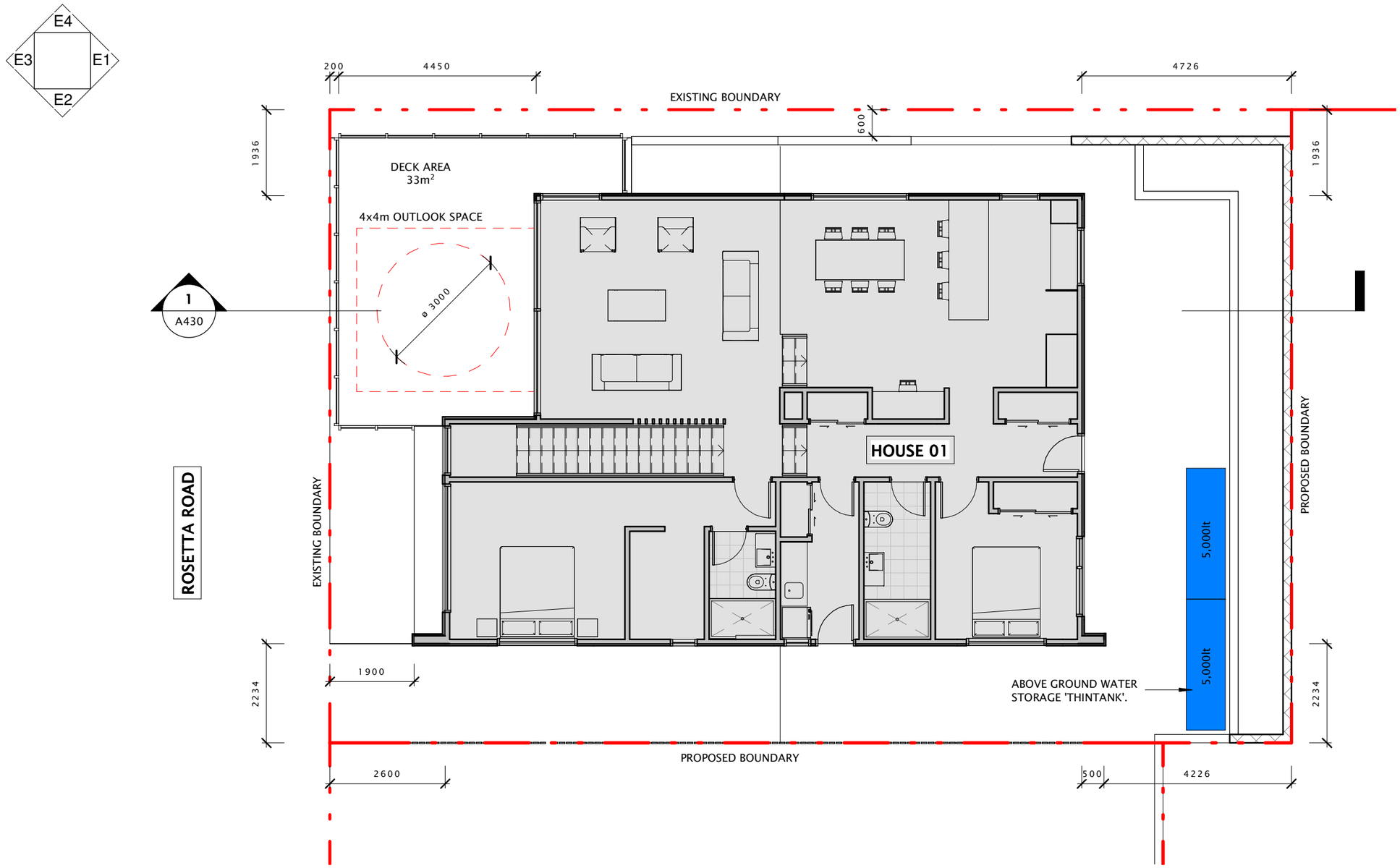
PROJECT	ROSETTA ROAD DEV.
CLIENT	COBIE TRADING LIMITED
	126-130 ROSETTA ROAD, RAUMATI BEACH

PROJECT STATUS	RESOURCE CONSENT		
SCALE	AS INDICATED	DATE	18/01/2023
DESIGN	–	DRAWN	MD
PROJECT NO.	22-006	SHEET NO.	A410
REV	2		



1 HOUSE 01 - FIRST FLOOR

SCALE: 1 : 100

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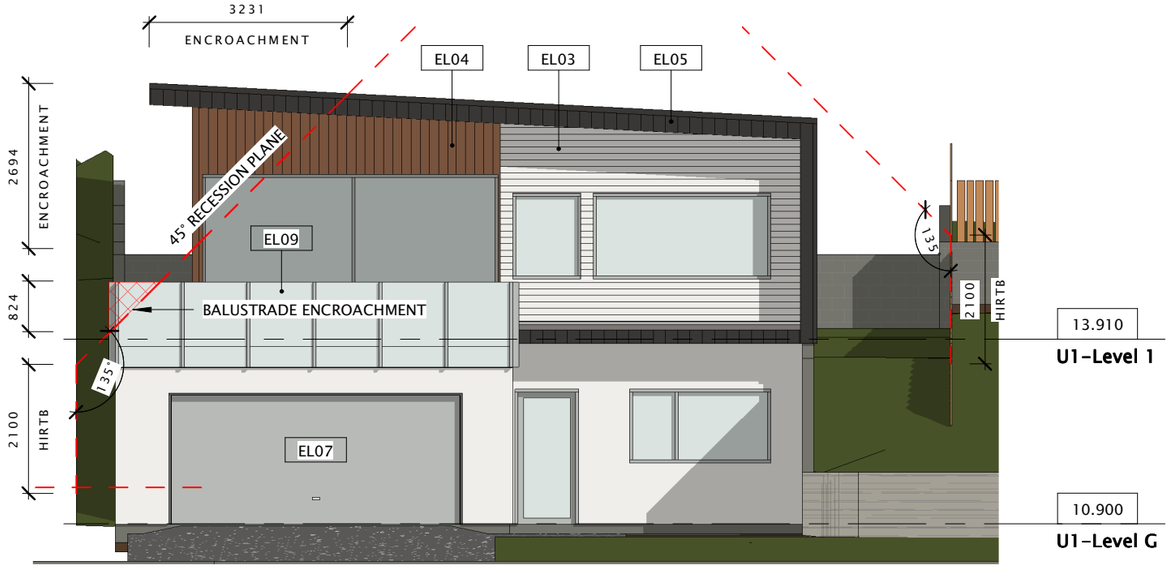
PROJECT
ROSETTA ROAD DEV.

CLIENT
COBIE TRADING LIMITED
126-130 ROSETTA ROAD, RAUMATI BEACH

PROJECT STATUS	RESOURCE CONSENT	
SCALE AS INDICATED	DATE 18/01/2023	
DESIGN –	DRAWN –	
PROJECT NO. 22-006	SHEET NO. A411	REV 2



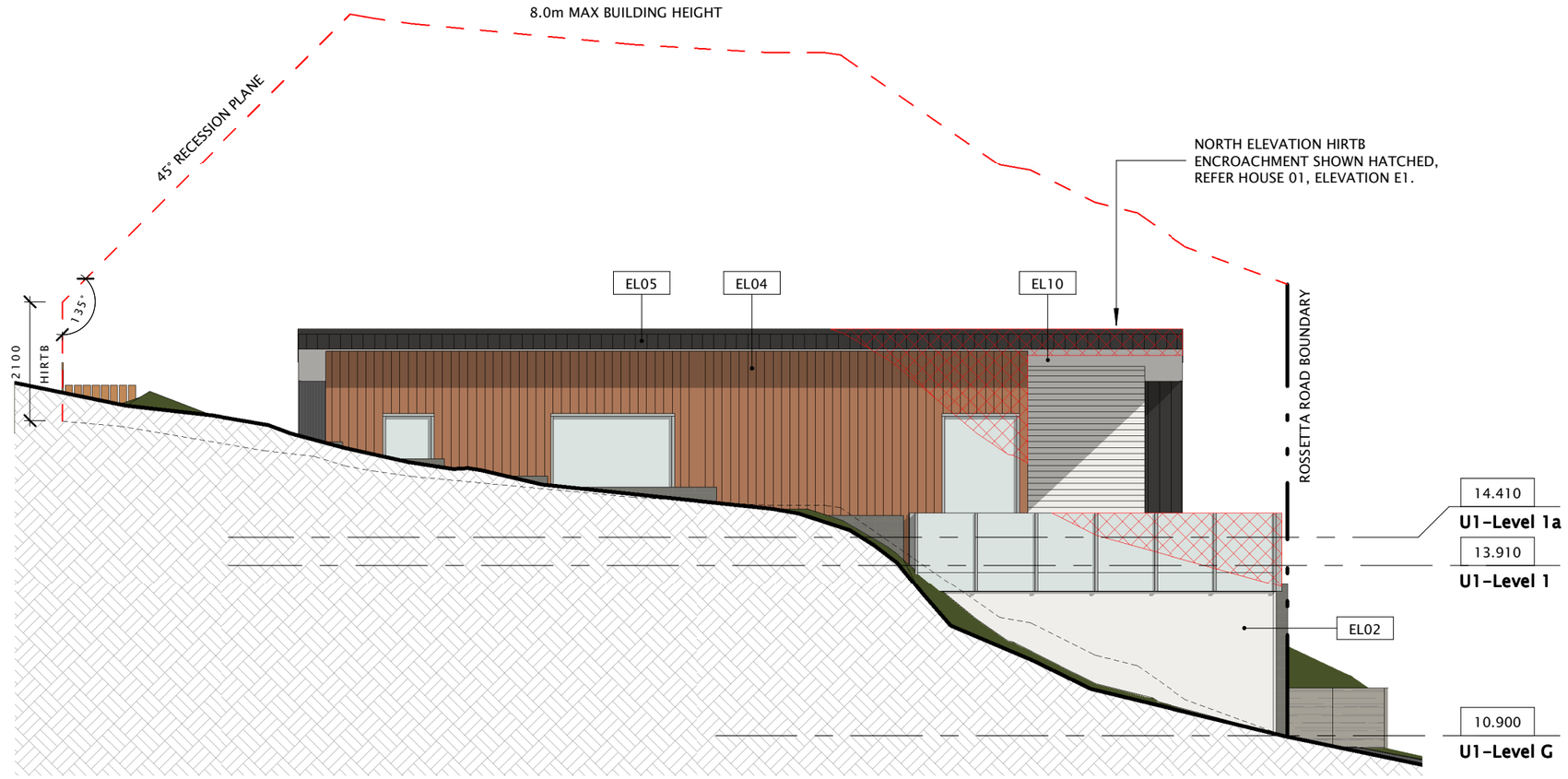
LOT 01 (HOUSE 01)

STREET FACADE AREA	= 73m²
GLAZING AREA	= 23m²
GLAZING PERCENTAGE	= 31%

ELEVATION KEYNOTES	
KEY	DESCRIPTION
EL01	PROFILED METAL LONGRUN ROOFING.
EL02	RENDERED FINISH OVER CONCRETE MASONRY BLOCK.
EL03	HORIZONTAL TIMBER WEATHERBOARDS OVER CAVITY SYSTEM WITH PAINT FINISH.
EL04	VERTICAL CEDAR WEATHERBOARD OVER CAVITY SYSTEM WITH STAIN FINISH.
EL05	VERTICAL TIMBER WEATHERBOARD OR 'GROOVED' PANEL CLADDING OVER CAVITY SYSTEM WITH PAINT FINISH.
EL06	ALUMINIUM JOINERY SUITE.
EL07	4.8x2.1m HIGH SECTIONAL GARAGE DOOR.
EL09	GLAZED ALUMINIUM BALUSTRADE.
EL10	PAINTED FIBRE CEMENT SOFFITS.
EL11	LIGHTWEIGHT RENDERED FINISH OVER CAVITY SYSTEM.

E1 HOUSE 01 – WEST ELEVATION

SCALE: 1 : 100



E2 HOUSE 01 – NORTH ELEVATION

SCALE: 1 : 100

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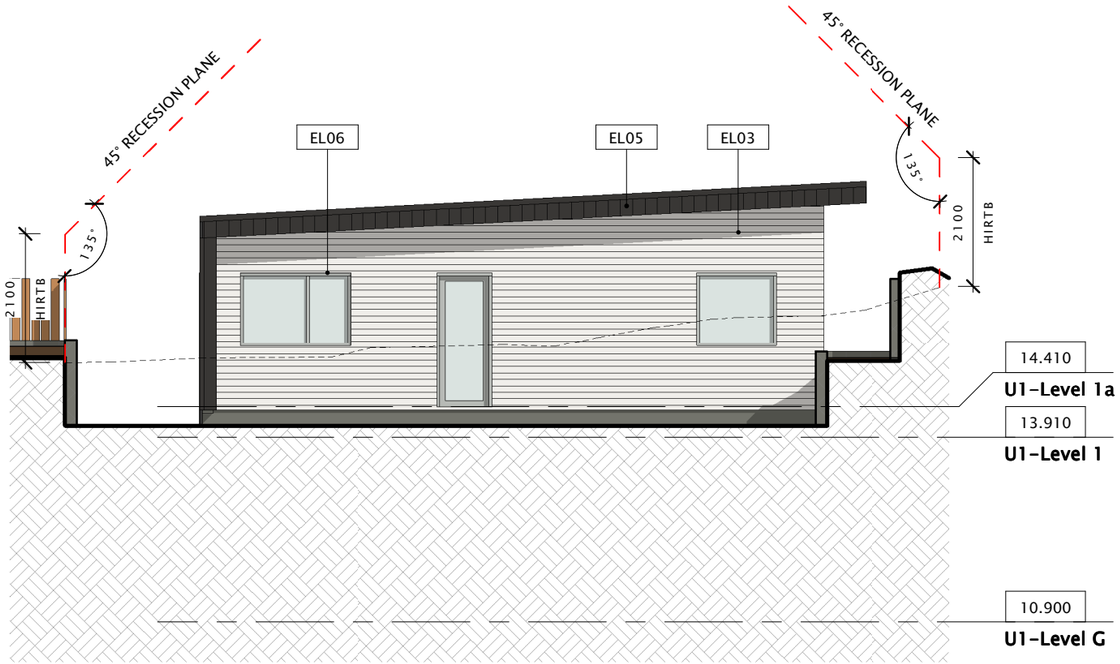
PROJECT: ROSETTA ROAD DEV.
CLIENT: COBIE TRADING LIMITED
126-130 ROSETTA ROAD, RAUMATI BEACH

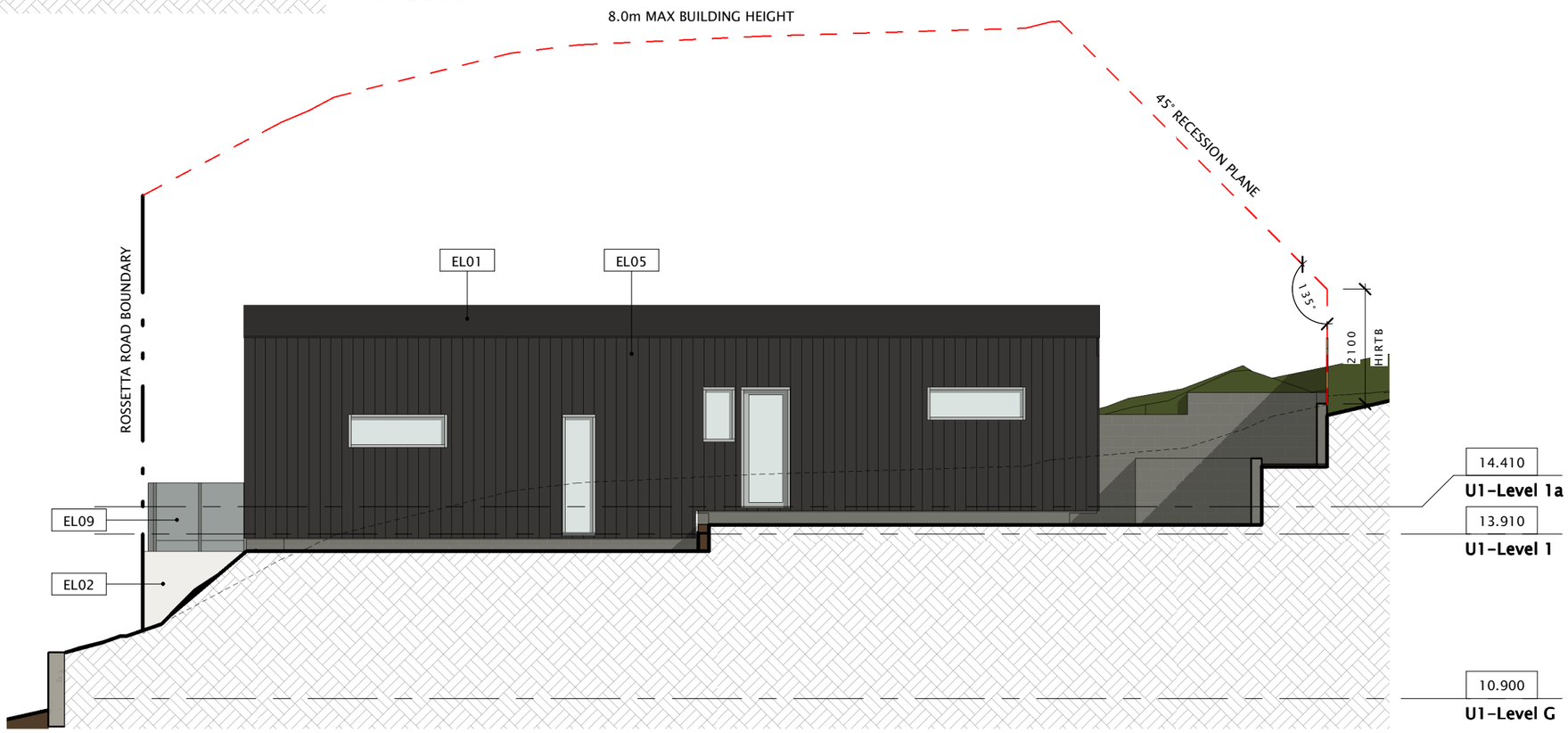
PROJECT STATUS	RESOURCE CONSENT		
SCALE AS INDICATED		DATE	18/01/2023
DESIGN –		DRAWN	MD
PROJECT NO. 22-006	SHEET NO. A420	REV	3



E3 HOUSE 01 - EAST ELEVATION

SCALE: 1 : 100

ELEVATION KEYNOTES	
KEY	DESCRIPTION
EL01	PROFILED METAL LONGRUN ROOFING.
EL02	RENDERED FINISH OVER CONCRETE MASONRY BLOCK.
EL03	HORIZONTAL TIMBER WEATHERBOARDS OVER CAVITY SYSTEM WITH PAINT FINISH.
EL04	VERTICAL CEDAR WEATHERBOARD OVER CAVITY SYSTEM WITH STAIN FINISH.
EL05	VERTICAL TIMBER WEATHERBOARD OR 'GROOVED' PANEL CLADDING OVER CAVITY SYSTEM WITH PAINT FINISH.
EL06	ALUMINIUM JOINERY SUITE.
EL07	4.8x2.1m HIGH SECTIONAL GARAGE DOOR.
EL09	GLAZED ALUMINIUM BALUSTRADE.
EL10	PAINTED FIBRE CEMENT SOFFITS.
EL11	LIGHTWEIGHT RENDERED FINISH OVER CAVITY SYSTEM.



E4 HOUSE 01 - SOUTH ELEVATION

SCALE: 1 : 100

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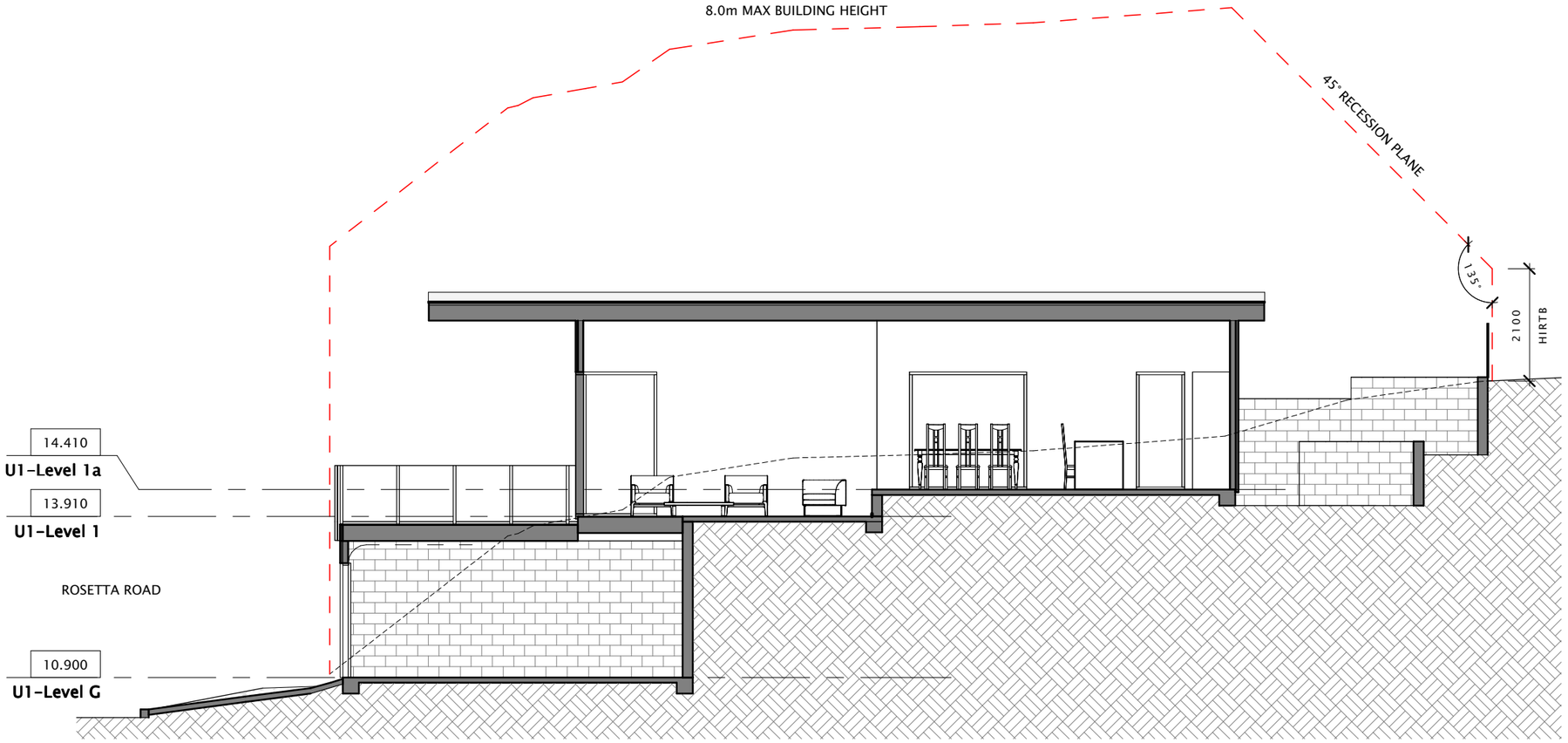
PROJECT	ROSETTA ROAD DEV.
CLIENT	COBIE TRADING LIMITED
	126-130 ROSETTA ROAD, RAUMATI BEACH
PROJECT STATUS	RESOURCE CONSENT
SCALE	AS INDICATED
DATE	18/01/2023
DESIGN	-
DRAWN	-
PROJECT NO.	22-006
SHEET NO.	A421
REV	2



1 **H01 - SECTION 01**

SCALE: 1 : 100

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PROJECT
ROSETTA ROAD DEV.

CLIENT
COBIE TRADING LIMITED

126-130 ROSETTA ROAD, RAUMATI BEACH

PROJECT STATUS	RESOURCE CONSENT	
SCALE AS INDICATED	DATE 18/01/2023	
DESIGN –	DRAWN –	
PROJECT NO. 22-006	SHEET NO. A430	REV 2

HOUSE 02

2 3D VIEW - HOUSE 02

SCALE: 1 : 1

Box Architecture Ltd

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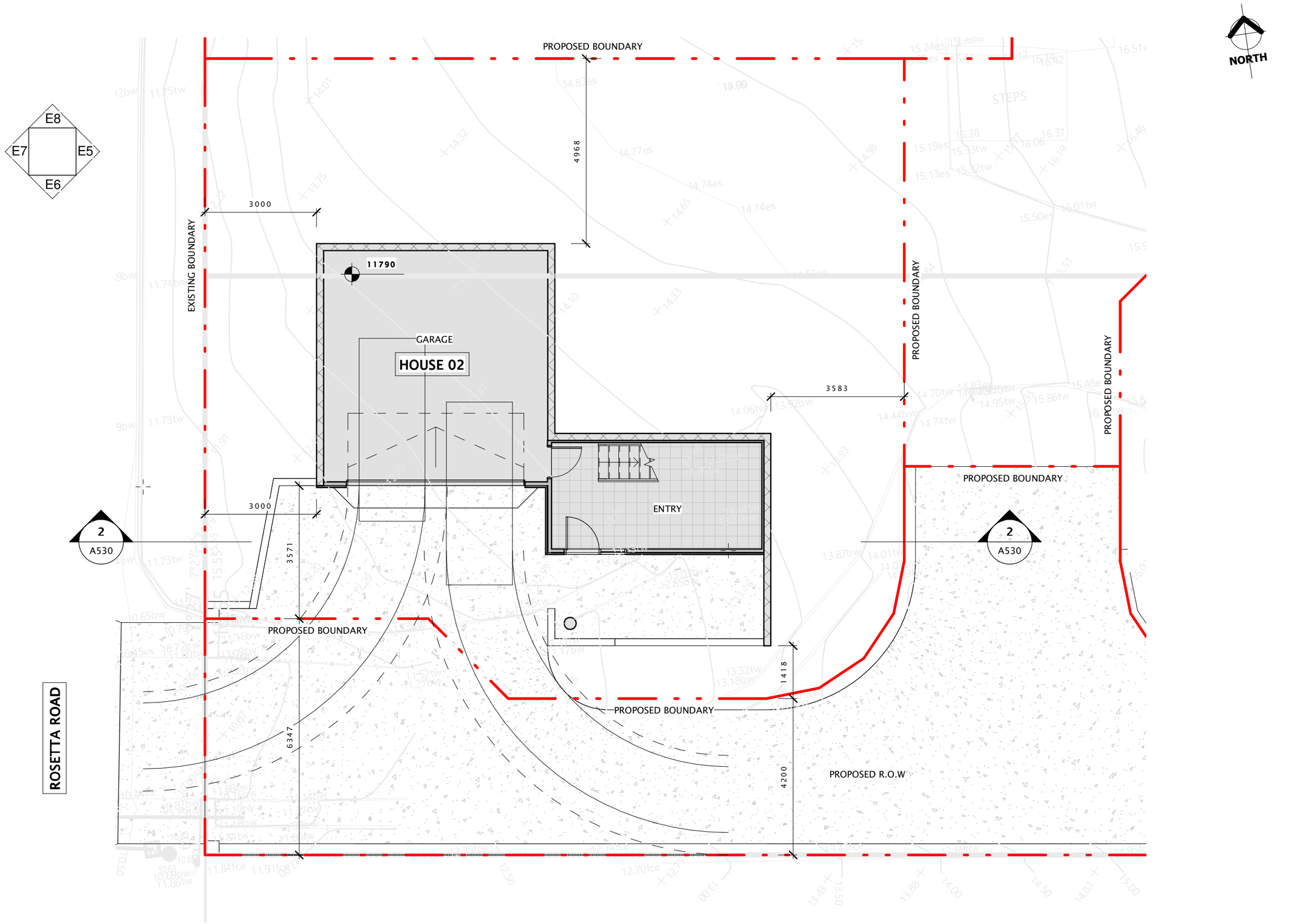
EMAIL: mark@boxarchitecture.co.nz

PROJECT
ROSETTA ROAD DEV.

CLIENT
COBIE TRADING LIMITED
126-130 ROSETTA ROAD, RAUMATI BEACH

PROJECT STATUS	RESOURCE CONSENT	
SCALE AS INDICATED	DATE 18/01/2023	
DESIGN -	DRAWN -	
PROJECT NO. 22-006	SHEET NO. A500	REV 2



1 **HOUSE 02 - GROUND FLOOR**

SCALE: 1 : 100

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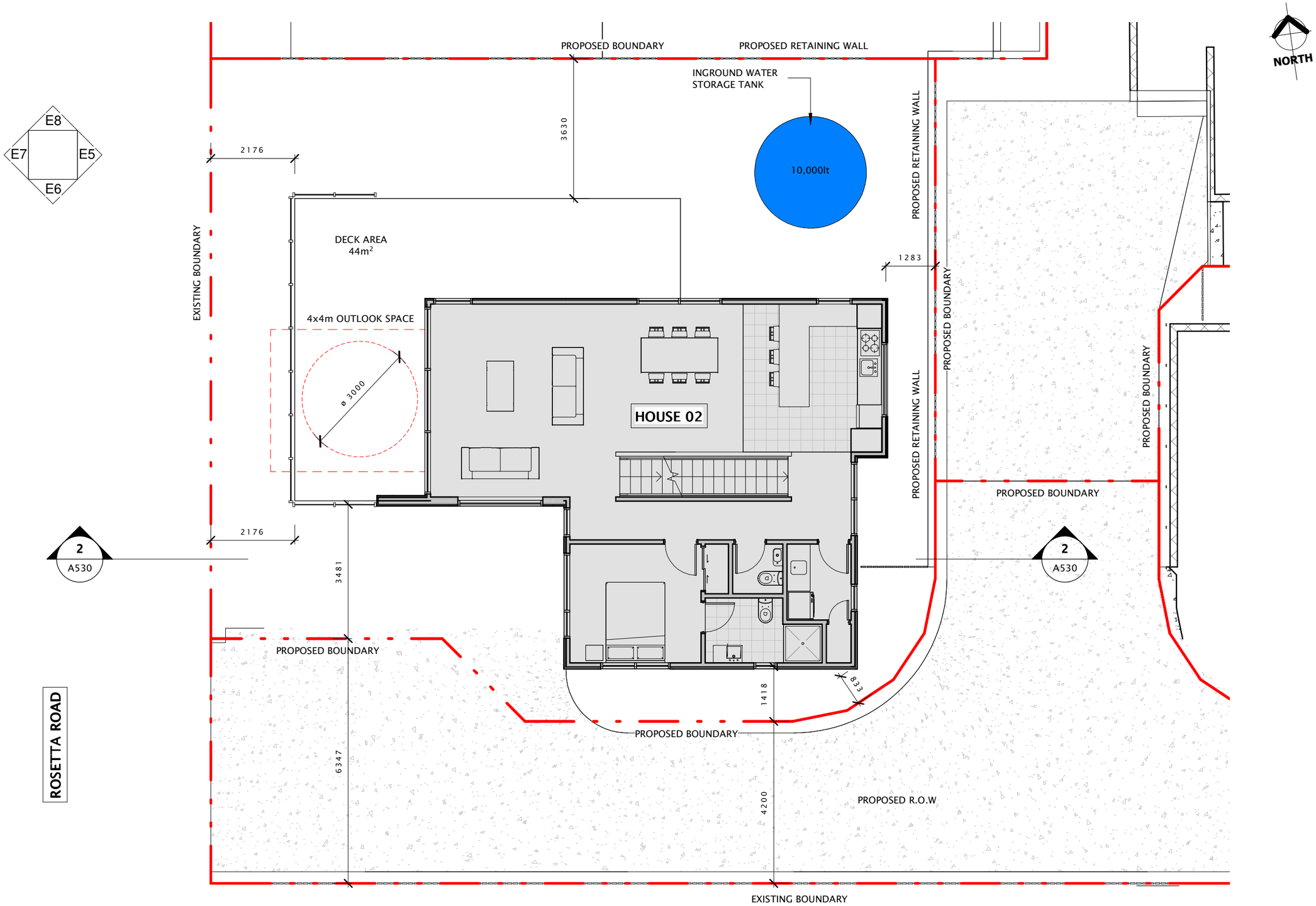
PROJECT
ROSETTA ROAD DEV.

CLIENT
COBIE TRADING LIMITED
126-130 ROSETTA ROAD, RAUMATI BEACH

PROJECT STATUS	RESOURCE CONSENT		
SCALE AS INDICATED	DATE 18/01/2023		
DESIGN –	DRAWN MD		
PROJECT NO. 22-006	SHEET NO. A510	REV 2	



1 HOUSE 2 - FIRST FLOOR

SCALE: 1 : 100

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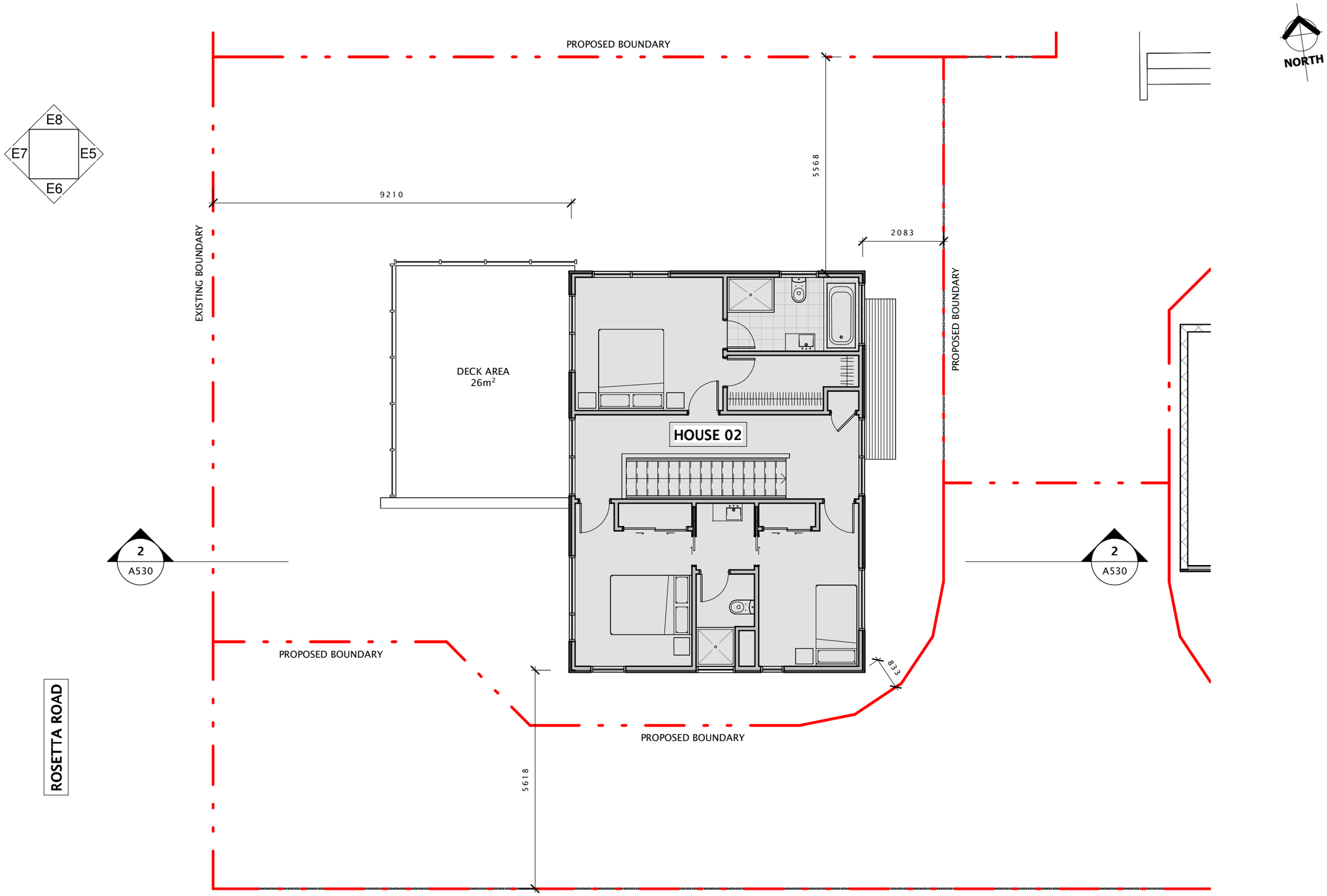
PROJECT	ROSETTA ROAD DEV.
CLIENT	COBIE TRADING LIMITED
	126-130 ROSETTA ROAD, RAUMATI BEACH
PROJECT STATUS	RESOURCE CONSENT
SCALE	AS INDICATED
DATE	18/01/2023
DESIGN	-
DRAWN	MD
PROJECT NO.	22-006
SHEET NO.	A511
REV	2



1 HOUSE 02 - SECOND FLOOR

SCALE: 1 : 100

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PROJECT
ROSETTA ROAD DEV.

CLIENT
COBIE TRADING LIMITED

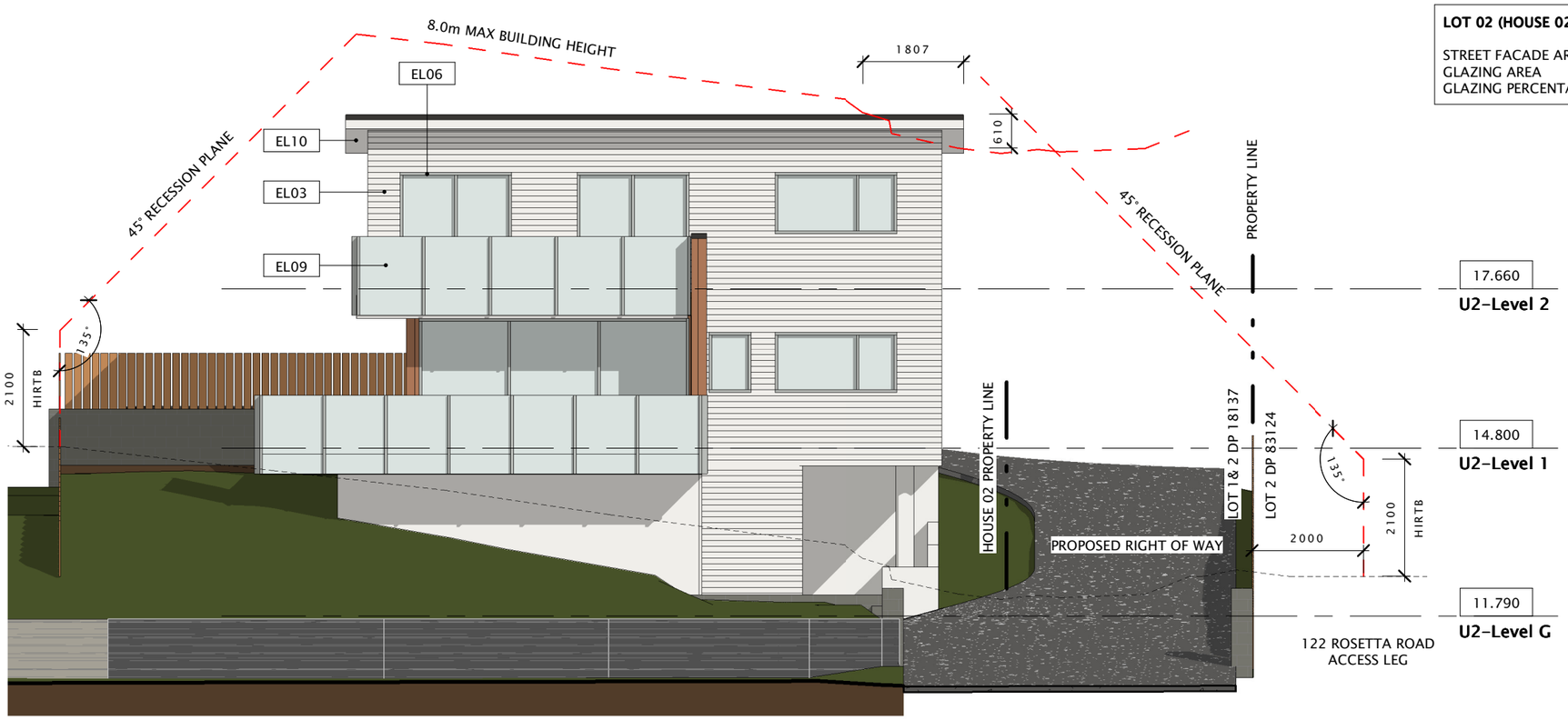
126-130 ROSETTA ROAD, RAUMATI BEACH

PROJECT STATUS	RESOURCE CONSENT	
SCALE AS INDICATED	DATE 18/01/2023	
DESIGN -	DRAWN MD	
PROJECT NO. 22-006	SHEET NO. A512	REV 2

LOT 02 (HOUSE 02)

STREET FACADE AREA	= 79m²
GLAZING AREA	= 25m²
GLAZING PERCENTAGE	= 31%

ELEVATION KEYNOTES	
KEY	DESCRIPTION
EL01	PROFILED METAL LONGRUN ROOFING.
EL02	RENDERED FINISH OVER CONCRETE MASONRY BLOCK.
EL03	HORIZONTAL TIMBER WEATHERBOARDS OVER CAVITY SYSTEM WITH PAINT FINISH.
EL04	VERTICAL CEDAR WEATHERBOARD OVER CAVITY SYSTEM WITH STAIN FINISH.
EL05	VERTICAL TIMBER WEATHERBOARD OR 'GROOVED' PANEL CLADDING OVER CAVITY SYSTEM WITH PAINT FINISH.
EL06	ALUMINIUM JOINERY SUITE.
EL07	4.8x2.1m HIGH SECTIONAL GARAGE DOOR.
EL09	GLAZED ALUMINIUM BALUSTRADE.
EL10	PAINTED FIBRE CEMENT SOFFITS.
EL11	LIGHTWEIGHT RENDERED FINISH OVER CAVITY SYSTEM.



E5 HOUSE 02 – WEST ELEVATION

SCALE: 1 : 100

E6 HOUSE 02 – NORTH ELEVATION

SCALE: 1 : 100

Box Architecture Ltd

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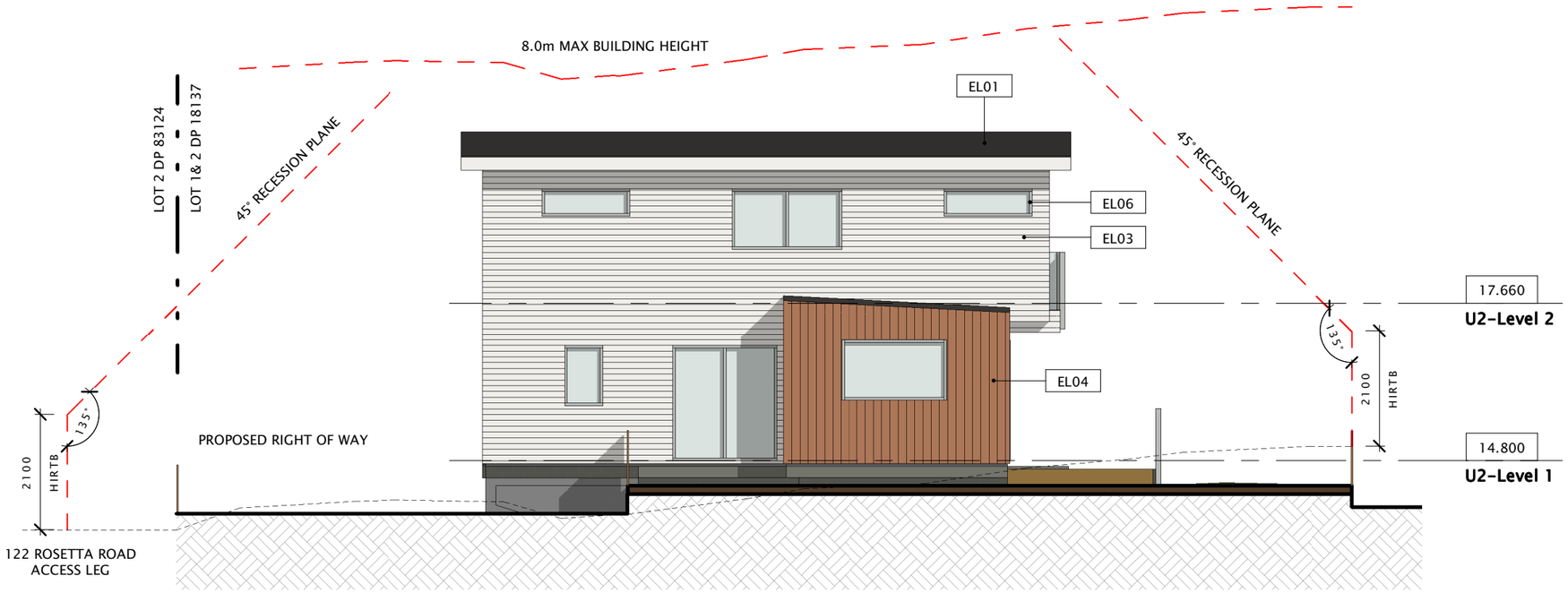
MBL: 021 440 566
EMAIL: mark@boxarchitecture.co.nz

PROJECT
ROSETTA ROAD DEV.

CLIENT
COBIE TRADING LIMITED

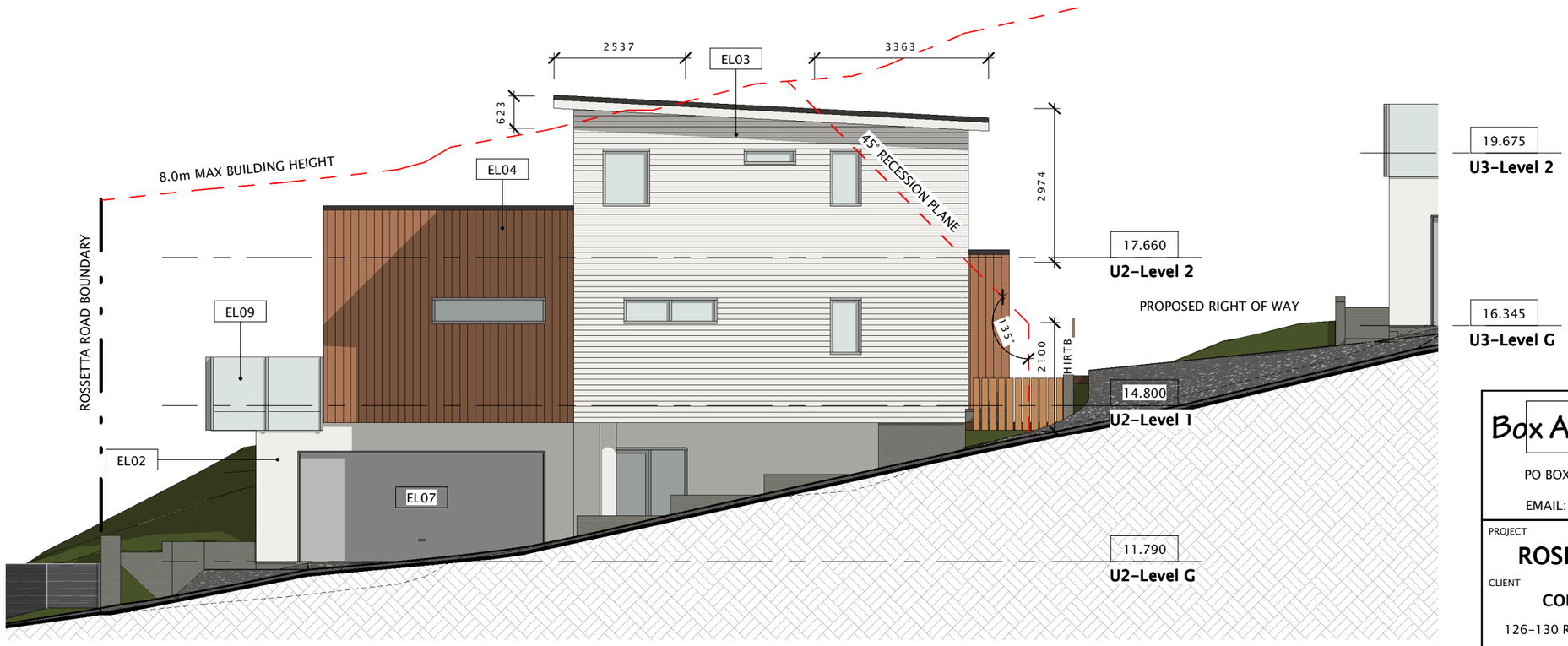
126-130 ROSETTA ROAD, RAUMATI BEACH

PROJECT STATUS	RESOURCE CONSENT	
SCALE AS INDICATED	DATE 18/01/2023	
DESIGN –	DRAWN MD	
PROJECT NO. 22-006	SHEET NO. A520	REV 2



E7 HOUSE 02 – EAST ELEVATION

SCALE: 1 : 100



E8 HOUSE 02 – SOUTH ELEVATION

SCALE: 1 : 100

ELEVATION KEYNOTES

KEY	DESCRIPTION
EL01	PROFILED METAL LONGRUN ROOFING.
EL02	RENDERED FINISH OVER CONCRETE MASONRY BLOCK.
EL03	HORIZONTAL TIMBER WEATHERBOARDS OVER CAVITY SYSTEM WITH PAINT FINISH.
EL04	VERTICAL CEDAR WEATHERBOARD OVER CAVITY SYSTEM WITH STAIN FINISH.
EL05	VERTICAL TIMBER WEATHERBOARD OR 'GROOVED' PANEL CLADDING OVER CAVITY SYSTEM WITH PAINT FINISH.
EL06	ALUMINIUM JOINERY SUITE.
EL07	4.8x2.1m HIGH SECTIONAL GARAGE DOOR.
EL09	GLAZED ALUMINIUM BALUSTRADE.
EL10	PAINTED FIBRE CEMENT SOFFITS.
EL11	LIGHTWEIGHT RENDERED FINISH OVER CAVITY SYSTEM.

Box Architecture Ltd

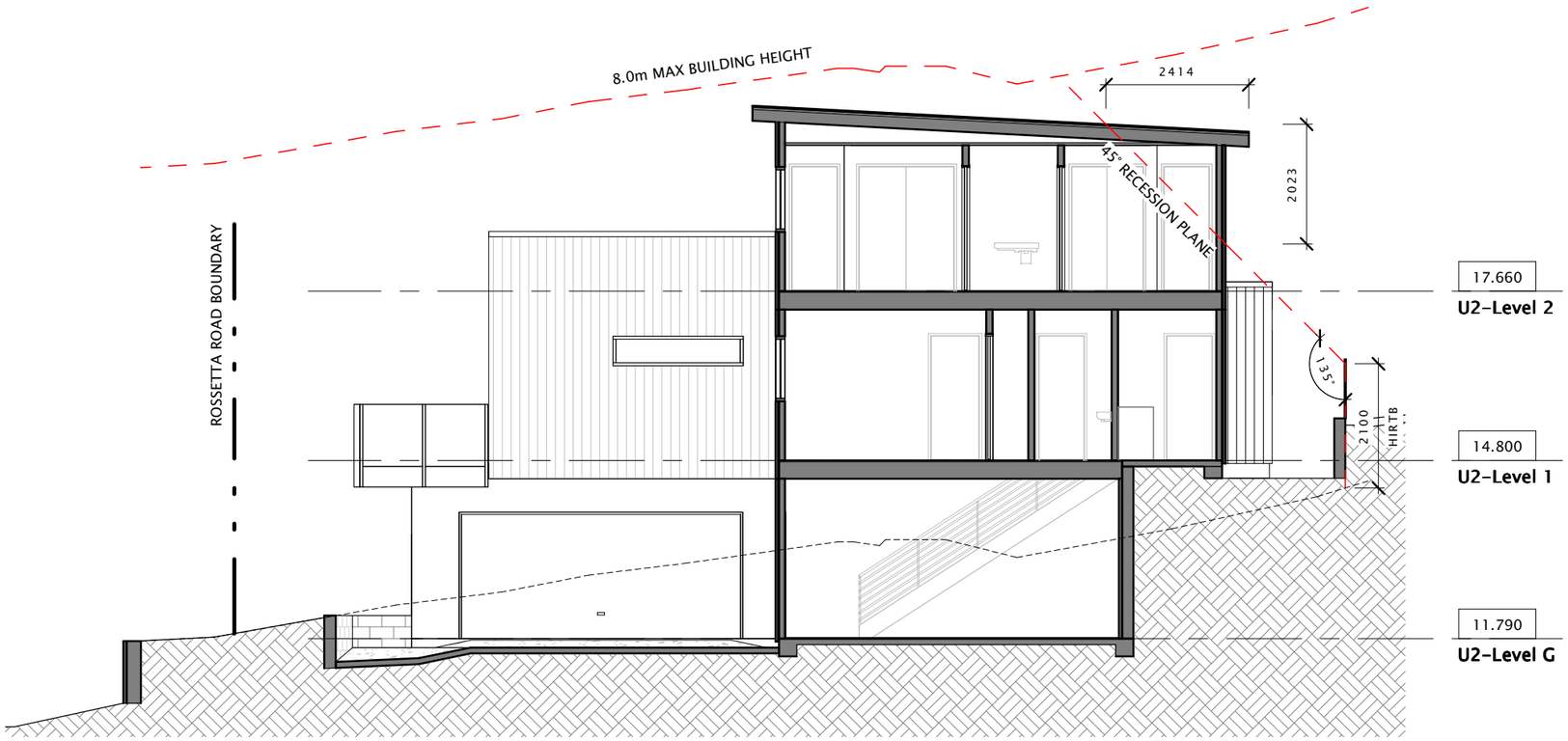
PO BOX 287 | PARAPARAUMU | 5254
MBL: 021 440 566
EMAIL: mark@boxarchitecture.co.nz

PROJECT
ROSETTA ROAD DEV.

CLIENT
COBIE TRADING LIMITED

126-130 ROSETTA ROAD, RAUMATI BEACH

PROJECT STATUS	RESOURCE CONSENT		
SCALE	AS INDICATED	DATE	18/01/2023
DESIGN	–	DRAWN	MD
PROJECT NO.	22-006	SHEET NO.	A521
REV	2		



2 H02 - SECTION 03

SCALE: 1 : 100

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PROJECT
ROSETTA ROAD DEV.

CLIENT
COBIE TRADING LIMITED

126-130 ROSETTA ROAD, RAUMATI BEACH

PROJECT STATUS	RESOURCE CONSENT	
SCALE AS INDICATED	DATE 18/01/2023	
DESIGN -	DRAWN -	
PROJECT NO. 22-006	SHEET NO. A530	REV 2

HOUSE 02

3 **3D VIEW - HOUSE 03**

SCALE: 1 : 1

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PROJECT
ROSETTA ROAD DEV.

CLIENT
COBIE TRADING LIMITED

126-130 ROSETTA ROAD, RAUMATI BEACH

PROJECT STATUS	RESOURCE CONSENT		
SCALE AS INDICATED		DATE 18/01/2023	
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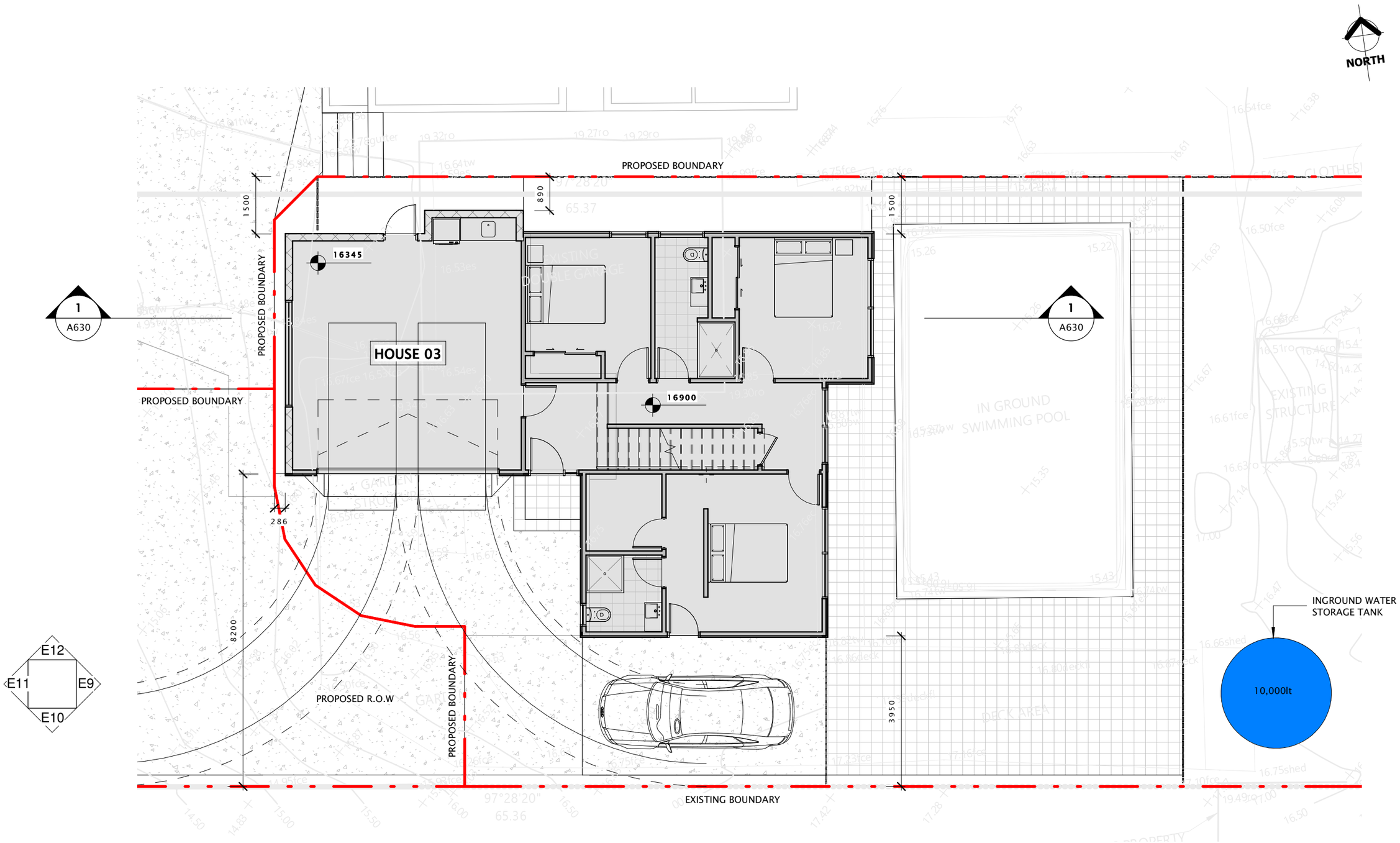

1 HOUSE 03 - GROUND FLOOR

SCALE: 1 : 100

Box Architecture Ltd

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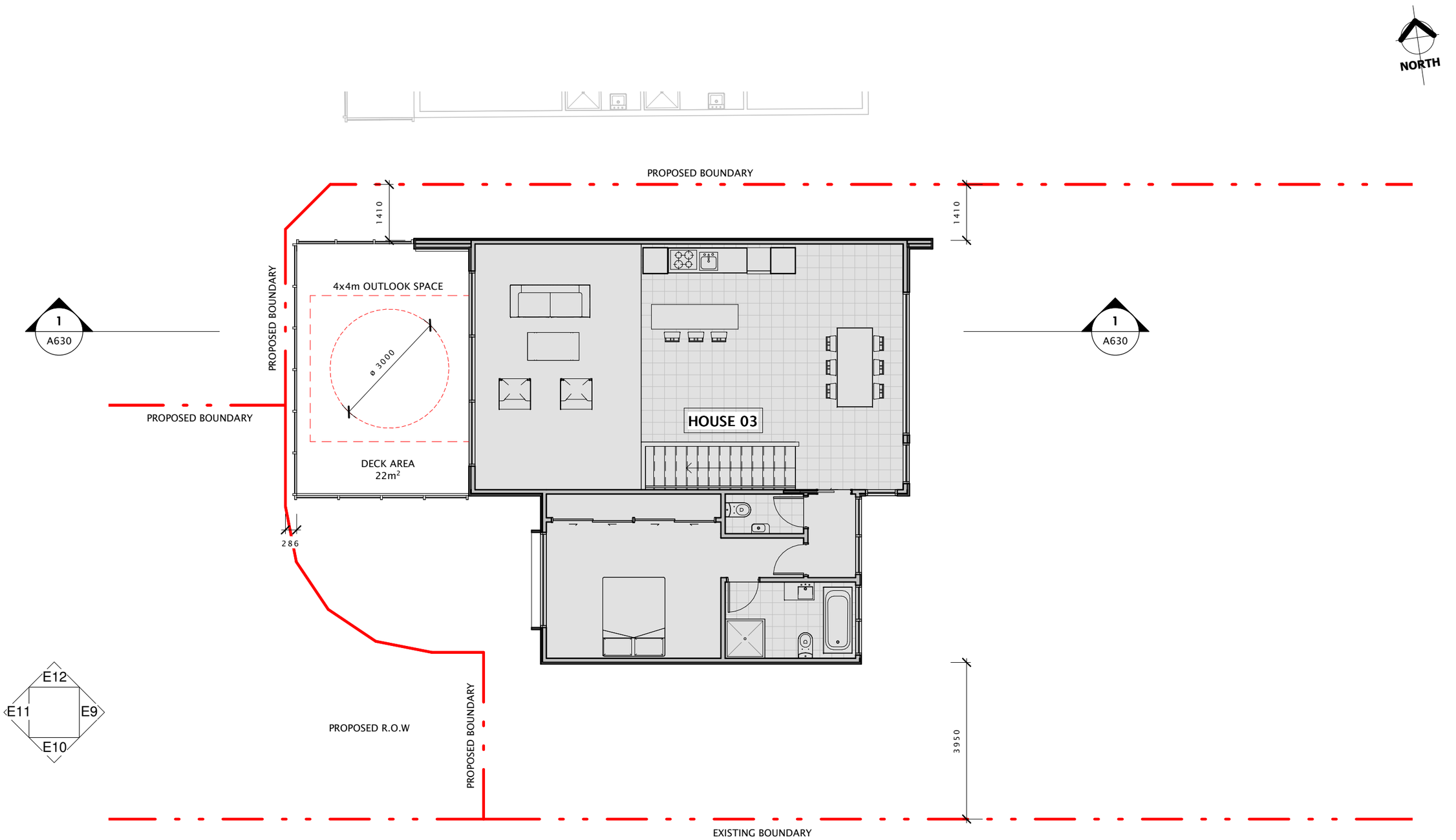
PROJECT
ROSETTA ROAD DEV.

CLIENT
COBIE TRADING LIMITED
126-130 ROSETTA ROAD, RAUMATI BEACH

PROJECT STATUS	RESOURCE CONSENT		
SCALE AS INDICATED		DATE	18/01/2023
DESIGN –		DRAWN	MD
PROJECT NO. 22-006	SHEET NO. A610		REV 2



1 **HOUSE 03 - FIRST FLOOR**

SCALE: 1 : 100

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MBL: 021 440 566
EMAIL: mark@boxarchitecture.co.nz

PROJECT
ROSETTA ROAD DEV.

CLIENT
COBIE TRADING LIMITED
126-130 ROSETTA ROAD, RAUMATI BEACH

PROJECT STATUS	RESOURCE CONSENT		
SCALE AS INDICATED	DATE 18/01/2023		
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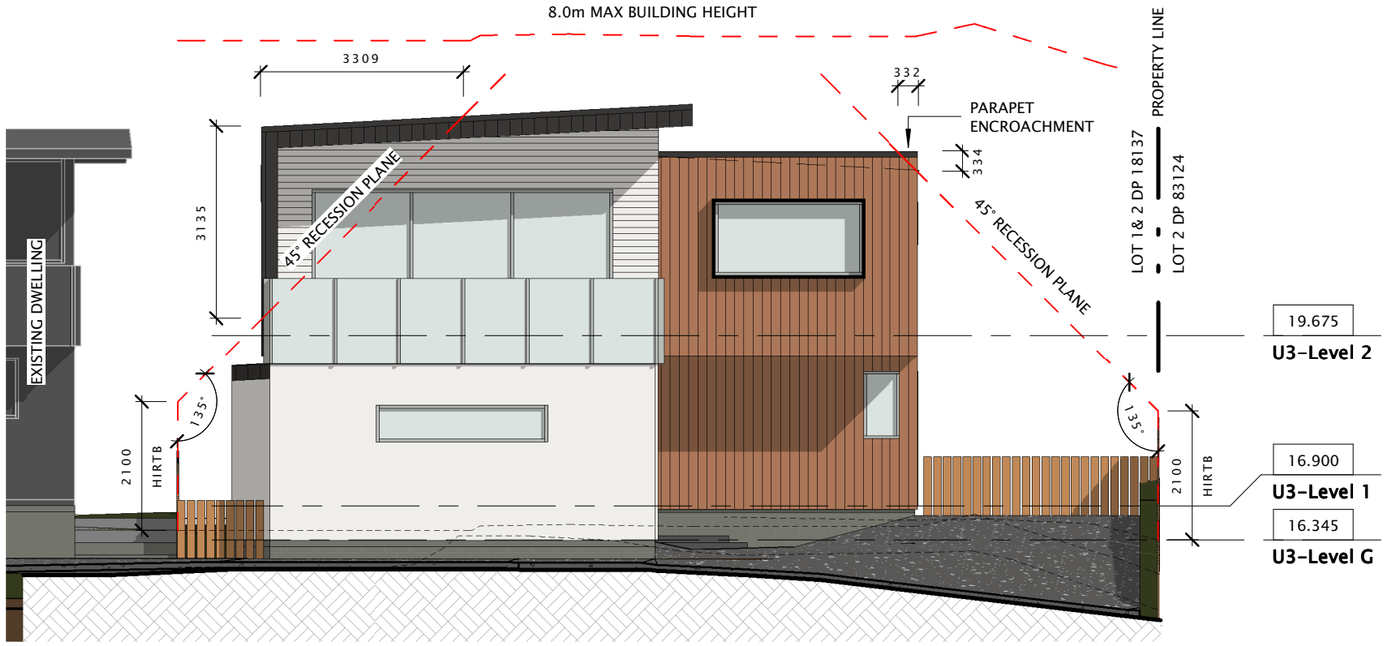


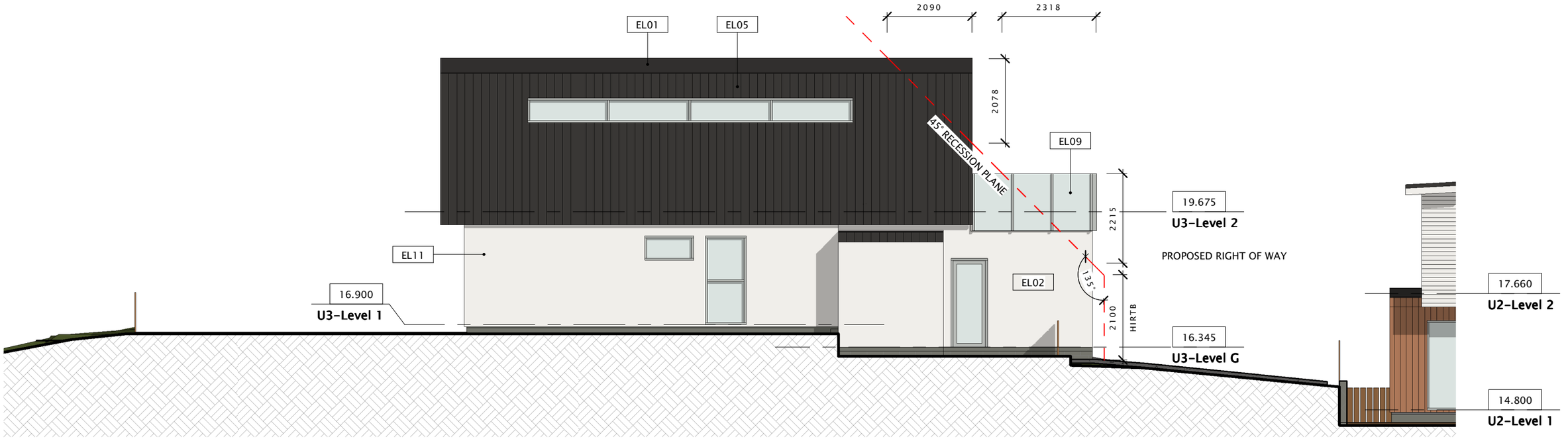
E9 HOUSE 03 - WEST ELEVATION

SCALE: 1 : 100

LOT 03 (HOUSE 03)

STREET FACADE AREA	= 71m²
GLAZING AREA	= 15m²
GLAZING PERCENTAGE	= 21%

ELEVATION KEYNOTES	
KEY	DESCRIPTION
EL01	PROFILED METAL LONGRUN ROOFING.
EL02	RENDERED FINISH OVER CONCRETE MASONRY BLOCK.
EL03	HORIZONTAL TIMBER WEATHERBOARDS OVER CAVITY SYSTEM WITH PAINT FINISH.
EL04	VERTICAL CEDAR WEATHERBOARD OVER CAVITY SYSTEM WITH STAIN FINISH.
EL05	VERTICAL TIMBER WEATHERBOARD OR 'GROOVED' PANEL CLADDING OVER CAVITY SYSTEM WITH PAINT FINISH.
EL06	ALUMINIUM JOINERY SUITE.
EL07	4.8x2.1m HIGH SECTIONAL GARAGE DOOR.
EL09	GLAZED ALUMINIUM BALUSTRADE.
EL10	PAINTED FIBRE CEMENT SOFFITS.
EL11	LIGHTWEIGHT RENDERED FINISH OVER CAVITY SYSTEM.



E10 HOUSE 03 - NORTH ELEVATION

SCALE: 1 : 100

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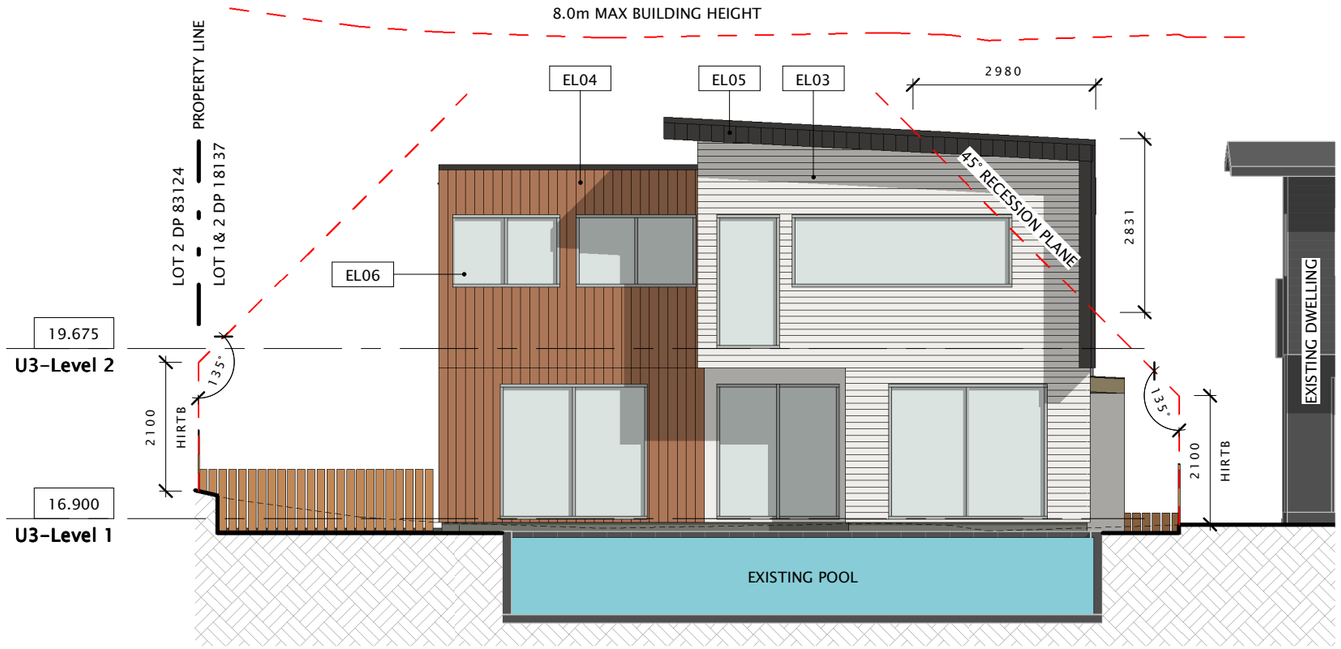
MBL: 021 440 566
EMAIL: mark@boxarchitecture.co.nz

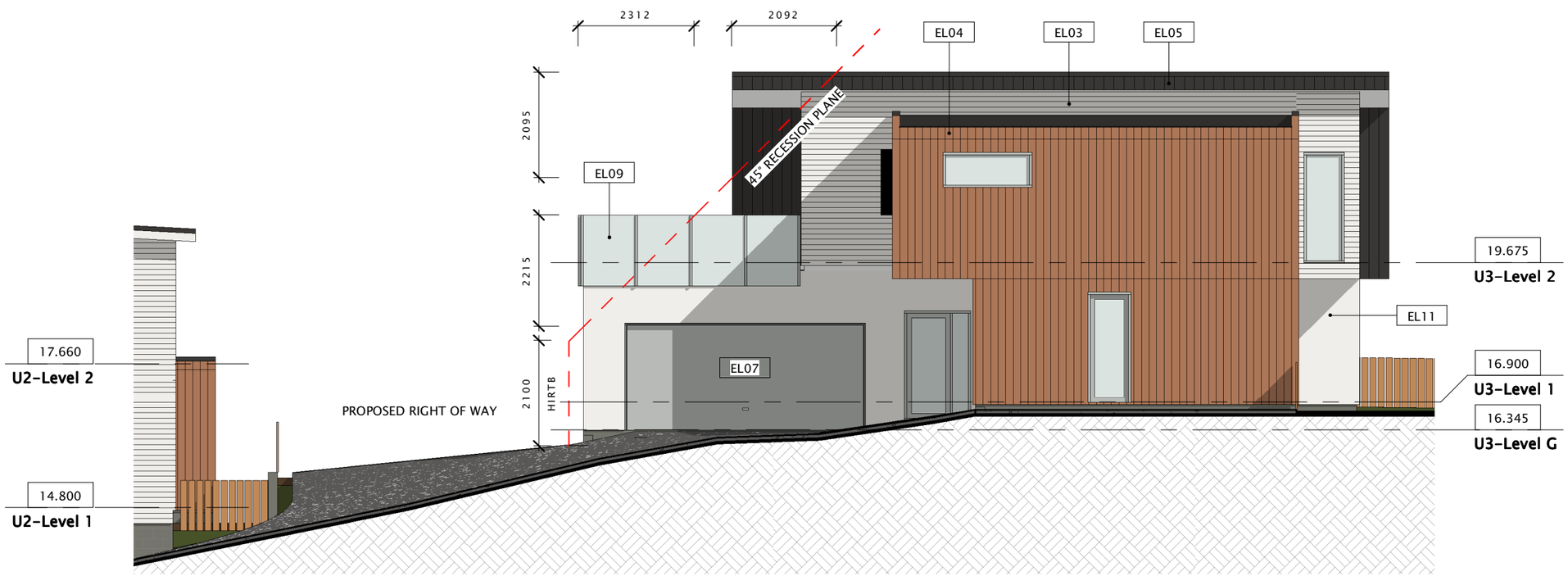
PROJECT
ROSETTA ROAD DEV.
CLIENT
COBIE TRADING LIMITED
126-130 ROSETTA ROAD, RAUMATI BEACH

PROJECT STATUS	RESOURCE CONSENT		
SCALE	AS INDICATED	DATE	18/01/2023
DESIGN	–	DRAWN	MD
PROJECT NO.	22-006	SHEET NO.	A620
REV	2		



E11 HOUSE 03 - EAST ELEVATION

SCALE: 1 : 100



E12 HOUSE 03 - SOUTH ELEVATION

SCALE: 1 : 100

ELEVATION KEYNOTES	
KEY	DESCRIPTION
EL01	PROFILED METAL LONGRUN ROOFING.
EL02	RENDERED FINISH OVER CONCRETE MASONRY BLOCK.
EL03	HORIZONTAL TIMBER WEATHERBOARDS OVER CAVITY SYSTEM WITH PAINT FINISH.
EL04	VERTICAL CEDAR WEATHERBOARD OVER CAVITY SYSTEM WITH STAIN FINISH.
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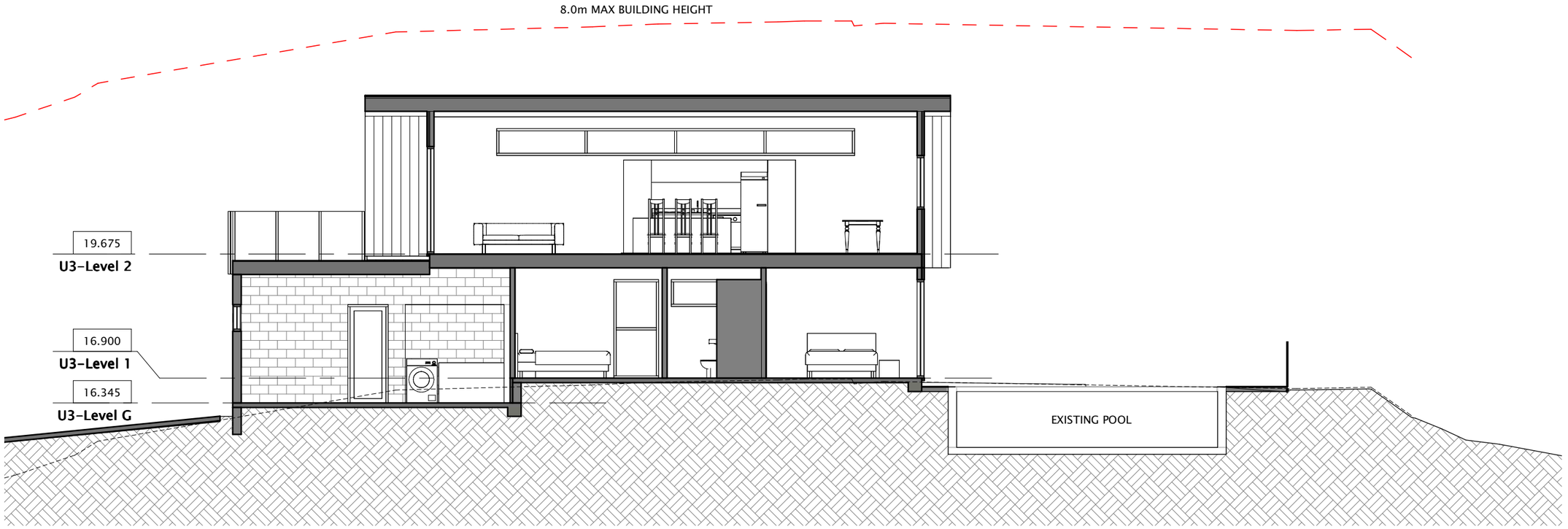
EMAIL: mark@boxarchitecture.co.nz

PROJECT: ROSETTA ROAD DEV.
CLIENT: COBIE TRADING LIMITED
126-130 ROSETTA ROAD, RAUMATI BEACH

PROJECT STATUS	RESOURCE CONSENT		
SCALE AS INDICATED	DATE 18/01/2023		
DESIGN -	DRAWN MD		
PROJECT NO. 22-006	SHEET NO. A621	REV 2	



1 **H03 - SECTION 03**

SCALE: 1 : 100

Box Architecture Ltd

PO BOX 287 | PARAPARAUMU | 5254
MBL: 021 440 566
EMAIL: mark@boxarchitecture.co.nz

PROJECT
ROSETTA ROAD DEV.

CLIENT
COBIE TRADING LIMITED

126-130 ROSETTA ROAD, RAUMATI BEACH

PROJECT STATUS	RESOURCE CONSENT	
SCALE AS INDICATED	DATE 18/01/2023	
DESIGN –	DRAWN –	
PROJECT NO. 22-006	SHEET NO. A630	REV 2

APPENDIX THREE: Record of Title

RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier **WN824/62**
Land Registration District **Wellington**
Date Issued 12 February 1959

Prior References
WN464/200 WN497/39 WN505/204

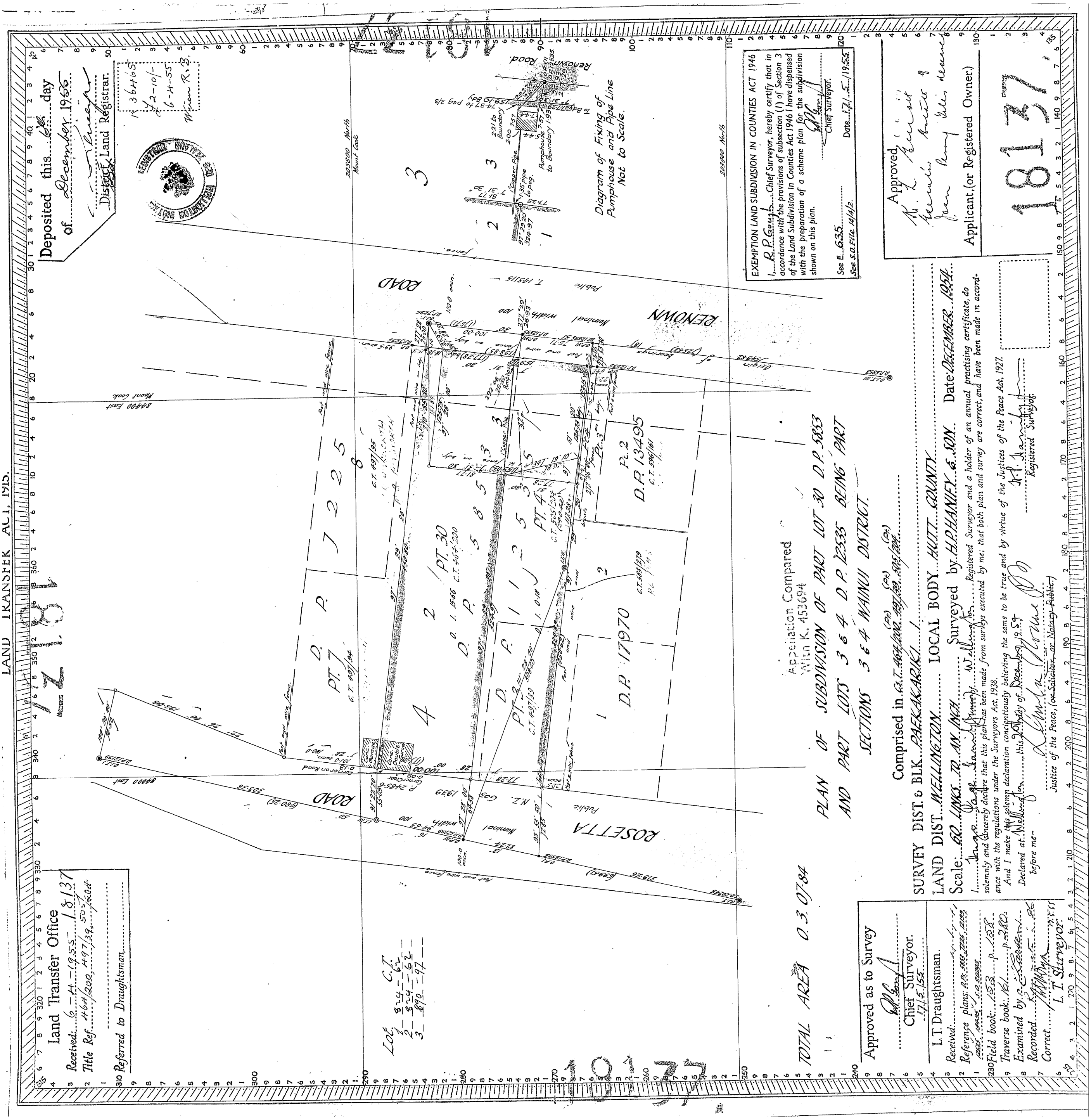
Estate Fee Simple
Area 2424 square metres more or less
Legal Description Lot 1-2 Deposited Plan 18137
Registered Owners
Cobie Trading Limited

Interests

Fencing Agreement in Transfer 155160

Appurtenant hereto are water pipe line rights created by Transfer 425049 - 12.2.1959

11994797.2 Mortgage to Bank of New Zealand - 29.1.2021 at 4:09 pm



LAND TRANSFER ACT, 1915.
PLAN OF SUBDIVISION OF PART LOT 30 D.P. 5853
AND PART LOTS 3 & 4 D.P. 12535 BEING PART
SECTIONS 3 & 4 WAINUI DISTRICT.
RENOWN ROAD
ROSETTA ROAD
TOTAL AREA 0.3.07.84
SURVEY DIST. & BLK. PAEKAKARIKI
LAND DIST. WELLINGTON
LOCAL BODY HUTT COUNTY
Scale: 60 LINKS TO AN INCH
Surveyed by H.P. HANIFY & SON. Date DECEMBER 1954
Diagram of Fixing of Pumphouse and Pipe Line Not to Scale.
EXEMPTION LAND SUBDIVISION IN COUNTIES ACT 1946
Land Transfer Office
Approved as to Survey
Chief Surveyor.
L.T. Draughtsman.
Applicant, (or Registered Owner.)
District Land Registrar.
18137

APPENDIX FOUR: Liquefaction Report

Geotechnical Site Suitability Report

126-130 Rosetta Road, Raumati, Paraparaumu

Lawrence Fay c/ Leith Consulting

Document Number: 21118-RPT-G-001-B

Date: 1 March 2023

Prepared by

Tom Van Deelen

Engineering Geologist

BSc, MEngNZ

Approved by

Robert Smith

Principal Geotechnical Engineer

CMEngNZ CPEng IntPE(NZ) / APEC Engineer

Contents

Executive Summary

Table 1: Report Summary			
Project		Site Address	126-130 Rosetta Road, Raumati
		Consent Application	Resource Consent
		Consent Authority	Kapiti Coast District Council
Site Assessment	Geotechnical Hazard Assessment	Liquefaction Risk	TC1
		Lateral Spreading Risk	TC1
		Slope Stability Risk	Shallow instability is an ongoing possibility
		Setbacks/No Build Areas	No, if piled foundations utilised
		Groundwater Level	Not encountered within the investigated depths.
		Site Subsoil Classification	Class D – Deep Soils Site
		AS2870:2011 Expansive Soils Classification	Class A – Non Expansive
		HAIL Assessment	Not Part of CGW scope
Foundation Assessment & Recommendations		Geotechnical Ultimate Bearing Capacity 300 kPa Depth	5.0 m bgl
		Foundation Recommendations	Specific Engineer Designed (SED) piled foundations
		Additional Key Considerations	Pile installation inspection to be undertaken by a Geotechnical Engineer familiar with the findings in this report
		Further Geotechnical Review Required	Geotechnical Drawing Review of Foundation Drawings.

1. Introduction

CGW Consulting Engineers (CGW) have been engaged by Lawrence Fay C/- Leith Consulting (client) to undertake a site investigation and site suitability assessment for a new proposed residential subdivision at 126-130 Rosetta Road, Raumati (site). The purpose of the investigation and reporting is to develop a ground model on which to provide a statement of suitability including an assessment of potential liquefaction and foundation recommendations for the proposed development.

The report summarises our findings and recommendations and may be used to support a resource and/or building consent to Kapiti Coast District Council (KCDC). Our limitations are presented within Appendix A of this report.

2. Proposed Development

It is understood the client is proposing to develop a 4 Lot subdivision while retaining the existing dwelling as part of the proposed Lot 3. Access to the proposed lots will be from Rosetta Road along the existing driveway in the south western corner of the site. Figure 1 below shows the preliminary proposed development layout.

Figure 1: Proposed Development, provided by the Leith Consulting, 18 January 2023.

3. Scope of Works

Our scope of works, as per the signed short form agreement dated 4th March 2021, are as follows:

- Two CPT tests to 10 m or refusal.
- Shallow investigations using machine excavated test pits and Scala Penetrometer tests;
- Preparation of a geotechnical assessment report with recommendations regarding liquefaction potential and foundation design.

4. Site Information

4.1 Site Description

The site, 126-130 Rosetta Road, Raumati is located approximately 3.5 km south west of Paraparaumu Town Centre and is legally described as Lots 1 and 2 DP 19137 CT 824/62.

Topographically the site is situated on a north-trending sand dune, including a west facing slope, relatively flat area in the centre of the site, and a moderately steep slope in the eastern extent of the site. From the survey information provide site levels appear to vary between Reduced Level (RL) 11 in the west to RL 19 in the centre and then down to RL 8 in the east.

Access to the site is from Rosetta Road, however a narrow section of the property can be accessed from Renown Road in the east. Access to the existing dwelling is from Rosetta Road, as the Renown Road extent of the property is steep.

The site is approximately 130 m east of Raumati beach, and the lower eastern extent of the site is in a KCDC Fill Control Area due to flooding risk.

An existing dwelling is situated in the centre of the site, along with a large swimming pool. The western and eastern portions of the site appear heavily vegetated from aerial imagery.

4.2 Published Geology

According to GNS mapping of the Wellington region (2000), the site is underlain by beach deposits (Q1d), described as '*active dunes*'.

Mapping indicates the closest major active fault is the Ohariu Fault. It is mapped approximately 5 km north east of the site and trends north east, with a recurrence interval of 2000<3500 years.

Greater Wellington Regional Council (GWRC) liquefaction mapping of the Wellington region indicates the site as having 'high' liquefaction potential. Generally speaking liquefaction occurs in saturated (ie. below the groundwater table) cohesionless fine grained sediments, typically silts and sands.

4.3 NZGD Review

A review of the New Zealand Geotechnical Database (NZGD) identified no ground investigations within 300 m of the site.

4.4 Property Review

A review of the KCDC hazard mapping and GIS database indicate the following:

- The site is zone as beach residential;
- The eastern extent of the site is mapped within a KCDC flood extent;
- The eastern extent of the site is mapped within a fill control area.

5. CGW Site Walkover and Investigation

A CGW engineering geologist attended the site on 15th March 2021 and undertook a site walkover including both shallow and deep site investigations across the site.

5.1 CGW Site Walkover

During the site walkover the following was observed:

- The eastern portion of the site slopes down to the east at approximately 25° to 35°.
- The north western and eastern portions of the site are densely vegetated with trees and bushes.
- The eastern boundary could not be accessed due to the vegetation.
- A double underground garage is present in the north western corner of the site, it is retaining up to approximately 2.5 m to 3.0 m.
- An approximately 1.2 m high concrete and stone retaining wall is present along the western boundary of the site.
- An underground pump house is present immediately east of the existing swimming pool, which is to be removed.
- On the northern side of the dwelling, a 2.1 m high concrete retaining wall is present.

Figure 2: Existing dwelling and pool, looking north east.

5.2 CGW Site Specific Investigations

CGW site specific investigations comprised:

- 2 cone penetrometer tests (CPT) to final depths of between 8.56 m and 10.43 m bgl, where refusal was met due to anchor failure.
- 2 machine excavated test pits to final depths of between 1.9 m to 2.1 m bgl in target material.
- 1 hand auger hole.
- 5 scala penetrometer tests to final depths of between 1.0 m to 3.5 m bgl, target depth.

The site investigations were undertaken by a CGW engineering geologist who set out the investigation locations, supervised the sub-contractor and carried out in-situ testing. A visual tactile classification of the soils encountered during the investigation was carried in accordance with the NZGS guidelines (2005). Scala penetrometer testing was completed in accordance with NZS 4402:1988 Test 6.5.2.

Testing locations are indicated on the plan within Appendix B. Investigation logs are also presented within Appendix B.

6. Ground Model

Ground conditions are summarised from the CGW investigations at the site.

6.1 Subsurface Conditions

Table 2 below present the soils conditions encountered at the site, including Soil Behaviour Type (SBT) inferred by the CPT analysis software.

Table 2: Site Ground Model			
Soil Type	**Depth to base of layer (m bgl)**	**Thickness (m)**	**Relative Density / Consistency**
TOPSOIL (where encountered) – fine sandy SILT to silty fine SAND	0.1-0.3	0.1-0.3	--
NON-ENGINEERED FILL (DCP03/HA only) – silty fine SAND	0.5	0.2	Very Loose
DUNE DEPOSITS – fine to medium SAND	5.0	4.7	Very Loose to Loose
	>10.4	Not determined	Medium dense

6.2 Groundwater

Groundwater was not encountered within the shallow or deep investigations completed by CGW. Groundwater conditions and levels may vary in response to environmental factors including seasonal variations or weather events.

6.3 Site Subsoil Classification

We consider that the site subsoil category in terms of NZS1170.5 Clause 3.1.3 is Class D (Deep soils) based on the following:

- Shallow site specific investigations indicate dune deposits
- Geology mapping of the Wellington region (2000)
- Clause 3.1.3 and Table 3.2 of NZS1170.5:2004

7. Liquefaction and Lateral Spreading Hazard

Liquefaction only occurs in saturated (ie. below the groundwater table) cohesionless fine grained sediments, typically silts and sands.

Since the CPT did not encounter groundwater, within the 10.4m investigated depth, ie. to a level of around 4m to 5m above sea level, liquefaction cannot occur in that depth range and liquefaction induced settlements would be expected to be nil over an MBIE 'index depth' of 10m. Even allowing for an exceptional flood water level around 8 masl, does not generate settlements exceeding TC1 classification. Similarly, liquefaction induced lateral spread is also calculated to be nil.

7.1 Expected Future Land Performance

Although not developed for non-residential building or construction outside of Canterbury, the MBIE Canterbury earthquake guidance provides a useful benchmark in classifying the liquefaction risk to a property and is now being used more widely across New Zealand.

The MBIE Guidelines provide broad classifications of land for future land performance based on index values of expected settlements. Given in Table 3 below is a summary of expected future land performance criteria for the site based on MBIE Technical Category and our analysis of the deep geotechnical data collected from the site.

Table 3 - Expected Future Land Performance Categories

Technical Category	Expected SLS Land Settlement (mm)		Expected ULS Land Settlement (mm)		Expected Global Lateral Movement (mm)		Expected ULS Lateral Stretch (mm)	
TC1	0 -15	✓	0 – 25	✓	Nil	✓	Nil	✓
TC2	0 – 50		0 – 100		<300 (Minor to moderate)		<50 (Minor)	
TC3	>50		>100		300 – 500 (Major)		0 – 200 (Minor to Moderate)	

Our liquefaction analysis indicates that liquefaction-induced ground subsidence is generally consistent with an MBIE Technical Category TC1 land performance designation.

8. RMA Section 106 Suitability Assessment

8.1 Criteria

In accordance with the Resource Management Act 1991 (RMA), the site has been assessed in accordance with Section 106 for natural hazards. Section 106 states:

- *There is significant risk from natural hazards; or*
- *Sufficient provision has not been made for legal and physical access to each allotment to be created by the subdivision.*

For the purpose of subsections 1a, an assessment of the risk from natural hazards requires a combined assessment of:

- *The likelihood of natural hazards occurring;*

- *The material damage to land in respect of which consent is sought, other land or structures that would results from natural hazards;*
- *Any likely subsequent use of land in respect of which the consent is sought that would accelerate, worsen or result in material damage of the kind referred to in paragraph b.*

8.2 Assessment

The site is considered based on site mapping, site investigations and local knowledge, to not be subject to the following natural hazards:

- **Fault Rupture** – the site is not situated within an identified fault hazard area by KCDC, and mapping indicates there are no mapped faults within 1.0 km.
- **Global Slope Stability** – The site and surrounding areas show no signs of global or major instability. No indication of deep seated or major slope instability were observed at the site during our walkover or investigations. However, minor instability and erosion of the dune slopes is an ongoing possibility. Similarly, earthquake shaking may cause near surface slumping of the sand deposits on steeper slopes.
- **Inundations (water, soil, rock debris)** – the site is not located at the base of a major slope and is not interpreted as at risk in the KCDC flood hazard map, except in the lowest eastern extent.

However, we consider the site may be subject to the following hazards, which will need to be mitigated as part of the development design:

- **Liquefaction and Settlement** – The site is classified in accordance with MBIE guidelines as TC1. However, the near surface strata is very loose to loose and unacceptable total and differential settlements could result from shallow foundation loadings. Consequently Specific Engineering Design (SED) and deeper piled foundations are recommended.

9. Geotechnical Engineering Recommendations

The following geotechnical recommendations are for the proposed subdivision development. If alternative development is proposed for the site, then further site investigations may be required to be undertaken.

9.1 Earthworks and Site Preparation

We anticipate minor earthworks may be required at the site. However, at this stage CGW have not been provided with proposed earthworks plans.

All earthworks across the site should be undertaken in accordance with NZS4431:1989.

Site preparation should include the following procedures:

- Remove vegetation, topsoil and soil containing significant amounts of organic material from beneath building footprints, foundations and proposed fill areas;
- Remove any existing 'uncontrolled' fill materials, if encountered, from beneath building footprints and fill areas;
- Excavate where required to the design foundation;
- Proof roll and compact the exposed subgrade materials using a heavy roller to reveal soft or loose areas and to densify the subgrade soils. Soft or loose areas which do not improve with compaction should be over excavated and replaced with compacted engineered fill;

9.2 Foundations

Scala Penetrometer testing and CPT testing indicates the site does not meet the requirements of NZS3604 'good ground'. An ultimate bearing capacity (UBC) of 300kPa would be anticipated at depths up to 5.0m bgl.

The site has been classified as TC1 regarding liquefaction risk (refer Section 7.3).

From a liquefaction perspective, there are no specific foundation requirements, as the site is deemed not to be at risk from liquefaction settlements or liquefaction induced lateral movements.

However, in view of the variable topography of the site and to minimise surcharging of existing slopes and retaining structures, Specific Engineering Design (SED) pile foundations are recommended, to be designed by a suitably qualified engineer.

For pile foundations, a unit weight of 19kN/m^3, a friction angle (phi) of 30 degrees and a reduction factor of 0.45 are recommended for specific design. It is anticipated that piles would be taken down to a depth of around 5m or greater. Driven timber pile foundations taken to refusal might be considered, subject to specific design.

Pile foundations are particularly recommended near to sloping boundaries and retaining structures and should be taken down below the base level of the sloping ground or retaining walls so as not to unduly surcharge the slopes or retaining structures.

It is recommended that pile installation and/or foundation excavations be inspected by a geotechnical engineer to confirm that founding conditions are consistent with those on which the design recommendations are based.

10. References

- Begg, J.G. & Johnston, M.R. (compilers) (2000) - *Geology of the Wellington Area, Scale 1:250,000, Geological Map 10.*
- Boulanger, R.W., and Idriss, I.M., (2014) - *CPT and SPT based liquefaction triggering procedures, CGM Report 14-01, University of California, Davis, California.*
- Idriss, I.M., and Boulanger, R.W., (2008) - *Soil liquefaction during earthquakes, Earthquake Engineering Research Institute Monograph, MN012*.
- Ministry of Business, Innovation & Employment (2012) – *Repairing and Rebuilding Houses Affected by the Canterbury Earthquakes.*
- Ministry of Business, Innovation & Employment. (2016) - *Earthquake Geotechnical Engineering Practice Module 3: Identification, Assessment and Mitigation of Liquefaction Hazards.*
- Ministry of Business, Innovation & Employment. (2018) - *Earthquake Geotechnical Engineering Practice Module 1: Overview of the guidelines.*
- New Zealand Geotechnical Society (2005) – *Field Description of Soil and Rock. Guideline for the Field Classification and Description of Soil and Rock for Engineering Purposes.*
- Robertson, P.K., Cabal K.L., (2012) - *Guide to Cone Penetration Testing for Geotechnical Engineering, 5th ed. Gregg Drilling & Testing, Inc.*
- Standards New Zealand. (1988) - *NZS4402.6.5.2:1988 Methods of testing soils for civil engineering purposes - Soil strength tests - Determination of the penetration resistance of a soil - Test 6.5.2 Hand method using a dynamic cone penetrometer.*
- Standards New Zealand. (1989) - *NZS4431:1989 Code of Practice for Earth Fill for Residential Development.*
- Standards New Zealand (2011) – *NZS3604:2011 Timber Framed Buildings*
- Zhang, G, Robertson, PK & Brachman, RW (2002) - *Estimating Liquefaction-Induced Ground Settlements from CPT for Level Ground, Canadian Geotechnical Journal, vol. 39, pp. 1168 – 1180.*
- Van Dissen, R. & Heron, D. (2003) - *Earthquake Fault Trace Survey, Kapiti Coast District.*

Appendix A: Limitations

This report has been prepared solely for the benefit of our client, Lawrence Fay c/ Leith Consulting, as per our brief and an agreed consultancy agreement. The reliance by any other parties on the information or opinions contained in this report shall, without our prior agreement in writing, be at such parties' sole risk.

The conclusions and recommendations contained within this report are based on the investigations as described in detail above. The nature and continuity of subsoil conditions are inferred and it must be appreciated that actual conditions could vary considerably. Defects and unforeseen ground conditions may remain undetected which might adversely affect the stability of the site and the recommendation made herein.

This report has been prepared solely to address the issues raised in our brief, and shall not be relied on for any other purpose.

Where we have provided comments on aesthetic issues these need to be confirmed by an architect or other expert in the field.

In the event the third party investigation data has been provided to us, the client acknowledges that we have placed reliance on this information to produce our report and CGW will accept no liability resulting from any errors or defect in the third party data provided to us.

Appendix B: CGW Testing Location Plan and Testing Logs

Notes:

1. Source: Kapiti Coast District Council GIS

Legend:

Scala Penetrometer ⊗

Hand Auger / Scala Penetrometer ⊕

Cone Penetration Test △

Machine Excavated Test Pit

Machine Augered Test Pit ◐

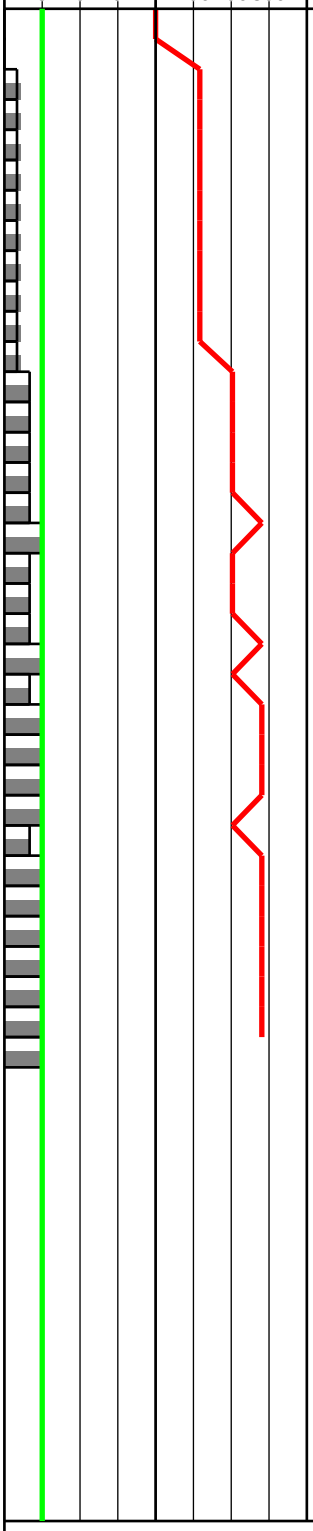
CGW CONSULTING ENGINEERS

AUCKLAND WELLINGTON NELSON CHRISTCHURCH WANAKA

www.cgwl.co.nz 03 549 8259 03 348 1000

CLIENT	Lawrence Fay c/ Leith Consulting
JOB TITLE	126-130 ROSETTA ROAD RAUMATI
DRAWING TITLE	GEOTECHNICAL INVESTIGATION PLAN
21118-S01	
SCALE	NTS
SIZE	A4
PROJECT NO	21118
DATE	Mar-21

CGW Consulting Engineers	Project Title: 126-130 Rosetta Road, Raumati		
	Project Number: 21118	Client: Lawrence Fay	DCP01/TP
	GL (mAOD):	N Coord: 0	E Coord: 0
Date: 15/03/2021	Method: Excavator	Logged By: SB	Scale: 1:25 Sheet 1 Of 1



Samples / Testing	Level mAHD	Legend	Depth (m)	Description	Water
				Very loose, fine to medium SAND, trace silt, trace fibrous organics; dark brownish grey; dry to moist, poorly graded. (DUNE DEPOSITS)	
			1.00	Very loose, fine to medium SAND; brownish grey; dry to moist, poorly graded. (DUNE DEPOSITS)	
			1.50	End Of Hole At 1.50 m	
			2.00		
			3.00		

KEY

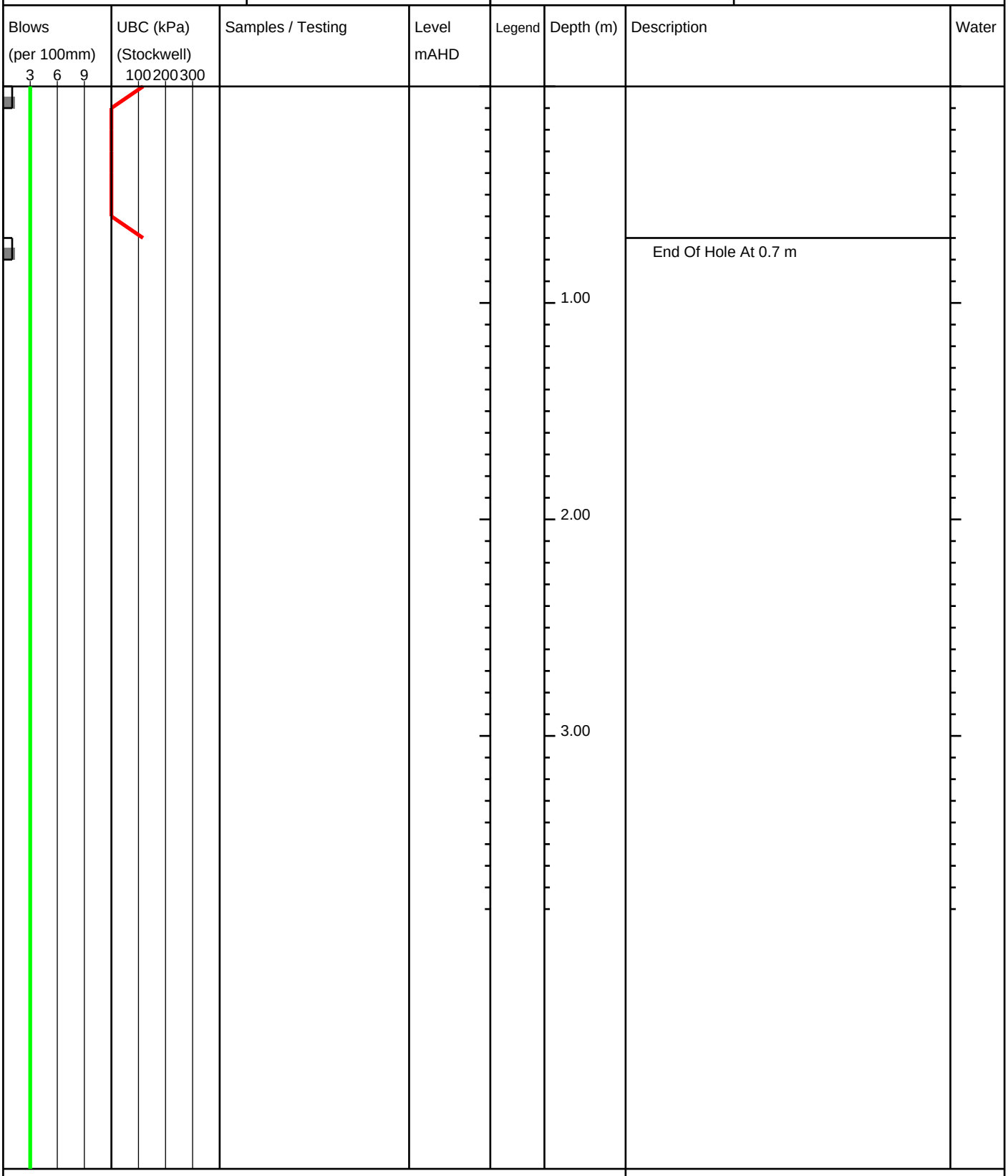
D - Disturbed Sample
B - Bulk Sample
W - Water Sample
V - Hand Shear Vane kPa

▽ - Groundwater Strike
▼ - Groundwater Level

REMARKS

No Groundwater Encountered
Terminated at target depth. Hole collapse in dry sand.

CGW Consulting Engineers	Project Title: 126-130 Rosetta Road, Raumati		
	Project Number: 21118	Client: Lawrence Fay	DCP02
	GL (mAOD):	N Coord: 0	E Coord: 0
Date: 15/03/2021	Method: DCP	Logged By: SB	Scale: 1:25 Sheet 1 Of 1



KEY

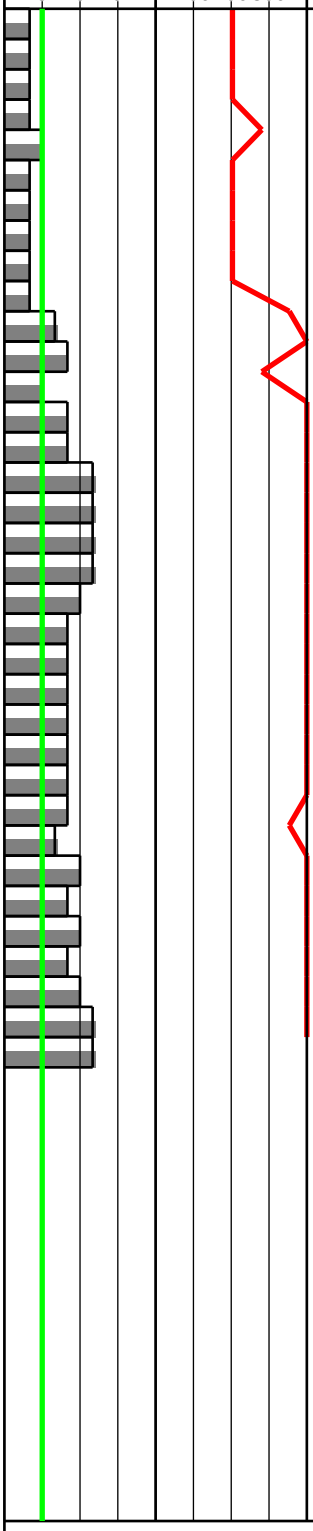
D - Disturbed Sample
B - Bulk Sample
W - Water Sample
V - Hand Shear Vane kPa

▽ - Groundwater Strike
▼ - Groundwater Level

REMARKS

No Groundwater Encountered
Hole abandoned due to
exposed service.

CGW Consulting Engineers	Project Title: 126-130 Rosetta Road, Raumati		
	Project Number: 21118	Client: Lawrence Fay	DCP03/HA
	GL (mAOD):	N Coord: 0	E Coord: 0
Date: 15/03/2021	Method: Hand Auger/DCP	Logged By: SB	Scale: 1:25 Sheet 1 Of 1



Samples / Testing	Level mAHD	Legend	Depth (m)	Description	Water
			0.10	Fine sandy SILT, trace fibrous organics; greyish brown; dry, poorly graded. (TOPSOIL)	
			0.50	Very loose, silty fine SAND, trace to minor fine gravel, trace fibrous organics; dark greyish brown; dry, poorly graded. Gravel: UW to SW, sub-angular to rounded, sandstone. (NON-ENGINEERED FILL)	
			1.00	Very loose, fine SAND, some silt; blackish grey; dry, poorly graded. (DUNE DEPOSITS)	
			1.20	Loose, fine SAND, minor to some silt; light brown; dry, poorly graded. (DUNE DEPOSITS)	
			1.50		
			1.60	Medium dense, fine SAND, minor silt; brown; dry, poorly graded. (DUNE DEPOSITS)	
			2.00	End Of Hole At 1.60 m	
			3.00		

KEY

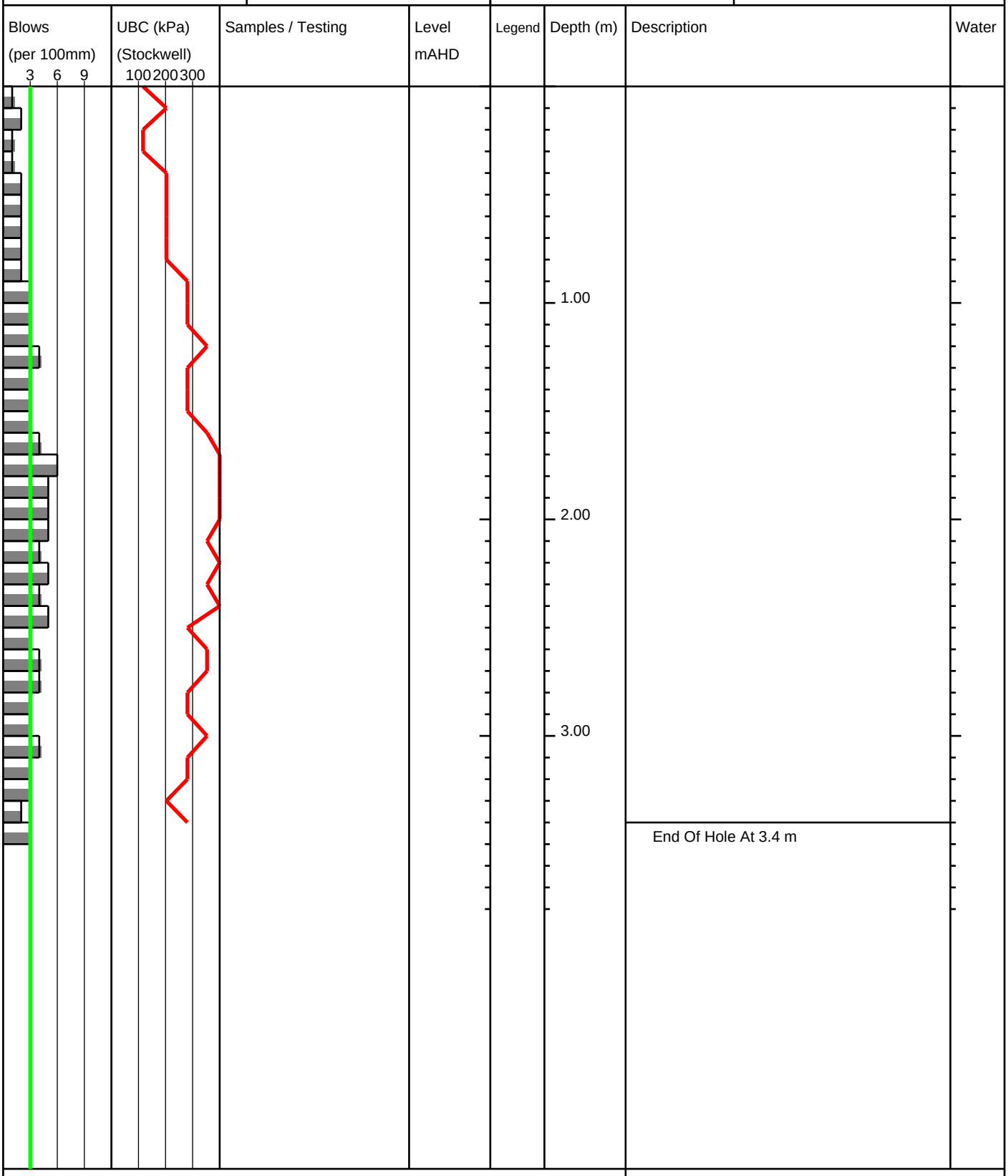
D - Disturbed Sample
B - Bulk Sample
W - Water Sample
V - Hand Shear Vane kPa

▽ - Groundwater Strike
▼ - Groundwater Level

REMARKS

No Groundwater Encountered
Terminated due to hole collapse in very dry sands.

CGW Consulting Engineers	Project Title: 126-130 Rosetta Road, Raumati		
	Project Number: 21118	Client: Lawrence Fay	DCP04
	GL (mAOD):	N Coord: 0	E Coord: 0
Date: 15/03/2021	Method: DCP	Logged By: SB	Scale: 1:25 Sheet 1 Of 1



KEY

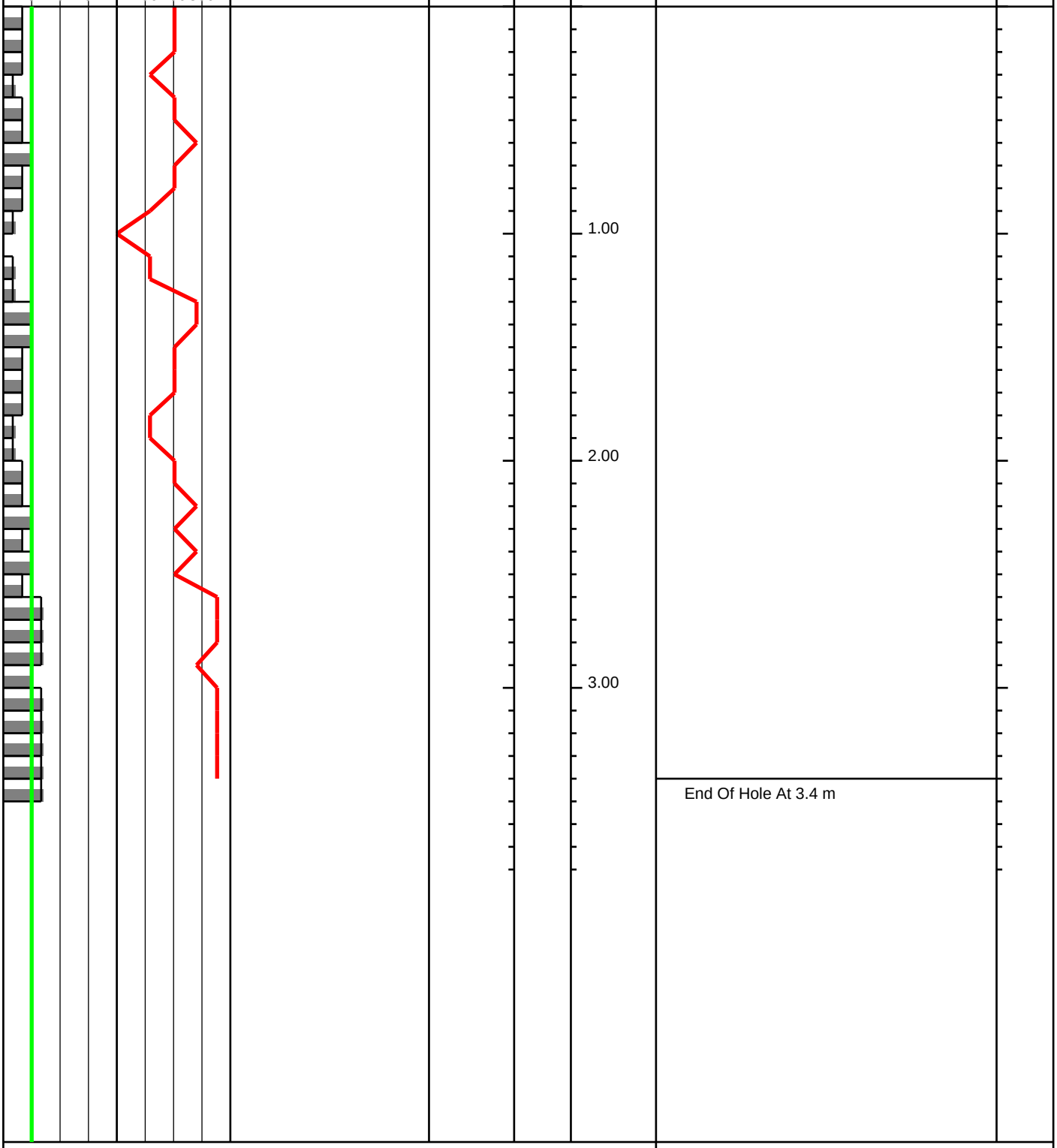
D - Disturbed Sample
B - Bulk Sample
W - Water Sample
V - Hand Shear Vane kPa

▽ - Groundwater Strike
▼ - Groundwater Level

REMARKS

No Groundwater Encountered
Terminated at target depth.

CGW Consulting Engineers	Project Title: 126-130 Rosetta Road, Raumati		
	Project Number: 21118	Client: Lawrence Fay	DCP05
	GL (mAOD):	N Coord: 0	E Coord: 0
Date: 15/03/2021	Method: DCP	Logged By: SB	Scale: 1:25 Sheet 1 Of 1



KEY

D - Disturbed Sample
B - Bulk Sample
W - Water Sample
V - Hand Shear Vane kPa

▽ - Groundwater Strike
▼ - Groundwater Level

REMARKS

No Groundwater Encountered
Terminated at target depth.

CGW Consulting Engineers	Project Title: 126-130 Rosetta Road, Raumati		
	Project Number: 21118	Client: Lawrence Fay	TP02
	GL (mAOD):	N Coord: 0	E Coord: 0
Date: 15/03/2021	Method: Excavator	Logged By: SB	Scale: 1:25 Sheet 1 Of 1

Blows (per 100mm) 3 6 9	UBC (kPa) (Stockwell) 100 200 300	Samples / Testing	Level mAHD	Legend	Depth (m)	Description	Water
					0.30	Silty fine SAND, trace fibrous organics; dark greyish brown; dry, poorly graded. (TOPSOIL)	
					1.00	Loosely packed, fine SAND, minor silt, trace fibrous organics; light brownish grey; dry, poorly graded. (DUNE DEPOSITS)	
					1.70	End Of Hole At 1.70 m	
					2.00		
					3.00		

KEY

D - Disturbed Sample
B - Bulk Sample
W - Water Sample
V - Hand Shear Vane kPa

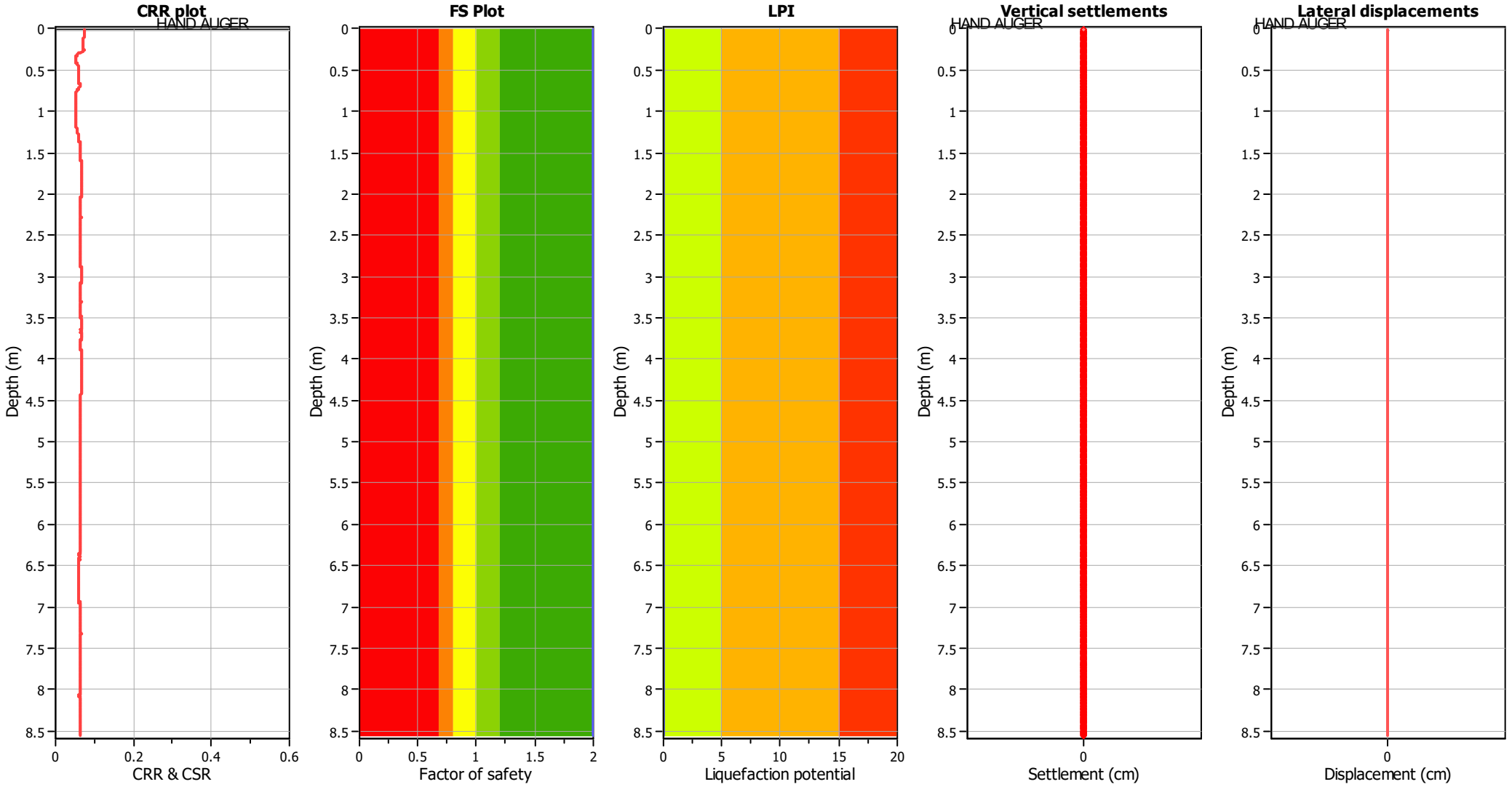
▽ - Groundwater Strike
▼ - Groundwater Level

REMARKS

No Groundwater Encountered
Terminated due to hole collapse in very dry sands.

Appendix C: Liquefaction Analysis

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	13.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.13	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	13.50 m	Fill height:	N/A	Limit depth:	N/A

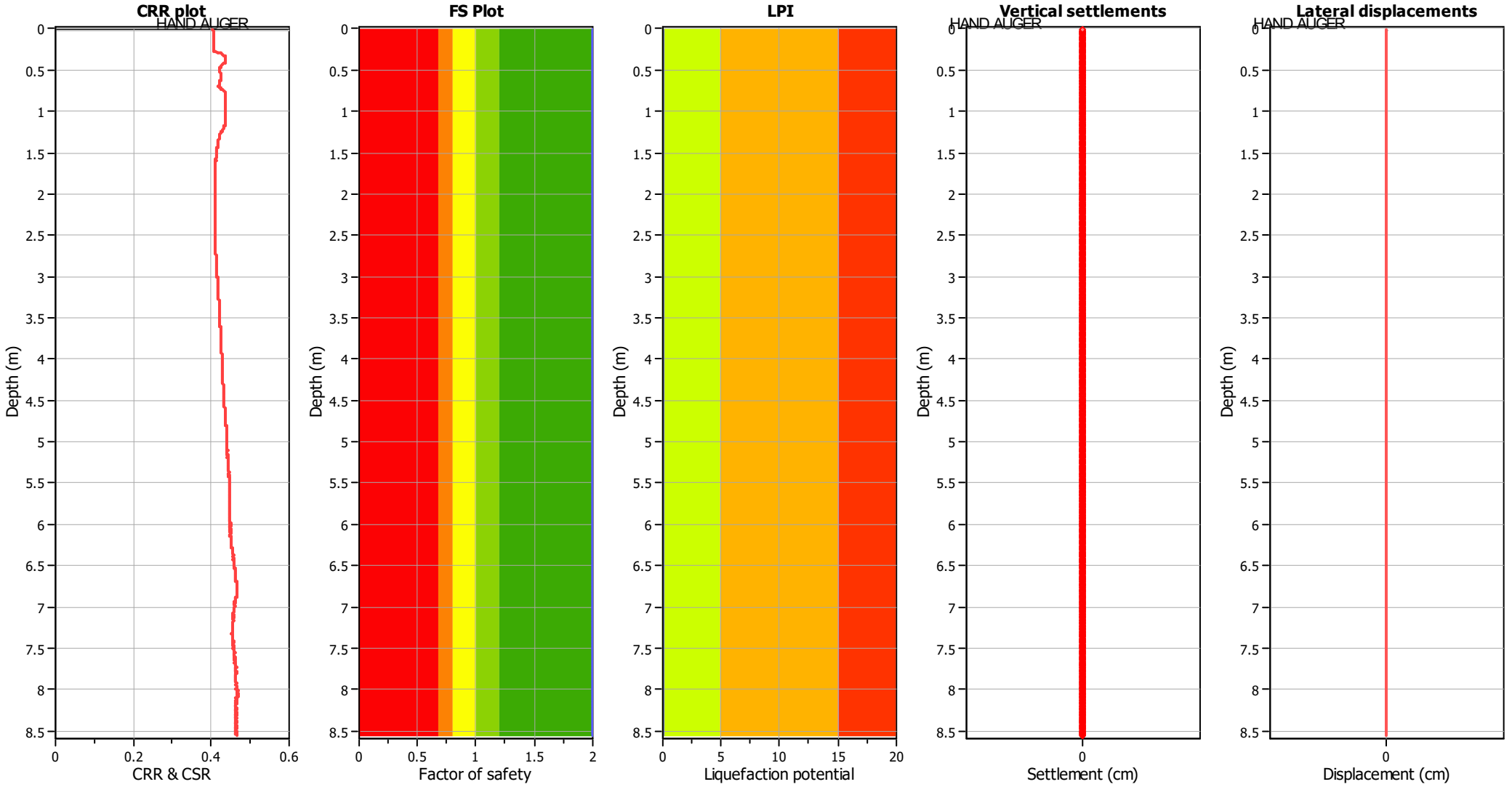
F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	13.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.70	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.68	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	13.50 m	Fill height:	N/A	Limit depth:	N/A

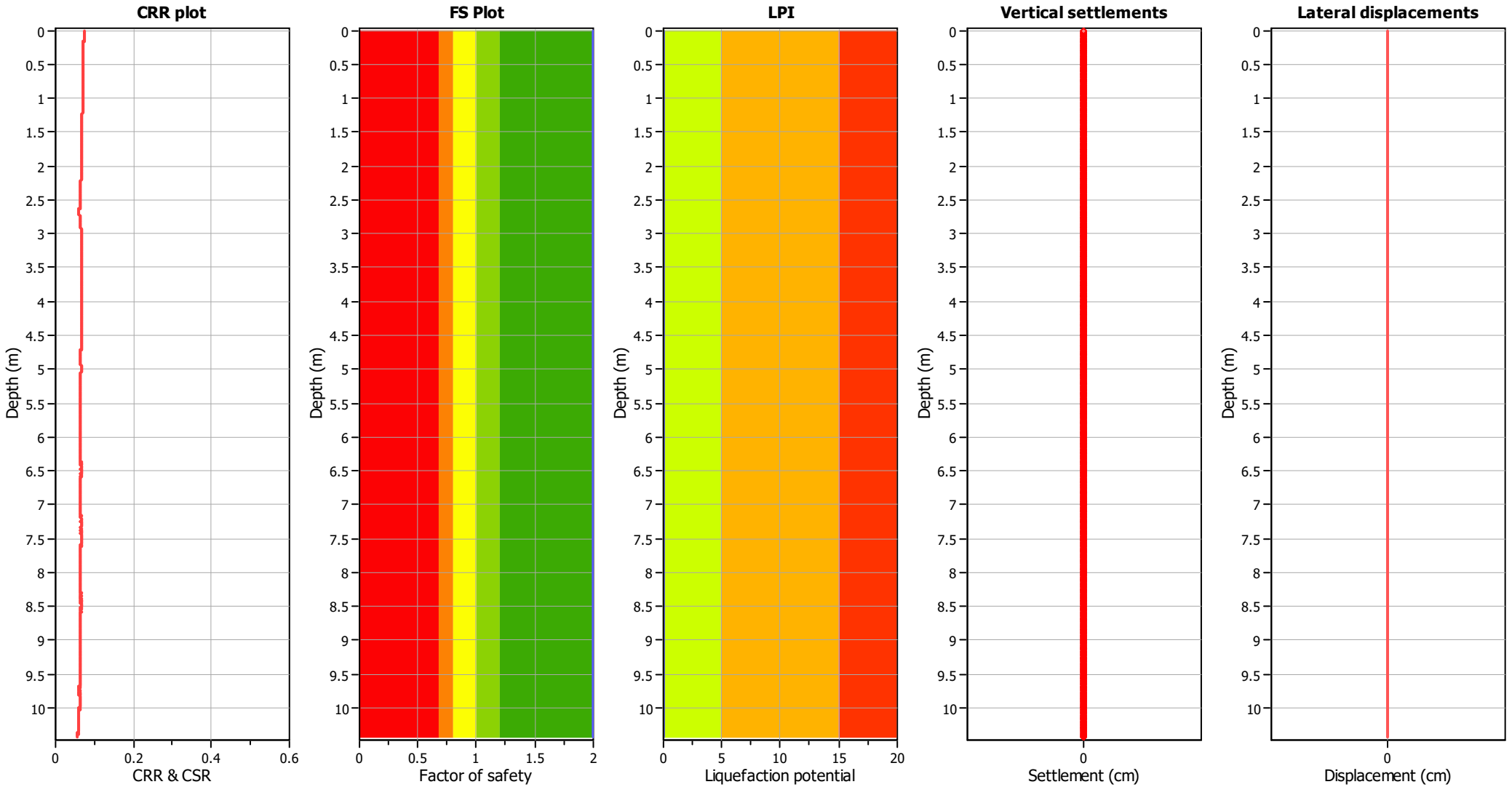
F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)
Fines correction method:	B&I (2014)
Points to test:	Based on Ic value
Earthquake magnitude M_w:	6.50
Peak ground acceleration:	0.13
Depth to water table (insitu):	11.00 m

During earthq.

Depth to GWT (erthq.):	11.50 m
Average results interval:	3
Ic cut-off value:	2.60
Unit weight calculation:	Based on SBT
Use fill:	No
Fill height:	N/A

During earthq.

Fill weight:	N/A
Transition detect. applied:	No
K_σ applied:	Yes
Clay like behavior applied:	Sands only
Limit depth applied:	No
Limit depth:	N/A

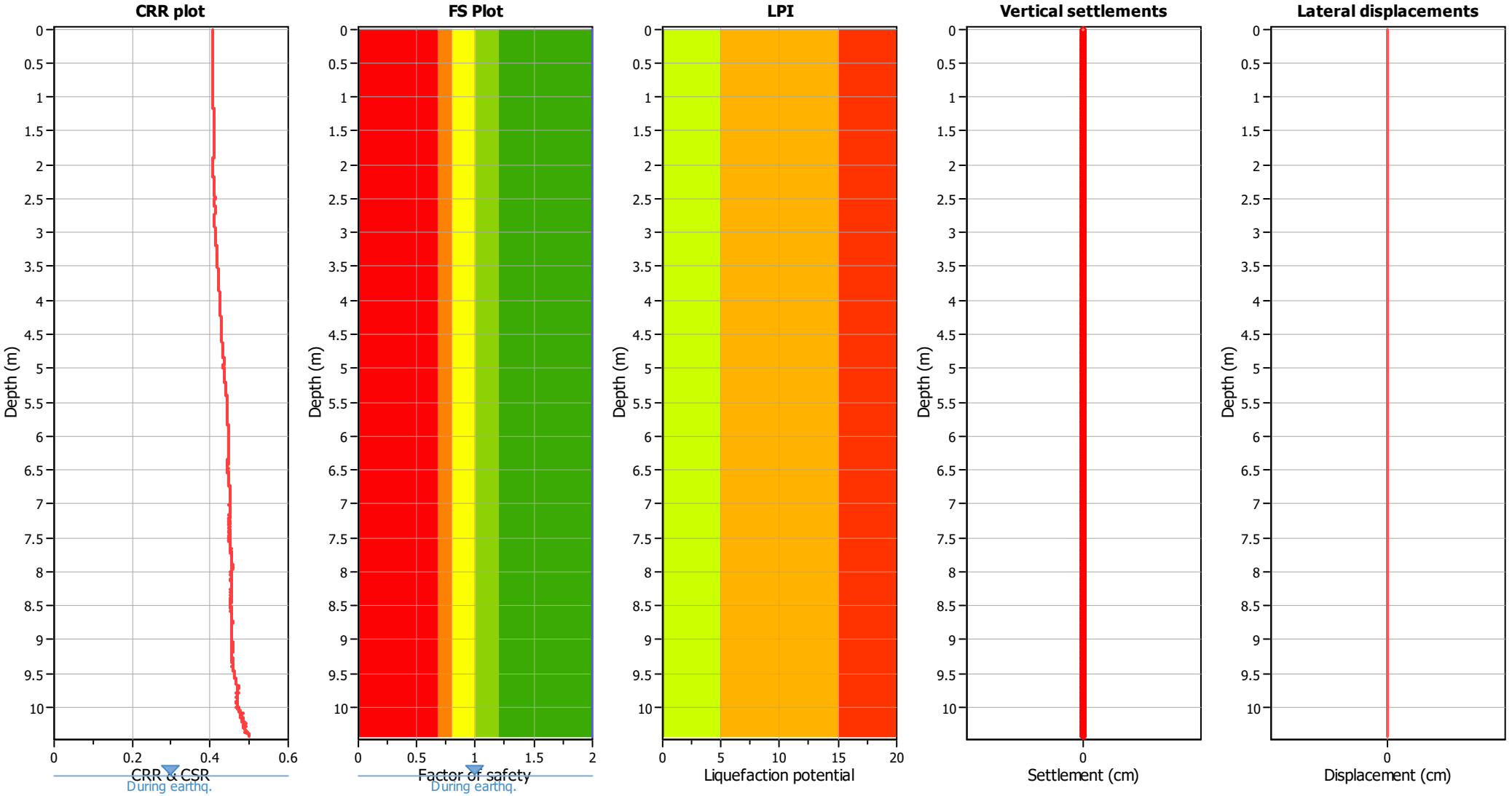
F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	11.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.70	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.68	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	11.50 m	Fill height:	N/A	Limit depth:	N/A

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

Appendix D: Statement of Professional Opinion

Statement of Professional Opinion on the Suitability of Land for Subdivision

ISSUED BY: CGW Consulting Engineers
(Geotechnical engineering firm or suitably qualified Geoprofessional)

TO: Kapiti Distrcit Council
(Territorial authority)

TO BE SUPPLIED TO: Lawrence Fay
(Owner/Developer)

IN RESPECT OF: Proposed Residential Subdivision
(Description of infrastructure/land development)

AT: 126-130 Rosetta Road, Raumati, Paraparaumu

(Address)

I Robert Bruce Smith on behalf of
(Geoprofessional)

CGW Consulting Engineers
(Geotechnical engineering firm)

hereby confirm:

1. I am a suitably qualified and experienced Geoprofessional employed by CGW Consulting Engineers and the geotechnical firm named above was retained by the owner/developer as the Geoprofessional on the above proposed development.

2. The geotechnical assessment report, dated 01/03/2023 has been carried out in accordance with the Ministry of Business, Innovation and Employment *Part D - Guidelines for the geotechnical investigation and assessment of subdivisions in the Canterbury region*, specifically in relation to liquefaction assessment.

(i) Details of and the results of my/the site investigations.

(ii) A liquefaction and lateral spreading assessment.

(iii) An assessment of rockfall and slippage, including hazards resulting from seismic activity.

(iv) An assessment of the slope stability and ground bearing capacity confirming the location and appropriateness of building sites.

(v) Recommendations proposing measures to avoid, remedy or mitigate any potential hazards on the land subject to the application, in accordance with the provisions of Section 106 of the Resource Management Act 1991.

3. In my professional opinion, not to be construed as a guarantee, I consider that Council is justified in granting consent incorporating the following conditions:

(i) __SED Pile Foundations be allowed for.

(ii) _____

4. This professional opinion is furnished to the territorial authority and the owner/developer for their purposes alone, on the express condition that it will not be relied upon by any other person and does not remove the necessity for the normal inspection of foundation conditions at the time of erection of any building. It is limited to those items referred to in clause 2 only.

5. This statement shall be read in conjunction with the geotechnical report referred to in clause 2 above, and shall not be copied or reproduced except in conjunction with the full geotechnical completion report.

6. Liability under this statement accrues to the geotechnical firm only and no liability shall accrue to the individual completing this statement.

7. The geotechnical engineering firm issuing this statement holds a current policy of professional indemnity insurance of no less than $_500,000_____

(Minimum amount of insurance shall be commensurate with the current amounts recommended by ENGINEERING NEW ZEALAND, ACENZ, NZTA, INGENIUM.)

R. Smith _____ Date:___01-03-23_____

(Signature of engineer, for and on behalf of CGW Consulting Engineers)

Qualifications and experience

_____CMEngNZ CPEng IntPE(NZ) / APEC Engineer_____

_____

This form is to accompany Form 9 – Resource Management Act 1991 (Application for a Resource Consent (Subdivision))

APPENDIX Five: Engineering and Infrastructure Report

LEITH CONSULTING

Land Surveying | Environmental Planning

Engineering and Infrastructure Report

Residential Subdivision Development

126-130 Rosetta Road, Raumati South

22 February 2023

Version 2

TABLE OF CONTENTS

Version:	Date of Issue:	Purpose:	Authorised By:
1	19 January 2022	Issued for Resource Consent application	S Poole
2	22 February 2023	Re-Issued for Resource Consent application	T Mills

Disclaimer:

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1 EXECUTIVE SUMMARY

This report has been prepared to support an application for resource consent and addresses the civil design aspects of a proposed four lot residential subdivision development at 126-130 Rosetta Road, Raumati South.

This report concludes that the proposed allotments can be serviced by the existing and proposed infrastructure outlined within this report and shown on the plans appended to the Assessment of Environmental Effects.

2 INTRODUCTION

2.1 Development Overview

The applicant proposes to undertake a four lot fee-simple infill subdivision at 126-130 Rosetta Road, Raumati South. The site is comprised of two parcels and is approximately 2,424m² (more or less) in area with an existing dwelling located centrally along the northern boundary. The applicant wishes for the existing dwelling to be confined within a smaller allotment and for new allotments to be created by infill subdivision.

The proposed subdivision will create 4 lots with areas ranging between approximately 303m² and 1001m². All lots are to be accessed from Rosetta Road, either by direct access off the Rosetta Road, or via a new right of way along the southern boundary.

A detailed description of the site and existing features is included within the Assessment of Environmental Effects.

Plans of the proposed development are appended to the Assessment of Environmental Effects.

2.2 Reference Documentation

The conceptual infrastructure discussed in this report and shown on the plans appended to the Assessment of Environmental Effects has been designed with reference to the following documentation:

- NZS4404:2010 – New Zealand Standard for Land Development and Subdivision Infrastructure.
- Erosion and Sediment Control Guide for Land Disturbing Activities in the Wellington Region (2021)
- NZS4509:2008 – New Zealand Fire Service Firefighting Water Supplies Code of Practice.
- Kāpiti Coast District Council – Subdivision and Development Principles and Requirements 2012.
- Kāpiti Coast District Council standard drawings
- Existing infrastructure information obtained from the Kāpiti Coast District Council online GIS database.
- Box Architecture Limited Architectural Plans titled ‘Rosetta Road Dev.’ sheets ‘A000-A630’ dated 18 January 2023.

3 EARTHWORKS

3.1 Existing Environment

A detailed description of the site and existing features is included within the Assessment of Environmental Effects.

3.2 Proposed Earthworks Design

Earthworks are proposed to facilitate the creation and development and are to be undertaken to:

- enable the construction of the right of way and accesses at suitable gradients; and
- create building platforms for proposed dwellings

Ground disturbance within the adjoining legal road will be limited to:

- Trenching and reinstatement operations required to install new services and utilities;
- Installation of new vehicle crossing(s); and
- Removal of retaining walls along the Rosetta Road frontage and excavation of berm

Earthworks will be undertaken in accordance with a Construction and Environmental Management Plan (CEMP) which is to be submitted to Council for acceptance and approval during the detailed design phase.

The proposed earthworks are shown on Leith Consulting Limited plan **KAP-0460-SCH (REV C)** appended to the Assessment of Environmental Effects. Details of the proposed earthworks are tabulated below:

Proposed earthworks:	
Total cut volume:	986m³
Total fill volume:	52m³
Balance volume:	883m³ excess cut
Maximum vertical depth of cut	4.4m
Maximum vertical depth of fill	1.2m

3.3 Earthworks Recommendations:

The following recommendations are to be undertaken to support the works being carried out as part of this development:

- That a resource consent condition be imposed to the effect of ensuring existing Council infrastructure is located and protected prior to and during excavation.
- Works are undertaken in accordance with the Greater Wellington Regional Council Erosion and Sediment Control Guide for Land Disturbing Activities in the Wellington Region (2021)

4 ACCESS

4.1 Existing Access

Figures 1-4 below show the roading infrastructure within the vicinity of the application site:

The site has legal frontage onto Rosetta Road to the west and Renown Road to the east. There is no existing vehicle access along the Renown Road frontage. The site has two formed accesses off Renown Road, a vehicle crossing to the south used as the primary drive-on access, and a second to the north, used in conjunction with the basement double garage. There is no existing footpath along the eastern side of Rosetta Road.

Figure 1 - Council GIS database records. Existing vehicle crossing highlighted yellow

Figure 2 - Northern crossing off Rosetta Road used for basement garage

Figure 3 – Southern vehicle crossing off Rosetta Road used for driveway

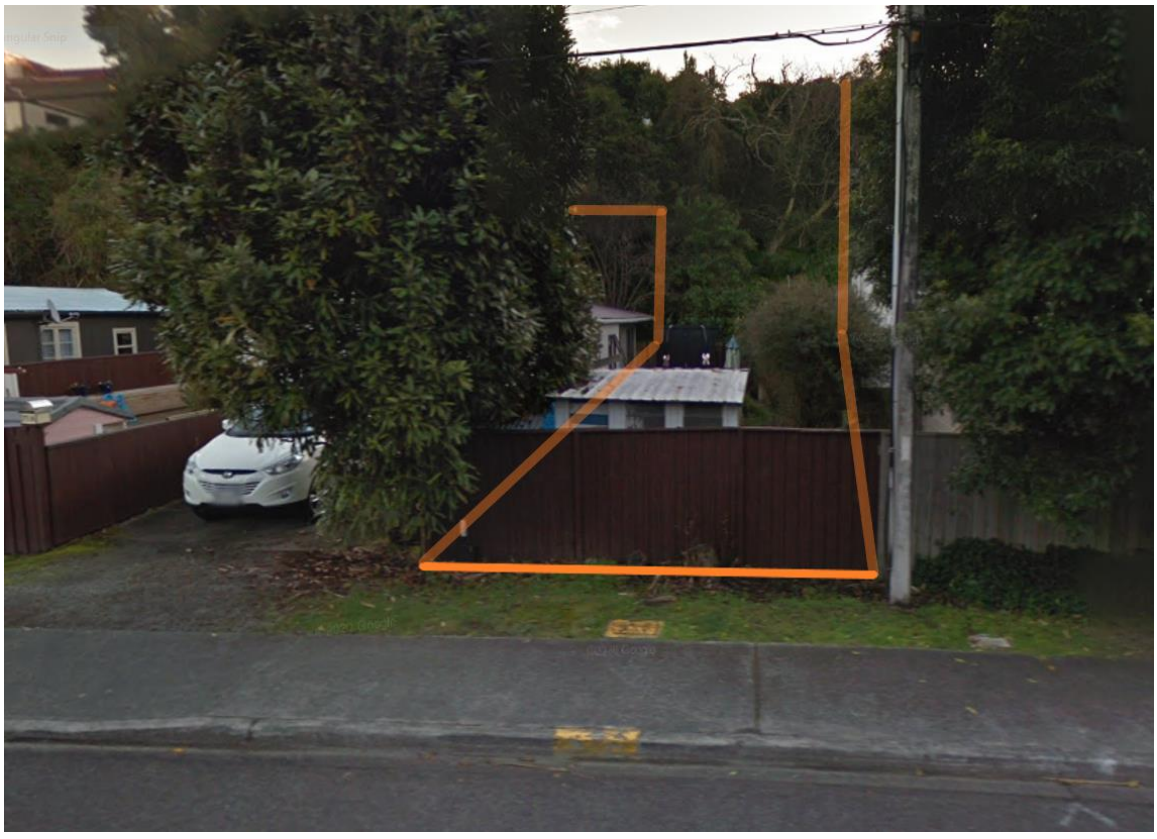

Figure 4 - Frontage onto Renown Road. Indicative boundaries shown orange. No existing vehicle crossing

4.2 Proposed Access

The proposed access arrangements are shown on Leith Consulting Limited plan **KAP-0460-SCH (REV C)** appended to the Assessment of Environmental Effects.

Access to proposed Lots 2-4 is to be provided via a new right of way formed along the southern boundary. The existing vehicle crossing in this location will be widened as required.

The conceptual right of way is proposed to have a rise for its entirety. The gradients are proposed to comply with NZS4404:2010. The L-shaped turning head has been designed in accordance with NZS4404:2010 Figure 4.3 and allows for 3-point vehicle manoeuvring where required. The entrance off Rosetta Road is shown as 5.7m wide x 6.0m long to accommodate two vehicles when required.

A minimum carriageway width of 3.5m is proposed, with standard kerb and channel on one side and flush nib kerb on the other. The legal width of the right of way extension varies and services will be required underneath the carriageway due to site constraints.

The existing vehicle crossing is to be utilised by proposed Lot 1 and upgraded/widened as required.

Vehicle access onto Renown Road via the existing access leg is not proposed due to topographical constraints. No further vehicle crossings or access points are proposed.

The right of way design will be finalised as part of detailed engineering design and submitted to Council for engineering approval prior to works commencing.

5 WASTEWATER

5.1 Existing Infrastructure

Figure 5 below shows the GIS location of the wastewater infrastructure within the vicinity of the application site:

Figure 5 - Council GIS database records. Existing wastewater connection highlighted yellow

A 100mmØ wastewater lateral is shown entering the south-western corner of the site and drains to a 150mmØ Asbestos Cement gravity main within the Rosetta Road carriageway. The gravity main drains north along Rosetta Road to the public wastewater pump station approximately 140m north of the site.

Council GIS records show no other wastewater infrastructure within or servicing the site.

5.2 Proposed Wastewater

The layout of the proposed wastewater network is shown on Leith Consulting Limited plan **KAP-0460-SCH (REV C)** appended to the Assessment of Environmental Effects.

The existing 100mm diameter lateral servicing the subject site is to be upgraded to a 150mm diameter gravity main to accommodate the additional flows generated by the new allotments. The new gravity main is to connect into the existing gravity main within Rosetta Road and terminate within the turning area of the proposed right of way. Lot 2 is proposed to be serviced via a connection onto the new main. Proposed Lot 1 will require a new lateral connection to the main within Rosetta Road.

Easements in gross in favour of KCDC are proposed in all locations where the new wastewater main is to pass through private property.

The wastewater design will be finalised as part of detailed design.

5.3 Sewer Recommendations

The design and construction works associated with the proposed wastewater system should be undertaken in accordance with the following documentation:

- NZS4404:2010 – New Zealand Standard for Land Development and Subdivision Infrastructure;
- Kāpiti Coast District Council – Subdivision and Development Principles and Requirements 2012.
- Kāpiti Coast District Council standard drawings
- Any other applicable documentation or reference material

6 STORMWATER

6.1 Existing Infrastructure

Figure 6 below shows the stormwater infrastructure within the vicinity of the application site:

The Council GIS database does not show the site having an existing stormwater connection or containing any existing stormwater infrastructure.

A sump is located midway along the Rosetta Road frontage of the site and connects to a 300mmØ Concrete gravity main draining north along Rosetta Road.

Figure 6 - Council GIS database records.

The existing access leg onto Renown Road is shown as being within the Fill Control area and Flood Extent on the Kāpiti Coast District Council online maps. The remaining area of the site is not identified as being within a flood plain or flood prone area on the Greater Wellington Regional Council or the Kāpiti Coast District Council latest flood extents.

6.2 Proposed Stormwater

There is no existing stormwater infrastructure in the vicinity of the development available for connection and therefore stormwater runoff is proposed to be disposed entirely onsite.

An investigation of the suitability for onsite stormwater disposal has been undertaken with the findings and recommendations detailed in a report appended to the Assessment of Environmental Effects titled *'Conceptual Stormwater Disposal Design – Residential Subdivision Development, 126-130 Rosetta Road, Raumati South Revision 2'.* This report concludes that hydraulic neutrality can be achieved via a combination of on-site soakage and attenuation.

6.3 Stormwater Recommendations

The design and construction works associated with the proposed stormwater system should be undertaken in accordance with the following documentation:

- NZS4404:2010 – New Zealand Standard for Land Development and Subdivision Infrastructure;
- Kāpiti Coast District Council – Subdivision and Development Principles and Requirements 2012.
- Kāpiti Coast District Council standard drawings
- Any other applicable documentation or reference material

7 WATER SUPPLY

7.1 Existing Infrastructure

Figure 7 below shows the reticulated water infrastructure within the vicinity of the application site:

The Council GIS database shows the site being serviced by an existing 20mmØ lateral connected to a 150mmØ Asbestos Cement main within the Rosetta Road berm. Council GIS records show no other water supply infrastructure within or servicing the site.

Figure 7 - Council GIS database records. Existing water services highlighted yellow

Figure 8 below shows the firefighting infrastructure within the vicinity of the application site.

Hydrants are located along the Rosetta Road and Renown Road frontages of the site. For the purposes of this report, the existing hydrant on Renown Road is considered inaccessible from the proposed building platforms due to topographical constraints.

On that basis the second closest hydrant is located at the common boundary between #110 and #114 Rosetta Road, approximately 110m from the existing dwelling. Hydrant testing has not been undertaken to confirm pressures available.

Figure 8 - Council GIS database records. Existing firefighting services highlighted yellow

7.2 Proposed Water Supply

The layout of the reticulated water supply is shown on Leith Consulting Limited plan **KAP-0460-SCH** appended to the Assessment of Environmental Effects.

All lots are to be provided with reticulated water supplies via connection into the existing Council infrastructure. Lot 1 is proposed to utilise the existing connection. Lots 2-4 are to be serviced by new 25mmOD MDPE connections installed in accordance with Kāpiti Coast District Council Standard Drawings.

The proposed development is deemed to be classified as FW2 for the purpose of evaluation against the firefighting water supply requirements within NZS PAS4509:2008. For non-sprinklered buildings this classification requires flows of 12.5L/s at a hydrant within 135m of a building and flows of 12.5L/s from a second hydrant within 270m of a building. Any dwelling at the rear of the site would be within 115m of the nearest Rosetta Road hydrant and within approximately 140m of the next closest hydrant. In addition, a hydrant is also located at the Renown Road frontage but has been disregarded for the purposes of this assessment as it is considered inaccessible from the proposed building platforms due to topographical constraints. Based on the proposed boundary layout and configuration of existing hydrants, any non-sprinklered buildings would be within the distances specified within NZS PAS4509:2008 and are therefore deemed to comply with firefighting requirements.

The water reticulation will be finalised as part of detailed design.

7.3 Water Supply Recommendations

The design and construction works associated with the proposed water reticulation should be undertaken in accordance with the following documentation:

- NZS4404:2010 – New Zealand Standard for Land Development and Subdivision Infrastructure;
- Kāpiti Coast District Council Subdivision and Development Principles and Requirements 2012;
- Kāpiti Coast District Council standard drawings;
- SNS4509:2008 – New Zealand Fire Service Firefighting Water Supplies Code of Practice; and
- Any other applicable documentation or reference material

8 UTILITIES

8.1 Electricity, Telecommunications and Gas

The dwelling within proposed Lot 4 has existing power and telecommunication connections which will remain unchanged while being potentially re-routed and protected by easements where necessary.

Electrical and telecommunication supplies can be provided to the boundary of the new vacant allotments (either road boundary or end point of the proposed right of way) by connecting to the existing infrastructure within Rosetta Road. The applicant may elect to also provide a reticulated gas connection to the boundary if available and economical.

9 SUMMARY

This report outlines the land development engineering aspects for a proposed residential development at 126-130 Rosetta Road, Raumati South.

The proposal to undertake a four-lot infill subdivision is considered feasible based on the existing infrastructure within the vicinity of the site. In addition, it is considered that the allotments can be serviced with new wastewater, reticulated water, and utility connections while complying with applicable standards and requirements.

APPENDIX SIX: Conceptual Stormwater Disposal Report

LEITH CONSULTING

Land Surveying | Environmental Planning

Conceptual Stormwater Disposal Report

Residential Subdivision Development

126-130 Rosetta Road, Raumati Beach

Version 2

22 February 2023

TABLE OF CONTENTS

Version:	Date of Issue:	Purpose:	Authorised By:
1	21 January 2022	Issued for resource consent application	T Mills
2	22 February 2023	Issued for resource consent application	T Mills

Disclaimer:

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1 INTRODUCTION

This Conceptual Stormwater Disposal Report has been prepared to accompany an application for resource consent for a proposed 4-lot residential subdivision of 126-130 Rosetta Road, Raumati Beach.

This purpose of this report is to outline potential methods and options for disposing the additional stormwater runoff generated by roof and impervious areas associated with the development.

2 REFERENCE DOCUMENTATION

The conceptual stormwater options discussed in this report and shown on the plans appended to the Assessment of Environmental Effects have been designed with reference to the following documentation:

- NZS4404:2010 – New Zealand Standard for Land Development and Subdivision Infrastructure
- Kāpiti Coast District Council – Subdivision and Development Principles and Requirements 2012
- Ministry of Business, Innovation & Employment – Acceptable Solutions and Verification Methods For New Zealand Building Code Clause E1 Surface Water
- Kāpiti Coast Rainwater and Greywater Code of Practice Guidelines
- Kāpiti Coast District Council on-site detention tank calculator
- CGW Consulting Engineers Limited assessment dated 31 March 2021 titled 'Geotechnical Site Suitability Report – 126-130 Rosetta Road, Raumati'
- Box Architecture Limited Architectural Plans titled 'Rosetta Road Dev.' sheets 'A000-A630' dated 18 January 2023.

3 SITE ANALYSIS

3.1 Site Description and Proposal

The site is located within the dune area of Raumati Beach and, as such, comprises of undulating topography. The site has two road frontages, the primary frontage with a driveway from Rosetta Road to the west and a second unutilised frontage from Renown Road to the east. The topography of the site rises from Rosetta Road at 10.0m AMSL to a centrally located plateau at approximately 17.0m AMSL then falls rapidly to Renown Road at approximately 7.0m AMSL.

The main house is situated at the centre of the site, with a garage and pool to the south and several ancillary buildings surrounding. There is also a double garage positioned directly on the Rosetta Road frontage. The site currently has numerous impervious areas which are to be removed or retained in accordance with the scheme plan included in the Assessment of Environmental Effects.

The applicant is seeking to subdivide the property into four new residential lots with Lot 1 to be accessed directly off Rosetta Road and Lots 2-4 to be accessed via a right of way along the southern boundary.

A detailed description of the site is included within the Assessment of Environmental Effects. Geotechnical conditions are described in the assessment prepared by CGW Consulting Engineers titled 'Geotechnical Site Suitability Report – 126-130 Rosetta Road, Raumati' dated 31 March 2021.

3.2 Natural Hazards

The eastern road frontage onto Renown Road is subject to the KCDC Q100 flood extend and is also subject to a Fill Control designation. This development does not propose to direct any additional runoff into this catchment or to undertake earthworks within the Fill Control area.

3.3 Groundwater Conditions

The geotechnical assessment reports that the water table was not encountered during testing. This aligns with our field observations, detailed in Section 4 of this report.

3.4 Design Considerations

Stormwater disposal from new dwellings and impervious areas on Lots 1 and 2 has been designed to cater for a 10% AEP storm event as there is a secondary flow path available either directly to or via the proposed right of way to Rosetta Road, which is not subject to flooding. Stormwater disposal for new impervious areas on proposed Lot 3 has been conceptually designed to cater for a 1% AEP storm event as the secondary flow path drains east into the fill control area within Renown Road.

The new dwellings proposed on Lots 1-3 are to have 10,000 litre rainwater storage tanks or a combination of a 4,000 litre rainwater storage tank and a greywater re-use irrigation system in accordance with KCDC's Plan Change 75.

Onsite test results and details of the above conceptual design are outlined in Sections 4 and 5 below.

4 PERCOLATION TESTING

4.1 Methodology

An onsite percolation test was conducted on 10 May 2021 to ascertain the soakage rate in the likely vicinity of a right of way soakpit. The test was undertaken in the location shown on Figure 1 below, with the base of the augered hole at approximately 11.4m AMSL.

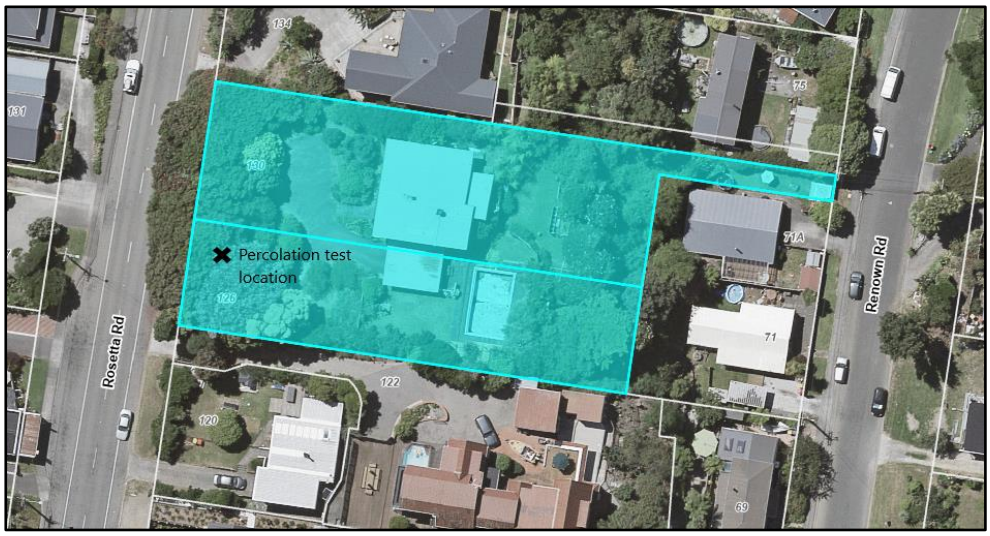


Figure 1 - Percolation test location

The percolation test was conducted using the falling head method whereby a sleeve was inserted into a hand augered hole and the rate of drainage was recorded at regular time intervals. Soil extracted during augering comprised of sand material and topsoil - refer Figures 2 and 3 below. The water table was not encountered during hand augering.

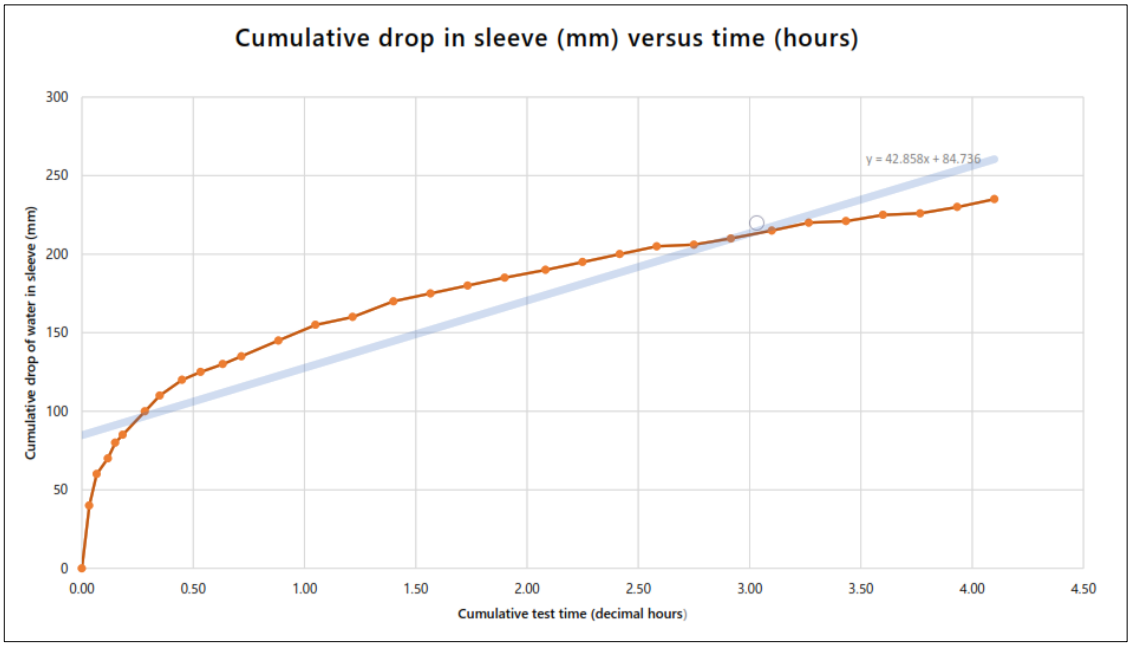
4.2 Test Results

Figure 2 - Soil extracted during hand augering

Figure 3 – Percolation test (looking south-west)

Percolation test results are graphed in Figure 4 and summarised below:

Figure 4 - Percolation test results



Soakage test results	
Raw soakage rate (from onsite testing)	43mm/hour (refer Figure 4 above)
Design soakage rate (with Factor of Safety*)	11mm/hour (Raw soakage rate x 0.25*)

* as required by the KCDC Subdivision and Development Principles and Requirements (2012) Clause 4.3.7.9.

A design soakage rate of **11mm/hour** is insufficient to allow stormwater disposal by way of soakpits within this area. Therefore, attenuation is required in order to achieve hydraulic neutrality.

It is noted that the soakage rate observed above may not necessarily represent potential percolation rate elsewhere within the site as testing was undertaken at the low point of the dune. From previous experiences on similar sites, percolation rates are typically faster in areas of higher elevation. We would therefore anticipate a higher percolation rate at the top of the dune within the application site. As such, a rate sourced from nearby developments with a similar elevation has been used for the preliminary design of a soakpit for new impermeable areas on proposed Lot 3 and is discussed in greater detail in Section 5.3.

5 CONCEPTUAL DESIGN

5.1 Proposed Right of Way

The site currently has a 274m² sealed driveway which includes a turning area and access to the existing garage. Stormwater captured on this driveway currently drains directly into Rosetta Road. This driveway is to be removed in its entirety and re-aligned as a 165m² formed right of way along the southern boundary of the site with 110m² of contributing driveways from Lots 3 and 4.

It is proposed that runoff from the right of way and contributing driveways of Lots 3 and 4 be discharged directly to Rosetta Road, offsetting the existing pre-development runoff. To avoid the existing sheet flow over the vehicle crossing, a street catchpit is proposed at the road boundary with a 100mmØ outlet pipe feeding directly into the kerb and channel within Rosetta Road.

5.2 Proposed Lots 1 and 2

5.2.1 Proposed Lot 1

Proposed Lot 1 is situated in the north-western corner of the site. Measuring approximately 309m², Lot 1 currently encompasses an existing double garage with a vegetated roof on the Rosetta Road frontage boundary and a portion of the existing driveway. As per Sheet A200 of Box Architecture Ltd.'s drawings titled "Rosetta Road Dev" dated 18 January 2023, a new 165m² dwelling with a 33m² decked garage roof and an additional 30m² of unattenuated impervious areas are proposed. As the existing garage roof area is vegetated, it has not been considered when determining net additional impervious areas. Therefore, the net impervious areas proposed on Lot 1 are assessed as **198m² roof area** and **30m² paved area**.

5.2.2 Proposed Lot 2

Proposed Lot 2 measures approximately 303m² and is bounded by Lot 1 to the north and the right of way to the south. As per Sheet A200 of Box Architecture Ltd.'s drawings titled "Rosetta Road Dev" dated 18 January 2023, a new 115m² dwelling with a 44m² decked garage roof and an additional 31m² of unattenuated impervious areas are proposed. No existing impervious areas have been used to offset calculations for an attenuation tank on Lot 2 and, as such, the net impervious areas proposed are assessed as **159m² roof area** and **31m² paved area.**

5.2.3 Attenuation Tank Design

Onsite attenuation tanks are proposed for the overflow from the 10,000 litre PC75 roof water tank or 4,000 litre grey-water re-use tank on each of Lots 1 and 2. It is envisaged that Promax Slimline water tanks (or similar) could be used to provide the attenuation storage. The attenuation tank calculations have been undertaken assuming that runoff from driveways and other impermeable surfaces will be discharged directly into the system, roof run-off has been over-attenuated to compensate.

Tank calculations have been undertaken using the Kāpiti Coast District Council on-site detention tank calculator with the results included at Appendix One. The orifices of each attenuation tank are proposed to discharge to a kerb adaptor in the right of way or directly to Rosetta Road at the restricted rates summarised below:

Lot number	Min storage volume	Max discharge (Q10 event)	Max discharge (Q2 event)	Orifice diameter
Lot 1	2,970 litres	1.0 litres/second	0.8 litres/second	19mm
Lot 2	2,540 litres	0.7 litres/second	0.6 litres/second	16mm

5.3 Proposed Lot 3

5.3.1 Existing site and proposal

Proposed Lot 3 measures approximately 810m² which includes 183m² of right of way resulting in a net area of 627m² to assess the proposal upon – the right of way being previously discussed in Section 5.1. Lot 3 currently contains an existing 52m² double garage to be removed along with a 60m² pool and 76m² of surrounding paved areas which are to remain. Perusal of the KCDC building file indicates that overflow from the pool (and surrounding concrete areas) currently drains into a soakpit located within the eastern half of the proposed Lot – refer Figure 5 below. It is proposed that this soakpit remains so long as it is only used as existing, and no additional runoff is to be directed into this soakpit.

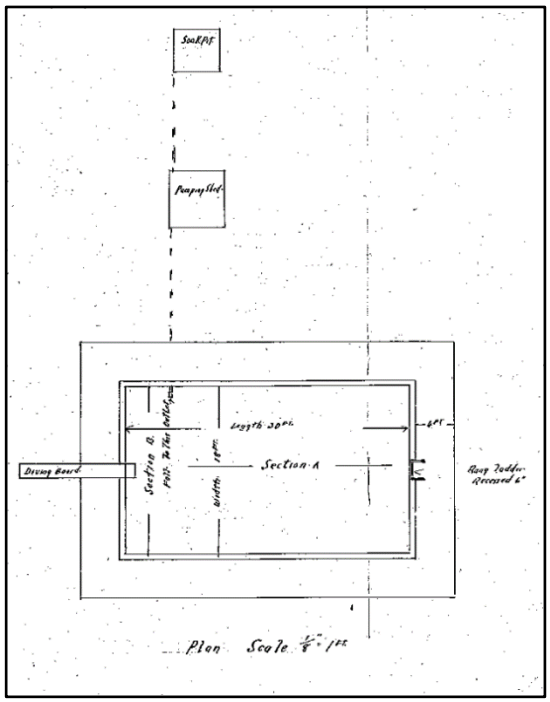


Figure 5 – Swimming pool details (Source: Building file)

As per Sheet A200 of Box Architecture Ltd.'s drawings titled "Rosetta Road Dev" dated 18 January 2023, a new 124m² dwelling with a 22m² deck over garage is proposed while keeping the 79m² of impervious areas associated with the existing pool. The net increase in impervious areas within Lot 3 is assessed as **144m² roof area**.

Having undertaken permeability testing at a much lower level within the site, the results are unlikely to represent what the design soakage rate will be at the top of the dune where any new disposal system for Lot 3 is likely to be located. To account for this, adopted values have been used for preliminary design purposes. The adopted values in the table below are based on previous experience in the area, are considered conservative, and will need to be confirmed prior to an application for building consent once the constraints of the final proposed surfaces are known.

Design Soakage Rates	
Raw soakage rate (adopted value, subject to verification via onsite testing)	1000mm/hour
Adopted design soakage rate (with Factor of Safety*)	250mm/hour (Raw soakage rate x 0.25*)

5.3.2 Soakpit Design

The proposed soakpit is to be comprised of interconnected plastic modules (Cirtex RainSmart or similar) or rock-filled. Selection criteria will be based on material availability, cost of supply and installation, and size (storage efficiency) requirements. Selection is to be made and sizing to be confirmed prior to building consent. Soakpits are to be wrapped in geotextile fabric around the side and top in accordance with E1 requirements.

5.3.2.1 Indicative dimensions (Cirtex RainSmart)

Conceptual dimensions for a soakpit comprised of Cirtex RainSmart modules is summarised below. The dimensions assume a void space ratio of 0.95.

Conceptual dimensions for modular soakpit	
Length	2.15m (3 modules)
Width	2.00m (5 modules)
Height of effective	1.29m ('Triple module')
Volume	5.26m³ (factoring in void losses)
Excess storage	0.36m³ (for design storm event)
Cover	0.45m (subject to trafficability requirements)
Depth to invert:	1.74m

5.3.2.2 Indicative dimensions (traditional rock-filled soakpit)

Conceptual dimensions for a traditional rock-filled soakpit with a 0.9m diameter perforated chamber are summarised below. The dimensions assume a void space ratio of 0.38.

Conceptual dimensions for rock-filled soakpit	
Length	3.00m
Width	4.00m
Height of effective	1.20m
Volume	5.47m³ (factoring in void losses)
Excess storage	0.30m³ (for design storm event)
Cover	0.1m (subject to trafficability requirements)
Depth to invert:	1.30m

The above conceptual dimensions have been calculated using the Rational Formula using the following values:

5.3.2.3 Coefficient (C)

A weighted coefficient of 0.90 has been calculated to determine the anticipated runoff based on figures adopted from E1 (Table 1):

- Fully roofed and/or sealed developments: 0.90

5.3.2.4 Rainfall Intensity (i)

Rainfall intensity has been interpolated from the Climate affected (2090) 24-hour Rainfall Depth Isoheyt maps within Part 4 Appendix A of the KCDC Subdivision and Development Principles and Requirements 2012. A Q100 depth of 170mm/24hrs was determined, then normalised to 46.2mm/hr (1 hour event) for conceptual calculations.

5.3.2.5 Area (A)

The area allows for the runoff generated by an additional 144m² of roof area as determined in Section 5.3.1.

5.4 Proposed Lot 4

Proposed Lot 4 is the largest allotment in this development. At approximately 1001m², it will include the existing 190m² dwelling with access from the proposed right of way to the west of proposed Lot 3.

The drainage plan from Council's building file, along with on-site inspections indicates that all downpipes drain to the rear of the existing building and feed into a rainwater tank which overflows to a soakpit. Figures 6 and 7 below show this downpipe junction along with the original drainage plan. It is proposed that this existing system remains as is.

Figure 6 – Downpipe junction on eastern face of dwelling

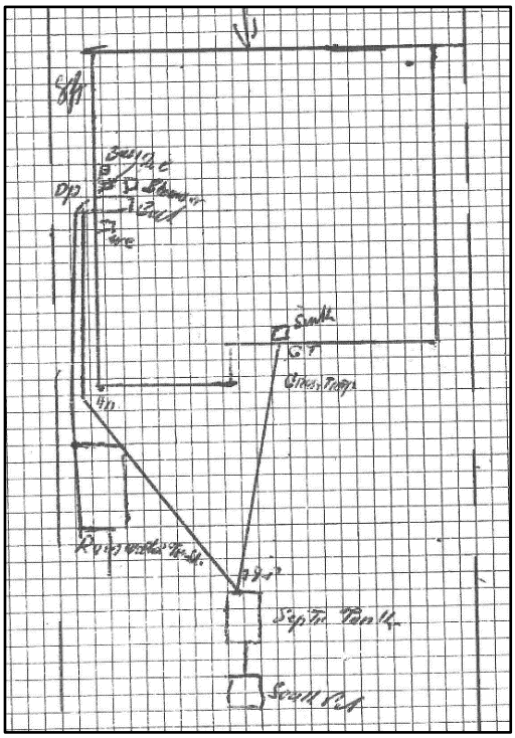


Figure 7 – Original Drainage Plan (Source: KCDC Building File)

5.5 Conceptual Design Summary

1. Stormwater runoff from the proposed right of way and private driveways for Lots 3 and 4 has been offset against the existing impermeable driveway and is to be routed to a standard kerb and channel following the southern boundary to a sump and 100mmØ bubble-up outlet to the kerb within Rosetta Road.
2. Stormwater runoff from new dwellings on proposed Lots 1 and 2 are to be attenuated based on roof areas to be confirmed at the building consent stage. For preliminary design purposes, the indicative values are detailed in Sections 5.2.1 and 5.2.2 and are sourced from Sheet A200 of Box Architecture Ltd.'s drawings titled "Rosetta Road Dev" dated 18 January 2023. These attenuation tanks over-sized to allow the proposed driveways to be discharged directly to the kerb as appropriate and are required in addition to the 10,000-litre rainwater re-use or 4,000-litre greyware re-use tanks necessitated by Plan Change 75. Overflow from the attenuation tanks are to be routed to kerb adaptors via stormwater laterals constructed to the boundary of each Lot.
3. Stormwater runoff from proposed Lot 3 is to be discharged to a soakpit based on roof areas to be confirmed at the building consent stage. For preliminary design purposes, the conceptual roof area detailed in Section 5.3.1 and is sourced from Sheet A200 of Box Architecture Ltd.'s drawings titled "Rosetta Road Dev" dated 18 January 2023. Overflow from the existing concrete area and pool on proposed Lot 3 is to continue to be discharged into the existing system.
4. The existing system on Lot 4 is currently within the confines of the Lot as shown in Section 5.4 and is proposed to remain as.
5. Alternative methods of disposal may be assessed at the time of engineering approval and are to be subject to Council approval.

6 OPERATION, MAINTENANCE AND ACCESS

The owners of each allotment are to be responsible for the maintenance of stormwater devices with that allotment. It is also envisaged it will be the collective responsibility of the allotments contributing to and utilising any stormwater devices situated within easements to collective share inspection and maintenance obligations.

6.1 Soakage Devices

The primary requirement of a soakage device is that it maintains the soakage rates at or above those used during design. Clogging of the device by sediment will reduce soakage rates and therefore proactive inspections and maintenance should be undertaken periodically. Maintenance is likely to include (but is not limited to) the following:

- Clearing out of driveway sumps/silt traps
- Maintaining devices in accordance with the manufacturer's instructions
- Recording of dates in which inspections and maintenance have occurred

During dwelling construction, it shall be the responsibility of the builder to inspect and maintain soakage devices and sumps at least fortnightly or after a significant rainfall event. There is a greater likelihood of sediment laden stormwater entering the device(s) during construction and the builder shall install and maintain protection measures to prevent soil and debris from entering sumps.

Any sump discharging to a soakpit is to be fitted with an Enviropod.

6.2 Detention Tanks

Tanks are to be maintained in accordance with the manufacturer's recommendations. Where required, entry into confined spaces should only be undertaken by a suitably qualified person and all should be undertaken in accordance with A/NZS 2865:2001 Safe Working in a Confined Space.

7 RECOMMENDATIONS

This report has been prepared to support an application for subdivision consent and through conceptual design, has outlined potential methods to dispose of the additional stormwater runoff generated by the development in a 10% and 1% AEP rainfall event where required.

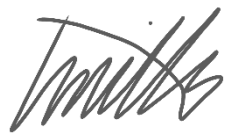
Designs are preliminary and shall be verified once further details of buildings and impervious areas are confirmed. It will be the responsibility of future owners to provide certified calculations verifying the sizing of systems within each lot relative to the parameters used in this report at the time of building consent, once roof and impervious areas are confirmed. It is anticipated that a consent notice will be recorded on the titles of these allotments to ensure this requirement is accounted for during the building consent phase and complied with on an ongoing basis. Alternative designs may be considered but will need to be supported by relevant calculations, technical specifications and/or additional testing if required.

8 LIMITATIONS

This document has been prepared for resource consent approval purposes only and is to be refined during the detailed engineering design phase and submitted to Council for acceptance and approval prior to works commencing onsite. If required, specific sizing will be undertaking as part of detailed design.

The content of this report is based on the information available at the time of writing. Sub-surface conditions have been ascertained from a discrete test location and do not necessarily represent of conditions in other areas of the site. The base of any excavations will need to be inspected at the time of construction to verify that the soil characteristics are consistent with the assumptions made in this conceptual design.

Prepared by:



Tom Mills, BSurv, MSSNZ
Licensed Cadastral Surveyor
Leith Consulting Ltd

APPENDIX ONE: ATTENUATION TANK CALCULATIONS

STORMWATER ON-SITE DETENTION TANK (OSD) DESIGN 22-Feb-23

10 YEAR ARI STORM with 2 YEAR ARI STORM OUTLET

PROPOSED LOT 1

309 m2 Lot with 198m² house plus 30m² impervious

NAME	KAP-0460	Calcs By	TEM
ADDRESS	126-130 Rosetta Road, Raumati Beach		
PHONE		Date	22-Feb-23

NOTE:
Only fill in the blue (unprotected) cells

DATA

Depth of Tank	**1.85**	*m*
2 Year Isoheyt Value	**80**	*mm*
10 Year Isoheyt Value	**115**	*mm*
Time of Concentration	**10**	*min. (10,15,20,30,60)*

	Area (m²)	`C'	CA (m²)
Site Area	**309**		
1. EXISTING SITE COVERAGE			
Existing Roof	**0**	0.9	0.0
Existing Paved	**0**	0.85	0.0
Existing Garden	**309**	0.35	108.2
TOTAL Existing Area	**309**		**108.2**
2. PROPOSED DEVELOPMENT			
Additional/Reduced Roof	**198**	0.9	178.2
Additional/Reduced Paved	**30**	0.85	25.5
Additional/Reduced Lawn/Garden	**-228**	0.35	-79.8
TOTAL Addition Area (should be zero)	**0**		**123.9**
3. REMAINING UNDRAINED AREA	(Not routed thru detention tank after development)		
Undrained Roof Area (Normally Zero)	**0**	0.9	0.0
Undrained Paved Area (Normally Zero)	**30**	0.85	25.5
Undrained Lawn/Garden Area	**81**	0.35	28.4
TOTAL Extg Not to Tank Area	**111**		**53.9**

NOTE A "#DIV/0!" message appearing in a cell means that data has been entered incorrectly

NOTE The sum of the existing areas must equal the `Site Area'

* NOTE If pre-development lawn areas are reduced a negative number is required to be entered.

CONTROL DATA

Existing `C'	0.35		*(`CA'extg/Site Area)*
Developed `CA' to OSD tank	178	*(m²)*	*(`CA'extg+`CA'adds-`CA'undr)*
Additional Area	0	*(m²)*	*(`A'add)*

0.00 0 0

RUNOFF DATA	**for 2 year**		**for 10 Year**	
Intensity I	52.80	*mm/hr*	75.9	*mm/hr*
Allowable Qmax whole site	1.59		2.28	
Lost Flows	0.79		1.14	
Allowable Qmax from tanks =	0.8	*l/s*	1.15	*l/s*
Allowable Qave from tanks =	0.5	*l/s*	0.7	*l/s (Qmax * 0.65)*

Orifice Calculation - PROTECTED DO NOT ENTER ANY FIGURES

d=	**18.5**	**mm**	
Q10 outflow=	**1.011160466**	**for h=**	**1.85**
Q10ave	**0.7**		
Q=	**0.797194687**	**for h in Q2**	**1.1499007**
Qave	**0.5**	**Q2**	

Rainfall Intensities (mm)

MIN	Normalised Rainfall Depth(I/I_{2hr})	2 Yr(mm/hr)	10 yr(mm/hr)
10	**0.11**	**52.8**	**75.9**
15	**0.14**	**44.8**	**64.4**
20	**0.16**	**38.4**	**55.2**
30	**0.19**	**30.4**	**43.7**
60	**0.26**	**20.8**	**29.9**
120	**0.35**	**14.0**	**20.1**
180	**0.46**	**12.3**	**17.6**
240	**0.51**	**10.2**	**14.7**
300	**0.56**	**9.0**	**12.9**
360	**0.60**	**8.0**	**11.5**
420	**0.64**	**7.3**	**10.5**
480	**0.68**	**6.8**	**9.8**
540	**0.71**	**6.3**	**9.1**
600	**0.75**	**6.0**	**8.6**
660	**0.78**	**5.7**	**8.2**
720	**0.81**	**5.4**	**7.8**

STORAGE (2 year)

time (min)	depth (mm)	inflow (l)	outflow (l)	storage (l)	
10	8.8	1568	310.90593	1257	*inflow=`CA'dev*depth*
15	11.2	1996	466.35889	1529	*outflow=Qave*time*
20	12.8	2281	622	1659	*diff=inflow-outflow*
30	15.2	2709	933	1776	
60	20.8	3707	1865	1841	
120	28.0	4990	3731	1259	
180	36.8	6558	5596	961	
240	40.8	7271	7462	0	
300	44.8	7983	9327	0	
360	48.0	8554	11193	0	
420	51.2	9124	13058	0	
480	54.4	9694	14923	0	
540	56.8	10122	16789	0	
600	60.0	10692	18654	0	
660	62.4	11120	20520	0	
720	64.8	11547	22381	0	
			Max=	1841	

STORAGE (10 Year)

time (min)	depth (mm)	inflow (l)	10 yr outflow (l)	Storage (10 yr) (l)
10	12.7	2254	394.3525818	1860
15	16.1	2869	592	2277
20	18.4	3279	789	2490
30	21.9	3894	1183	2711
60	29.9	5328	2366	2962
120	40.3	7173	4732	2440
180	52.9	9427	7098	2328
240	58.7	10451	9464	987
300	64.4	11476	11831	0
360	69.0	12296	14197	0
420	73.6	13116	16563	0
480	78.2	13935	18929	0
540	81.7	14550	21295	0
600	86.3	15370	23661	0
660	89.7	15985	26027	0
720	93.2	16599	28393	0
			Max=	2962

SUMMARY

Tank Volume	**2970.0**	**litres**
10 Year Max Discharge	**1.0**	**l/s**
2 Year Max Discharge	**0.8**	**l/s**
Orifice Diameter	**19**	**mm**

STORMWATER ON-SITE DETENTION TANK (OSD) DESIGN 22-Feb-23

10 YEAR ARI STORM with 2 YEAR ARI STORM OUTLET

PROPOSED LOT 2

303 m2 Lot with 159m² house plus 31m² impervious

NAME	KAP-0460	Calcs By	TEM
ADDRESS	126-130 Rosetta Road, Raumati Beach		
PHONE		Date	22-Feb-23

NOTE:
Only fill in the blue (unprotected) cells

DATA

Depth of Tank	**1.85**	*m*
2 Year Isoheyt Value	**80**	*mm*
10 Year Isoheyt Value	**115**	*mm*
Time of Concentration	**10**	*min. (10,15,20,30,60)*

	Area (m²)	`C'	CA (m²)
Site Area	**303**		
1. EXISTING SITE COVERAGE			
Existing Roof	**0**	0.9	0.0
Existing Paved	**0**	0.85	0.0
Existing Garden	**303**	0.35	106.1
TOTAL Existing Area	**303**		**106.1**
2. PROPOSED DEVELOPMENT			
Additional/Reduced Roof	**159**	0.9	143.1
Additional/Reduced Paved	**31**	0.85	26.4
Additional/Reduced Lawn/Garden	**-190**	0.35	-66.5
TOTAL Addition Area (should be zero)	**0**		**103.0**
3. REMAINING UNDRAINED AREA	(Not routed thru detention tank after development)		
Undrained Roof Area (Normally Zero)	**0**	0.9	0.0
Undrained Paved Area (Normally Zero)	**31**	0.85	26.4
Undrained Lawn/Garden Area	**113**	0.35	39.6
TOTAL Extg Not to Tank Area	**144**		**65.9**

NOTE A "#DIV/0!" message appearing in a cell means that data has been entered incorrectly

NOTE The sum of the existing areas must equal the `Site Area'

* NOTE If pre-development lawn areas are reduced a negative number is required to be entered.

CONTROL DATA

Existing `C'	0.35		*(`CA'extg/Site Area)*
Developed `CA' to OSD tank	143	*(m²)*	*(`CA'extg+`CA'adds-`CA'undr)*
Additional Area	0	*(m²)*	*(`A'add)*

0.00 0 0

RUNOFF DATA	**for 2 year**		**for 10 Year**	
Intensity I	52.80	*mm/hr*	75.9	*mm/hr*
Allowable Qmax whole site	1.56		2.24	
Lost Flows	0.97		1.39	
Allowable Qmax from tanks =	0.6	*l/s*	0.85	*l/s*
Allowable Qave from tanks =	0.4	*l/s*	0.6	*l/s (Qmax * 0.65)*

Orifice Calculation - PROTECTED DO NOT ENTER ANY FIGURES

d=	**15.9**	**mm**	
Q10 outflow=	**0.743268125**	**for h=**	**1.85**
Q10ave	**0.5**		
Q=	**0.589454267**	**for h in Q2**	**1.163539**
Qave	**0.4**	**Q2**	

Rainfall Intensities (mm)

MIN	Normalised Rainfall Depth(I/I_{24})	2 Yr(mm/hr)	10 yr(mm/hr)
10	**0.11**	**52.8**	**75.9**
15	**0.14**	**44.8**	**64.4**
20	**0.16**	**38.4**	**55.2**
30	**0.19**	**30.4**	**43.7**
60	**0.26**	**20.8**	**29.9**
120	**0.35**	**14.0**	**20.1**
180	**0.46**	**12.3**	**17.6**
240	**0.51**	**10.2**	**14.7**
300	**0.56**	**9.0**	**12.9**
360	**0.60**	**8.0**	**11.5**
420	**0.64**	**7.3**	**10.5**
480	**0.68**	**6.8**	**9.8**
540	**0.71**	**6.3**	**9.1**
600	**0.75**	**6.0**	**8.6**
660	**0.78**	**5.7**	**8.2**
720	**0.81**	**5.4**	**7.8**

STORAGE (2 year)

time (min)	depth (mm)	inflow (l)	outflow (l)	storage (l)	
10	8.8	1259	229.88716	1029	*inflow=`CA'dev*depth*
15	11.2	1603	344.83075	1258	*outflow=Qave*time*
20	12.8	1832	460	1372	*diff=inflow-outflow*
30	15.2	2175	690	1485	
60	20.8	2976	1379	1597	
120	28.0	4007	2759	1248	
180	36.8	5266	4138	1128	
240	40.8	5838	5517	321	
300	44.8	6411	6897	0	
360	48.0	6869	8276	0	
420	51.2	7327	9655	0	
480	54.4	7785	11035	0	
540	56.8	8128	12414	0	
600	60.0	8586	13793	0	
660	62.4	8929	15173	0	
720	64.8	9273	16549	0	
			Max=	1597	

STORAGE (10 Year)

time (min)	depth (mm)	inflow (l)	10 yr outflow (l)	Storage (10 yr) (l)
10	12.7	1810	289.8745688	1520
15	16.1	2304	435	1869
20	18.4	2633	580	2053
30	21.9	3127	870	2257
60	29.9	4279	1739	2539
120	40.3	5760	3478	2281
180	52.9	7570	5218	2352
240	58.7	8393	6957	1436
300	64.4	9216	8696	519
360	69.0	9874	10435	0
420	73.6	10532	12175	0
480	78.2	11190	13914	0
540	81.7	11684	15653	0
600	86.3	12342	17392	0
660	89.7	12836	19132	0
720	93.2	13330	20871	0
			Max=	2539

SUMMARY

Tank Volume	**2540.0**	**litres**
10 Year Max Discharge	**0.7**	**l/s**
2 Year Max Discharge	**0.6**	**l/s**
Orifice Diameter	**16**	**mm**

APPENDIX TWO: SOAKPIT DIMENSIONS CALCULATIONS

Indicative soakpit dimensions (1% AEP):

Site specific variables:

Soakage rates:			Runoff coefficient (C)		
Raw rate:	1000	mm/hr	C:	0.9	
4x safety factor:	250	mm/hr	*Coefficient adopted from E1 - Table 1*		
Rainfall intensity (i)			**Contributing Area (A)**		
i (24hrs)	170	mm/24hrs	Dwelling roof:	144	m^2
i (1 hr)	44.2	mm/hr	Driveway/impervious:	0	m^2
From KCDC SDPR 2012 Appendix A			Combined:	144	m^2
Chamber storage volume:			**Void Ratio:**		
Diameter	0	m	Rock-filled:	0.38	
Chamber area	0.00	m^2	Modules:	0.95	
Depth	0.00	m			
Chamber storage volume	0.00	m^3			

Calculations:

Contributing rainfall:		5.73	m^3	(C * i * A * 10) / 10,000
Less base soakage:	-	1.07	m^3	(Soakpit area * soakage) / 1000
Less chamber storage:	-	0.00	m^3	From above
Design storage volume required:		4.66	m^3	
Dimensions reqd. due to void losses:		**4.90**	m^3	Design storage volume / void ratio
Height of effective soakpit:		1.29	m	Actual volume required / area (assumes
Assumed topsoil thickness		0.45	m	chamber within centre of hole)

Indicative soakpit dimensions (assumes 0.95 void ratio):

Length:	2.15	m	or	3	Cirtex modules at 0.715m per module
Width:	2	m	or	5	Cirtex modules at 0.4m per module
Height:	1.29	m	or	3	Cirtex modules at 0.43m per module

Resulting vol:	5.53	m^3	L x W x H
Adj for voids:	5.26	m^3	Actual volume achieved due to void losses
Required vol:	**4.90**	m^3	Required volume from above
Excess	0.36	m^3	Excess storage volume achieved for design AEP event

Depth to inv:	1.74	assumes	0.45	m cover (subject to trafficability)

Indicative soakpit dimensions (1% AEP):

Site specific variables:

Soakage rates:			Runoff coefficient (C)		
Raw rate:	1000	mm/hr	C:	0.9	
4x safety factor:	250	mm/hr	*Coefficient adopted from E1 - Table 1*		
Rainfall intensity (i)			**Contributing Area (A)**		
i (24hrs)	170	mm/24hrs	Dwelling roof:	144	m^2
i (1 hr)	44.2	mm/hr	Driveway/impervious:	0	m^2
From KCDC SDPR 2012 Appendix A			Combined:	144	m^2
Chamber storage volume:			**Void Ratio:**		
Diameter	0.9	m	Rock-filled:	0.38	
Chamber area	0.64	m^2	Modules:	0.95	
Depth	1.20	m			
Chamber storage volume	0.76	m^3			

Calculations:

Contributing rainfall:		5.73	m^3	(C * i * A * 10) / 10,000
Less base soakage:	-	3.00	m^3	(Soakpit area * soakage) / 1000
Less chamber storage:	-	0.76	m^3	From above
Design storage volume required:		1.96	m^3	
Dimensions reqd. due to void losses:		**5.17**	m^3	Design storage volume / void ratio
Height of effective soakpit:		1.20	m	Actual volume required / area (assumes
Assumed topsoil thickness		0.1	m	chamber within centre of hole)

Indicative soakpit dimensions (assumes 0.38 void ratio):

Length:	3.0	m			
Width:	4.00	m			
Height:	1.2	m			
Resulting vol:	14.40	m^3	L x W x H		
Adj for voids:	5.47	m^3	Actual volume achieved due to void losses		
Required vol:	**5.17**	m^3	Required volume from above		
Excess	0.30	m^3	Excess storage volume achieved for design AEP event		
Depth to inv:	1.30		assumes	0.1	m cover (subject to trafficability)

Normalised Depth-Duration relationship for 24 hour rainfall

	2090 Rainfall depth	
1% AEP	170	mm/hr

Duration (mins)	Normalised depth	1% AEP depth (mm)	1% AEP intensity (i)
10	0.11	19	112.2
15	0.14	24	95.2
30	0.19	32	64.6
60	0.26	44	44.2
120	0.35	60	29.8
180	0.46	78	26.1
360	0.6	102	17.0
720	0.81	138	11.5
1440	1	170	7.1

APPENDIX SEVEN: Topographical Survey

DETAILS:

THIS PURPOSE OF THIS PLAN IS TO DEFINE LEVELS AND TOPOGRAPHICAL FEATURES ONLY. IT IS NOT TO BE USED FOR ANY OTHER PURPOSE.

EXISTING STORMWATER, WASTEWATER AND WATER SUPPLY LINES HAVE BEEN PLOTTED FROM COUNCIL RECORDS AND HAVE NOT BEEN VERIFIED ONSITE.

SITE BOUNDARIES HAVE BEEN DETERMINED BY SURVEY CALCULATION

SURVEY INFORMATION:

EQUIPMENT:
ROBOTIC TOTAL STATION & RTK GNSS WITH LOCAL BASE

DATUM:
NZGD2000

CIRCUIT:
WELLINGTON 2000

VERTICAL DATUM:
WELLINGTON 1953 (MSL)

SURVEY ORIGIN:
OLP I DP 59593 (F2F1)

SOURCE OF LEVELS:
OLP I DP 59693 (F2F1)
RL = 10.643
OBTAINED VIA LINZ
HEIGHT CONVERSION
01 FEBRUARY 2021

CONTOUR INTERVAL:
1.0m (MAJOR)
0.5m (MINOR)

ROSETTA ROAD

150mmØ AC WASTEWATER MAIN (GIS)

150mmØ AC RETICULATION MAIN (GIS)

225mmØ CONCRETE SUMP LEAD (GIS)

#134
PART LOT 8
DP 7225

PART LOT 7
DP 7225

#130
LOT 2
DP 18137

#126
LOT 1
DP 18137

#120
LOT 1
DP 83124

#122
LOT 2
DP 83124

#71 RENOWN ROAD
LOT 3
DP 18137

EXISTING DOUBLE GARAGE

EXISTING DWELLING

EXISTING DOUBLE GARAGE

GARDEN STRUCTURE

IN GROUND SWIMMING POOL

EXISTING STRUCTURE

DECK AREA

SHED

GARDEN

STEPS

SEPTIC TANK BREATHER

CLOTHESLINE

VEHICLE CROSSING

SURVEY EXTENT

UNABLE TO SURVEY AREA DUE TO DENSE VEGETATION

ROOFLINE OF NEIGHBOURING PROPERTY

97°28'20" 90.69

97°28'20" 65.37

97°28'20" 65.36

97°28'20" 7.49

7°27' 20.12

7°30'30" 16.45

7°30'30" 15.55

N

LEGEND:

- EXISTING BOUNDARY
- MAJOR CONTOUR
- MINOR CONTOUR
- W WATER MAIN (GIS)
- SW STORMWATER MAIN (GIS)
- S WASTEWATER MAIN (GIS)
- CENTRELINE OF ROAD
- BOTTOM OF BANK
- BUILDING GROUND LEVEL
- BUILDING GUTTER
- BUILDING ROOFLINE
- EDGE OF VEGETATION
- EXISTING FENCE
- GARDEN
- TOP OF BANK

- FH FIRE HYDRANT (SURVEYED)
- W WATER METER (SURVEYED)
- STORMWATER SUMP (SURVEYED)
- POWER POLE (SURVEYED)
- E POWER PILLAR (SURVEYED)

- 100.00bb BOTTOM OF BANK HEIGHT
- 100.00tb TOP OF BANK HEIGHT
- 100.00deck DECK HEIGHT
- 100.00ec EDGE OF CONCRETE HEIGHT
- 100.00ev EDGE OF VEGETATION HEIGHT
- 100.00fce BASE OF FENCE HEIGHT
- 100.00shed SHED HEIGHT
- 100.00tw TOP OF WALL HEIGHT
- 100.00bw BOTTOM OF WALL HEIGHT
- 100.00bldgl BUILDING GROUND LEVEL HEIGHT
- 100.00cl CENTRELINE OF ROAD HEIGHT
- 100.00ec EDGE OF CONRETE HEIGHT
- 100.00es EDGE OF SEAL HEIGHT
- +100.00 SPOT HEIGHT

- 100.00tk TOP OF KERB HEIGHT
- 100.00ik INVERT OF KERB HEIGHT
- 100.00loc LIP OF CHANNEL HEIGHT
- 100.00ro ROOFLINE HEIGHT
- 100.00vx VEHICLE CROSSING HEIGHT

LEITH CONSULTING
Land Surveying | Environmental Planning

WWW.LEITHCONSULTING.CO.NZ

PROJECT: 4 LOT SUBDIVISION
LOT 1 & 2 DP 18137
126-130 ROSETTA ROAD

CLIENT: LAWRENCE FAY

TITLE: TOPOGRAPHICAL SURVEY PLAN

SCALE: A1: 1:100 A3: 1:200

DRAWING SET NO: KAP-0460-TPO

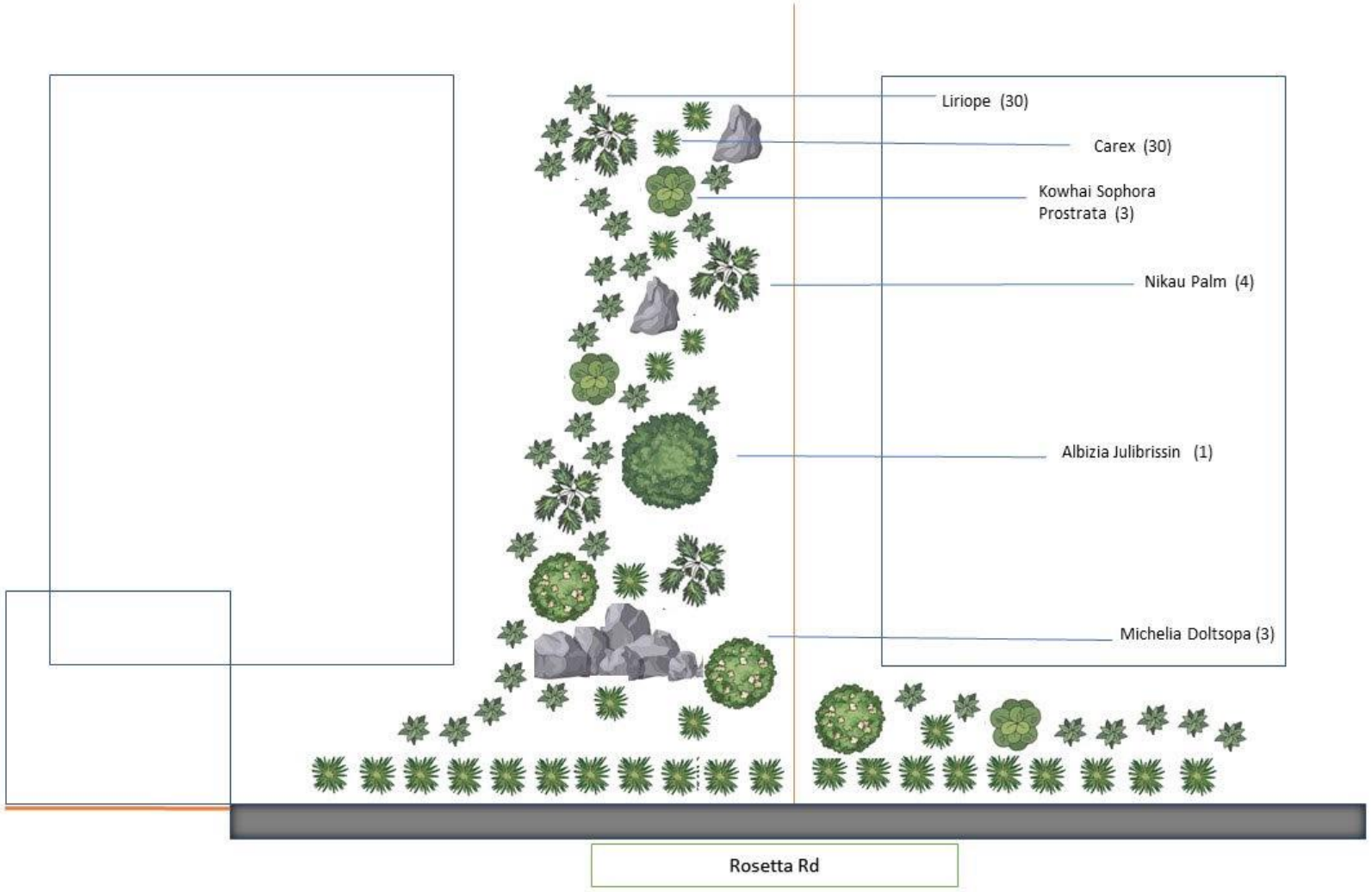
SHEETS: 1 OF 1

REVISION: -

STATUS: ISSUED

SURVEYED:	JLL	10-02-2021
DRAWN:	ATT	18-03-2021
DESIGNED:	-	-
CHECKED:	JLL	18-03-2021
APPROVED:	TEM	19-03-2021

APPENDIX EIGHT: Landscaping Plan


Liriope (30)
Carex (30)
Kowhai Sophora Prostrata (3)
Nikau Palm (4)
Albizia Julibrissin (1)
Michelia Doltsopa (3)
Rosetta Rd

Plant Schedule – 126-130 Rosetta Rd

Tree	Nikau Palm		4	5-7m
Tree	Silk Tree	Albizia Julibrissin	1	5m
Tree	Michelia	Doltsopa	3	3m
Shrub	Kowhai	Sophora Prostrata	3	2m
Perennial	Liriope	Muscari	30	20cm
Perennial	Carex	Comans Green	30	40cm