Te Kaunihera o Te Hiku o te Ika
Far North District Council

Office Use Only
Application Number:

Application for resource consent or fast-track resource consent

(Or Associated Consent Pursuant to the Resource Management Act 1991 (RMA)) (If applying for a Resource Consent pursuant to Section 87AAC or 88 of the RMA, this form can be used to satisfy the requirements of Schedule 4). Prior to, and during, completion of this application form, please refer to Resource Consent Guidance Notes and Schedule of Fees and Charges — both available on the Council's web page.

1. Pre-Lodgement Meeting

Have you met with a council Resource Consent representative to discuss this application prior to lodgement? ◯ **Yes** ✔ **No**

2. Type of Consent being applied for

(more than one circle can be ticked):

- ◯ **Land Use**
- ◯ **Fast Track Land Use***
- ◯ **Subdivision**
- ◯ **Consent under National Environmental Standard** (e.g. Assessing and Managing Contaminants in Soil)
- ◯ **Discharge**
- ◯ **Change of Consent Notice (s.221(3))**
- ◯ **Extension of time (s.125)**
- ◯ **Other (please specify)** _____

The fast track is for simple land use consents and is restricted to consents with a controlled activity status.

3. Would you like to opt out of the Fast Track Process?

◯ **Yes** ◯ **No**

4. Consultation

Have you consulted with Iwi/Hapū? ◯ **Yes** ✔ **No**

If yes, which groups have you consulted with?	
Who else have you consulted with?	

*For any questions or information regarding iwi/hapū consultation, please contact Te Hono at Far North District Council **tehonosupport@fndc.govt.nz***

5. Applicant Details

Name/s: Xiaowei Han and Yanli Wang

Email: [redacted]

Phone number: [redacted]

Postal address:
(or alternative method of service under section 352 of the act) [redacted]

6. Address for Correspondence

Name and address for service and correspondence (if using an Agent write their details here)

Name/s: Hodgson Planning Consultants Limited Monique Kimber

Email: [redacted]

Phone number: [redacted]

Postal address:
(or alternative method of service under section 352 of the act) [redacted]

**** All correspondence will be sent by email in the first instance. Please advise us if you would prefer an alternative means of communication.***

7. Details of Property Owner/s and Occupier/s

Name and Address of the Owner/Occupiers of the land to which this application relates (where there are multiple owners or occupiers please list on a separate sheet if required)

Name/s: Xiaowei Han and Yanli Wang

Property Address/ Location: 134 Hihi Road, Mangonui

Postcode 0557

8. Application Site Details

Location and/or property street address of the proposed activity:

Name/s:

Site Address/ Location: 134 Hihi Road, Mangonui

Postcode

Legal Description: Lot 6 DP 164729 **Val Number:**

Certificate of title: NA99B/208

Please remember to attach a copy of your Certificate of Title to the application, along with relevant consent notices and/or easements and encumbrances (search copy must be less than 6 months old)

Site visit requirements:

Is there a locked gate or security system restricting access by Council staff? ◯ **Yes** ✔ **No**

Is there a dog on the property? ◯ **Yes** ✔ **No**

Please provide details of any other entry restrictions that Council staff should be aware of, e.g. health and safety, caretaker's details. This is important to avoid a wasted trip and having to re-arrange a second visit.

9. Description of the Proposal:

Please enter a brief description of the proposal here. Please refer to Chapter 4 of the District Plan, and Guidance Notes, for further details of information requirements.

Relocate a 52.8m² residential dwelling onto the vacant site, which breaches Visual Amenity Rules 10.7.5.11 and 10.7.5.2.2. Retrospective consent for earthworks that infringes rules 12.3.6.1.2 and 12.3.6.2.1 as the cut face was greater than 1.5m (being 3m).

If this is an application for a Change or Cancellation of Consent Notice conditions (s.221(3)), please quote relevant existing Resource Consents and Consent Notice identifiers and provide details of the change(s), with reasons for requesting them.

10. Would you like to request Public Notification?

◯ **Yes** ✔ **No**

11. Other Consent required/being applied for under different legislation

(more than one circle can be ticked):

- [x] **Building Consent** EBC-2025-200 here (if known)
- [ ] **Regional Council Consent (ref # if known)** Ref # here (if known)
- [ ] **National Environmental Standard consent** Consent here (if known)
- [ ] **Other (please specify)** Specify 'other' here

12. National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health:

The site and proposal may be subject to the above NES. In order to determine whether regard needs to be had to the NES please answer the following:

Is the piece of land currently being used or has it historically ever been used for an activity or industry on the Hazardous Industries and Activities List (HAIL) ◯ **Yes** ✔ **No** ◯ **Don't know**

Is the proposed activity an activity covered by the NES? Please tick if any of the following apply to your proposal, as the NESCS may apply as a result. ◯ **Yes** ✔ **No** ◯ **Don't know**

- [ ] **Subdividing land**
- [ ] **Changing the use of a piece of land**
- [x] **Disturbing, removing or sampling soil**
- [ ] **Removing or replacing a fuel storage system**

13. Assessment of Environmental Effects:

Every application for resource consent must be accompanied by an Assessment of Environmental Effects (AEE). This is a requirement of Schedule 4 of the Resource Management Act 1991 and an application can be rejected if an adequate AEE is not provided. The information in an AEE must be specified in sufficient detail to satisfy the purpose for which it is required. Your AEE may include additional information such as Written Approvals from adjoining property owners, or affected parties.

Your AEE is attached to this application ✔ **Yes**

13. Draft Conditions:

Do you wish to see the draft conditions prior to the release of the resource consent decision? ◯ **Yes** ● **No**

If yes, do you agree to extend the processing timeframe pursuant to Section 37 of the Resource Management Act by 5 working days? ◯ **Yes** ✔ **No**

14. Billing Details:

This identifies the person or entity that will be responsible for paying any invoices or receiving any refunds associated with processing this resource consent. Please also refer to Council's Fees and Charges Schedule.

Name/s: (please write in full) Xiaowei Han and Yanli Wang

Email: [redacted]

Phone number:

Postal address:
(or alternative method of service under section 352 of the act)

Fees Information
An instalment fee for processing this application is payable at the time of lodgement and must accompany your application in order for it to be lodged. Please note that if the instalment fee is insufficient to cover the actual and reasonable costs of work undertaken to process the application you will be required to pay any additional costs. Invoiced amounts are payable by the 20th of the month following invoice date. You may also be required to make additional payments if your application requires notification.

Declaration concerning Payment of Fees
I/we understand that the Council may charge me/us for all costs actually and reasonably incurred in processing this application. Subject to my/our rights under Sections 357B and 358 of the RMA, to object to any costs, I/we undertake to pay all and future processing costs incurred by the Council. Without limiting the Far North District Council's legal rights if any steps (including the use of debt collection agencies) are necessary to recover unpaid processing costs I/we agree to pay all costs of recovering those processing costs. If this application is made on behalf of a trust (private or family), a society (incorporated or unincorporated) or a company in signing this application I/we are binding the trust, society or company to pay all the above costs and guaranteeing to pay all the above costs in my/our personal capacity.

Name: (please write in full)

Signature:
(signature of bill payer)

Date

MANDATORY

15. Important Information:

Note to applicant
You must include all information required by this form. The information must be specified in sufficient detail to satisfy the purpose for which it is required.
You may apply for 2 or more resource consents that are needed for the same activity on the same form.
You must pay the charge payable to the consent authority for the resource consent application under the Resource Management Act 1991.

Fast-track application
Under the fast-track resource consent process, notice of the decision must be given within 10 working days after the date the application was first lodged with the authority, unless the applicant opts out of that process at the time of lodgement.
A fast-track application may cease to be a fast-track application under section 87AAC(2) of the RMA.

Privacy Information:
Once this application is lodged with the Council it becomes public information. Please advise Council if there is sensitive information in the proposal. The information you have provided on this form is required so that your application for consent pursuant to the Resource Management Act 1991 can be processed under that Act. The information will be stored on a public register and held by the Far North District Council. The details of your application may also be made available to the public on the Council's website, www.fndc.govt.nz. These details are collected to inform the general public and community groups about all consents which have been issued through the Far North District Council.

15. Important information continued...

Declaration

The information I have supplied with this application is true and complete to the best of my knowledge.

Name: **(please write in full)** Monique Kimber

Signature:

Date 06-Nov-2024

A signature is not required if the application is made by electronic means

Checklist (please tick if information is provided)

- ☐ Payment (cheques payable to Far North District Council)
- ☑ A current Certificate of Title (Search Copy not more than 6 months old)
- ☐ Details of your consultation with Iwi and hapū
- ☐ Copies of any listed encumbrances, easements and/or consent notices relevant to the application
- ☑ Applicant / Agent / Property Owner / Bill Payer details provided
- ☑ Location of property and description of proposal
- ☑ Assessment of Environmental Effects
- ☐ Written Approvals / correspondence from consulted parties
- ☑ Reports from technical experts (if required)
- ☑ Copies of other relevant consents associated with this application
- ☑ Location and Site plans (land use) AND/OR
- ☑ Location and Scheme Plan (subdivision)
- ☑ Elevations / Floor plans
- ☑ Topographical / contour plans

Please refer to Chapter 4 of the District Plan for details of the information that must be provided with an application. Please also refer to the RC Checklist available on the Council's website. This contains more helpful hints as to what information needs to be shown on plans.

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Email: [redacted]

Phone number:

Postal address:
(or alternative method of service under section 352 of the act)

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Name: (please write in full) Xiaowei Han Yanli Wang

Signature:
(signature of bill payer [redacted] MANDATORY

Date 06/11/2024

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HODGSON
PLANNING CONSULTANTS

LAND USE

RESOURCE CONSENT APPLICATION

134 Hihi Road, Mangonui

Xiaowei Han and Yanli Wang

HPC Reference: HD2423

6 November 2024

hodgson planning consultants ltd po box 97 pukekohe 2340 + 64 9 235 3252

Contents

Application Details

HPC Reference	HD2423
Date	4 November 2024
Location	134 Hihi Road, Mangonui
Legal Description	Lot6 DP 164729 and 1/6 share of Lot 9 DP164729 (NA99B/208)
Area	4.4345 hectares
Applicant	Xiaowei Han and Yanli Wang
Territorial Authority	Far North District Council
District Plan	Far North District Plan (FNDP)
Zoning	Coastal Living
Overlays	None applicable.
District Plan	Proposed Far North District Plan (FNDP)
Zoning	Rural Lifestyle Zone
Proposal	Relocate a 52.8m² residential dwelling onto the vacant site, which breaches Visual Amenity Rules 10.7.5.11 and 10.7.5.2.2. Retrospective consent for earthworks that infringes rules 12.3.6.1.2 and 12.3.6.2.1 as the cut face was greater than 1.5m (being 3m).
Activity Status	Discretionary activity

Introduction

1. This application for resource consent is made pursuant to Section 88 of the Resource Management Act 1991 (the Act). The application is supported by an assessment of environmental effects as is required by section 88 of the Act, with the assessment relying on technical assessments and recommendations. The information contained in this application addresses the requirements set out in Schedule 4 of the Act.

2. The property subject to this application is located at 134 Hihi Road, Mangonui. The 4.4 hectare site is vacant of development. The applicants, Xiaowei Han and Yanli Wang proposes to relocate a newly built 3-bedroom dwelling onto the site. The replacement dwelling will infringe the visual amenity standard in the District Plan as the building is 52.8m² in area and at the time of subdivision no building envelope was determined. Earthworks have been undertaken on the site to form the building platform. This equated to a cut volume of 250m³ and a fill volume of 255m², over an approximately 800m² area. The cut faces were a maximum of 3m in height. Consent is required as a Discretionary activity for the earthworks.

3. This assessment concludes that any actual or potential adverse effects on the environment that may arise from the Far North District Council granting land use consent to the activities (relocation of a r dwelling onto the site that infringes the visual amenity standard and retrospective earthworks) will be less than minor and that no persons will be adversely affected.

Legal Description

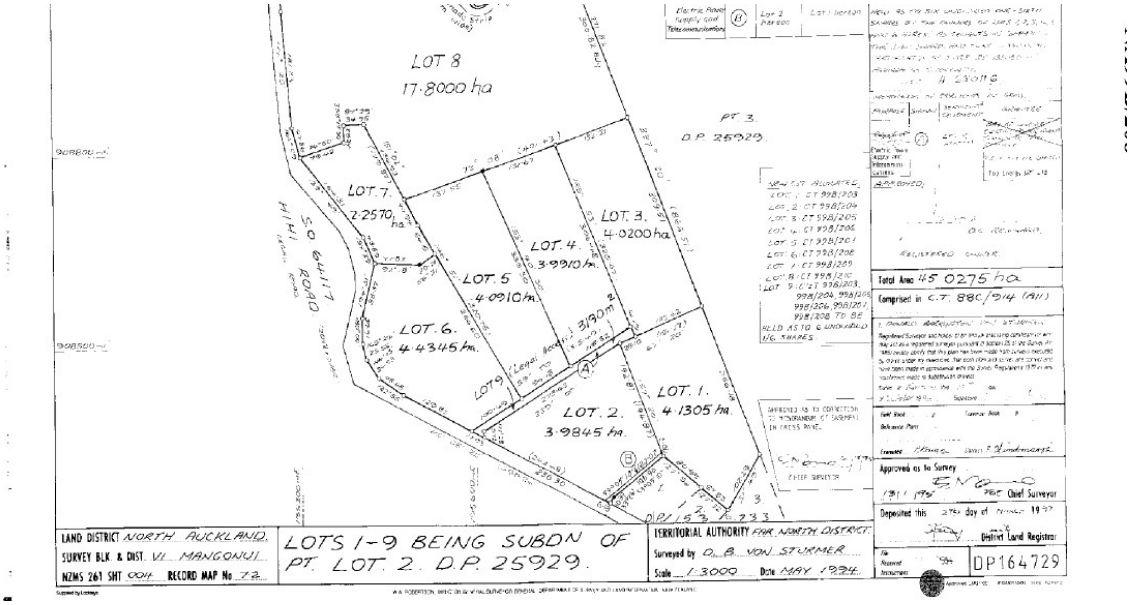
4. The property is legally described as:
   134 Hihi Road, Lot 6 DP 164729, RT NA96B/208 4.4345 hectares more or less
   1/6 share in Lot 9 DP 164729 (Jointly Owned Access Lot) – 3190 square metres more or less

5. A copy of the above Record of Title and relevant documents are provided in **Attachment 1**.

6. The shared access is amalgamated with the lot pursuant to s241(2) of the RMA.

7. The Consent Notice D124438.2 lapsed after 7 years from the deposit of the Plan on 27 March 1997. At the time of subdivision no building platform was identified.

8. Part of the shared access is subject to an easement in gross to supply power and telecommunications.



Description of Site and Surrounding Environment

9. The aerial photograph below identifies the location of 134 Hihi Road and depicts the approximate extent of the property and boundaries. (Far North District Council GIS Viewer). Please note that a site visit has not been undertaken and reliance has been placed on photographs of the site and surrounds (**Attachment 4**).

10. Hihi Road is a local road from State Highway 10. The access to the site is via a shared driveway and ensuring both legal and practical entry to the property and the other adjoining lifestyle properties (each approximately 4 hectares in area).

11. The topography is characterised by a gentle slope, which grades towards the northeast. This subtle incline facilitates natural drainage and influences the layout and usability of the land. The geotechnical investigation, as referenced in **Attachment 2**, confirms that the land is stable and generally suitable for conventional construction.

12. The land includes a mix of native bush, mature trees, and grassland. The majority of the site is in grassed. An established hedge lines the periphery of the property adjacent to the road and shared access, providing natural screening and enhancing privacy. In the northern part of the site within a gully feature and away from the development site are some established trees and vegetation.

13. The property is part of a rural setting on the outskirts of Mangonui, with a mix of rural residential lots and farmland. The site has distance views of the harbour to the north and the surrounding hill country. The immediate area has low density residential development. Adjoining properties primarily consist of single-level residential homes and agricultural buildings located in proximity to the shared access with primary outlook to the north. The separation between dwellings contributes to the character and amenity of the area. The nearest dwelling is located to the east approximately 80m from the proposed dwelling (see photo from the building platform to the closest neighbour).

14. There are no significant water bodies or overland flow paths directly affecting the site, as confirmed by FNDC and NRC flood maps. The nearest water bodies are located some distance away (greater than 100m), ensuring that the property is not susceptible to flooding hazards. No HAIL is identified on the site within the Council database.

Proposal

Land Use

15. The applicant is seeking resource consent to relocate a replacement dwelling onto the vacant site. The dwelling is intended to be occupied by the applicant. Retrospective consent is sought for the earthworks that formed the building platform.

16. The site preparation for the proposed prefabricated relocatable dwelling occurred over an area of 800m² and involved approximately 250m³ of excavation which was reused to fill the site (approx. 255m³). The maximum depth of excavation ranged between 1.5m and 3m, while the fill height is a maximum of 0.9m in the north-eastern corner. The battered grades are between 1v:2.5 to 1V:2H. Aside from bored footing excavations, no further cuts/fills are proposed. A total of 520m² of the earthwork area has been stabilised with aggregate in readiness for the relocatable dwelling, and the battered slopes will soon be stabilised with grass. These earthworks were completed over a short period. No current or historical HAIL activities are known to have occurred at the site. Therefore, the NESCS regulations are not considered to be applicable for the proposed residential development.

17. The proposed prefabricated 3-bedroom relocatable dwelling has been constructed by 'Houseme' and is ready to be relocated onto the site. The building measures 52.8m² in area. It will be positioned on piles in the northwestern corner of the metalled building platform., 14.15m from the shared access and 20m from the road boundary, the dwelling will be nearly 68m from the boundary to the closest neighbour, ensuring compliance with the yard standards and maintain amenity values. The ample surrounding metalled area will be used for parking and servicing.

18. The interior layout includes an open-plan kitchen and living area, three bedrooms, and a bathroom. Externally, the house will feature a mono-pitched roof, insulated cladding finished in Gray Friars, complemented by a timber deck on the northern elevation to capitalise on the views and provide an outdoor living area. A site plan, floor plans and elevations of the dwellings and the project are provided in Attachment 3.

19. The roof water will be collected in a 30,000L tank for potable reuse, with overflow managed via a spreader bar outlet. Wastewater will be treated onsite through a septic tank system, disposing of effluent to a 300m² disposal field. Building consent has already been granted EBC-2025-200/0.

Far North District Plan

20. An assessment of the proposal against the relevant rules of the Plan and relevant objectives and policies is provided in **Attachment 5**.

21. In summary:

Rule No.	Title		Standards
10.7.5.1.1	Visual Amenity	X	The following are permitted activities in the Coastal Living Zone: (a) any new building(s), provided that the gross floor area of any new building(s) permitted under this rule **does not exceed 50m²;** or …… Any new building(s) or alteration/additions to an existing building that does not meet the permitted activity standards in Rule 10.7.5.1.1 are a controlled activity where the new building or building alteration/addition **is located entirely within a building envelope that has been approved under a resource consent.**
			Consent Required as a Restricted Discretionary Activity
10.7.5.1.2	Residential Intensity	✓	Residential development shall be limited to one unit per 4ha of land. In all cases the land shall be developed in such a way that each unit shall have at least 3,000m² for its exclusive use

			surrounding the unit plus a minimum of 3.7ha elsewhere on the property..
10.7.5.1.4	Building Height	✓	The maximum height of any building shall be 8m.
10.7.5.1.5	Sunlight	✓	No part of any building shall project beyond a 45-degree recession plane as measured inwards from any point 2m vertically above ground level on any site boundary
10.7.5.1.6	Stormwater	✓	The maximum proportion or amount of the gross site area which may be covered by buildings and other impermeable surfaces shall be 10% or 600m2 whichever is the lesser.
10.7.5.1.6	Setback from Boundaries	✓	Buildings shall be set back a minimum 10m from any site boundary,

22. The assessment identifies that the 52.8m² dwelling results in a visual amenity standard infringement. The 505m³ earthworks over 800m², requires consent as the cut faces exceed 1.5m, being up to 3m. Overall, the activity status for the consent is Discretionary.

Proposed Far North District Plan

23. The Far North District Council notified their Proposed District Plan on the 27 July 2022 and hearings are currently being undertaken. Many of the rules will not have legal effect until Council has released decisions. However, some rules have immediate legal effect and apply now that the Proposed District Plan is notified. These are rules addressing aspects like listed historic items and their settings, notable trees, Sites and Areas of Significance to Māori, and ecosystems and indigenous biodiversity. This site does not contain any listed historic items, notable trees, site and areas of significance to Māori. The only relevant rules and standards that have immediate legal effect are:
    - EW-R12- Earthworks and the discovery of suspected sensitive material
    - EW-R13 – Earthworks and erosion and sediment control
    - EW-S3 – Accidental discovery protocol
    - EW-S5 – Erosion and sediment control

24. The proposed will comply with standards EW-S3 and therefore permitted under rule EW-R12. No suspected sensitive material was discovered when undertaking the earthworks.

25. It is not known if erosion and sediment control measures were implemented to prevent silt or sediment from entering waterbodies or any stormwater system, overland flow path or roads. The works have been completed and do not appear to have resulted in silt or sediment from entering waterbodies. The development site is physically separated from the waterbodies. The site is now stable. Consent is therefore conservatively sought as a Restricted Discretionary activity to infringe standard EW-S5 and EW-R15.

Consultation

26. Section 36A of the RMA states that there is no duty under this Act to consult about a resource consent application. The Fourth Schedule (Clause 6(1)(f)) of the RMA states that an Assessment of Effects on the Environmental should include a statement that identifies those persons affected by the proposal, the consultation undertaken, if any, and any response to the views of any person consulted.

27. The potential amenity effects of the proposal are considered less than minor. A dwelling and its associated residential use are anticipated on the vacant site. Compliance with the all the other relevant bulk and location standards relative to the adjacent properties can be achieved. The existing hedge will partially screen the development from the road and shared access. The development is of a form and scale that is consistent with existing development. The low density rural residential character of the area will be maintained. It is considered that the overall natural character will be maintained.

Assessment of Effects

Construction Effects

28. The volumes of earthworks to create suitable building platform and access is considered reasonable to establish the rural residential activity. The earthworks reduce the height of the landform, minimising the visual effects. The earthworks for the development were undertaken during a short duration therefore the effects of the works were temporary. The earthworks have been assessed by geotechnical engineers, Wilton Joubert, who have concluded that the risk of deep-seated global slope instability to impacting the development to be low. The proposed works present a low risk in terms of erosion and sediment effects due to topography and separation distance from watercourses. A near cut/fill balance was achieved, which minimises the traffic effects associated with the site preparation works.

29. Noise associated with the earthworks and other construction activities are inevitable. Although the relocation of a newly built dwelling, rather than constructing the building on site will mitigate some potential noise effects. Furthermore, noise from the construction activities will be temporary in nature, and the contractors will operate under standard best practice construction methodologies to ensure that unreasonable noise is avoided.

30. Overall, it is expected that site works will be managed to ensure any adverse construction effects will be less than minor.

Amenity Values and Character

31. The underlying coastal living zoning confirms that low density residential development is anticipated. The site is not located within or near a sensitive environment. Single- storey detached dwellings feature on the adjoining properties. These are typically clustered near the shared access resulting in the landscape primarily dominated by the grassed hill country and areas of vegetation. The scale of the built development, only 52.8m² is less than extend of built development on adjacent sites. The modest scale of the building, combined with the existing hedge ensure that the visual impact of the building is minimal. The landscape will retain in natural character and that the visual

character effects would be less than minor. The development will not necessitate the removal of vegetation as the earthworks and proposed dwelling will be located on grassed land.

32. The dwelling has been located and designed to ensure effects on privacy, access to daylight and on adjoining properties are generally consistent with the coastal living standards. The development will comply with the applicable height, yard setbacks, building coverage standards. The earthworks were undertaken over a short duration to avoid adverse nuisance effects on the neighbours. The amenity effects of the development will be less than minor.

Infrastructure

33. The detailed design for the onsite servicing has been approved as part of the building consent process. It is considered that suitable and sufficient infrastructure can service the residential development and any infrastructure effects will be less than minor. The development will control stormwater and treat and dispose of wastewater to avoid adverse impacts on water quality.

34. The vehicle crossing onto the shared access and the ample parking and manoeuvring area within the site avoid adverse traffic effects.

Resource Management Act 1991

Section 95

35. Relevant notification procedures for this resource consent application are specified in Sections 95A-G of the Act. The Resource Legislation Amendments Act 2017 has changed the statutory tests to determine notification. A four-step process is to be followed to firstly determine public notification and then limited notification. These changes came into force on 18 October 2017 and amended 1 July 2020 and 30 September 2020.

36. An assessment of these steps to determine notification is provided below:

Resource Management Act	Assessment
95A Public Notification of consent applications	
Step 1: Mandatory public notification in certain circumstances	

The applicant has requested that the application be publicly notified.	*The applicant does not request public notification.*
Public notification is required under section 95C Public Notification of consent application after request for further information or report.	*To date no request for further information has been requested by Council.*
the application is made jointly with an application to exchange recreation reserve land under section 15AA of the Reserves Act 1977.	*The application does not include the exchange of recreation reserve land.*
Step 2: If not required by Step 1, Public Notification Precluded in Certain Circumstances	
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.	*None of the activities are subject to a rule 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:	*Not applicable.*
Step 3: if not precluded by step 2, public notification required in certain circumstances	
the application is for a resource consent for 1 or more activities, and any of those activities is subject to a rule or national environmental standard that requires public notification.	*Not Applicable*
the consent authority decides, in accordance with section 95D[1], that the activity will have or is likely to have adverse effects on the environment that are more than minor.	*Refer to Effects Assessment* *Overall, the environmental effects are considered to be less than minor.*
Step 4: Public Notification in Special Circumstances	
Determine whether special circumstances exist in relation to the application that warrant the application being publicly notified.	*No special circumstances exist in relation to the application to warrant public notification.*

It is concluded that Public Notification is not required. Next step is to determine whether limited notification is required.	
95B Limited Notification of Consent Applications	
Step 1: Certain affected groups and affected persons must be notified	
Determine whether there are any— affected protected customary rights groups; or (b) affected customary marine title groups (in the case of an application for a resource consent for an accommodated activity).	*There are no known affected protected customary rights groups or customary marine title groups relevant to this application or site.*
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 (b)whether the person to whom the statutory acknowledgement is made is an affected person under section 95E.	*The land is not on or adjacent to or may affect land subject to a statutory acknowledgement made in accordance with an Act specified in Schedule 11.*
Step 2: if not required by step 1, limited notification precluded in certain circumstances	
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 activity is not subject to a rule that precludes limited notification.*
the application is for a resource consent for either or both of the following, but no other, activities: a controlled activity that requires consent under a district plan (other than a subdivision of land) ~~a prescribed activity (see section 360H(1)(a)(ii)).~~	*The overall activity status is Discretionary.*
Step 3: if not precluded by step 2, certain other affected persons must be notified.	
In the case of a boundary activity, an owner of an allotment with an infringed boundary; and	*Not Applicable*
In the case of any activity prescribed under section 360H(1)(b), a prescribed person in respect of the proposed activity.	*Not Applicable.*
In the case of any other activity, determine whether a person is an affected person in accordance with section 95E.	*Refer to effects assessment.*

A person is an affected person if the consent authority decides that the activity's adverse effects on the person are minor or more than minor (but are not less than minor).	*No persons are considered adversely affected by the activity as any adverse effects will be less than minor.* .
Step 4: Further notification in 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),	*No special circumstances exist in relation to the application to warrant public notification.*
It is concluded that the application can proceed on a Non-Notified Basis.	

Section 104

37. When considering an application for resource consent, Council pursuant to Section 104 and subject to Part 2 of the Act must have regard to:

- *s104(1)(a) Any actual or potential effect on the environment of allowing the activity; and*

- *s104(1) (ab) Any measure proposed or agreed to by the applicant for the purpose of ensuring positive effects on the environment to offset or compensate for any adverse effects on the environment that will or may result from allowing the activity; and*

- *s104(1)(b) Any relevant provisions of a national policy statement, New Zealand coastal policy statement, regional policy statement, plan or propose plan; and*

- *s104(1)(c) Any other matter Council considers relevant and reasonably necessary to determine the application.*

Section 104(1)(a)

38. Section 104 requires an overall balancing exercise of a range of considerations, one of which is the actual and potential effects, on the environment of allowing the activity (s104(1)(a)).

39. It is our opinion that the proposal to relocate a dwelling onto the vacant coastal living site will be an efficient use of the land resource and the proposed residential development will generate less than minor adverse amenity effects.

Section 104(1)(b)

40. In terms of those matters set out in section 104(1)(b) we note that:

- The National Policy Statement on Electricity Transmission is not relevant.
- National Policy Statement for Renewable Electricity Generation is not relevant.
- The New Zealand Coastal Policy Statement is only relevant to the extent that onsite services will ensure that adverse effects on the coastal environment will be avoided.
- The National Policy Statement for Freshwater Management is relevant to the extent that the development through adoption of a suitable stormwater management system will not have any adverse effects upon water quality.
- The National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health is not applicable to this development.
- National Policy Statement for Urban Development 2020 is not considered relevant.

41. The proposed development will not be contrary to the Regional Policy Statement regarding subdivision, use and development or any Proposed Plan Change associated with this or other relevant planning documents.

42. Objective 3.11 of the RPS for Northland seeks for new use and development to fit within the context of the surrounding environment. The proposal is compatible with the surrounding uses and values. The proposal development will also avoid adverse reverse sensitivity effects (objective 3.6) and the

onsite services have been designed to avoid adverse environmental effects on freshwater. The earthworks will not give rise to natural hazards (objective 3.13).

43. The proposal is consistent with the relevant objectives and policies of the Far North District Plan. In summary:

- The proposal is an example of low-density residential development, which is anticipated in the zone and of a scale and design appropriate for the natural character of the coastal environment.
- The proposal generally meets the bulk and location standards and result in only a small infringement to the 50m² visual amenity control.
- The site is located approximately 600m from the coast, minimising the potential for adverse effects including visual effects.
- The built development will read as part of the cluster of other buildings along the shared driveway.
- The existing hedge will screen the development from the road. The site is not known to be of cultural or historic heritage.
- The site works to accommodate the rural-residential development covers approximately 2% of the site area. This scale of development on the coastal living zoned site is not considered to undermine the life supporting capacity of soils of the District.
- The exposed area is separated from waterbodies and has partially been stabilised with aggregate metalled. The battered slopes will be grassed.
- The earthworks undertaken has not resulted in adverse land stability effects.
- The earthworks were undertaken over a short period of time and were not known to cause a nuisance to adjoining neighbours. A cut to fill balance was achieved, minimising the need to transport soil to or from the site.

Proposed Far North District Plan – Objectives and Policies

44. The Proposed Far North District Plan was notified on 27 July 2022 and Hearings are currently being held. The zoning of the site is proposed to become Rural Lifestyle under the Proposed District Plan.

45. The proposed Rural Lifestyle zone objectives and policies seek that zone is used predominantly for low density residential activity and small-scale farming compatible with the character and amenity

of the zone, which includes limited buildings, area of vegetation, natural features and open space. There is a need to avoid reverse sensitivity effects on adjacent Rural production zoned land.

46. It is considered that the proposed development is consistent with the policy direction indicated by the Proposed District Plan. The establishment of a 52.8m² dwelling on a vacant 4.4 hectare site is consistent with the character and amenity of the surrounding area. Existing areas of vegetation will be retained on the site. The proposed site is not located to any land zone rural production. The proposed building meets the proposed bulk and location standards in the Rural Lifestyle zone. As notified this zone does not have the same visual amenity constraints as the operative district plan.

47. The objectives and policies relating to earthworks seek to facility subdivision and development while managing adverse effects. The earthworks undertaken to establish the building platform will not result in adverse effects. As assessed in the geotechnical assessment the earthworks, subject to the recommendations, will not create new or exacerbate existing natural hazards. The earthworks were undertaken over a short duration and were no known to create nuisance or adverse amenity effects. The scale of the earthworks has not undermined the natural landform nor adversely affected character values of the area.

Section 104(1)(c) Other Matters

48. There are no "other matters" considered relevant to this application.

Part 2 of the RMA

49. Where a territorial local authority is considering a resource consent application in accordance with section 104 of the Resource Management Act 1991, consideration must be given to Part 2 of the Act. Part 2 sets out the Purpose and Principals of the Act and these are contained in sections 5, 6, 7 and 8 of the Act. An assessment against Part 2 is provided below to assist in decision making on this resource consent application and to address a situation whereby there is any illegality, uncertainty, or incompleteness in the relevant planning instruments.

Section 5 – Purpose

50. This section of the Act outlines the purpose of the Act as being the promotion of sustainable management of natural and physical resources, and then proceeds to outline what is meant by sustainable management. This purpose is promoted through the objectives and policies of District and Regional planning documents.

51. Sustainable management is not solely about avoiding adverse effects upon the environment; instead, there is an explicit acknowledgement in this section of the Act that adverse effects arise that can be remedied where they already exist and mitigated where they are anticipated. In addition to this, Section 5 anticipates that use, development, and protection of natural resources will be managed in a manner that enables people to provide for the social, economic, and cultural well-being.

52. Taking into account the definition of sustainable management contained in section 5(2), it is considered that the proposal does achieve the purpose of the Act. "Sustainable management" means managing the use, development, and protection of natural and physical resources within certain parameters.

53. The proposed residential development of the vacant site is considered to be generally consistent with the activities anticipated in the environment and the applicable standards and the general performance standards and assessment criteria applying the purpose of the Act including the matters listed in section 5(2)(a), (b) and (c).

Section 6 – Matters of National Importance

54. Section 6 of the Act sets out a number of matters of national importance. In this circumstance:

a) There are no outstanding natural features or landscapes to be protected, s6(b).

b) There are no significant indigenous vegetation or significant habitats to be protected, s6(c).

c) The activity is not known to compromise the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga, s6(e) being separated from identified sites of value.

d) The proposal has taken into consideration the management of significant risks from natural hazards.

e) The activity does not conflict with any of the matters of national importance to be recognised and provided for in achieving the sustainable management purpose of the Act.

Section 7 – Other Matters

55. Section 7 directs that in achieving the purpose of the RMA that the Council must have particular regard to certain matters which include, of relevance here, the efficient use and development of natural and physical resources, the maintenance and enhancement of amenity values, and the maintenance and enhancement of the quality of the environment.

56. The activity is consistent with the efficient use and development of natural and physical resources.

57. The proposal is consistent with the maintenance and enhancement of amenity values, and the maintenance and enhancement of the quality of the environment.

Section 8 – Principles of the Treaty of Waitangi

58. We do not anticipate that the application would challenge the principles of the Treaty of Waitangi.

Conclusion

59. A dwelling is to be relocated on the vacant site, which is compatible to the scale of development on adjoining properties. The dwelling infringes floor area visual amenity limit by 2.8m². Retrospective consent is also sought for the earthworks undertaken to form the building platform.

60. This assessment of environmental effects of the proposal demonstrates that any adverse effects will be less than minor. The proposal will maintain amenity values and coastal/rural character. The size and appearance of the relocated dwelling is consistent with housing forms in the area, will retain existing vegetation and maintain a sense of open space.

61. An assessment of the proposal against the relevant objectives and policies and provisions of the Far North District Plan has been undertaken. It is concluded that the proposal will be consistent with the outcomes anticipated for development within the Coastal Living zone.

62. Overall, the proposal will make a positive contribution by enabling a new dwelling to be established on the vacant site.

D 124438.2

COND

THE RESOURCE MANAGEMENT ACT 1991

SECTION 221 : CONSENT NOTICE

IN THE MATTER of Deposited Plan 164729

A N D

IN THE MATTER of Certificates of Title 99B/203, 99B/204, 99B/205, 99B/206, 99B/207, 99B/208, 99B/209 and 99B/210 (North Auckland Registry)

PURSUANT to Section 221 and for the purposes of Section 224 of the Resource Management Act 1991, this Consent Notice is issued by **THE FAR NORTH DISTRICT COUNCIL** (hereinafter called "the Council") to the effect that the conditions described in the Schedule below are to be complied with on a continuing basis by the subdividing owner after the deposit of the survey plan and is to be registered on the appropriate titles.

SCHEDULE

(1) The condition applies to the following parcels of land namely:

(a) All that parcel of land containing 4.1305 hectares more or less being Lot 1 on Deposited Plan 164729 and an undivided one-sixth (1/6th) share in 3190 square metres more or less being Lot 9 Deposited Plan 164729 and being part Allotment 1 Parish of Mangonui East and being all of the land comprised and described in Certificate of Title 99B/203 (North Auckland Registry)

(b) All that parcel of land containing 3.9845 hectares more or less being Lot 2 on Deposited Plan 164729 and an undivided one-sixth (1/6th) share in 3190 square metres more or less being Lot 9 Deposited Plan 164729 and being part Allotment 1 Parish of Mangonui East and being all of the land comprised and described in Certificate of Title 99B/204 (North Auckland Registry)

(c) All that parcel of land containing 4.0200 hectares more or less being Lot 3 on Deposited Plan 164729 and an undivided one-sixth (1/6th) share in 3190 square metres more or less being Lot 9 Deposited Plan 164729 and being part Allotment 1 Parish of Mangonui East and being all of the land comprised and described in Certificate of Title 99B/205 (North Auckland Registry)

(d) All that parcel of land containing 3.9910 hectares more or less being Lot 4 on Deposited Plan 164729 and an undivided one-sixth (1/6th) share in 3190 square metres more or less being Lot 9 Deposited Plan 164729 and being part Allotment 1 Parish of Mangonui East and being all of the land comprised and described in Certificate of Title 99B/206 (North Auckland Registry)

(e) All that parcel of land containing 4.0910 hectares more or less being Lot 5 on Deposited Plan 164729 and an undivided one-sixth (1/6th) share in 3190 square metres more or less being Lot 9 Deposited Plan 164729 and being part Allotment 1 Parish of Mangonui East and being all of the land comprised and described in Certificate of Title 99B/207 (North Auckland Registry)

(f) All that parcel of land containing 4.4345 hectares more or less being Lot 6 on Deposited Plan 164729 and an undivided one-sixth (1/6th) share in 3190 square metres more or less being Lot 9 Deposited Plan 164729 and being part Allotment 1 Parish of Mangonui East and being all of the land comprised and described in Certificate of Title 99B/208 (North Auckland Registry)

(g) All that parcel of land containing 2.2570 hectares more or less being Lot 7 on Deposited Plan 164729 and being part Allotment 1 Parish of Mangonui East and being all of the land comprised and described in Certificate of Title 99B/209 (North Auckland Registry)

(h) All that parcel of land containing 17.8000 hectares more or less being Lot 8 on Deposited Plan 164729 and being part Allotment 1 Parish of Mangonui East and being all of the land comprised and described in Certificate of Title 99B/210 (North Auckland Registry)

(2) The condition is that the subdividing owner (being the present registered proprietor of the said land above described) shall not transfer, lease or otherwise dispose of any of the said pieces of land hereinbefore described until such time as the Council [by way of at least an approved development plan and a statutory declaration that the prospective purchaser, transferee or lessee intends to carry out such development] is satisfied that the prospective purchaser, transferee or lessee for any of the said Lots has a bona fide proposal to establish a permitted, controlled or discretionary activity as required by Rule 8.1.5 of the Mangonui County Section of the Operative Far North District Plan, using the criteria of Rule 6.1.6, and no non-complying

re-subdivision of Lots 1 to 8 on Deposited Plan 164729 or any of those Lots is to be permitted for a period of seven years from the date of deposit of Deposited Plan 164729, in accordance with Council policy.

SIGNED: _____

by the FAR NORTH DISTRICT COUNCIL pursuant to Section 252 of the Local Government Act 1974

DATE: 13 November 1995

SIGNED by)
Daniel Christoph REINHARD)
as registered proprietor/)
subdividing owner in the)
presence of:)

_____

_____

CONSENT NOTICE

(Pursuant to Section 221 of the
Resource Management Act 1991)

(duplicate)
(2) CONO 993B/203 – 210
(Ryl)

FOUNTAIN MANNING & CO.
SOLICITORS
KAITAIA

LINZ
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PARTICULARS ENTERED IN REGISTER
LAND REGISTRY NORTH AUCKLAND
ASST LAND REGISTRAR

993B/203-210

COMPUTER FREEHOLD REGISTER
UNDER LAND TRANSFER ACT 1952

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier	**NA99B/208**
Land Registration District	**North Auckland**
Date Issued	27 March 1997

Prior References
NA88C/914

Estate	Fee Simple
Area	4.4345 hectares more or less
Legal Description	Lot 6 Deposited Plan 164729

Proprietors
Xiaowei Han and Yanli Wang

Estate	Fee Simple - 1/6 share
Area	3190 square metres more or less
Legal Description	Lot 9 Deposited Plan 164729

Proprietors
Xiaowei Han and Yanli Wang

Interests

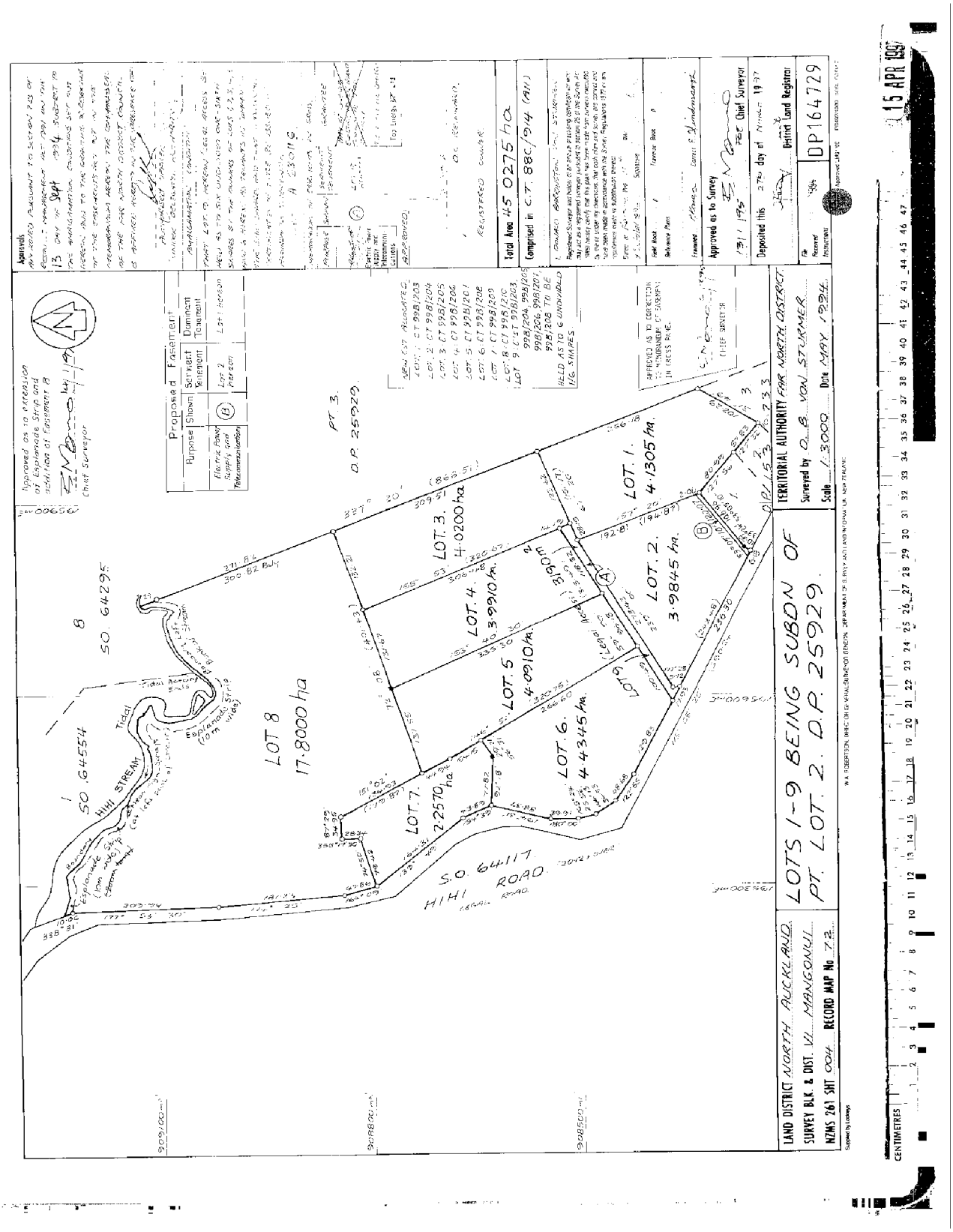
Subject to Section 241(2) Resource Management Act 1991

D124438.2 Consent Notice pursuant to Section 221(1) Resource Management Act 1991 - 27.3.1997 at 9.13 am

Subject to an electricity power supply and telecommunications right (in gross) over part marked A on DP 164729 in favour of Top Energy Limited and Telecom New Zealand Limited created by Transfer D124438.7 - 27.3.1997 at 9.13 am (affects Lot 9 DP 164729)

The easements created by Transfer D124438.7 are subject to Section 243 (a) Resource Management Act 1991

Identifier **NA99B/208**



Wilton Joubert Limited
09 945 4188
185 Waipapa Road,
Kerikeri

SITE	**134 Hihi Road, Hihi, Mangonui**
LEGAL DESCRIPTION	**Lot 6 DP 164729**
PROJECT	**New Minor Residential Dwelling**
CLIENT	**Mark Jennings**
REFERENCE NO.	**135529**
DOCUMENT	**Site-Specific Geotechnical Report**
STATUS/REVISION NO.	**FINAL – Building Consent**
DATE OF ISSUE	**8 August 2024**

Report Prepared For	Email
Building Solutions NZ	buildingsolutionsnz@outlook.com

Authored by	**N. Ngaropo** *BSc (Geology)*	Engineering Geologist	nikora@wjl.co.nz	
Reviewed by	**S.Page** *Part Dip. (Civil)*	Engineering Technician	shaun@wjl.co.nz	
Approved by	**D. Soric** *(BE, CMEngNZ, CPEng)*	Senior Geotechnical Engineer	damir@wjl.co.nz	

1. EXECUTIVE SUMMARY

The following table is intended to be a concise summary which must be read in conjunction with the relevant report sections as referenced herein.

Development Type:	New minor residential dwelling.
Development Proposals Supplied:	Yes – Preliminary architectural drawings (3 sheets).
NZS3604 Type Structure/s:	Yes.
Geology Encountered:	Undifferentiated Tangihua Complex (Northland Allochthon)
Non-Engineered Fill Encountered:	Yes – To a maximum depth of 0.90m generally confined to the northern leading-edge of the formed platform area.
Overall Site Gradient in Proximity to Development:	Flat within the proposed building platform with 1V:2.5 (21°) to 1V:2H (26°) cut/fill batters in proximity. Slopes surrounding the general development area are gentle with grades averaging less than 8°.
Site Stability Risk:	Overall Low Risk of deep-seated global instability.
Liquefaction Risk:	Negligible risk of liquefaction susceptibility.
Suitable Shallow Foundation Type(s):	Bored, concrete encased, tanalised timber pile foundations.
Shallow Soil Bearing Capacity:	Yes – Natural Soils Only. Geotechnical Ultimate Bearing Capacity = 300 kPa.
NZBC B1 Expansive Soils Classification:	Class H – Highly Expansive (y_s = 78mm).
Minimum Bored Footing Depths :	0.90m below finished ground levels and 0.30m into competent natural ground, whichever is deeper.
NZS1170.5:2004 Site Subsoil Classification:	Class C – Shallow Soil stratigraphy.
Earthworks:	Aside from bored footing excavations, no further cuts/fills are proposed or envisaged at this stage of the development. WJL should be contacted if this assumption changes. We recommend that all existing cut batters are dressed in a geotextile fabric and re-grassed and/or planted as soon as practicable to aid in stabilisation of batters. Likewise, all fill batters should be re-grassed and/or planted as soon as practicable. Whilst on-site, minor water ponding was observed along the southern cut batter toe. The area should be re-shaped to ensure stormwater run-off is appropriately contoured away from the building site to a stable disposal point downslope that is well clear of the building site.
Consent Application Report Suitable for:	Not anticipated unless development proposals are revised.

2. INTRODUCTION

2.1. SCOPE OF WORK

Wilton Joubert Limited (WJL) was engaged by the client; Building Solutions NZ, to undertake a geotechnical assessment of ground conditions at the above site, where we understand, it is proposed to construct a new residential dwelling adjacent to the southern right-of-way (ROW) boundary.

For the purposes of this report, we have assumed the dwelling will comprise of a lightweight, timber framed structure, designed and constructed generally in keeping with the requirements of NZS3604:2011.

2.2. SUPPLIED INFORMATION

At the time of preparing this report, we were supplied with preliminary architectural drawings including Site, Floor, and Elevation Plans (3 sheets), prepared by Hilldesign Engineering Limited, titled; '*Proposed Prefabricated Dwelling at 134 Hihi Road, Mangonui for Xiao Wei Han & Wang Yang Li*' (dated 26 August 2024; ref: 24-5750).

Any revision of the supplied architectural drawings with Geotechnical implications should be referred to WJL for review.

3. SITE DESCRIPTION

The subject 4.4345ha Coastal Living zoned property is located off the eastern side of Hihi Road, which bounds the western boundary of the site, and is accessed 1.1km north of the State Highway 10 intersection. Entry to the site is via a formed gravel driveway that trends of a shared ROW which borders the southern boundary.

The property is shown on our appended Site Plan (ref: 135529-G600) and in Figure 1 below.

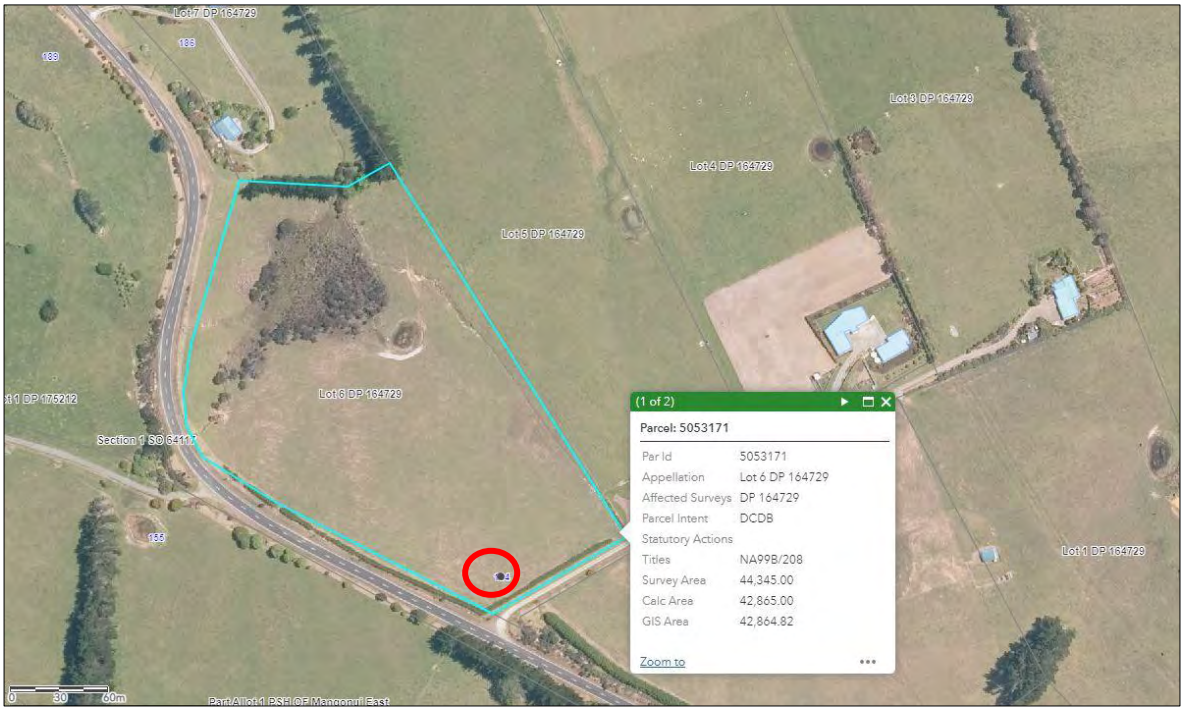


Figure 1: Screenshot aerial view of the subject site from the Far North District Council (FNDC) on-line GIS Property and Land Map. Property boundary is highlighted in cyan. Red circle approximately depicts proposed building site location.

Topographically speaking, the property is set on a northeast facing, gently sloping flank, falling from a broad crest upslope of the property to the south. Ground inclinations across the site are somewhat uniform in nature and average less than 8°. An open drain trends parallel to the eastern boundary and directs northwest towards a low-lying gully feature present at the northern end of the site. A pond is located above the gully feature and is setback in excess of 100m from the development area.

Figure 2: Site photo overlooking Proposed Development Area (north direction).
Orange cones are indicative of proposed building site location.

No existing built development is present within the property. Historical earthworks associated with the formation of the northern pond have previously been undertaken on-site. Additionally, recent earthworks have also been undertaken in forming the proposed building platform (refer Section 4 below).

Ground cover across the site comprises of pasture, with shelterbelts present along the south-western, southern, and northern boundaries, and bush lining the noted northern gully feature.

At the time of preparing this report, we note that the FNDC on-line GIS Water Services Map indicates that reticulated water, wastewater, and stormwater connections are not available to the property.

4. DEVELOPMENT PROPOSALS

It is our understanding the client proposes to construct a new 52.8m² single-level, residential dwelling adjacent to the southern ROW boundary.

The dwelling is to be found on a timber subfloor, suspended on bored, concrete encased, tanalised timber pile foundations, supporting lightweight timber framing, cladding and roofing. The finished floor level (FFL) of the dwelling is proposed at RL40.60. A timber deck is also to wrap along the northern leading-edge of the dwelling.

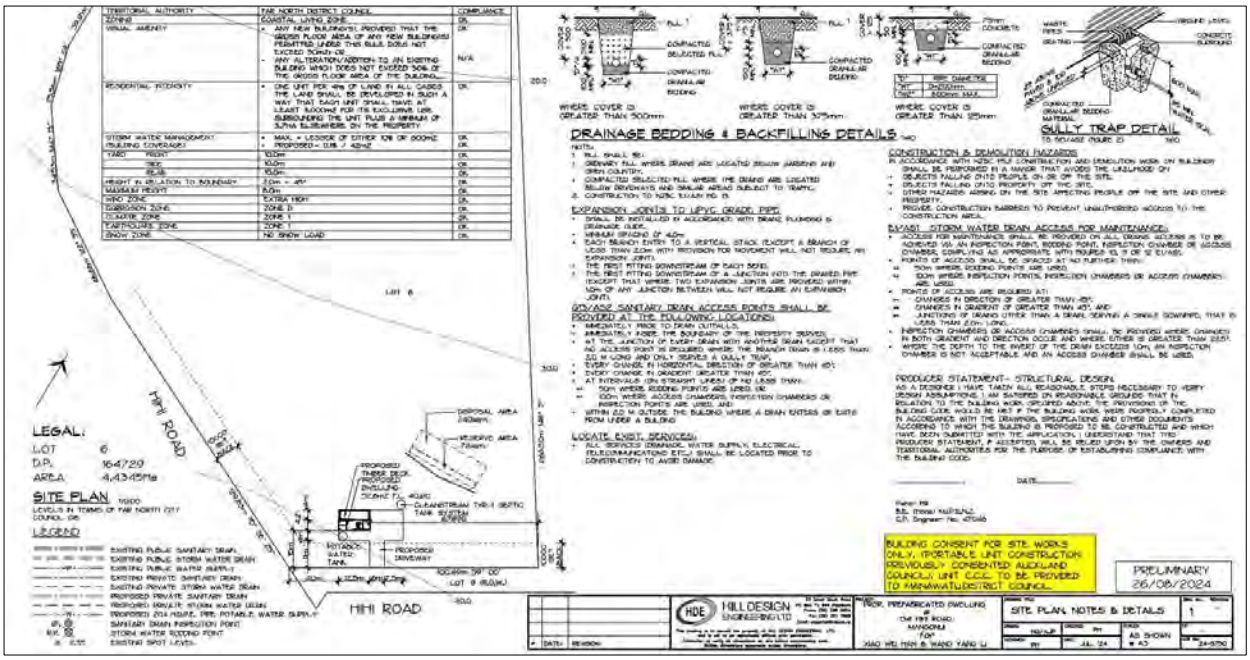


Figure 3: Screenshot of the Partial Site Plan from the supplied architectural drawings.

Earthworks have recently been undertaken on site in forming a level platform across the proposed development area. Cuts ranging between approximately 1.5m to 3.0m in height and batter grades of 1V:2.5 (21°) to 1V:2H (26°) have been excavated along the southern periphery of the proposed dwelling location. As a result, fill has been 'pushed-over' along the northern leading edge of the platform area, forming batters averaging 1V:2H (26°). Fills are up to approximately 0.90m in height at the north-eastern corner of the proposed deck location, tapering off to the west.

Aside from bored footing excavations, no further cuts/fills are proposed or envisaged at this stage of the development. WJL should be contacted if this assumption changes.

Figure 4: Site photograph of northern leading-edge of formed platform. Orange cones are indicative of proposed building site.

Figure 5: Site photograph overlooking proposed development area from the southern boundary corner (north direction).

As a result, our principal objectives were to investigate and assess the suitability of potential foundation options for the site subsoils, not only primarily in terms of bearing capacity, but also for differential foundation movement.

5. GEOLOGY

Local geology across the property and wider surrounding land is noted on the GNS Science New Zealand Geology Web Map, Scale 1:250,000, as; **Undifferentiated Tangihua Complex in Northland Allochthon**. These deposits are approximately 28.5 to 108 million years in age and described as; "*Mainly basalt pillow lava, with subvolcanic intrusives of basalt, dolerite and gabbro; locally incorporating siliceous mudstone*" (ref: GNS Science Website).

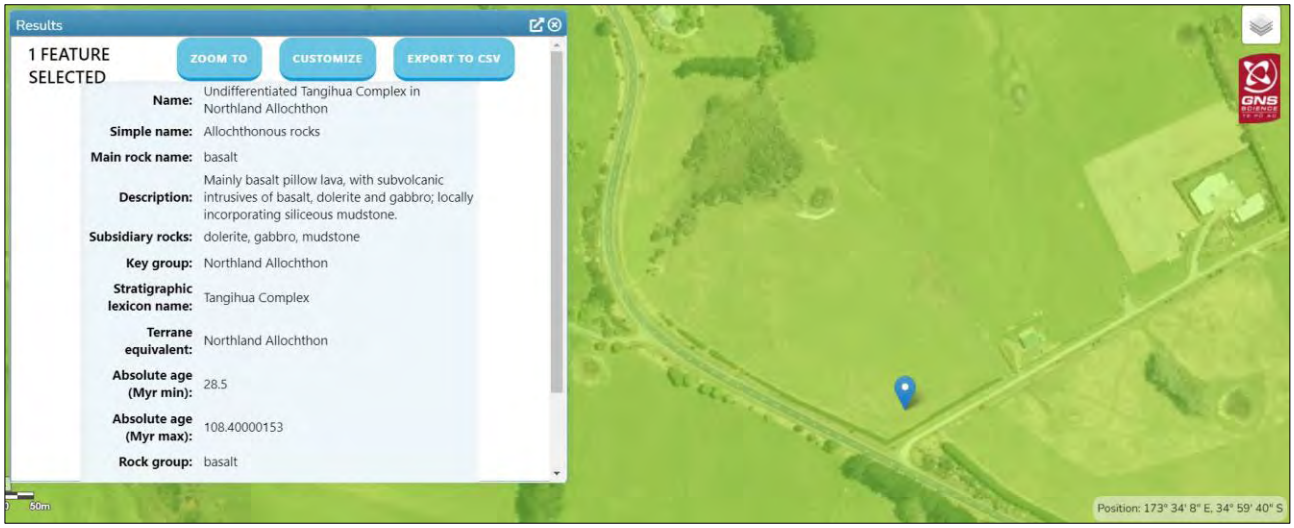


Figure 6: Screenshot aerial view of the subject site from the New Zealand Geology Web Map. Blue marker depicts property location.

6. GEOTECHNICAL INVESTIGATION

Our fieldwork, as presented on our appended Site Plan (ref: 135529-G600), was undertaken on 5 August 2024, and involved:

- Drilling 2 (no.) 50mm diameter hand auger boreholes (HA's), to depths of 3.0m (HA01) and 4.0m (HA02) below cleared ground level (bcgl),
- Drilling a fill inspection HA extending through to natural ground, and
- The on-site measurement of an electronic Zip Level cross-section (A-A') through the proposed building site and surrounding influential batters and slopes.

The soil sample arisings from the HA's were logged in accordance with the "Field Description of Soil and Rock", NZGS, December 2005.

In-situ undrained Vane Shear Strengths were measured at intervals of depth and then adjusted in accordance with the New Zealand Geotechnical Society (NZGS); Guidelines for Handheld Shear Vane Testing, August 2001, with strengths classified in accordance with the NZGS Field Classification Guidelines; Table 2.10, December 2005. The materials identified are described in detail on the appended records, together with the results of the various tests undertaken, plus the groundwater conditions as determined during time on site.

The HA logs and cross-section (ref: 135529-G610) are appended to this report.

7. GEOTECHNICAL FINDINGS

The following is a summary of the ground conditions encountered in our investigation. Please refer to the appended logs for greater detail.

7.1. NON-ENGINEERED FILL/BURIED TOPSOIL

HA01 was overlain by a thin layer of hardfill, whilst HA02 and HA03 were overlain by 0.90m and 0.30m of non-engineered fill, overlying buried topsoil layers of 0.30m and 0.10m thickness, respectively. The fill material as mentioned earlier on in this report is assumed to have been 'push-over' material from cutting excavations and comprises Clayey SILT deposits with frequent TOPSOIL inclusions.

The maximum depth of nonengineered fill and topsoil was recorded in HA02 at 1.2m below ground level.

7.2. NATURAL GROUND

The underlying natural deposits encountered on-site were consistent with our expectations of Undifferentiated Tangihua Complex deposits, comprising of stiff to very stiff, Clayey SILT, Slightly Clayey SILT, and SILT deposits, until termination of both HA's.

Measured in-situ, BS1377 adjusted peak shear strengths generally ranged between 90kPa and greater than 224kPa, where soil strength was in excess of the shear vane capacity, or the vane was 'Unable to Penetrate' (UTP) into the soil.

Where measurable, the ratio of peak to remoulded vane shear strength values ranged between 2.0 and 4.9, indicating fluctuations between 'Moderately Sensitive to Sensitive' underlying subsoils.

Figure 7: Site photograph of the HA01 soil arisings (0.0m to 3.0m).

Figure 8: Site photograph of the HA02 soil arisings (0.0m to 4.0m).

7.3. GROUNDWATER

Groundwater inflow was encountered in HA01 and HA02 at measured depths of 1.6m and 3.2m bcgl, respectively and settling at standing levels of 2.4m and 2.2m bcgl, by the completion of drilling. It should be noted that our fieldwork investigation followed a period of significant rainfall (133mm) during the month of July and is, on average, one of the heaviest rainfall periods (month) of the year for Mangonui (ref: Figure 9 below).

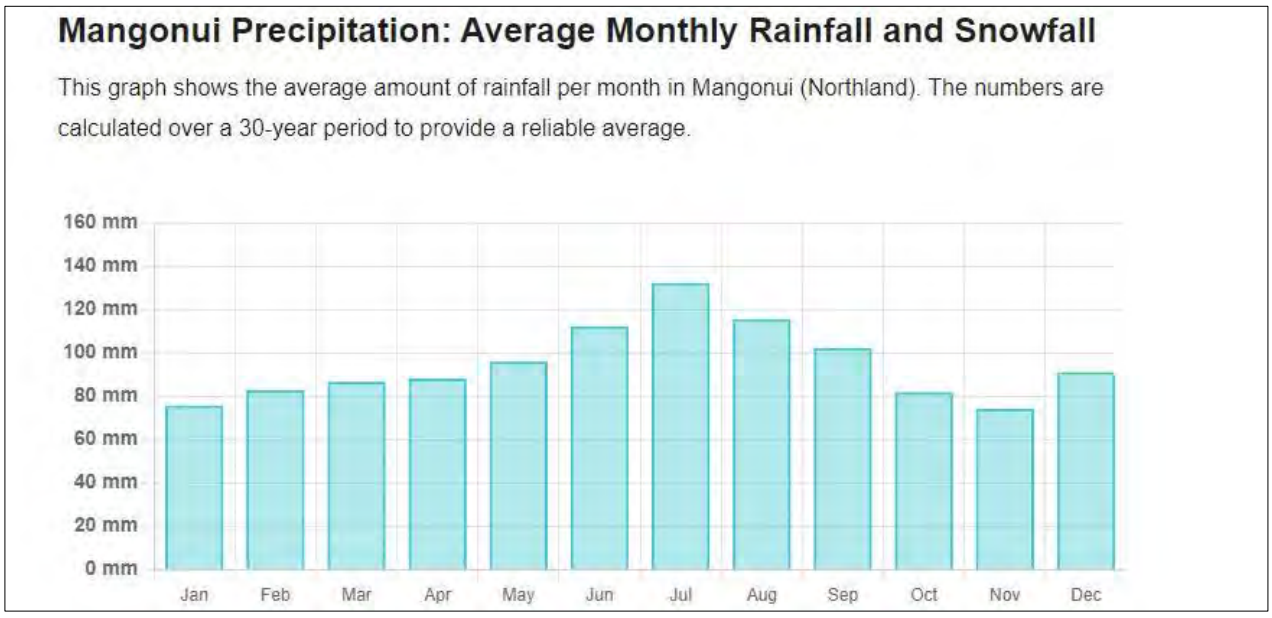


Figure 9: Screenshot of average monthly Rainfall measured over a period of 30 years, displayed on a Bar Graph sourced from © 2010-2024 World Weather & Climate Information.

Considering the elevation, topography, and underlying geological profile encountered, it is generally envisaged that groundwater levels will not be significantly elevated above those encountered on-site, nor will elevated levels initiate slope instability affecting the development due to the gentle grades present for a considerable distance beyond the building site.

7.4. SUMMARY TABLE

The following table summarises our inferred stratigraphic profiling:

Investigation Hole ID	Termination Depth (m)	Depth to Base of Surficial Non-Engineered Fill and Buried Topsoil (m)	Vane Shear Strength Range (kPa) within Natural Ground	Groundwater Inflow Depth/Resting Level (m)
HA01	3.0	0.05	105 - 217+ / UTP	1.6/2.4
HA02	4.0	1.20	90 – 224+	3.2/2.2
HA03	0.6	0.40	N/A	NE

UTP = Unable to Penetrate, NE = Not Encountered, N/A = Not Applicable

8. GEOTECHNICAL ASSESSMENTS

8.1. SITE STABILITY

On the basis of:

- No obvious evidence of deep-seated instability within the immediate vicinity of the proposed building site and surrounding influential land,
- The gently sloping nature of the land beyond the building site that averages less than 8° across some 100m,
- The stiff to very stiff, in-situ measured Vane Shear Strengths recorded during our investigation, and
- Lack of significantly elevated groundwater evidence within our HA's,

we consider that the risk of deep-seated global slope instability impacting the proposed development to be significantly low.

In the long-term, provided that all of the recommendations within this report, or subsequent revisions, are adhered to, then we do not anticipate any significant risk of instability either within, or immediately beyond, the proposed building site.

8.2. LIQUEFACTION ASSESSMENT

At the time of preparing this report, we note that the FNDC on-line GIS Liquefaction Vulnerability Map indicates that the property and wider surrounding land lies within an '*Unlikely*' zone.

Figure 10: Screenshot aerial view of the subject site and surrounding land from the FNDC on-line GIS Liquefaction Vulnerability Map. Cyan square and black dot depict property location.

Liquefaction is a natural phenomenon where a loss of strength of sand-like soils is experienced following cyclic induced stress, which is typically a result of prolonged seismic shaking and the resultant increase in pore water pressure of saturated soils. Recent examples of this were experienced in Christchurch and the greater Canterbury Region during the Canterbury Earthquake Sequence between 2010-2011.

Cyclic loading during prolonged seismic shaking induces an increase in pore water pressure, which in turn decreases the effective stress of a sand-like deposit of soil. Excess pore water pressure (EPWP) can build to such an extent that the effective stress of the underlying soils is reduced to near zero, whereby the soils no longer carry shear strength and behave as a semi solid/fluid. In such a scenario, excess pore water pressures will follow the path of least resistance to eventual dissipation, which can lead to the migration of liquefied soils towards the surface, or laterally towards a free-face (edge of slope, riverbank, etc.) or layers that have not yet undergone liquefaction.

A screening procedure based on geological criteria was adopted to examine whether the proposed development might be susceptible to liquefaction, with observations as follows:

- There are no known active faults traversing through the property or wider surrounding land,
- There is no historical evidence of liquefaction at the property,
- The site is situated on an elevated location with good water-shedding characteristics,
- Stiff to very stiff, in-situ measured Vane Shear Strength recorded during our investigation,
- The underlying natural soil deposits comprise of cohesive soils that are generally considered not susceptible to liquefaction, and
- The subsoils beneath the development area is underlain by Undifferentiated Tangihua Complex material in Northland Allochthon which are approximately 28.5 to 108 million years of age, allowing for adequate consolidation in comparison to Holocene age material (10,000 years).

Based on the above, we conclude that the subsoils across the property have a negligible risk of liquefaction susceptibility and liquefaction damage is therefore considered to be unlikely.

9. CONCLUSIONS AND RECOMMENDATIONS

On the basis of the above analyses, we consider that the risk of moderate to deep-seated slope instability impacting on the proposed development within the property to be satisfactorily low, provided all recommendations contained within our report are implemented in design and construction.

With regard to the Building Act 2004; Sections 71-72, we believe on reasonable grounds that:

i. The current proposed site development and associated building work within the relayed building platform should not accelerate, worsen, or result in slippage or subsidence on the land on which the building work is to be carried out or any other property, and

ii. The land beneath the building footprint and surrounding immediate amenity areas of the relayed building platform are neither subject nor likely to be subject to slippage or subsidence, provided the development is undertaken in accordance with the recommendations and guidance of this report.

9.1. FOUNDATIONS

The minor dwelling is to be found on a timber subfloor, suspended on bored, concrete encased, tanalised timber pile foundations. A timber deck is also to wrap along the northern leading-edge of the dwelling.

All foundations must be embedded a minimum of 900mm below final ground level, or a minimum of 300mm into natural ground below the fill, whichever is the greater. The maximum depth of nonengineered fill and topsoil was recorded in HA02 at 1.2m below ground level. Bored pile holes at the location of HA02 would be embedded to 1.5m below ground level, however deeper embedment may be required elsewhere if the depth of nonengineered fill is greater than 1.2m.

9.1.1. SHALLOW FOUNDATION BEARING CAPACITY

The following bearing capacity values are considered to be appropriate for the design of shallow foundations, subject to founding directly within competent natural ground, for which careful Geo-Professional inspections of the subgrade should be undertaken during footing excavations to check that underlying ground conditions are in keeping with our expectations:

Geotechnical Ultimate Bearing Capacity	300 kPa
ULS Dependable Bearing Capacity (Φ=0.5)	150 kPa

All existing surficial non-engineered fill is assessed as unsuitable founding material to support dwelling foundations and as such, all foundations will need to bypass all fill extents and be sufficiently embedded into competent natural ground.

When finalising development proposals, it should be checked that all foundations lie outside 45° envelopes rising up from:

- 0.50m below the invert of service trenches, and/or
- the toe of adjacent retaining walls,

unless such foundation details are found by SED to be satisfactory. Deeper foundation embedment with piles may be required for any surcharging foundations.

During inspections, it is important to exercise caution to verify that the natural ground meets the recommended bearing capacity mentioned in this report. This is crucial for preserving stability and structural integrity.

9.1.2. SHALLOW FOUNDATIONS ON EXPANSIVE SOILS

In this instance, without any laboratory testing, we recommend a primary classification of Class H (Highly) expansive soils as defined in clause 7.5.13.1.2, as introduced to NZS3604 by Amendment 19 of NZBC Structure B1/AS1.

- NZBC B1 Expansive Soil Class H
- Upper Limit of Characteristic surface movement (ys) 78mm

Soil expansiveness can be mitigated for the minor dwelling and timber decking foundations by ensuring all bored footings are embedded a minimum of 0.90m below finished ground levels and 0.30m into competent natural ground, whichever is deeper.

9.1.3. NZS1170.5:2004 SITE SUBSOIL CLASSIFICATION

We consider the proposed buildings to be underlain with a Class C – Shallow Soil stratigraphy.

9.2. SITE EARTHWORKS

Aside from bored footing excavations, no further cuts/fills are proposed or envisaged at this stage of the development. WJL should be contacted if this assumption changes.

All earthworks should be undertaken in accordance with the following standards:

- NZS4431:2022 "Code of Practice for Earth Fill Residential Development",
- Section 2 "Earthworks & Geotechnical Requirements" of NZS4404:2010 "Land Development and Subdivision Infrastructure", and
- Chapter 2 "Site Development Suitability (Geotechnical and Natural Hazards" of the Far North District Council Engineering Standards, (Version 0.6 issued May 2023).

9.3. SITE PREPARATION

We recommend footing excavations are only undertaken during periods of fine weather.

The competency of the exposed subgrade at the base of all bored footings should be confirmed by a Geo-Professional. Without such inspections being undertaken, a Chartered Professional Geotechnical Engineer is unable to issue a Producer Statement - PS4 – Design Review which could result in the failure to meet Building Consent requirements as set by Council as conditions of consent.

9.4. SUBGRADE PROTECTION

All pile/post inverts should be poured as soon as possible once inspected by a Geo-Professional or covered with a protective layer of site concrete.

9.5. LONG-TERM BATTERS

It was noted on-site that topsoil has been spread over all cut batters and given the nature of the cut batter slopes with grades ranging between 1V:2.5 (21°) to 1V:2H (26°), we recommend that all existing cut batters are re-dressed in a geotextile fabric and re-grassed and/or planted as soon as practicable to aid in stabilization of batters. Likewise, all fill batters should be re-grassed and/or planted as soon as practicable.

Whilst on-site, minor water ponding was observed along the southern cut batter toe. The area should be re-shaped to ensure stormwater run-off is appropriately contoured away from the building site to a stable disposal point downslope that is well clear of the building site.

The structural designer and building contractor should ensure that a satisfactory FoS against ground instability is available at all stages of the development.

9.6. GENERAL SITE WORKS

We stress that any and all works should be undertaken in a careful and safe manner so that Health & Safety is not compromised, and that suitable Erosion & Sediment control measures should be put in place. Any stockpiles placed should be done so in an appropriate manner so that land stability and/or adjacent structures are not compromised.

Furthermore:

- All works must be undertaken in accordance with the Health and Safety at Work Act 2015,
- Any open excavations should be fenced off or covered, and/or access restricted as appropriate,
- The location of all services should be verified at the site prior to the commencement of construction,
- The Contractor is responsible at all times for ensuring that all necessary precautions are taken to protect all aspects of the works, as well as adjacent properties, buildings and services, and
- Should the contractor require any site-specific assistance with safe construction methodologies, please contact WJL for further assistance.

9.7. LONG-TERM FOUNDATION CARE & MAINTENANCE

The recommendations given above to mitigate the risk of expansive soils, do not necessarily remove the risk of external influences affecting the moisture in the subgrade supporting the foundations.

All owners should also be aware of the detrimental effects that significant trees can have on building foundation soils, viz:

- Their presence can induce differential consolidation settlements beneath foundations through localised soil water deprivation, or conversely, and
- Foundation construction too soon after their removal can result in soil swelling and raising foundations as the soil rehydrates.

To this end, care should be taken to avoid:

- Having significant trees positioned where their roots could migrate beneath the house foundations, and
- Constructing foundations on soils that have been differentially excessively desiccated by nearby trees, whether still existing, or recently removed.

We recommend that homeowners make themselves familiar with the appended Homeowners' Guide published by CSIRO, with particular emphasis on maintenance of drains, water pipes, gutters, and downpipes.

10. STORMWATER CONTROL

Uncontrolled stormwater flows must not be allowed to run onto or over site slopes, or to saturate the ground, so as to adversely affect slope stability or foundation conditions.

Overland flows and similar runoff such as from the on-site cut batters, should be intercepted by means of shallow surface drains and be directed away from building footprint to protect platforms from both saturation and erosion, as well as any localised slope instability. All water collected in interceptor drains should be diverted away from the building site to a stable disposal point downslope that is well clear of the building site.

Likewise, all stormwater runoff from roof and paved areas should be collected in sealed pipes and be discharged in accordance with the above.

11. UNDERGROUND SERVICES

The FNDC on-line GIS Water Services Map indicates that reticulated water, wastewater, and stormwater connections are not available to the property. However, other underground services, public or private, mapped, or unmapped, of any type may be present, hence we recommend staying on the side of caution during the commencement of any work within the proposed development area.

12. FUTURE CONSTRUCTION MONITORING

The foregoing statements are Professional Opinion, based on a limited collection of information, some of which is factual, and some of which is inferred. Because soils are not a homogeneous, manufactured building component, there always exists a level of risk that inferences about soil conditions across the greater site, which have been drawn from isolated "pin-prick" locations, may be subject to localized variations. Generally, any investigation is deemed less complete until the applicability of its inferences and the Professional Opinions arising out of those are checked and confirmed during the construction phase, to an appropriate level.

It is increasingly common for the Building Consent Authorities to require a Producer Statement – Construction (PS4) which is an important document. The purpose of the PS4 is to confirm the Engineers' Professional Opinion to the BCA that specific elements of construction, such as the verification of design assumptions and soil parameters (NZBC clause B1/VM4 2.0.8), are in accordance with the approved Building Consent and its related documents, which should include the subject Geotechnical Report. Where site works will involve the placement of fill, the PS4 should reference NZBC clause B1/VM1 10.1.

For WJL to issue a PS4 to meet the above clauses of the NZBC, we will need to carry out the site inspections as per the Building Consent and Council requirements.

We require at least 48 hours' notice for site inspections.

Site inspections should be undertaken by a Chartered Professional Geotechnical Engineer or their Agent, who is familiar with both this site and the contents of this Geotechnical Report.

Prior to works commencement, the above Engineer should be contacted to confirm the construction methodologies, inspection, and testing frequency.

The primary purpose of the site inspections is to check that the conditions encountered are consistent with those expected from the investigations and adopted for the design as discussed herein. If anomalies or uncertainties are identified, then further Professional advice should be sought from the Geo-Professional, which will allow the timely provision of solutions and recommendations should any engineering problems arise.

Upon satisfactory completion of the above work aspects, WJL would then be in a position to issue the PS4 as required by Council.

At this time, the following Geotechnical site inspections and testing should include, but are not limited to:

- Pre-pour bored footing excavations.

13. LIMITATIONS

We anticipate that this report is to be submitted to Council in support of a Building Consent application.

This report has been commissioned solely for the benefit of our clients, Mark Jennings, in relation to the project as described herein, and to the limits of our engagement, with the exception that the local Territorial Authority may rely on it to the extent of its appropriateness, conditions and limitations, when issuing the subject consent. Any variations from the development proposals as described herein as forming the basis of our appraisal should be referred to us for further evaluation. Copyright of Intellectual Property remains with WJL, and this report may NOT be used by any other entity, or for any other proposals, without our written consent. Therefore, no liability is accepted by this firm or any of its directors, servants, or agents, in respect of any other geotechnical aspects of this site, nor for its use by any other person or entity, and any other person or entity who relies upon any information contained herein does so entirely at their own risk. Where other parties may wish to rely on it, whether for the same or different proposals, this permission may be extended, subject to our satisfactory review of their interpretation of the report.

The recommendations provided in this geotechnical report are in accordance with the findings from our shallow investigation. However, it is important to acknowledge that additional refinement of the investigation and analysis may be necessary to meet the specific requirements set by the local council.

Although this report may be submitted to a local authority in connection with an application for a consent, permission, approval, or pursuant to any other requirement of law, this disclaimer shall still apply and require all other parties to use due diligence where necessary and does not remove the necessity for the normal inspection of site conditions and the design of foundations as would be made under all normal circumstances.

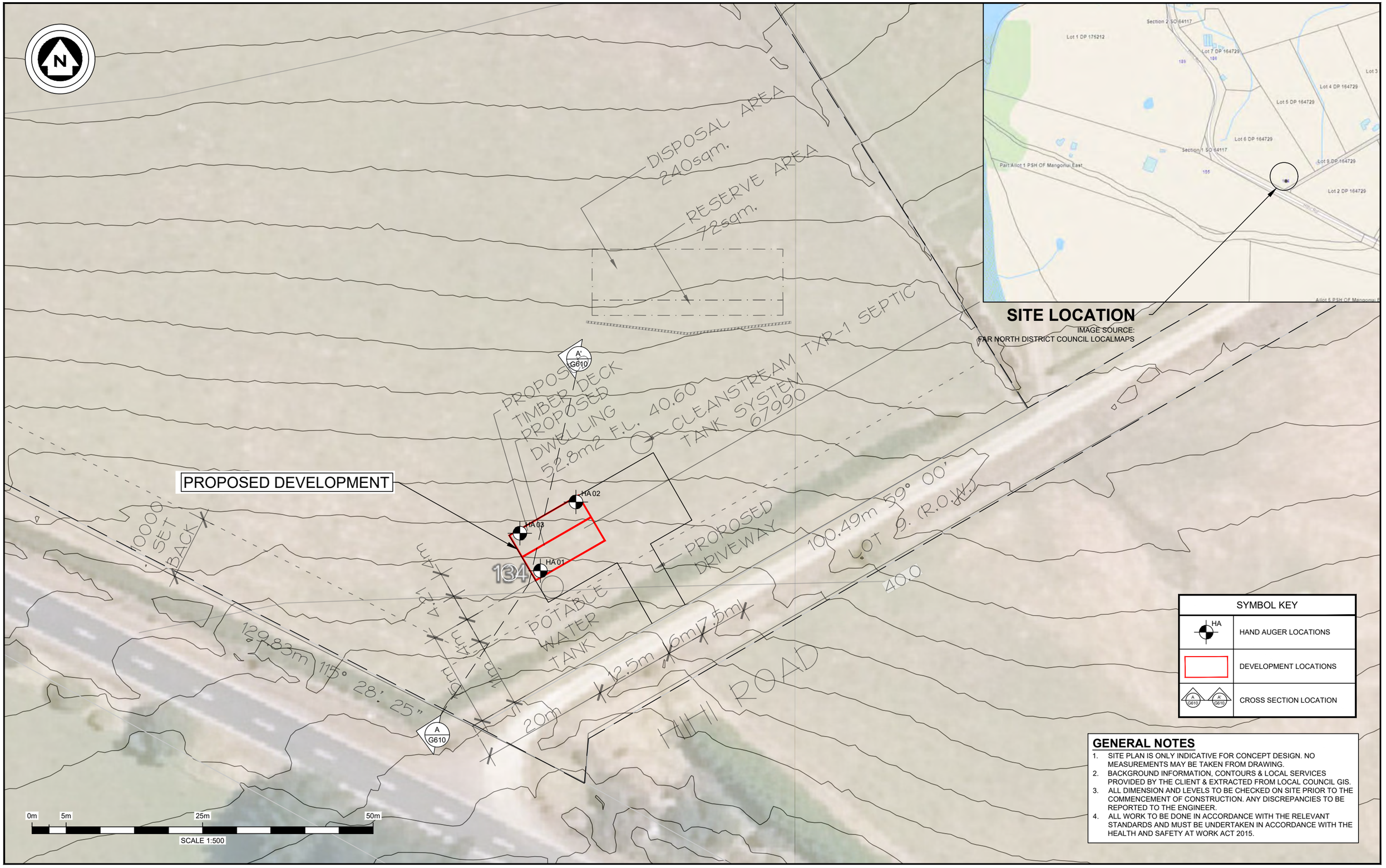
Thank you for the opportunity to provide our service on this project, and if we can be of further assistance, please do not hesitate to contact us.

Yours faithfully,

WILTON JOUBERT LIMITED

Enclosures:

Site Plan (1 sheet)
Cross-section A-A' (1 sheet)
Hand Auger Borehole Records (3 sheets)
'Foundation Maintenance & Footing Performance' sheet BTF18: A Homeowner's Guide, published by CSIRO (4 sheets)
Construction Monitoring (1 sheet)



SITE LOCATION

IMAGE SOURCE:
FAR NORTH DISTRICT COUNCIL LOCALMAPS

SYMBOL KEY	
HA	HAND AUGER LOCATIONS
	DEVELOPMENT LOCATIONS
A G610 A' G610	CROSS SECTION LOCATION

GENERAL NOTES

1. SITE PLAN IS ONLY INDICATIVE FOR CONCEPT DESIGN. NO MEASUREMENTS MAY BE TAKEN FROM DRAWING.
2. BACKGROUND INFORMATION, CONTOURS & LOCAL SERVICES PROVIDED BY THE CLIENT & EXTRACTED FROM LOCAL COUNCIL GIS.
3. ALL DIMENSION AND LEVELS TO BE CHECKED ON SITE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER.
4. ALL WORK TO BE DONE IN ACCORDANCE WITH THE RELEVANT STANDARDS AND MUST BE UNDERTAKEN IN ACCORDANCE WITH THE HEALTH AND SAFETY AT WORK ACT 2015.

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www.wiltonjoubert.co.nz

ISSUE / REVISION			
No.	DATE	BY	DESCRIPTION
A	SEP 2024	NPN	ISSUED WITH GEOTECHNICAL REPORT

DESIGNED BY:
DRAWN BY: NPN
CHECKED BY:
SURVEYED BY:

SERVICES NOTE
WHERE EXISTING SERVICES ARE SHOWN, THEY ARE INDICATIVE ONLY AND MAY NOT INCLUDE ALL SITE SERVICES. WILTON JOUBERT LTD DOES NOT WARRANT THAT ALL, OR INDEED ANY SERVICES ARE SHOWN. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE AND PROTECT ALL EXISTING SERVICES PRIOR TO AND FOR THE DURATION OF THE CONTRACT WORKS.

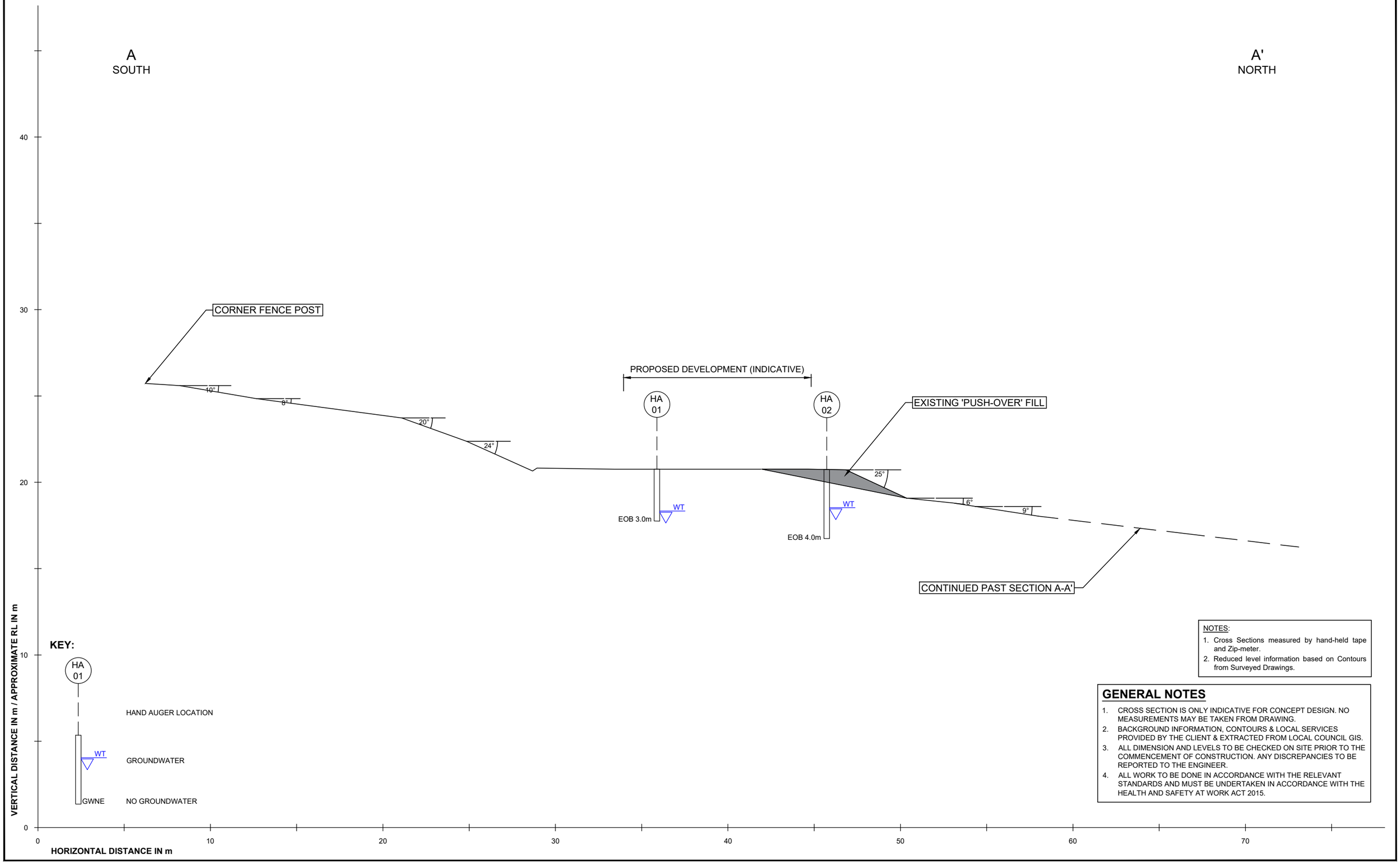
BUILDING CONSENT
DESIGN / DRAWING SUBJECT TO ENGINEER'S APPROVAL

DRAWING TITLE: **SITE PLAN**

PROJECT DESCRIPTION: **PROPOSED MINOR DWELLING**

PROJECT TITLE:
LOT 6 DP 164729
134 HIHI ROAD
MANGONUI
NORTHLAND

ORIGINAL DRAWING SIZE:	OFFICE:
A3	KERIKERI
DRAWING SCALE:	CO-ORDINATE SYSTEM:
1:500	NOT COORDINATED
DRAWING NUMBER:	ISSUE:
135529-G600	A



NOTES:

1. Cross Sections measured by hand-held tape and Zip-meter.
2. Reduced level information based on Contours from Surveyed Drawings.

GENERAL NOTES

1. CROSS SECTION IS ONLY INDICATIVE FOR CONCEPT DESIGN. NO MEASUREMENTS MAY BE TAKEN FROM DRAWING.
2. BACKGROUND INFORMATION, CONTOURS & LOCAL SERVICES PROVIDED BY THE CLIENT & EXTRACTED FROM LOCAL COUNCIL GIS.
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A	AUG 2024	NPN	ISSUED WITH GEOTECHNICAL REPORT

DESIGNED BY:
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BUILDING CONSENT
DESIGN / DRAWING SUBJECT TO ENGINEER'S APPROVAL

DRAWING TITLE: **CROSS SECTION A-A'**

PROJECT DESCRIPTION: **PROPOSED MINOR DWELLING**

PROJECT TITLE: **LOT 6 DP 164729 134 HIHI ROAD MANGONUI NORTHLAND**

ORIGINAL DRAWING SIZE: A3
OFFICE: KERIKERI
DRAWING SCALE: 1:200
CO-ORDINATE SYSTEM: NOT COORDINATED
DRAWING NUMBER: 135529-G610
ISSUE: A

HAND AUGER : HA01

JOB NO.: 135529 **SHEET:** 1 OF 3

START DATE: 05/08/2024 **NORTHING:** **GRID:**

CLIENT: Building Solutions NZ **DIAMETER:** 50mm **EASTING:**

PROJECT: New Dwelling **SV DIAL:** **ELEVATION:** Ground

SITE LOCATION: 134 Hihi Road, Mangonui **FACTOR:** **DATUM:**

STRATIGRAPHY	SOIL DESCRIPTION	LEGEND	DEPTH (m)	WATER	SHEAR VANE PEAK STRENGTH (kPa)	SHEAR VANE REMOULD STRENGTH (kPa)	SHEAR VANE SENSITIVITY	DCP - SCALA (Blows / mm)	COMMENTS, SAMPLES, OTHER TESTS
	NON-ENGINEERED FILL: Fine to Coarse Angular GRAVEL, loose, moist		0.0						
Undifferentiated Tangihua Complex in Northland Allochthon	NATURAL: Slightly Clayey SILT, light orange with pinkish brown streaks, very stiff, moist, low plasticity		0.2						
			0.4		UTP	-	-		
	SILT, minor clay and sand, brownish orange with black mottling and occasional pink specks, very stiff, dry to moist, no to low plasticity, minor pockets of black charcoal		0.6						
			0.8		143	62	2.3		
	Slightly Clayey SILT, orange and brown with pink and occasional black mottling, very stiff, moist, low plasticity		1.0						
			1.2		217+	-	-		
			1.4						
			1.6	▽	105	47	2.2		
	1.8m: Pockets of Clayey SILT, moderate plasticity		1.8						
			2.0		112	43	2.6		
	2.2m: Becoming orange and purple with grey and pink streaks		2.2						
			2.4	▼ 05/08/2024	217+	-	-		
			2.6						
			2.8		133	56	2.4		
	EOH: 3.00m - Target Depth		3.0						
			3.2						
			3.4						
			3.6						
			3.8						
			4.0						
			4.2						
			4.4						

REMARKS

End of borehole @ 3.00m (Target Depth: 3.00m)

Groundwater encountered @ 1.60m during drilling. Standing groundwater @ 2.40m.

NZGS Definition of Relative Density for Coarse Grain soils: VL - Very Loose; L - Loose; MD - Medium Dense; D - Dense; VD - Very Dense

LOGGED BY: NPN

CHECKED BY: DXS

▼ Standing groundwater level

▽ GW while drilling

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HAND AUGER : HA02

JOB NO.: 135529 **SHEET:** 1 OF 1

START DATE: 05/08/2024 **NORTHING:** **GRID:**

CLIENT: Building Solutions NZ **DIAMETER:** 50mm **EASTING:**

PROJECT: New Dwelling **SV DIAL:** 772 **ELEVATION:** Ground

SITE LOCATION: 134 Hihi Road, Mangonui **FACTOR:** 1.6 **DATUM:**

STRATIGRAPHY	SOIL DESCRIPTION	LEGEND	DEPTH (m)	WATER	SHEAR VANE PEAK STRENGTH (kPa)	SHEAR VANE REMOULD STRENGTH (kPa)	SHEAR VANE SENSITIVITY	DCP - SCALA (Blows / mm)	COMMENTS, SAMPLES, OTHER TESTS
FILL	NON-ENGINEERED FILL: Clayey SILT, brownish orange with occasional red and white mottles, stiff, moist, moderate plasticity, occasional topsoil inclusions		0.2						
			0.4		64	19	3.4		
			0.6						
			0.8		144	45	3.2		
Topsoil	BURIED TOPSOIL, brown, wet, perched groundwater encountered	TS	1.0						
		TS	1.2						
Undifferentiated Tanglhua Complex in Northland Allochthon	NATURAL: Clayey SILT, brown to light brown with occasional red, white, and orange mottles, very stiff, moist, moderate plasticity		1.4		160	64	2.5		
			1.6		224+	-	-		
	1.8m: Becoming white with light brown and orangey brown streaks, low to moderate plasticity		1.8						
			2.0		170	64	2.7		
			2.2	05/08/2024					
	2.4m: Becoming stiff		2.4		93	19	4.9		
			2.6						
	2.8m: Becoming very stiff		2.8		122	45	2.7		
			3.0						
	3.2m: Becoming stiff		3.2	▽	90	45	2.0		
			3.4						
			3.6		112	38	2.9		
			3.8						
	Slightly Clayey SILT, brownish orange and red with occasional white, very stiff, moist, low plasticity		4.0		224+	-	-		
	EOH: 4.00m - Target Depth		4.2						
			4.4						

REMARKS

End of borehole @ 4.00m (Target Depth: 4.00m)

Groundwater encountered @ 3.20m during drilling. Standing groundwater @ 2.20m.

NZGS Definition of Relative Density for Coarse Grain soils: VL - Very Loose; L - Loose; MD - Medium Dense; D - Dense; VD - Very Dense

LOGGED BY: SJP

CHECKED BY: DXS

▼ Standing groundwater level

▽ GW while drilling

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HAND AUGER : HA03

CLIENT: Building Solutions NZ
PROJECT: New Dwelling
SITE LOCATION: 134 Hihi Road, Mangonui

JOB NO.: 135529 **SHEET:** 1 OF 1
START DATE: 05/08/2024 **NORTHING:** **GRID:**
DIAMETER: 50mm **EASTING:**
SV DIAL: **ELEVATION:** Ground
FACTOR: **DATUM:**

STRATIGRAPHY	SOIL DESCRIPTION	LEGEND	DEPTH (m)	WATER	SHEAR VANE: PEAK STRENGTH (kPa)	SHEAR VANE: REMOULD STRENGTH (kPa)	SHEAR VANE: SENSITIVITY	DCP - SCALA (Blows / mm)	COMMENTS, SAMPLES, OTHER TESTS
FILL	NON-ENGINEERED FILL: Clayey SILT, brownish orange and yellow, stiff, moist, low plasticity		0.2	Groundwater Not Encountered					
Top soil	BURIED TOPSOIL, brown, moist	TS	0.4						
Complex in Northland	NATURAL: Clayey SILT, brownish orange, very stiff, moist, low to moderate plasticity		0.6						
	EOH: 0.60m - Target Depth		0.8						
			1.0						
			1.2						
			1.4						
			1.6						
			1.8						
			2.0						
			2.2						
			2.4						
			2.6						
			2.8						
			3.0						
			3.2						
			3.4						
			3.6						
			3.8						
			4.0						
			4.2						
			4.4						

SOIL DESCRIPTION: TOPSOIL, CLAY, SAND, PEAT, FILL, SILT, GRAVEL, ROCK

REMARKS
End of borehole @ 0.60m (Target Depth: 0.60m)

NZGS Definition of Relative Density for Coarse Grain soils: VL - Very Loose; L - Loose; MD - Medium Dense; D - Dense; VD - Very Dense

LOGGED BY: NPN
CHECKED BY: DXS

▼ Standing groundwater level
▽ GW while drilling

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Foundation Maintenance and Footing Performance:
A Homeowner's Guide

PUBLISHING

BTF 18-2011 replaces Information Sheet 10/91

Buildings can and often do move. This movement can be up, down, lateral or rotational. The fundamental cause of movement in buildings can usually be related to one or more problems in the foundation soil. It is important for the homeowner to identify the soil type in order to ascertain the measures that should be put in place in order to ensure that problems in the foundation soil can be prevented, thus protecting against building movement.

This Building Technology File is designed to identify causes of soil-related building movement, and to suggest methods of prevention of resultant cracking in buildings.

Soil Types

The types of soils usually present under the topsoil in land zoned for residential buildings can be split into two approximate groups – granular and clay. Quite often, foundation soil is a mixture of both types. The general problems associated with soils having granular content are usually caused by erosion. Clay soils are subject to saturation and swell/shrink problems.

Classifications for a given area can generally be obtained by application to the local authority, but these are sometimes unreliable and if there is doubt, a geotechnical report should be commissioned. As most buildings suffering movement problems are founded on clay soils, there is an emphasis on classification of soils according to the amount of swell and shrinkage they experience with variations of water content. The table below is Table 2.1 from AS 2870-2011, the Residential Slab and Footing Code.

Causes of Movement

Settlement due to construction

There are two types of settlement that occur as a result of construction:

- Immediate settlement occurs when a building is first placed on its foundation soil, as a result of compaction of the soil under the weight of the structure. The cohesive quality of clay soil mitigates against this, but granular (particularly sandy) soil is susceptible.
- Consolidation settlement is a feature of clay soil and may take place because of the expulsion of moisture from the soil or because of the soil's lack of resistance to local compressive or shear stresses. This will usually take place during the first few months after construction, but has been known to take many years in exceptional cases.

These problems are the province of the builder and should be taken into consideration as part of the preparation of the site for construction. Building Technology File 19 (BTF 19) deals with these problems.

Erosion

All soils are prone to erosion, but sandy soil is particularly susceptible to being washed away. Even clay with a sand component of say 10% or more can suffer from erosion.

Saturation

This is particularly a problem in clay soils. Saturation creates a bog-like suspension of the soil that causes it to lose virtually all of its bearing capacity. To a lesser degree, sand is affected by saturation because saturated sand may undergo a reduction in volume, particularly imported sand fill for bedding and blinding layers. However, this usually occurs as immediate settlement and should normally be the province of the builder.

Seasonal swelling and shrinkage of soil

All clays react to the presence of water by slowly absorbing it, making the soil increase in volume (see table below). The degree of increase varies considerably between different clays, as does the degree of decrease during the subsequent drying out caused by fair weather periods. Because of the low absorption and expulsion rate, this phenomenon will not usually be noticeable unless there are prolonged rainy or dry periods, usually of weeks or months, depending on the land and soil characteristics.

The swelling of soil creates an upward force on the footings of the building, and shrinkage creates subsidence that takes away the support needed by the footing to retain equilibrium.

Shear failure

This phenomenon occurs when the foundation soil does not have sufficient strength to support the weight of the footing. There are two major post-construction causes:

- Significant load increase.
- Reduction of lateral support of the soil under the footing due to erosion or excavation.

In clay soil, shear failure can be caused by saturation of the soil adjacent to or under the footing.

GENERAL DEFINITIONS OF SITE CLASSES

Class	Foundation
A	Most sand and rock sites with little or no ground movement from moisture changes
S	Slightly reactive clay sites, which may experience only slight ground movement from moisture changes
M	Moderately reactive clay or silt sites, which may experience moderate ground movement from moisture changes
H1	Highly reactive clay sites, which may experience high ground movement from moisture changes
H2	Highly reactive clay sites, which may experience very high ground movement from moisture changes
E	Extremely reactive sites, which may experience extreme ground movement from moisture changes

Notes

1. Where controlled fill has been used, the site may be classified A to E according to the type of fill used.
2. Filled sites. Class P is used for sites which include soft fills, such as clay or silt or loose sands; landslip; mine subsidence; collapsing soils; soil subject to erosion; reactive sites subject to abnormal moisture conditions or sites which cannot be classified otherwise.
3. Where deep-seated moisture changes exist on sites at depths of 3 m or greater, further classification is needed for Classes M to E (M-D, H1-D, H2-D and E-D).

Tree root growth
Trees and shrubs that are allowed to grow in the vicinity of footings can cause foundation soil movement in two ways:

- Roots that grow under footings may increase in cross-sectional size, exerting upward pressure on footings.
- Roots in the vicinity of footings will absorb much of the moisture in the foundation soil, causing shrinkage or subsidence.

Unevenness of Movement

The types of ground movement described above usually occur unevenly throughout the building's foundation soil. Settlement due to construction tends to be uneven because of:

- Differing compaction of foundation soil prior to construction.
- Differing moisture content of foundation soil prior to construction.

Movement due to non-construction causes is usually more uneven still. Erosion can undermine a footing that traverses the flow or can create the conditions for shear failure by eroding soil adjacent to a footing that runs in the same direction as the flow.

Saturation of clay foundation soil may occur where subfloor walls create a dam that makes water pond. It can also occur wherever there is a source of water near footings in clay soil. This leads to a severe reduction in the strength of the soil which may create local shear failure.

Seasonal swelling and shrinkage of clay soil affects the perimeter of the building first, then gradually spreads to the interior. The swelling process will usually begin at the uphill extreme of the building, or on the weather side where the land is flat. Swelling gradually reaches the interior soil as absorption continues. Shrinkage usually begins where the sun's heat is greatest.

Effects of Uneven Soil Movement on Structures

Erosion and saturation
Erosion removes the support from under footings, tending to create subsidence of the part of the structure under which it occurs. Brickwork walls will resist the stress created by this removal of support by bridging the gap or cantilevering until the bricks or the mortar bedding fail. Older masonry has little resistance. Evidence of failure varies according to circumstances and symptoms may include:

- Step cracking in the mortar beds in the body of the wall or above/below openings such as doors or windows.
- Vertical cracking in the bricks (usually but not necessarily in line with the vertical beds or perpends).

Isolated piers affected by erosion or saturation of foundations will eventually lose contact with the bearers they support and may tilt or fall over. The floors that have lost this support will become bouncy, sometimes rattling ornaments etc.

Seasonal swelling/shrinkage in clay
Swelling foundation soil due to rainy periods first lifts the most exposed extremities of the footing system, then the remainder of the perimeter footings while gradually permeating inside the building footprint to lift internal footings. This swelling first tends to create a dish effect, because the external footings are pushed higher than the internal ones.

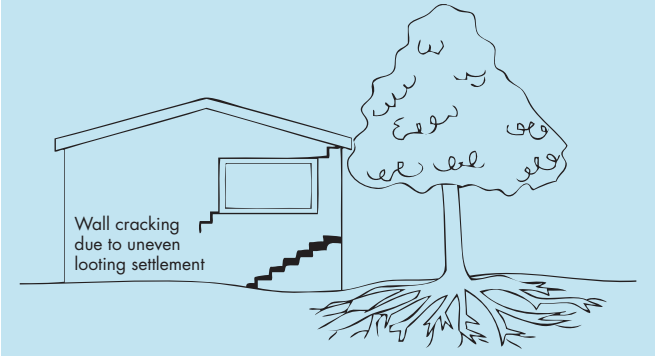
The first noticeable symptom may be that the floor appears slightly dished. This is often accompanied by some doors binding on the floor or the door head, together with some cracking of cornice mitres. In buildings with timber flooring supported by bearers and joists, the floor can be bouncy. Externally there may be visible dishing of the hip or ridge lines.

As the moisture absorption process completes its journey to the innermost areas of the building, the internal footings will rise. If the spread of moisture is roughly even, it may be that the symptoms will temporarily disappear, but it is more likely that swelling will be uneven, creating a difference rather than a disappearance in symptoms. In buildings with timber flooring supported by bearers and joists, the isolated piers will rise more easily than the strip footings or piers under walls, creating noticeable doming of flooring.

As the weather pattern changes and the soil begins to dry out, the external footings will be first affected, beginning with the locations where the sun's effect is strongest. This has the effect of lowering the external footings. The doming is accentuated and cracking reduces or disappears where it occurred because of dishing, but other cracks open up. The roof lines may become convex.

Doming and dishing are also affected by weather in other ways. In areas where warm, wet summers and cooler dry winters prevail, water migration tends to be toward the interior and doming will be accentuated, whereas where summers are dry and winters are cold and wet, migration tends to be toward the exterior and the underlying propensity is toward dishing.

Trees can cause shrinkage and damage



Movement caused by tree roots
In general, growing roots will exert an upward pressure on footings, whereas soil subject to drying because of tree or shrub roots will tend to remove support from under footings by inducing shrinkage.

Complications caused by the structure itself
Most forces that the soil causes to be exerted on structures are vertical – i.e. either up or down. However, because these forces are seldom spread evenly around the footings, and because the building resists uneven movement because of its rigidity, forces are exerted from one part of the building to another. The net result of all these forces is usually rotational. This resultant force often complicates the diagnosis because the visible symptoms do not simply reflect the original cause. A common symptom is binding of doors on the vertical member of the frame.

Effects on full masonry structures
Brickwork will resist cracking where it can. It will attempt to span areas that lose support because of subsided foundations or raised points. It is therefore usual to see cracking at weak points, such as openings for windows or doors.

In the event of construction settlement, cracking will usually remain unchanged after the process of settlement has ceased.

With local shear or erosion, cracking will usually continue to develop until the original cause has been remedied, or until the subsidence has completely neutralised the affected portion of footing and the structure has stabilised on other footings that remain effective.

In the case of swell/shrink effects, the brickwork will in some cases return to its original position after completion of a cycle, however it is more likely that the rotational effect will not be exactly reversed, and it is also usual that brickwork will settle in its new position and will resist the forces trying to return it to its original position. This means that in a case where swelling takes place after construction and cracking occurs, the cracking is likely to at least partly remain after the shrink segment of the cycle is complete. Thus, each time the cycle is repeated, the likelihood is that the cracking will become wider until the sections of brickwork become virtually independent.

With repeated cycles, once the cracking is established, if there is no other complication, it is normal for the incidence of cracking to stabilise, as the building has the articulation it needs to cope with the problem. This is by no means always the case, however, and monitoring of cracks in walls and floors should always be treated seriously.

Upheaval caused by growth of tree roots under footings is not a simple vertical shear stress. There is a tendency for the root to also exert lateral forces that attempt to separate sections of brickwork after initial cracking has occurred.

The normal structural arrangement is that the inner leaf of brickwork in the external walls and at least some of the internal walls (depending on the roof type) comprise the load-bearing structure on which any upper floors, ceilings and the roof are supported. In these cases, it is internally visible cracking that should be the main focus of attention, however there are a few examples of dwellings whose external leaf of masonry plays some supporting role, so this should be checked if there is any doubt. In any case, externally visible cracking is important as a guide to stresses on the structure generally, and it should also be remembered that the external walls must be capable of supporting themselves.

Effects on framed structures
Timber or steel framed buildings are less likely to exhibit cracking due to swell/shrink than masonry buildings because of their flexibility. Also, the doming/dishing effects tend to be lower because of the lighter weight of walls. The main risks to framed buildings are encountered because of the isolated pier footings used under walls. Where erosion or saturation causes a footing to fall away, this can double the span which a wall must bridge. This additional stress can create cracking in wall linings, particularly where there is a weak point in the structure caused by a door or window opening. It is, however, unlikely that framed structures will be so stressed as to suffer serious damage without first exhibiting some or all of the above symptoms for a considerable period. The same warning period should apply in the case of upheaval. It should be noted, however, that where framed buildings are supported by strip footings there is only one leaf of brickwork and therefore the externally visible walls are the supporting structure for the building. In this case, the subfloor masonry walls can be expected to behave as full brickwork walls.

Effects on brick veneer structures
Because the load-bearing structure of a brick veneer building is the frame that makes up the interior leaf of the external walls plus perhaps the internal walls, depending on the type of roof, the building can be expected to behave as a framed structure, except that the external masonry will behave in a similar way to the external leaf of a full masonry structure.

Water Service and Drainage

Where a water service pipe, a sewer or stormwater drainage pipe is in the vicinity of a building, a water leak can cause erosion, swelling or saturation of susceptible soil. Even a minuscule leak can be enough to saturate a clay foundation. A leaking tap near a building can have the same effect. In addition, trenches containing pipes can become watercourses even though backfilled, particularly where broken rubble is used as fill. Water that runs along these trenches can be responsible for serious erosion, interstrata seepage into subfloor areas and saturation.

Pipe leakage and trench water flows also encourage tree and shrub roots to the source of water, complicating and exacerbating the problem. Poor roof plumbing can result in large volumes of rainwater being concentrated in a small area of soil:

- Incorrect falls in roof guttering may result in overflows, as may gutters blocked with leaves etc.
- Corroded guttering or downpipes can spill water to ground.
- Downpipes not positively connected to a proper stormwater collection system will direct a concentration of water to soil that is directly adjacent to footings, sometimes causing large-scale problems such as erosion, saturation and migration of water under the building.

Seriousness of Cracking

In general, most cracking found in masonry walls is a cosmetic nuisance only and can be kept in repair or even ignored. The table below is a reproduction of Table C1 of AS 2870-2011.

AS 2870-2011 also publishes figures relating to cracking in concrete floors, however because wall cracking will usually reach the critical point significantly earlier than cracking in slabs, this table is not reproduced here.

Prevention/Cure

Plumbing
Where building movement is caused by water service, roof plumbing, sewer or stormwater failure, the remedy is to repair the problem. It is prudent, however, to consider also rerouting pipes away from the building where possible, and relocating taps to positions where any leakage will not direct water to the building vicinity. Even where gully traps are present, there is sometimes sufficient spill to create erosion or saturation, particularly in modern installations using smaller diameter PVC fixtures. Indeed, some gully traps are not situated directly under the taps that are installed to charge them, with the result that water from the tap may enter the backfilled trench that houses the sewer piping. If the trench has been poorly backfilled, the water will either pond or flow along the bottom of the trench. As these trenches usually run alongside the footings and can be at a similar depth, it is not hard to see how any water that is thus directed into a trench can easily affect the foundation's ability to support footings or even gain entry to the subfloor area.

Ground drainage
In all soils there is the capacity for water to travel on the surface and below it. Surface water flows can be established by inspection during and after heavy or prolonged rain. If necessary, a grated drain system connected to the stormwater collection system is usually an easy solution.

It is, however, sometimes necessary when attempting to prevent water migration that testing be carried out to establish watertable height and subsoil water flows. This subject is referred to in BTF 19 and may properly be regarded as an area for an expert consultant.

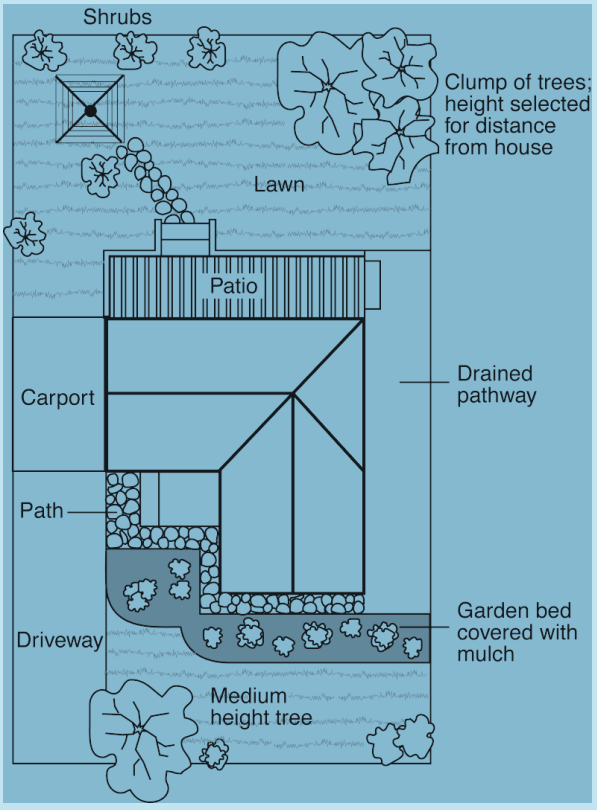
Protection of the building perimeter
It is essential to remember that the soil that affects footings extends well beyond the actual building line. Watering of garden plants, shrubs and trees causes some of the most serious water problems.

For this reason, particularly where problems exist or are likely to occur, it is recommended that an apron of paving be installed around as much of the building perimeter as necessary. This paving should

CLASSIFICATION OF DAMAGE WITH REFERENCE TO WALLS

Description of typical damage and required repair	Approximate crack width limit (see Note 3)	Damage category
Hairline cracks	<0.1 mm	0
Fine cracks which do not need repair	<1 mm	1
Cracks noticeable but easily filled. Doors and windows stick slightly.	<5 mm	2
Cracks can be repaired and possibly a small amount of wall will need to be replaced. Doors and windows stick. Service pipes can fracture. Weathertightness often impaired.	5–15 mm (or a number of cracks 3 mm or more in one group)	3
Extensive repair work involving breaking-out and replacing sections of walls, especially over doors and windows. Window and door frames distort. Walls lean or bulge noticeably, some loss of bearing in beams. Service pipes disrupted.	15–25 mm but also depends on number of cracks	4

Gardens for a reactive site



extend outwards a minimum of 900 mm (more in highly reactive soil) and should have a minimum fall away from the building of 1:60. The finished paving should be no less than 100 mm below brick vent bases.

It is prudent to relocate drainage pipes away from this paving, if possible, to avoid complications from future leakage. If this is not practical, earthenware pipes should be replaced by PVC and backfilling should be of the same soil type as the surrounding soil and compacted to the same density.

Except in areas where freezing of water is an issue, it is wise to remove taps in the building area and relocate them well away from the building – preferably not uphill from it (see BTF 19).

It may be desirable to install a grated drain at the outside edge of the paving on the uphill side of the building. If subsoil drainage is needed this can be installed under the surface drain.

Condensation

In buildings with a subfloor void such as where bearers and joists support flooring, insufficient ventilation creates ideal conditions for condensation, particularly where there is little clearance between the floor and the ground. Condensation adds to the moisture already present in the subfloor and significantly slows the process of drying out. Installation of an adequate subfloor ventilation system, either natural or mechanical, is desirable.

Warning: Although this Building Technology File deals with cracking in buildings, it should be said that subfloor moisture can result in the development of other problems, notably:

- Water that is transmitted into masonry, metal or timber building elements causes damage and/or decay to those elements.
- High subfloor humidity and moisture content create an ideal environment for various pests, including termites and spiders.
- Where high moisture levels are transmitted to the flooring and walls, an increase in the dust mite count can ensue within the living areas. Dust mites, as well as dampness in general, can be a health hazard to inhabitants, particularly those who are abnormally susceptible to respiratory ailments.

The garden

The ideal vegetation layout is to have lawn or plants that require only light watering immediately adjacent to the drainage or paving edge, then more demanding plants, shrubs and trees spread out in that order.

Overwatering due to misuse of automatic watering systems is a common cause of saturation and water migration under footings. If it is necessary to use these systems, it is important to remove garden beds to a completely safe distance from buildings.

Existing trees

Where a tree is causing a problem of soil drying or there is the existence or threat of upheaval of footings, if the offending roots are subsidiary and their removal will not significantly damage the tree, they should be severed and a concrete or metal barrier placed vertically in the soil to prevent future root growth in the direction of the building. If it is not possible to remove the relevant roots without damage to the tree, an application to remove the tree should be made to the local authority. A prudent plan is to transplant likely offenders before they become a problem.

Information on trees, plants and shrubs

State departments overseeing agriculture can give information regarding root patterns, volume of water needed and safe distance from buildings of most species. Botanic gardens are also sources of information. For information on plant roots and drains, see Building Technology File 17.

Excavation

Excavation around footings must be properly engineered. Soil supporting footings can only be safely excavated at an angle that allows the soil under the footing to remain stable. This angle is called the angle of repose (or friction) and varies significantly between soil types and conditions. Removal of soil within the angle of repose will cause subsidence.

Remediation

Where erosion has occurred that has washed away soil adjacent to footings, soil of the same classification should be introduced and compacted to the same density. Where footings have been undermined, augmentation or other specialist work may be required. Remediation of footings and foundations is generally the realm of a specialist consultant.

Where isolated footings rise and fall because of swell/shrink effect, the homeowner may be tempted to alleviate floor bounce by filling the gap that has appeared between the bearer and the pier with blocking. The danger here is that when the next swell segment of the cycle occurs, the extra blocking will push the floor up into an accentuated dome and may also cause local shear failure in the soil. If it is necessary to use blocking, it should be by a pair of fine wedges and monitoring should be carried out fortnightly.

This BTF was prepared by John Lewer FAIB, MIAMA, Partner, Construction Diagnosis.

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CONSTRUCTION MONITORING SERVICES

Construction monitoring is a service, which provides the client with independent verification (to the extent of the consultant's engagement) that the works have been completed in accordance with specified requirements. Most construction projects are unique, and construction works are often complex in detail and skilled professional involvement is necessary for the successful execution of such projects.

The decision as to which level is appropriate will be project dependent, but factors influencing the level of construction monitoring for a project are the size and importance of the project, the complexity of the construction works, and the experience and demonstrated skill in quality management of the constructor. The primary responsibility for completing the contract works in accordance with the requirements of the plans and specifications is the constructor's.

The involvement of the consultants is important during the construction phase to ensure that the design is being correctly interpreted, the construction techniques are appropriate and do not reduce the effectiveness of the design and the work is completed generally in accordance with the plans and specifications. The risk of non-compliance can be reduced by increasing the involvement of the consultant.

Table 1 sets out the five levels of construction monitoring, describes the types of review and indicates where a particular level of monitoring is appropriate. Tables 2 and 3 provide rating values for various aspects of a project to enable an assessment of an appropriate monitoring level to be made.

Table 1

LEVEL	REVIEW	COMMENT
CM1	Monitor the outputs from another party's quality assurance programme against the requirements of the plans and specifications. Visit the works at a frequency agreed with the client to review important materials of construction critical work procedures and/or completed plant or components. Be available to advise the constructor on the technical interpretation of the plans and specifications.	This level is only a secondary service. It may be appropriate where:- For the design consultant when another party is engaged to provide a higher level of construction monitoring or review during the period of construction or:- When the project works are the subject of a performance based specification and performance testing is undertaken and monitored by others.
CM2	Review, preferable at the earliest opportunity, a sample of each important work procedure, material of construction and component for compliance with the requirements of the plans and specifications and review a representative sample of each important completed work prior to enclosure or completion s appropriate. Be available to provide the constructor with technical interpretation of the plans and specification.	This level of service is appropriate for smaller projects of a routine nature being undertaken by an experienced and competent constructor and where a higher than normal risk of non-compliance is acceptable. It provides for the review of a representative sample of work procedures and materials of construction. The assurance of compliance of the finished work is dependent upon the constructor completing the work to at least the same standard as the representative sample reviewed.
CM3	Review, to an extent agreed with the client, random samples of important work procedures, for compliance with the requirements of the plans and specifications and review important completed work prior to enclosure or on completion as appropriate. Be available to provide the constructor with technical interpretation of the plans and specifications.	This level of service is appropriate for medium sized projects of a routine nature being undertaken by an experienced constructor when a normal risk of non-compliance is acceptable.
CM4	Review, at a frequency agreed with the client, regular samples of work procedures, materials of construction and components for compliance with the requirements of the plans and specifications and review the majority of completed work prior to the enclosure or on completion as appropriate.	This level of service is appropriate for projects where a lower than normal risk of non-compliance is required.
CM5	Maintain personnel on site to constantly review work procedures, materials of construction and components for compliance with the requirements of the plans and specifications and review completed work prior to enclosure or on completion as appropriate.	This level of service is appropriate for Major projects -Projects where the consequences of failure are critical -Projects involving innovative or complex construction procedures. The level of service provides the client with the greatest assurance that the completed work complies with the requirements of the plans and specifications.

Source www.ipenz.org.nz/ipenz/practicesupport/endorsedinfo/codes

Table 2

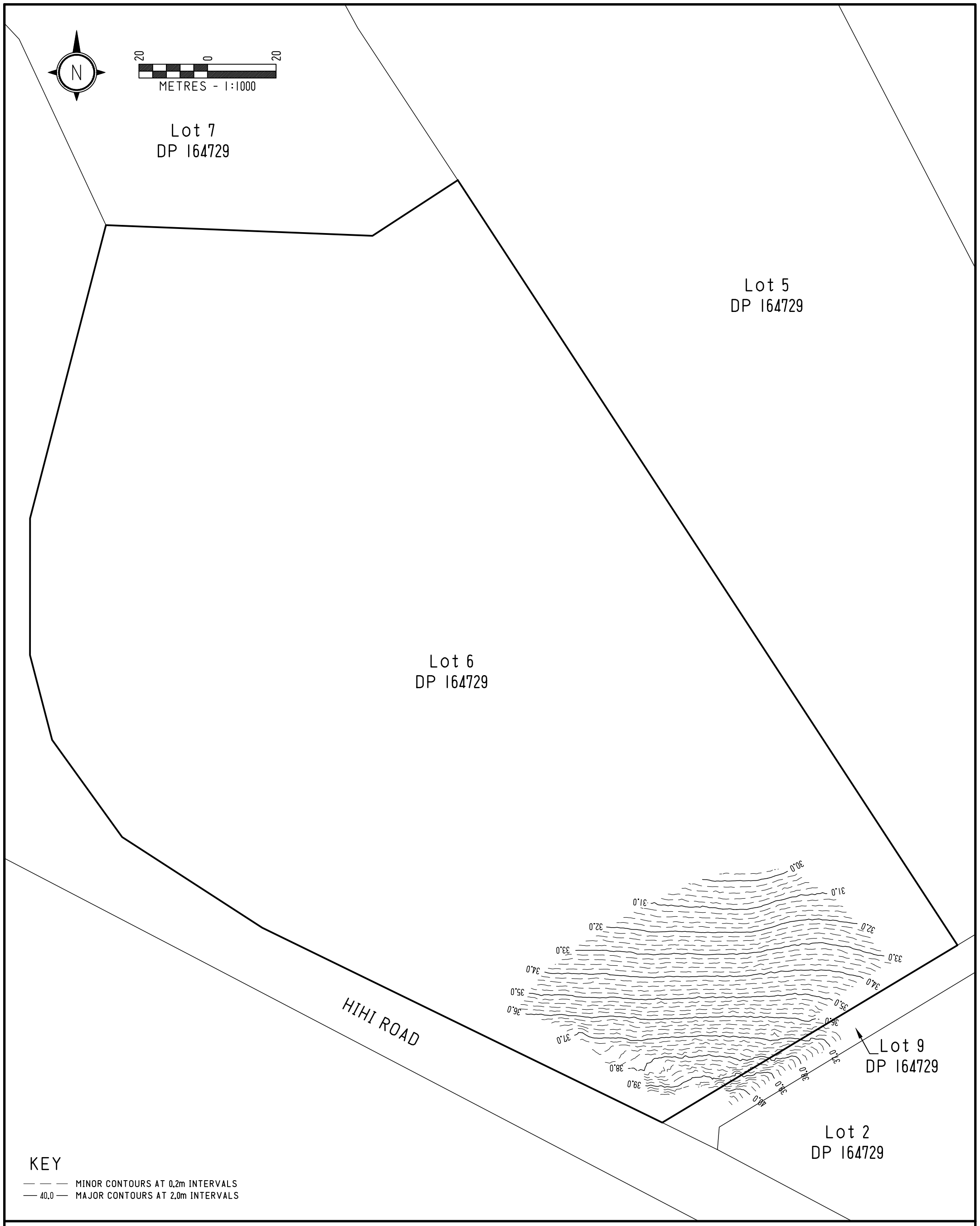
CRITERIA	K	ASSESSMENT				SELECTED VALUE
Project Status		Small	Medium	Large	Major	
	KA	1	2	3	4	
Complexity of work procedures		Routine	Difficult	Complex		
	KB	2	4	6		
Constructor's relevant experience		Inexperienced	Experienced	Certified ISO 9000		
	KC	6	2	1		
Consequences of non-compliance		Minor	Moderate	Serious	Critical	
	KD	1	4	6	12	
					KTOTAL = KA + KB + KC + KD ->	

Table 3

	LEVEL OF CONSTRUCTION MONITORING				
KTOTAL	CM1	CM2	CM3	CM4	
5-6	-	Sampling only	-	-	-
7-8	-	N/A	Weekly	-	-
9-10	A	N/A	Twice Weekly	-	-
11-12	Secondary	N/A	N/A	Twice Weekly	-
13-14	Service	N/A	N/A	Every second day	-
15-16	-	N/A	N/A	Daily	-
17-	-	N/A	N/A	N/A	Constant

N/A = Not Appropriate

- Secondary Service - This level of service is only appropriate when another party is responsible for undertaking the primary review of construction standards.
- Table 3 indicates the frequency of review considered to be appropriate for the project concerned. Not indicated is the time input requirement at each review. The time on each occasion will increase with the increased size and complexity of the construction works and should be agreed with the consultant at the time of engagement.
- Frequency of inspection is intended to be indicative of involvement with actual frequency dependent on the rate of progress of the works.



TOPOGRAPHICAL SURVEY OF LOT 6 DP 164729 - ORIGINAL CONTOURS

134 HIHI ROAD, MANGONUI

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LEVELS IN TERMS OF NEW ZEALAND VERTICAL DATUM (2016)
IS 1 RL=36.29m
COORDINATES IN TERMS OF MT EDEN 2000
RT REFERENCE: NA99B/208

BY	DATE	NOTES
LP	09.10.24	SURVEY
CC	10.10.24	DRAFTING

REF. DATA:

reyburn & bryant
Ph: 09 438 3563
7 Selwyn Ave, Whangarei
PO Box 191, Whangarei 0140
www.reyburnandbryant.co.nz

DATE	10.10.2024
SCALE	1:1000 @A3
JOB	T18219
SHEET	01 OF 03
REV	A

Date Plotted: 10/14/2024 4:16 PM File Path: P:¥18000 - 18999¥18219 - Building Solutions NZ Hihi¥Drawings¥Topo Plan¥T18219 - Building Solutions - Rev A.dwg

N

0 0 0

METRES - 1:500

Lot 6
DP 164729

Lot 5
DP 164729

× 29.97

× 30.29

× 31.17

× 32.09

× 32.77

× 32.62

× 33.10

× 33.88

× 34.08

× 34.34

× 34.84

× 34.82

× 34.91

× 34.96

× 34.92

× 34.90

× 35.64

IS 1 RL = 36.29m ◎

× 36.40

× 36.61

× 38.17

× 38.41

× 39.54

32.0 33.0 34.0 35.0 36.0 37.0 38.0 40.0

Lot 9
DP 164729

Lot 2
DP 164729

HIHI ROAD

KEY

- MINOR CONTOURS AT 0.2m INTERVALS
- 40.0 MAJOR CONTOURS AT 2.0m INTERVALS
- EDGE OF WORKS
- BOTTOM OF BANK
- TOP OF BANK
- METALLED AREA
- × 38.41 SPOT HEIGHT

TOPOGRAPHICAL SURVEY OF LOT 6 DP 164729 - FINAL CONTOURS

134 HIHI ROAD, MANGONUI

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www.reyburnandbryant.co.nz

DATE	10.10.2024
SCALE	1:1000 @A3
JOB	T18219
SHEET	02 OF 03
REV	A

DEPTH RANGE TABLE

CUT RANGE (250m³) LOWER	to	UPPER	COLOUR
-2.2	to	-2.1	
-2.1	to	-2.0	
-2.0	to	-1.9	
-1.9	to	-1.8	
-1.8	to	-1.7	
-1.7	to	-1.6	
-1.6	to	-1.5	
-1.5	to	-1.4	
-1.4	to	-1.3	
-1.3	to	-1.2	
-1.2	to	-1.1	
-1.1	to	-1.0	
-1.0	to	-0.9	
-0.9	to	-0.8	
-0.8	to	-0.7	
-0.7	to	-0.6	
-0.6	to	-0.5	
-0.5	to	-0.4	
-0.4	to	-0.3	
-0.3	to	-0.2	
-0.2	to	-0.1	
-0.1	to	0.0	

FILL RANGE (255m³) LOWER	to	UPPER	COLOUR
0.0	to	0.1	
0.1	to	0.2	
0.2	to	0.3	
0.3	to	0.4	
0.4	to	0.5	
0.5	to	0.6	
0.6	to	0.7	
0.7	to	0.8	
0.8	to	0.9	
0.9	to	1.0	
1.0	to	1.1	
1.1	to	1.2	
1.2	to	1.3	
1.3	to	1.4	
1.4	to	1.5	

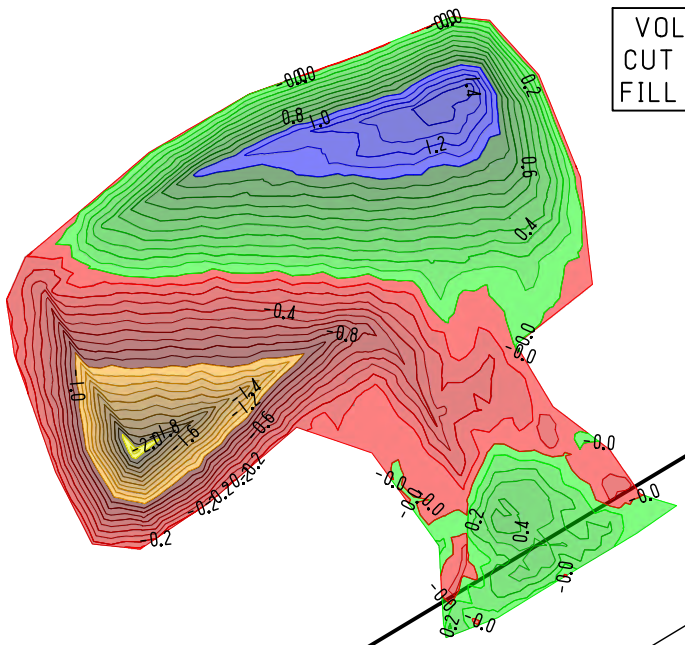
N

0 0 0

METRES - 1:500

Lot 6
DP 164729

VOLUMES:
CUT = 250m³
FILL = 255m³



IS 1 RL = 36.29m ◎

Lot 9
DP 164729

Lot 2
DP 164729

HIHI ROAD

TOPOGRAPHICAL SURVEY OF LOT 6 DP 164729 - CUT/FILL

134 HIHI ROAD, MANGONUI

NOTES
- NO PART OF THIS PLAN MAY BE REPRODUCED, COPIED, OR AMENDED IN ANY FORM WITHOUT THE PRIOR PERMISSION OF REYBURN & BRYANT (1999) LIMITED.
- DO NOT SCALE OFF DRAWINGS.
- NOT ALL SERVICES MAY BE LOCATED ON THIS PLAN. CONSULT SERVICE PROVIDERS BEFORE COMMENCING EXCAVATION OR CONSTRUCTION.

LEVELS IN TERMS OF NEW ZEALAND VERTICAL DATUM (2016)
IS 1 RL=36.29m
COORDINATES IN TERMS OF MT EDEN 2000
RT REFERENCE: NA99B/208

BY	DATE	NOTES
LP	09.10.24	SURVEY
CC	10.10.24	DRAFTING

REF. DATA:

reyburn & bryant
Ph: 09 438 3563
7 Selwyn Ave, Whangarei
PO Box 191, Whangarei 0140
www.reyburnandbryant.co.nz

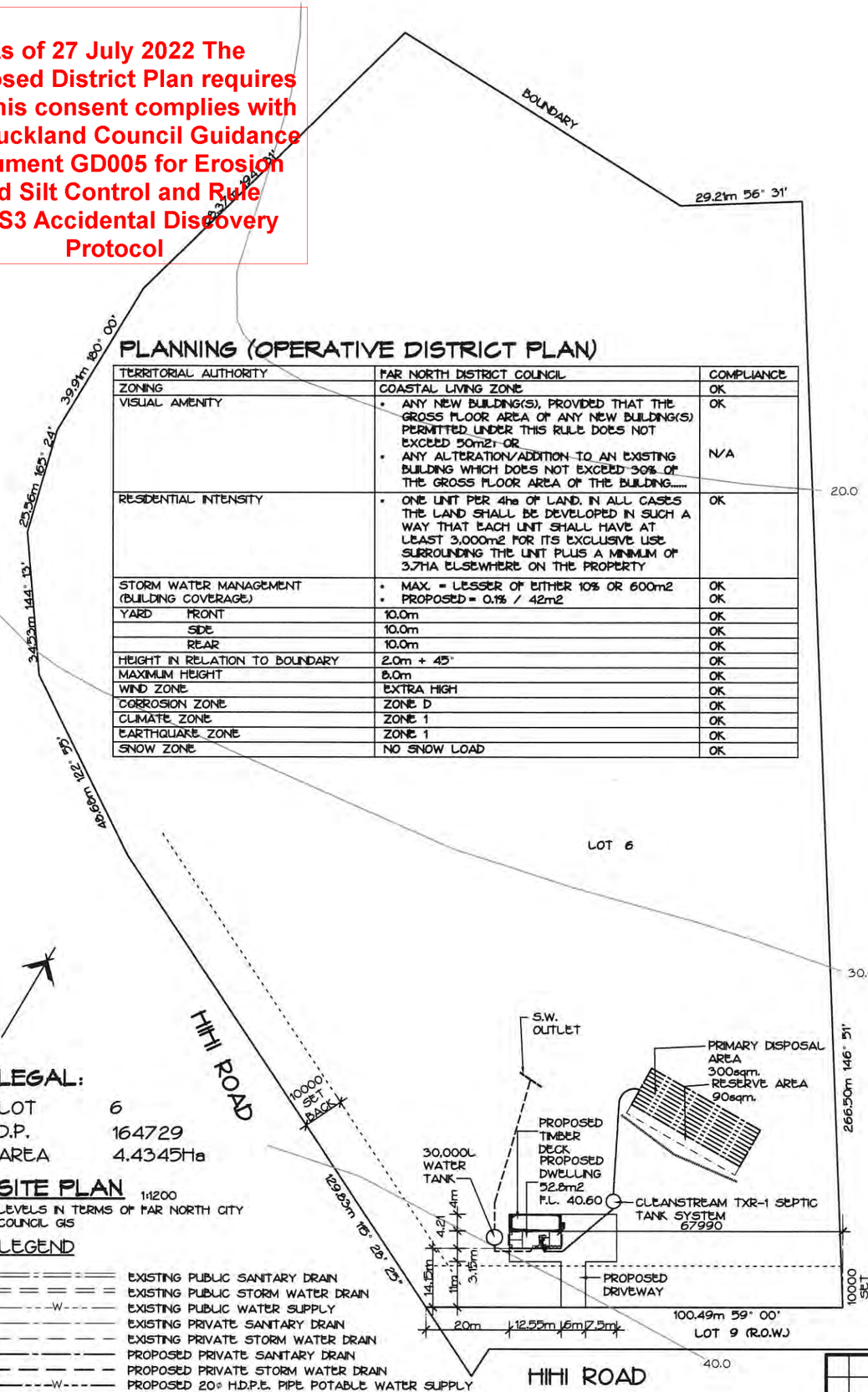
DATE	10.10.2024
SCALE	1:500 @A3
JOB	T18219
SHEET	03 OF 03
REV	A

Date Plotted: 10/14/2024 4:16 PM File Path: P:¥18000 - 18999¥18219 - Building Solutions NZ Hihi¥Drawings¥Topo Plan¥T18219 - Building Solutions - Rev A.dwg

As of 27 July 2022 The Proposed District Plan requires that this consent complies with The Auckland Council Guidance Document GD005 for Erosion and Silt Control and Rule EW-S3 Accidental Discovery Protocol

PLANNING (OPERATIVE DISTRICT PLAN)

TERRITORIAL AUTHORITY	FAR NORTH DISTRICT COUNCIL	COMPLIANCE
ZONING	COASTAL LIVING ZONE	OK
VISUAL AMENITY	• ANY NEW BUILDING(S), PROVIDED THAT THE GROSS FLOOR AREA OF ANY NEW BUILDING(S) PERMITTED UNDER THIS RULE DOES NOT EXCEED 50m2; OR • ANY ALTERATION/ADDITION TO AN EXISTING BUILDING WHICH DOES NOT EXCEED 30% OF THE GROSS FLOOR AREA OF THE BUILDING.....	OK N/A
RESIDENTIAL INTENSITY	• ONE UNIT PER 4ha OF LAND. IN ALL CASES THE LAND SHALL BE DEVELOPED IN SUCH A WAY THAT EACH UNIT SHALL HAVE AT LEAST 3,000m2 FOR ITS EXCLUSIVE USE SURROUNDING THE UNIT PLUS A MINIMUM OF 3.7HA ELSEWHERE ON THE PROPERTY	OK
STORM WATER MANAGEMENT (BUILDING COVERAGE)	• MAX. = LESSER OF EITHER 10% OR 600m2 • PROPOSED = 0.1% / 42m2	OK OK
YARD FRONT	10.0m	OK
SIDE	10.0m	OK
REAR	10.0m	OK
HEIGHT IN RELATION TO BOUNDARY	2.0m + 45°	OK
MAXIMUM HEIGHT	8.0m	OK
WIND ZONE	EXTRA HIGH	OK
CORROSION ZONE	ZONE D	OK
CLIMATE ZONE	ZONE 1	OK
EARTHQUAKE ZONE	ZONE 1	OK
SNOW ZONE	NO SNOW LOAD	OK



LEGAL:

LOT	6
D.P.	164729
AREA	4.4345Ha

SITE PLAN 1:1200

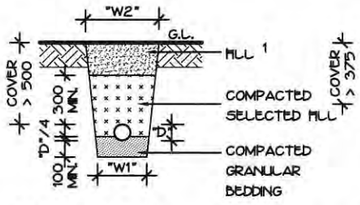
LEVELS IN TERMS OF FAR NORTH CITY COUNCIL GIS

LEGEND

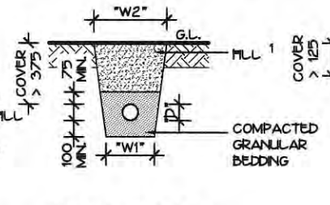
- EXISTING PUBLIC SANITARY DRAIN
- EXISTING PUBLIC STORM WATER DRAIN
- EXISTING PUBLIC WATER SUPPLY
- EXISTING PRIVATE SANITARY DRAIN
- EXISTING PRIVATE STORM WATER DRAIN
- PROPOSED PRIVATE SANITARY DRAIN
- PROPOSED PRIVATE STORM WATER DRAIN
- PROPOSED 20ø H.D.P.E. PIPE POTABLE WATER SUPPLY
- I.P. SANITARY DRAIN INSPECTION POINT
- R.P. STORM WATER RODDING POINT
- X 2.35 EXISTING SPOT LEVEL

PLANNING (PROPOSED DISTRICT PLAN)

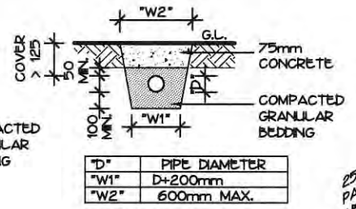
TERRITORIAL AUTHORITY	FAR NORTH DISTRICT COUNCIL	COMPLIANCE
ZONING	RURAL LIFESTYLE ZONE	OK
IMPERMEABLE SURFACE COVERAGE	• MAX. = LESSER OF 12.5% OR 2500m2	OK
RESIDENTIAL INTENSITY	• ONE PRINCIPAL DWELLING PLUS ONE MINOR RESIDENTIAL UNIT	OK
BUILDING COVERAGE	• MAX. = 12.5% • PROPOSED = 0.1% / 52.8m2	OK OK
YARD FRONT	10.0m	OK
SIDE	10.0m	OK
REAR	10.0m	OK
HEIGHT IN RELATION TO BOUNDARY	• 2m + 55° AT THE NORTHERN BOUNDARY OF THE SITE; • 2m + 45° AT THE THE EASTERN AND WESTERN BOUNDARIES OF THE SITE; • 2m + 35° AT THE SOUTHERN BOUNDARY OF THE SITE.	OK OK OK
MAXIMUM HEIGHT	8.0m	OK
WIND ZONE	EXTRA HIGH	OK
CORROSION ZONE	ZONE D	OK
CLIMATE ZONE	ZONE 1	OK
EARTHQUAKE ZONE	ZONE 1	OK
SNOW ZONE	NO SNOW LOAD	OK



WHERE COVER IS GREATER THAN 500mm

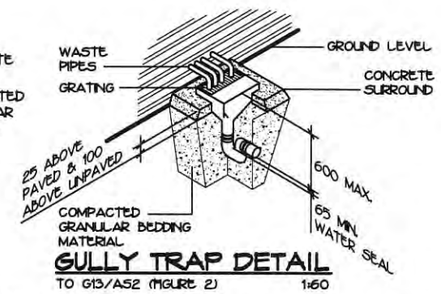


WHERE COVER IS GREATER THAN 375mm



"D"	PIPE DIAMETER
"W1"	D+200mm
"W2"	600mm MAX.

WHERE COVER IS GREATER THAN 125mm



GULLY TRAP DETAIL

TO G13/AS2 (FIGURE 2) 1:60

DRAINAGE BEDDING & BACKFILLING DETAILS 1:40

NOTE:
1. MILL SHALL BE:
   - ORDINARY MILL WHERE DRAINS ARE LOCATED BELOW GARDENS AND OPEN COUNTRY.
   - COMPACTED SELECTED MILL WHERE THE DRAINS ARE LOCATED BELOW DRIVEWAYS AND SIMILAR AREAS SUBJECT TO TRAFFIC.
2. CONSTRUCTION TO NZBC E1/AS1 FIG. 13

EXPANSION JOINTS TO UPVC GRADE PIPE

- SHALL BE INSTALLED IN ACCORDANCE WITH BRANZ PLUMBING & DRAINAGE GUIDE.
- MINIMUM SPACING OF 4.0m
- EACH BRANCH ENTRY TO A VERTICAL STACK (EXCEPT A BRANCH OF LESS THAN 2.0m WITH PROVISION FOR MOVEMENT WILL NOT REQUIRE AN EXPANSION JOINT).
- THE FIRST FITTING DOWNSTREAM OF EACH BEND.
- THE FIRST FITTING DOWNSTREAM OF A JUNCTION INTO THE GRADED PIPE (EXCEPT THAT WHERE TWO EXPANSION JOINTS ARE PROVIDED WITHIN 1.0m OF ANY JUNCTION BETWEEN WILL NOT REQUIRE AN EXPANSION JOINT).

G13/AS2 SANITARY DRAIN ACCESS POINTS SHALL BE PROVIDED AT THE FOLLOWING LOCATIONS:

- IMMEDIATELY PRIOR TO DRAIN OUTFALLS,
- IMMEDIATELY INSIDE THE BOUNDARY OF THE PROPERTY SERVED,
- AT THE JUNCTION OF EVERY DRAIN WITH ANOTHER DRAIN EXCEPT THAT NO ACCESS POINT IS REQUIRED WHERE THE BRANCH DRAIN IS LESS THAN 2.0 M LONG AND ONLY SERVES A GULLY TRAP,
- EVERY CHANGE IN HORIZONTAL DIRECTION OF GREATER THAN 45°,
- EVERY CHANGE IN GRADIENT GREATER THAN 45°,
- AT INTERVALS (ON STRAIGHT LINES) OF NO LESS THAN:
  - 50m WHERE RODDING POINTS ARE USED, OR
  - 100m WHERE ACCESS CHAMBERS, INSPECTION CHAMBERS OR INSPECTION POINTS ARE USED, AND
- WITHIN 2.0 M OUTSIDE THE BUILDING WHERE A DRAIN ENTERS OR EXITS FROM UNDER A BUILDING

LOCATE EXIST. SERVICES:

- ALL SERVICES (DRAINAGE, WATER SUPPLY, ELECTRICAL, TELECOMMUNICATIONS ETC.) SHALL BE LOCATED PRIOR TO CONSTRUCTION TO AVOID DAMAGE

CONSTRUCTION & DEMOLITION HAZARDS

IN ACCORDANCE WITH NZBC F5.2 CONSTRUCTION AND DEMOLITION WORK ON BUILDINGS SHALL BE PERFORMED IN A MANOR THAT AVOIDS THE LIKELIHOOD OF:
- OBJECTS FALLING ONTO PEOPLE ON OR OFF THE SITE,
- OBJECTS FALLING ONTO PROPERTY OFF THE SITE,
- OTHER HAZARDS ARISING ON THE SITE AFFECTING PEOPLE OFF THE SITE AND OTHER PROPERTY,
- PROVIDE CONSTRUCTION BARRIERS TO PREVENT UNAUTHORISED ACCESS TO THE CONSTRUCTION AREA.

E1/AS1 STORM WATER DRAIN ACCESS FOR MAINTENANCE:

- ACCESS FOR MAINTENANCE SHALL BE PROVIDED ON ALL DRAINS. ACCESS IS TO BE ACHIEVED VIA AN INSPECTION POINT, RODDING POINT, INSPECTION CHAMBER OR ACCESS CHAMBER, COMPLYING AS APPROPRIATE WITH FIGURES 10, 11 OR 12 E1/AS1.
- POINTS OF ACCESS SHALL BE SPACED AT NO FURTHER THAN:
  - 50m WHERE RODDING POINTS ARE USED.
  - 100m WHERE INSPECTION POINTS, INSPECTION CHAMBERS OR ACCESS CHAMBERS ARE USED.
- POINTS OF ACCESS ARE REQUIRED AT:
  - CHANGES IN DIRECTION OF GREATER THAN 45°,
  - CHANGES IN GRADIENT OF GREATER THAN 45°, AND
  - JUNCTIONS OF DRAINS OTHER THAN A DRAIN, SERVING A SINGLE DOWNPIPE, THAT IS LESS THAN 2.0m LONG.
- INSPECTION CHAMBERS OR ACCESS CHAMBERS SHALL BE PROVIDED WHERE CHANGES IN BOTH GRADIENT AND DIRECTION OCCUR AND WHERE EITHER IS GREATER THAN 22.5°.
- WHERE THE DEPTH TO THE INVERT OF THE DRAIN EXCEEDS 1.0m, AN INSPECTION CHAMBER IS NOT ACCEPTABLE AND AN ACCESS CHAMBER SHALL BE USED.

PRODUCER STATEMENT– STRUCTURAL DESIGN.

AS A DESIGNER I HAVE TAKEN ALL REASONABLE STEPS NECESSARY TO VERIFY DESIGN ASSUMPTIONS. I AM SATISFIED ON REASONABLE GROUNDS THAT IN RELATION TO THE BUILDING WORK SPECIFIED ABOVE THE PROVISIONS OF THE BUILDING CODE WOULD BE MET IF THE BUILDING WORK WERE PROPERLY COMPLETED IN ACCORDANCE WITH THE DRAWINGS, SPECIFICATIONS AND OTHER DOCUMENTS ACCORDING TO WHICH THE BUILDING IS PROPOSED TO BE CONSTRUCTED AND WHICH HAVE BEEN SUBMITTED WITH THE APPLICATION. I UNDERSTAND THAT THIS PRODUCER STATEMENT, IF ACCEPTED, WILL BE RELIED UPON BY THE OWNERS AND TERRITORIAL AUTHORITIES FOR THE PURPOSE OF ESTABLISHING COMPLIANCE WITH THE BUILDING CODE.

P. Hill DATE 4/9/2024

Peter Hill
B.E. (Hons) M.I.P.E.N.Z.
C.P. Engineer No. 47048

BUILDING CONSENT FOR SITE WORKS ONLY, (PORTABLE UNIT CONSTRUCTION PREVIOUSLY CONSENTED AUCKLAND COUNCIL).

B.C. APPLICATION 04/09/2024

#	DATE:	REVISION:

HDE HILL DESIGN ENGINEERING LTD
23 Great South Road, PO Box 72 944 Papakura, Phone (09) 298 0854, Fax (09) 297 7888, Email enquiries@hde.co.nz

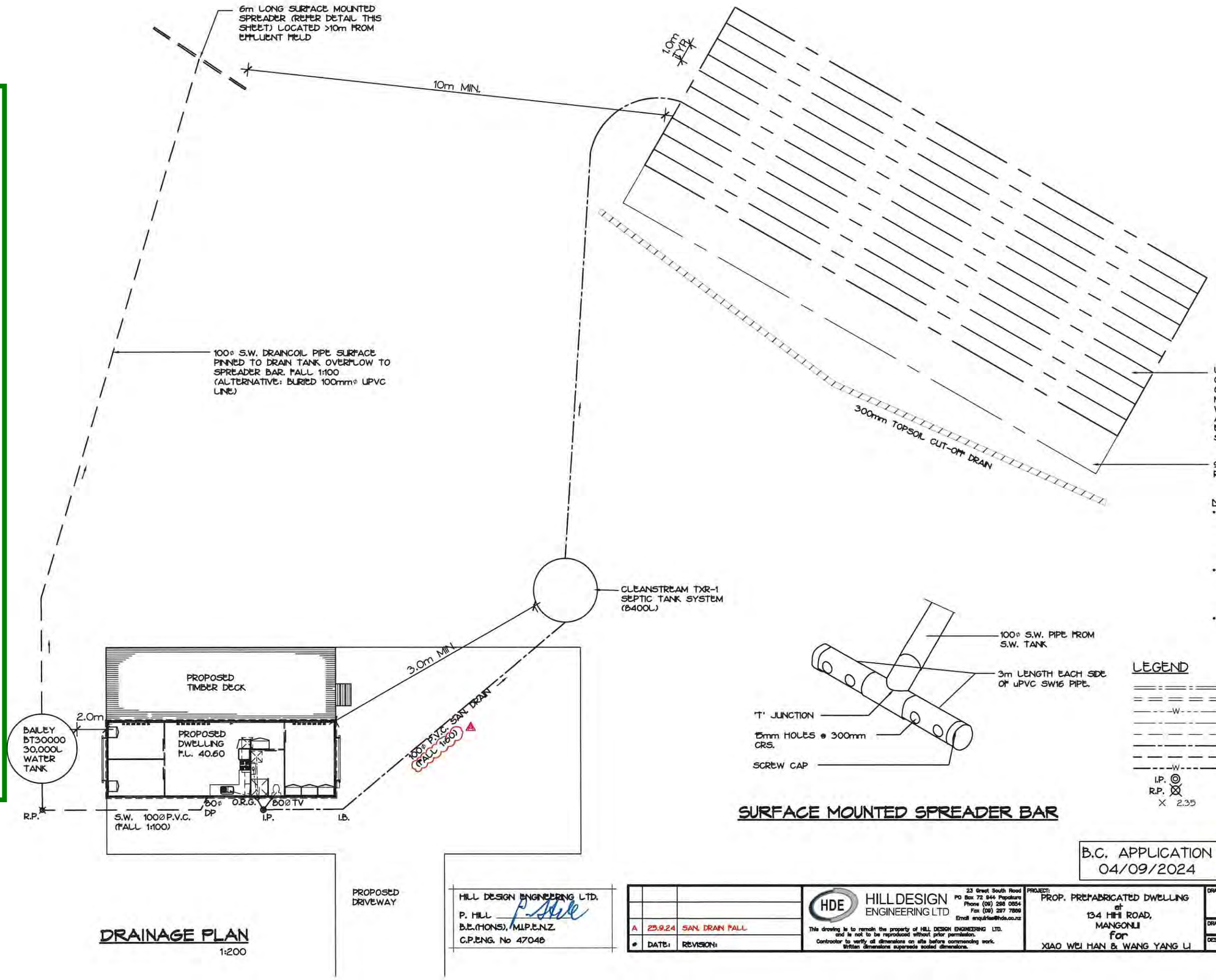
PROJECT: PROP. PREFABRICATED DWELLING at 134 HIHI ROAD, MANGONUI for XIAO WEI HAN & WANG YANG LI

DRAWING TITLE: SITE PLAN, NOTES & DETAILS

DWG. No: 1 REVISION: -

DRAWN: NG/AJP | CHECKED: PH | SCALES: AS SHOWN @ A3 | SHT: 6

DESIGNED: PH | DATE: JUL. '24 | JOB No: 24-5750



DRAINAGE PLAN
1:200

SURFACE MOUNTED SPREADER BAR

NOTE:
- THE RESERVE AREA SHOULD REMAIN UNDEVELOPED & SHOULD BE MAINTAINED WITH GRASSED/VEGETATED SURFACE READY FOR THE POSSIBLE INSTALLATION OF ADDITIONAL DRIPLINES IN IT IN CASE OF POSSIBLE FAILURE OF DISPOSAL AREA.
- THE DISPOSAL AREA IS RECOMMENDED TO BE FENCED OFF OR CLEARLY MARKED TO PROTECT THE INTEGRITY OF THE DISPOSAL AREA FROM UNWANTED DAMAGE FROM VEHICLES, PERSONS OR ANIMALS.
- PLANTING WITHIN EFFLUENT DISPOSAL FIELD IS ENCOURAGED TO ASSIST WITH EVAPOTRANSPIRATION BY PLANTS

LEGEND

	EXISTING PUBLIC SANITARY DRAIN
	EXISTING PUBLIC STORM WATER DRAIN
-W-	EXISTING PUBLIC WATER SUPPLY
	EXISTING PRIVATE SANITARY DRAIN
	EXISTING PRIVATE STORM WATER DRAIN
	PROPOSED PRIVATE SANITARY DRAIN
	PROPOSED PRIVATE STORM WATER DRAIN
-W-	PROPOSED 20ø H.D.P.E. PIPE POTABLE WATER SUPPLY
I.P.	SANITARY DRAIN INSPECTION POINT
R.P.	STORM WATER RODDING POINT
X 2.35	EXISTING SPOT LEVEL

B.C. APPLICATION 04/09/2024

BUILDING CONSENT FOR SITE WORKS ONLY, (PORTABLE UNIT CONSTRUCTION PREVIOUSLY CONSENTED AUCKLAND COUNCIL).

HILL DESIGN ENGINEERING LTD.
P. HILL
B.E.(HONS), M.I.P.E.N.Z.
C.P.ENG. No 47048

	DATE:	REVISION:
A	25.9.24	SAN. DRAIN FALL

HDE HILL DESIGN ENGINEERING LTD
23 Great South Road
PO Box 72 644 Papakura
Phone (09) 298 0854
Fax (09) 297 7809
Email enquiries@hde.co.nz

PROJECT: PROP. PREFABRICATED DWELLING at 134 HIHI ROAD, MANGONUI for XIAO WEI HAN & WANG YANG LI

DRAWING TITLE: DRAINAGE PLAN
DWG. No: 2
REVISION: A
DRAWN: NG/A.P
CHECKED: PH
SCALES: AS SHOWN @ A3
DESIGNED: PH
DATE: AUG. '24
OF: 6
JOB No: 24-5750

INSULATION SCHEDULE:

PER H1/AS1 5TH EDITION (AFTER 02/11/2023)
CALCULATION METHOD
ZONE 1 – 4 WITHOUT EMBEDDED HEATING SYSTEMS

ELEMENT	'R' VALUE	CONSTRUCTION
ROOF	R4.16	100mm PIR INSULATED PANEL
EXTERNAL WALLS	R2.63	100mm EPS INSULATED PANEL
SUSPENDED FLOOR	R2.18	75mm EPS & 19mm PLYWOOD
WINDOWS	R0.37	TYPE: DOUBLE GLAZING FRAME: ALUMINIUM SPACER: THERMALLY IMPROVED GLASS: LOW E/CLEAR GAS:ARGON

LEGEND:

- EL. DIST. BOARD
- P.S. POWER SUPPLY
- SINGLE POWER POINT
- DOUBLE POWER POINT
- CF GAS CALIFONT
- (1) WALL BRACING PANEL
- TYPE 1 DOMESTIC SMOKE ALARM IN ACCORDANCE WITH NZBC F7/AS1.
- INTERNAL LIGHTS
- LIGHT SWITCH
- EXTERNAL LIGHT
- MANROSE 1255 EXTRACT FAN WITH WEATHER COWL

SANITARY PLUMBING.

MINIMUM SIZE OF PIPE (mm)		GRADIENT (MIN)
BASIN, SWR, SINK, W.M.	40ø	1:40
W.C.	80ø	1:60

ALL SANITARY PLUMBING TO NZBC G13/AS/1.

BRACING SCHEDULE:

No.	TYPE	LENGTH	No.	TYPE	LENGTH
1	PANEL	1.7	7	PANEL	2.5
2	PANEL	1.4	8	PANEL	2.5
3	PANEL	2.7	9	PANEL	1.1
4	PANEL	2.6	10	PANEL	1.1
5	PANEL	1.1	11	PANEL	4.0
6	PANEL	1.1			

NATURAL VENTILATION

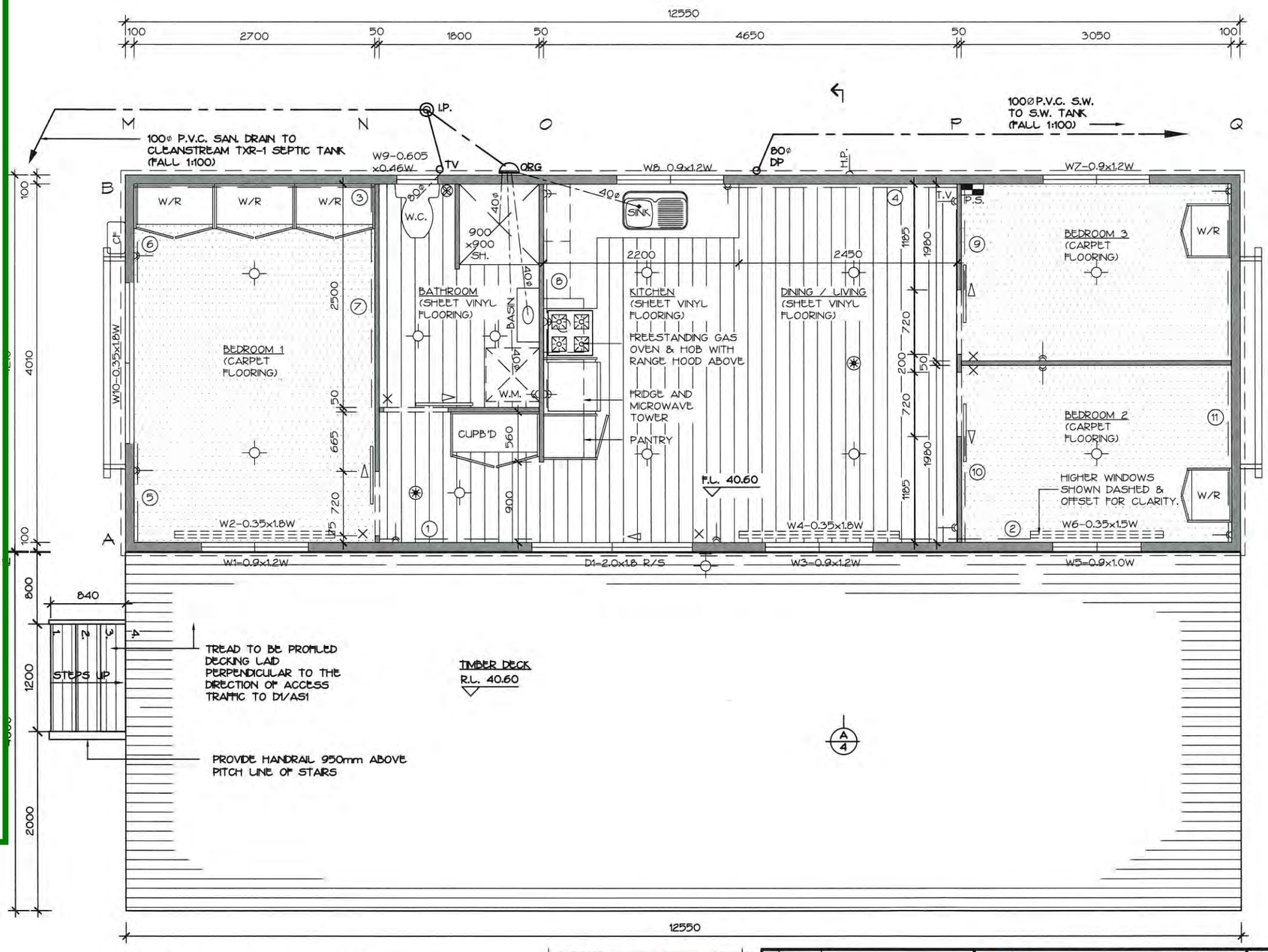
5% MIN. REQUIREMENT AS PER NZBC G4/AS1

ROOM	FLOOR AREA	NO:	OPENING SIZE	
BEDROOM 1	10.83m²	W1	0.54m²	
		W2	0.63m²	
		W10	0.63m²	
			1.80m²	=16.6% OK
BEDROOM 2	6.04m²	W5	0.45m²	
		W6	0.53m²	
			0.98m²	=16.2% OK
BEDROOM 3	6.04m²	W7	0.54m²	
			0.54m²	=8.9% OK
BATHROOM	4.50m²	W9	0.28m²	
			0.28m²	=6.2% OK
KITCHEN / DINING / LIVING	21.35m²	D1	1.80m²	
		W3	0.54m²	
		W4	0.63m²	
		W8	0.54m²	
			3.51m²	=16.4% OK

RISK MATRIX

	RISK FACTOR	RISK SEVERITY LOW	MEDIUM	HIGH	V. HIGH	SCORE
A	WIND ZONE	0	0	1	2	2
B	NUMBER OF STOREYS	0	1	2	4	0
C	ROOF/ WALL JUNCTION	0	1	3	5	0
D	EAVES WIDTH	0	1	2	5	5
E	ENVELOPE COMPLEXITY	0	1	3	6	0
F	DECK DESIGN	0	2	4	6	0

RISK MATRIX FOR WORST CASE SCENARIO: 7
OK



BUILDING CONSENT FOR SITE WORKS ONLY, (PORTABLE UNIT CONSTRUCTION PREVIOUSLY CONSENTED AUCKLAND COUNCIL).

B.C. APPLICATION
04/09/2024

FLOOR PLAN (E345)

AREA – 52.8m² 1:50

HILL DESIGN ENGINEERING LTD.
P. HILL
B.E.(HONS), M.I.P.E.N.Z.
C.P.ENG. No 47048

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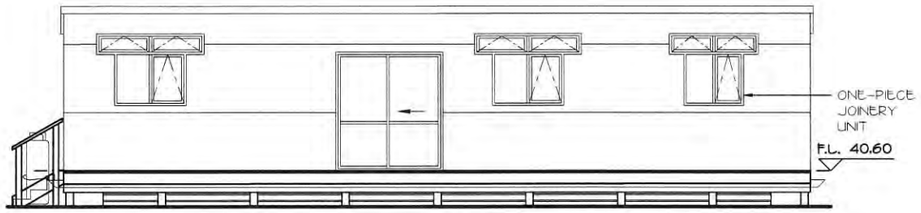
PROP. PREFABRICATED DWELLING
at
134 HIHI ROAD,
MANGONUI
for
XIAO WEI HAN & WANG YANG LI

DRAWING TITLE: FLOOR PLAN
DWG. No: 3
REVISION: -
DRAWN: NG/A.P
CHECKED: PH
SCALES: AS SHOWN @ A3
DESIGNED: PH
DATE: AUG. '24
OF: 6
JOB No: 24-5730



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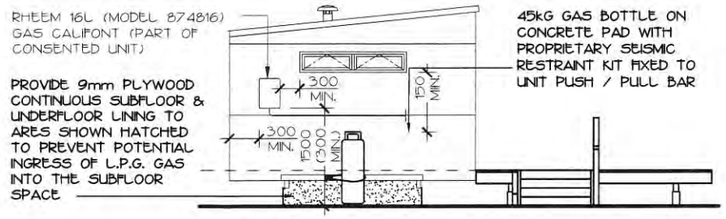

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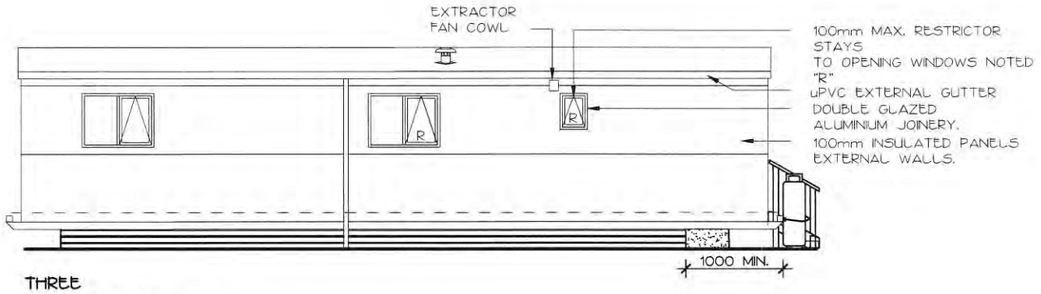
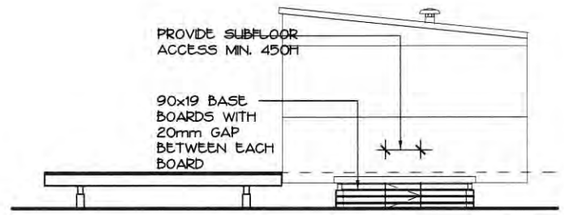


THREE

ELEVATIONS

1:100



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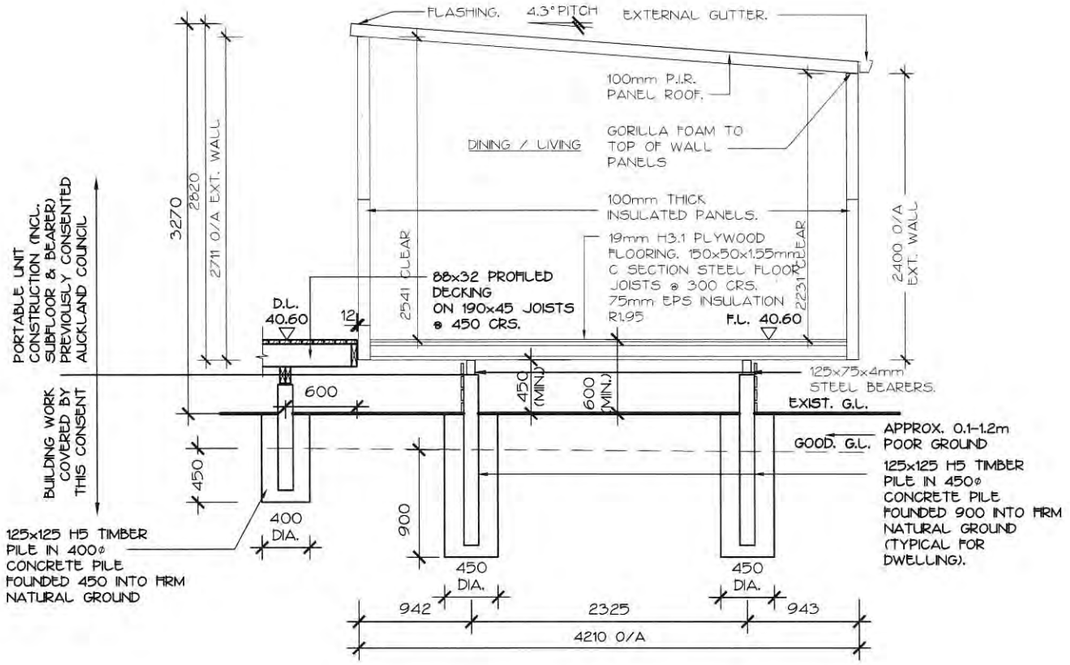

SECTION A/3

B.C. APPLICATION
04/09/2024

BUILDING CONSENT FOR SITE WORKS ONLY. (PORTABLE UNIT CONSTRUCTION PREVIOUSLY CONSENTED AUCKLAND COUNCIL).

HILL DESIGN ENGINEERING LTD.
P. HILL
B.E.(HONS), M.I.P.E.N.Z.
C.P.ENG. No 47048

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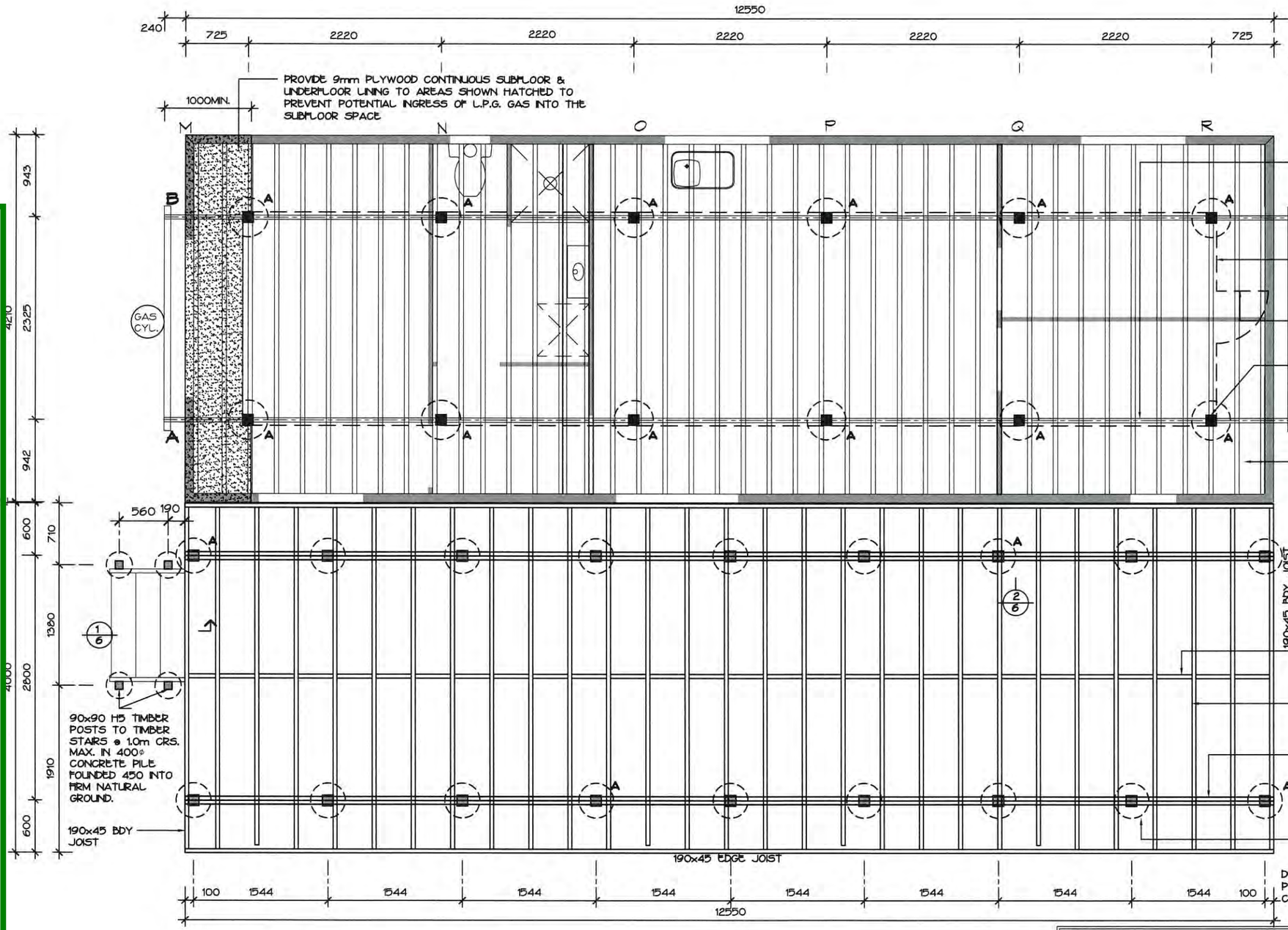
DRAWING TITLE: ELEVATIONS & SECTION			DWG. No: 4 / REVISION: -
DRAWN: NG/AJP	CHECKED: PH	SCALES: AS SHOWN @ A3	OF: 6
DESIGNED: PH	DATE: AUG. '24		JOB No: 24-5750



FLOOR FRAMING / FOUNDATION PLAN (E345)

1:50

LEGEND

DWELLING ANCHOR PILE.
125x125 H5 TIMBER PILE IN 450ø CONCRETE PILE FOUNDED 900 INTO FIRM NATURAL GROUND

DECK ORDINARY PILE.
125x125 H5 TIMBER PILE IN 400ø CONCRETE PILE FOUNDED 450 MIN INTO FIRM NATURAL GROUND.

DECK ANCHOR PILE.
125x125 H5 TIMBER PILE IN 400ø CONCRETE PILE FOUNDED 900 MIN INTO FIRM NATURAL GROUND.

STEP POST.
90x90 H5 TIMBER POST IN 400ø CONCRETE PILE FOUNDED 450 INTO FIRM NATURAL GROUND.

DECK FIXING SCHEDULE
- JOIST TO BEARER
  2/100x3.75ø SKEW NAILS (3/90x3.15 IF POWER DRIVEN)
- BEARER TO ORDINARY PILE
- 1/WIRE DOG EACH SIDE AND 2/100x3.75ø SKEWED NAILS
- BEARER TO ANCHOR PILE
  LUMBERLOK 12kN S.S. FIXINGS (REFER PRODUCT INFO)

DECK BRACING
BRACING DEMAND:
50.2m2 x 7.5BU/m2 = 376.5BU
BRACING PROVIDED:
4 x ANCHOR PILES @ 120BU= 480BU

HILL DESIGN ENGINEERING LTD.
P. HILL
B.E.(HONS), M.I.P.E.N.Z.
C.P.ENG. No 47048

MATERIALS & WORKMANSHIP

ALL MATERIAL & WORKMANSHIP SHALL COMPLY WITH THE N.Z.B.C.
- TIMBER: NZS3602 SG8
  ALL TIMBER GROUND CONTACT H5
  ALL TIMBER ABOVE GROUND & EXPOSED TO WEATHER H3.2
- CONCRETE: NZS3109:
  FOUNDATIONS = 17.5mPa
- FIXINGS: BOLTS, WASHERS, NAILS, PLATES SHALL BE STAINLESS STEEL. ALL BOLTS TO HAVE 50x50x4mm WASHERS.

NOTE:
- GEOTECHNICAL ENGINEER MUST INSPECT PILE EXCAVATIONS PRIOR TO CONSTRUCTION.
- IF THERE IS ANY DOUBT OVER THE INTEGRITY OF THE SOIL DURING EXCAVATIONS AND CONSTRUCTION, THE GEOTECHNICAL ENGINEER SHALL BE NOTIFIED AND A SITE INSPECTION UNDERTAKEN.
- THESE DRAWINGS TO BE READ IN CONJUNCTION WITH WILTON JOUBERT LTD. GEOTECHNICAL REPORT REF: 135529 DATED 8 AUGUST 2024 INCL. SUBSEQUENT REVISIONS.

GLAZING (DOMESTIC)

ALL GLAZING SHALL BE IN ACCORDANCE WITH NZS:4223:2016 AND NZBC F2/AS1.

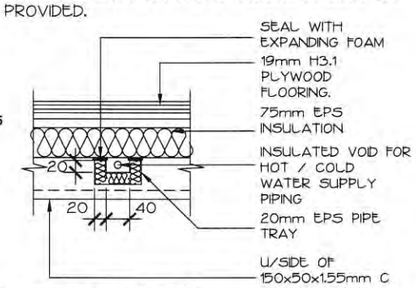
DOORS
- ALL DOORS WITH GLAZED PANELS GREATER THAN 0.5sqm TO HAVE SAFETY GLASS GLAZING IN ACCORDANCE WITH TABLE 1 OF NZS 4223.3:2016
- ALL DOORS WITH GLAZED PANELS LESS THAN 0.5sqm TO HAVE MINIMUM OF 5mm ANNEALED GLASS OR SAFETY GLASS GLAZING IN ACCORDANCE WITH TABLE 1 OF NZS 4223.3:2016

DOORS WITH SIDE PANELS
- ALL SIDE PANELS WITH GLAZED PANELS GREATER THAN 0.5sqm TO HAVE SAFETY GLASS GLAZING IN ACCORDANCE WITH TABLE 1 OF NZS 4223.3:2016

BATHROOMS
- ALL GLAZING WITHIN 2.0m OF THE FLOOR LEVEL IN A BATHROOM, ENCLOSURES CONTAINING BATHS AND SPA POOLS SHALL BE GLAZED WITH SAFETY GLASS IN ACCORDANCE WITH TABLE 1 OF NZS 4223.3:2016.
- ALL GLAZING OVER 2.0m FROM THE FLOOR LEVEL SHALL BE SAFETY GLASS FROM TABLE 1 OR ANNEALED GLASS TO PART 4 OF THE STANDARD.
- FULLY FRAMED SHOWER SCREENS AND BATH ENCLOSURES SHALL BE GLAZED WITH SAFETY GLASS.
- UN FRAMED (FRAMELESS) PIVOT OR HINGED DOORS SHALL BE TOUGHENED SAFETY GLASS 6mm MIN.
- PANELS AND DOORS WITH ONE UN FRAMED EDGE SHALL BE TOUGHENED SAFETY GLASS 5mm MIN.

PIPEWORK INSULATION

WHERE THERE IS THE LIKELIHOOD OF FREEZING (CLIMATE ZONES 4, 5 & 6):
- HOT AND COLD WATER SUPPLY PIPING OUTSIDE OF THE BUILDING THERMAL ENVELOPE SHALL BE INSULATED WITH EITHER 12mm NOMINAL THICKNESS CLOSED CELL FOAM POLYMER INSULATION OR 12mm NOMINAL THICKNESS FIBREGLASS INSULATION PREFORMED TO THE SHAPE OF THE PIPE"
- AN EXPANSION CONTROL VALVE SHALL BE PROVIDED.



WATER SUPPLY INSULATION DETAIL

1:10

BUILDING CONSENT FOR SITE WORKS ONLY, (PORTABLE UNIT CONSTRUCTION PREVIOUSLY CONSENTED AUCKLAND COUNCIL).

B.C. APPLICATION 04/09/2024

#	DATE:	REVISION:

HILL DESIGN ENGINEERING LTD
23 Great South Road, PO Box 72 944 Papakura, Phone (09) 298 0804, Fax (09) 237 7899, Email enquiries@hde.co.nz

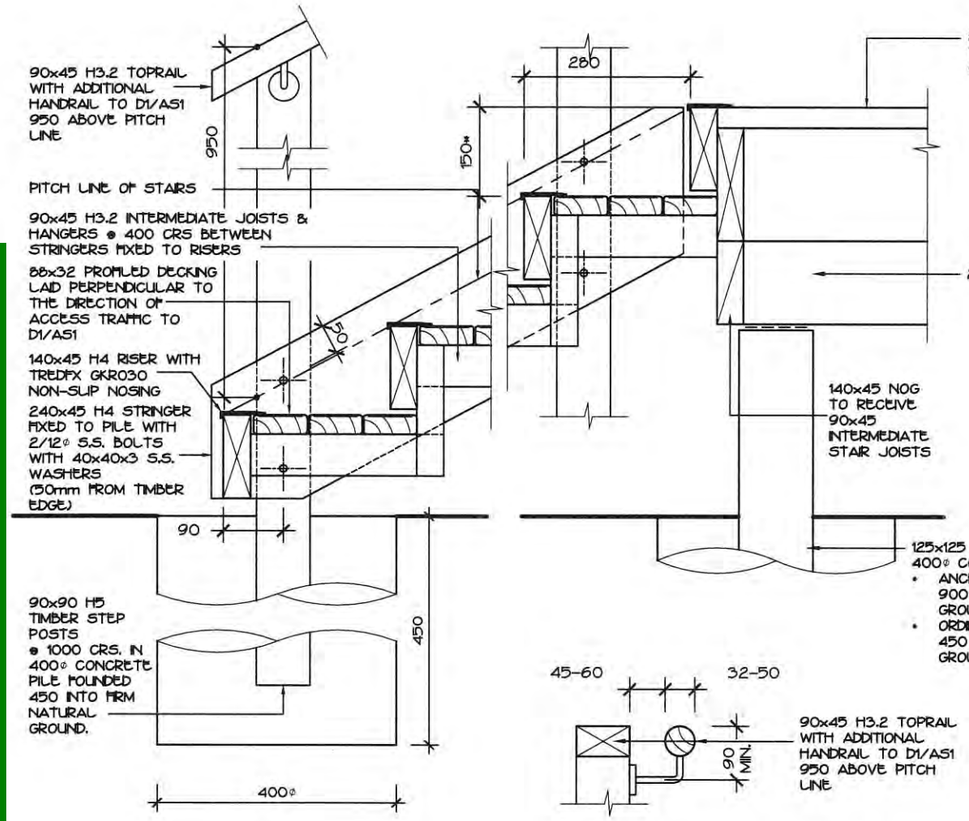
PROJECT: PROP. PREFABRICATED DWELLING at 134 HIHI ROAD, MANGONUI for XIAO WEI HAN & WANG YANG LI

DRAWING TITLE: FLOOR FRAMING/ FOUNDATION PLAN

DWG. No: 5 REVISION: -

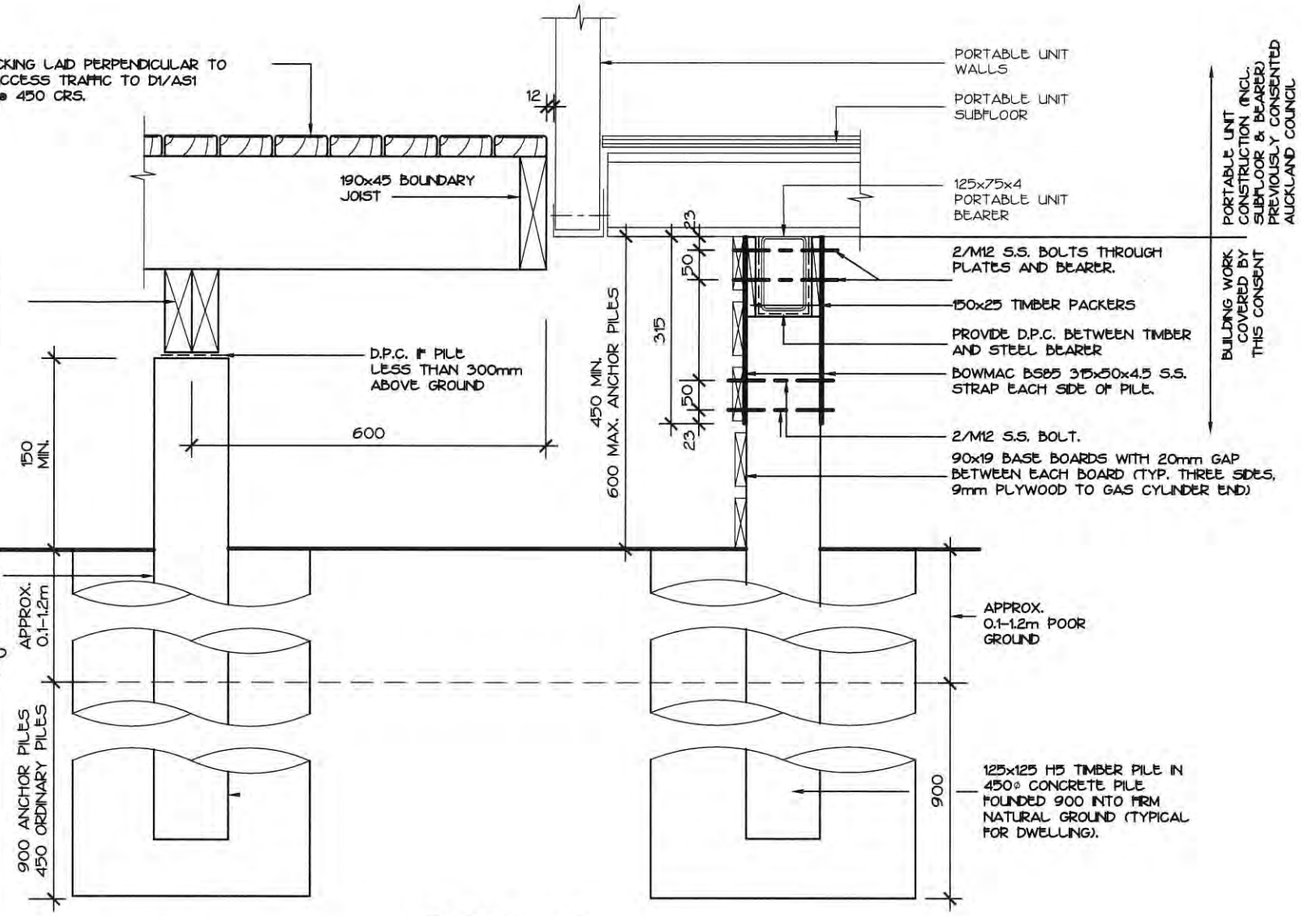
DRAWN: NG/AJP | CHECKED: PH | SCALES: A3 SHOWN @ A3 | OF: 6

DESIGNED: PH | DATE: AUG. '24 | JOB No: 24-5750

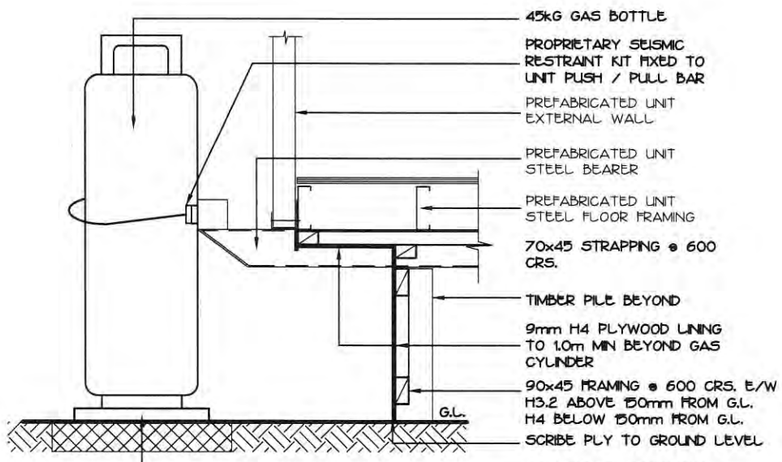


DETAIL (1/5) 1:10

HANDRAIL DETAIL 1:10



DETAIL (2/5) 1:10



GAS CYLINDER RESTRAINT & SUB-FLOOR LINING DETAIL 1:20

NOTE:
- PROVIDE D.P.C. BETWEEN TIMBER AND STEEL FRAMING
- PROVIDE NO SUB-FLOOR VENTILATION IN PLYWOOD LINING (TO PREVENT POTENTIAL INGRESS OF L.P.G. GAS INTO THE SUBFLOOR SPACE)

HILL DESIGN ENGINEERING LTD.
P. HILL
B.E.(HONS), M.I.P.E.N.Z.
C.P.ENG. No 47048

BUILDING CONSENT FOR SITE WORKS ONLY, (PORTABLE UNIT CONSTRUCTION PREVIOUSLY CONSENTED AUCKLAND COUNCIL).

B.C. APPLICATION 04/09/2024

#	DATE:	REVISION:

HDE HILL DESIGN ENGINEERING LTD
23 Great South Road
PO Box 72 944 Papakura
Phone (09) 298 0654
Fax (09) 297 7889
Email enquiries@hde.co.nz

PROJECT: PROP. PREFABRICATED DWELLING at 134 HIHI ROAD, MANGONUI for XIAO WEI HAN & WANG YANG LI

DRAWING TITLE: DETAILS

DWG. No: 6 REVISION: -

DRAWN: NG/AJP | CHECKED: PH | SCALES: AS SHOWN @ A3 | OF: 6

DESIGNED: PH | DATE: AUG. '24 | JOB No: 24-5750

DISTRICT PLAN ASSESSMENT
-FAR NORTH DISTRICT COUNCIL

134 Hihi Road, Mangonui

CHAPTER 10	COASTAL ENVIRONMENT	
SECTION 7	COASTAL LIVING ZONE	
10.7.3	OBJECTIVES	
10.7.3.1	To provide for the well being of people by enabling low density residential development to locate in coastal areas where any adverse effects on the environment of such development are able to be avoided, remedied or mitigated	The proposal is an example of low-density residential development, which is anticipated in the zone and of a scale and design appropriate for the natural character of the coastal environment.
10.7.3.2	To preserve the overall natural character of the coastal environment by providing for an appropriate level of subdivision and development in this zone.	
10.7.4	POLICIES	
10.7.4.1	That the adverse effects of subdivision, use, and development on the coastal environment are avoided, remedied or mitigated.	The proposal generally meets the bulk and location standards and result in only a small infringement to the 50m² visual amenity control. The site is located approximately 600m from the coast, minimising the potential for adverse effects including visual effects. The built development will read as part of the cluster of other buildings along the shared driveway. The existing hedge will screen the development from the road. The site is not known to be of cultural or historic heritage.
10.7.4.2	That standards be set to ensure that subdivision, use or development provides adequate infrastructure and services and maintains and enhances amenity values and the quality of the environment.	
10.7.4.3	Subdivision, use and development shall preserve and where possible enhance, restore and rehabilitate the character of the zone in regards to s6 matters, and shall avoid adverse effects as far as practicable by using techniques including: (a) clustering or grouping development within areas where there is the least impact on natural character and its elements such as indigenous vegetation, landforms, rivers, streams and wetlands, and coherent natural patterns; (b) minimising the visual impact of buildings, development, and associated vegetation clearance and earthworks, particularly as seen from public land and the coastal marine area; (c) providing for, through siting of buildings and development and design of	

	subdivisions, legal public right of access to and use of the foreshore and any esplanade areas; (d) through siting of buildings and development, design of subdivisions, and provision of access that recognise and provide for the relationship of Maori with their culture, traditions and taonga including concepts of mauri, tapu, mana, wehi and karakia and the important contribution Maori culture makes to the character of the District (refer Chapter 2, and in particular Section 2.5, and Council's "Tangata Whenua Values and Perspectives (2004)"); (e) providing planting of indigenous vegetation in a way that links existing habitats of indigenous fauna and provides the opportunity for the extension, enhancement or creation of habitats for indigenous fauna, including mechanisms to exclude pests; (f) protecting historic heritage through the siting of buildings and development and design of subdivisions.	
10.7.5.1	PERMITTED ACTIVITIES	
	An activity is a permitted activity in the Coastal Living Zone if: (a) complies with the standards for permitted activities set out in Rules 10.7.5.1.1 to 10.7.5.1.13 below; and (b) it complies with the relevant standards for permitted activities set out in Part 3 of the Plan - District Wide Provisions.	
10.7.5.1.1	Visual Amenity The following are permitted activities in the Coastal Living Zone: (a) any new building(s), provided that the gross floor area of any new building(s) permitted under this rule does not exceed 50m²; or (b) any alteration/addition to an existing building which does not exceed 30% of the gross floor area of the building which is being altered or added to, provided that any alteration/addition does not exceed the height of the existing building and that any alteration/addition is to a building that existed at 28 April 2000. (c) replacement of any building so long as the replacement does not exceed the building envelope occupied by the previous building; or	Infringement The proposed building is 52.8m² in area.

	(d) renovation or maintenance of any building	
10.7.5.1.2	Residential Intensity Residential development shall be limited to one unit per 4ha of land. In all cases the land shall be developed in such a way that each unit shall have at least 3,000m² for its exclusive use surrounding the unit plus a minimum of 3.7ha elsewhere on the property.	Complies Only one dwelling is proposed on the 4.4545 hectare site.
10.7.5.1.3	Scale of Activities The total number of people engaged at any one period of time in activities on a site, including employees and persons making use of any facilities, but excluding people who normally reside on the site or are members of the household shall not exceed 1 person per 2,000m² of net site area. Provided that: (a) this number may be exceeded for a period totalling not more than 60 days in any 12 month period where the increased number of persons is a direct result of activities ancillary to the primary activity on the site; and (b) (c) this number may be exceeded where persons are engaged in constructing or establishing an activity (including environmental enhancement) on the site; and this number may be exceeded where persons are visiting marae. In determining the total number of people engaged at any one period of time, the Council will consider the maximum capacity of the facility (for instance, the number of beds in visitors accommodation, the number of seats in a restaurant or theatre), the number of staff needed to cater for the maximum number of guests, and the number and nature of the vehicles that are to be accommodated on site to cater for those engaged in the activity.	Not applicable The applicant intends on residing within the building.
10.7.5.1.4	Building Height The maximum height of any building shall be 8m.	Complies The building will be approximately 4.5m high.

10.7.5.1.5	Sunlight No part of any building shall project beyond a 45 degree recession plane as measured inwards from any point 2m vertically above ground level on any site boundary (refer to definition of Recession Plane in Chapter 3 - Definitions), except where a site boundary adjoins a legally established entrance strip, private way, access lot, or access way serving a rear site, the measurement shall be taken from the farthest boundary of the entrance strip, private way, access lot, or access way.	Complies The 3.5m high building is at least 14m from the closest boundary.
10.7.5.1.6	Stormwater Management The maximum proportion or amount of the gross site area which may be covered by buildings and other impermeable surfaces shall be 10% or 600m2 whichever is the lesser.	Complies Approximately 520m² of the site will be covered in buildings/and aggregates.
10.7.5.1.7	Setback from Boundaries Buildings shall be set back a minimum 10m from any site boundary, except that on any site with an area less than 5,000m² this set back shall be 3m from any site boundary.	Complies The building will be 14m from the closest boundary.
10.7.5.1.8	Screening for Neighbours Non-Residential Activities	Not Applicable
10.7.5.1.9	Transportation	See Assessment Below
10.7.5.1.10	Hours of Operation Non-Residential Activities	Not Applicable
10.7.5.1.11	Keeping of Animals	Not Applicable
10.7.5.1.12	Noise All activities shall be so conducted as to ensure that noise from the site shall not exceed the following noise limits as measured at or within the boundary of any other site in this zone, or at any site in the Residential, Russell Township or Coastal Residential Zones, or at or within the notional boundary at any dwelling in any other rural or coastal zone: 0700 to 2200 hours 2200 to 0700 hours 55 dBA L10 45 dBA L10 and 70 dBA Lmax	To Comply
10.7.5.1.13	Helicopter Landing Area A helicopter landing area shall be at least 200m from the nearest boundary of any of	Not Applicable

	the Residential, Coastal Residential, Russell Township or Point Veronica Zones.	
10.7.5.2	Controlled Activities	
	An activity is a controlled activity in the Coastal Living Zone if: (a) it complies with all of the standards for permitted activities except for Rule 10.7.5.1.1 Visual Amenity above; and (b) (c) it complies with Rules 10.7.5.2.1 Papakainga Housing or 10.7.5.2.2 Visual Amenity below; and it complies with the relevant standards for permitted or controlled activities set out in Part 3 of the Plan - District Wide Provisions. The Council must approve an application for a land use consent for a controlled activity but it may impose conditions on that consent.	
10.7.5.2.2	Visual Amenity Any new building(s) or alteration/additions to an existing building that does not meet the permitted activity standards in Rule 10.7.5.1.1 are a controlled activity where the new building or building alteration/addition is located entirely within a building envelope that has been approved under a resource consent.	Does not comply A building envelope was not approved at the time of subdivision.
10.7.5.3	Restricted Discretionary Activity	
	An activity is a restricted discretionary activity in the Coastal Living Zone if: (a) does not comply with any one of the following Rules 10.7.5.1.1 Visual Amenity; 10.7.5.1.3 Scale of Activities; 10.7.5.1.4 Building Height; 10.7.5.1.5 Sunlight; 10.7.5.1.6 Stormwater Management; 10.7.5.1.7 Setback from Boundaries; 10.7.5.1.9 Transportation; 10.7.5.1.12 Noise and/or 10.7.5.2.2 Visual Amenity as set out above; but (b) it complies with all of the other rules for permitted and controlled activities under Rules 10.7.5.1 and 10.7.5.2; and (c) it complies with Rules 10.7.5.3.1 Visual Amenity; 10.7.5.3.2 Building Height; 10.7.5.3.3 Sunlight; 10.7.5.3.4 Transportation; 10.7.5.3.5 Scale of Activities; 10.7.5.3.6 Setback from Boundaries; 10.7.5.3.7 Noise and 10.7.5.3.8 Stormwater Management below; and (d) it complies with the relevant standards for permitted, controlled or restricted discretionary activities set out in Part 3 of the Plan - District Wide Provisions.	
10.7.5.3.1	Visual Amenity The following are restricted discretionary activities in the Coastal Living Zone: (a) any new building(s); or (b) any alteration/addition to an existing building that do not meet the permitted activity standards in Rule 10.7.5.1.1 where the new building or building alteration/addition is located partially or entirely outside a building envelope that has been approved under a resource consent.	The new 52.8m² dwelling on the coastal living zoned site requires consent as a Restricted Discretionary Activity.
7.6.3	Matters of Discretion	The site is a rural/coastal lifestyle property set on a northeast facing slope. The site's original landform fell to the northeast, with a low-lying gully feature at

	When considering an application under this provision the Council will restrict the exercise of its discretion to matters relating to: the location of the building; the size, bulk, and height of the building or utility services in relation to ridgelines and natural features; the colour and reflectivity of the building; the extent to which planting can mitigate visual effects; any earthworks and/or vegetation clearance associated with the building; the location and design of associated vehicle access, manoeuvring and parking areas; the extent to which the building will be visually obtrusive; the cumulative visual effects of all the buildings on the site; the degree to which the landscape will retain the qualities that give it its naturalness, visual and amenity values; the extent to which private open space can be provided for future uses ; the extent to which the siting, setback and design of building(s) avoid visual dominance on landscapes, adjacent sites and the surrounding environment; the extent to which non-compliance affects the privacy, outlook and enjoyment of private open spaces on adjacent sites.	the northern end of the site. Ground inclinations across the site are somewhat uniform in nature and average less than 8°. The development site is located greater than 100n from the gully feature near Hihi Road and the shared ROW access. Earthworks have been undertaken to form the building platform, which enables the development to sit within the landscape. The dwelling will be prefabricated offsite and relocated onto the prepared building platform. The proposed dwelling is a small exceedance (2.8m²) from the 50m² permitted baseline. To date it is the only building on the site. The dwelling location complies with the bulk and location standards. The dwelling will be finished the visually recessive grey friars (LRV 10%). Shelterbelts present along the south-western, southern, and northern boundaries which screen the development from adjoining sites. For these reasons it is considered that that development will not visually dominant the landscape and will maintain the visual and amenity values of the surrounding area.
CHAPTER 12	NATURAL AND PHYSICAL RESOURCES	
12.3	Soils and Minerals	
12.3.3	Objectives 12.3.3.1 To achieve an integrated approach to the responsibilities of the Northland Regional Council and Far North District Council in respect to the management of adverse effects arising from soil excavation and filling, and minerals extraction. 12.3.3.2 To maintain the life supporting capacity of the soils of the District. 12.3.3.3 To avoid, remedy or mitigate adverse effects associated with soil excavation or filling.	The zoning supports low density, rural residential development. The site works to accommodate the rural-residential development covers approximately 2% of the site area. This scale of development on the coastal living zoned site is not considered to undermine the life supporting capacity of soils of the District. The exposed area is separated from waterbodies and has partially been stabilised with aggregate metalled. The battered slopes will be grassed. The earthworks undertaken has not resulted in adverse land stability effects.

	12.3.3.4 To enable the efficient extraction of minerals whilst avoiding, remedying or mitigating any adverse environmental effects that may arise from this activity.	The earthworks were undertaken over a short period of time and were not known to cause a nuisance to adjoining neighbours. A cut to fill balance was achieved, minimising the need to transport soil to or from the site.
12.3.4	Policies 12.3.4.1 That the adverse effects of soil erosion are avoided, remedied or mitigated. 12.3.4.2 That the development of buildings or impermeable surfaces in rural areas be managed so as to minimise adverse effects on the life supporting capacity of the soil. 12.3.4.3 That where practicable, activities associated with soil and mineral extraction be located away from areas where that activity would pose a significant risk of adverse effects to the environment and/or to human health. Such areas may include those where: (a) there are people living in close proximity to the site or land in the vicinity of the site is zoned Residential, Rural Living, Coastal Residential or Coastal Living; (b) there are significant ecological, landscape, cultural, spiritual or heritage values; (c) there is a potential for adverse effects on lakes, rivers, wetlands and the coastline; (d) natural hazards may pose unacceptable risks. 12.3.4.4 That soil excavation and filling, and mineral extraction activities be designed, constructed and operated to avoid, remedy or mitigate adverse effects on people and the environment. 12.3.4.5 That soil conservation be promoted. 12.3.4.6 That mining tailings that contain toxic or bio-accumulative chemicals are contained in such a way that adverse effects on the environment are avoided. 12.3.4.7 That applications for discretionary activity consent involving mining and quarrying be accompanied by a Development Plan.	

	12.3.4.8 That as part of a Development Plan rehabilitation programmes for areas no longer capable of being actively mined or quarried may be required. 12.3.4.9 That soil excavation and filling in the National Grid Yard are managed to ensure the stability of National Grid support structures and the minimum ground to conductor clearances are maintained. 12.3.4.10 To ensure that soil excavation and filling are managed appropriately, normal rural practices as defined in Chapter 3 will not be exempt when determining compliance with rules relating to earthworks, except if the permitted standards in the National Grid Yard specify that activity is exempt.	
12.3.6.1	Permitted Activities An activity is a permitted activity if: (a) it complies with the standards for permitted activities set out in Rules 12.3.6.1.1 to 12.3.6.1.1 to 12.3.6.1.5 below; and (b) it complies with the relevant standards for permitted activities in the zone in which it is located, set out in Part 2 of the Plan - Environment Provisions; and (c) it complies with the other relevant standards for permitted activities set out in Part 3 of the Plan - District Wide Provisions.	
12.3.6.1.2	EXCAVATION AND/OR FILLING, INCLUDING OBTAINING ROADING MATERIAL BUT EXCLUDING MINING AND QUARRYING, IN THE RURAL LIVING, COASTAL LIVING, SOUTH KERIKERI INLET, GENERAL COASTAL, RECREATIONAL ACTIVITIES, CONSERVATION, WAIMATE NORTH AND POINT VERONICA ZONES Excavation and/or filling, excluding mining and quarrying, on any site in the Rural Living, Coastal Living, South Kerikeri Inlet Zone, General Coastal, Recreational Activities, Conservation, Waimate North and Point Veronica Zones is permitted, provided that: (a) it does not exceed 300m³ in any 12 month period per site; and (b) it does not involve a cut or filled face exceeding 1.5m in height i.e. the maximum permitted cut and fill height may be 3m.	Does not comply Cut- 250m³ max depth of 3m Fill – 255m³ max height 0.9m
12.3.6.1.4	Filling in any zone shall meet the following standards: (a) the fill material shall not	Complies

	contain putrescible, pollutant, inflammable or hazardous components; and (b) the fill shall not consist of material other than soil, rock, stone, aggregate, gravel, sand, silt, or demolition material; and (c) the fill material shall not comprise more than 5% vegetation (by volume) of any load.	The excavated soil material was reused to fill the site.
12.3.6.2	Restricted Discretionary Activity	
12.3.6.2.1	EXCAVATION AND/OR FILLING, EXCLUDING MINING AND QUARRYING, IN THE RURAL LIVING, COASTAL LIVING, SOUTH KERIKERI INLET, GENERAL COASTAL, RECREATIONAL ACTIVITIES, CONSERVATION, WAIMATE NORTH AND POINT VERONICA ZONES Excavation and/or filling, excluding mining and quarrying, on any site in the Rural Living, Coastal Living, South Kerikeri Inlet Zone, General Coastal, Recreational Activities, Conservation, Waimate North and Point Veronica Zones is a restricted discretionary activity, provided that: (a) it does not exceed 2,000m3 in any 12 month period per site; and (b) it does not involve a cut or filled face exceeding 1.5m in height i.e. the maximum permitted cut and fill height may be 3m.	Does not Comply While compliance with the volume limitation is achieved the cut face is greater than 1.5m (being maximum of 3m). Discretionary Activity pursuant to Rule 12.3.6.4
12.3.7	Assessment Criteria The matters set out in s104 and s105, and in Part II of the Act, apply to the consideration of all resource consents for land use activities. In addition to these matters, the Council shall also apply the relevant assessment matters set out below: (a) the degree to which the activity may cause or exacerbate erosion and/or other natural hazards on the site or in the vicinity of the site, particularly lakes, rivers, wetlands and the coastline; (b) any effects on the life supporting capacity of the soil; (c) any adverse effects on stormwater flow within the site, and stormwater flow to or from other properties in the vicinity of the site including public roads; (d) any reduction in water quality;	The earthworks undertaken were separated from waterbodies (greater than 100m). The site is not known to be subject to natural hazards. The attached geotechnical investigation concludes that the risk of instability impacting the proposed development to be significantly low. The site is zoned coastal living and is anticipated to be utilised for lifestyle purposes. It is considered that the 800m² of earthworks to formulate the building platform will not undermine the life supporting capacity of the soil. It is unknown if erosion and sediment controls were in place while the earthworks were undertaken. The exposed batters have subsequently been stabilised and in the process of being grassed. The site is not located within an Outstanding Landscape nor identified as an Outstanding Natural Feature. The earthworks occurred within an areas of pasture and therefore did not affect significant indigenous vegetation. The site is not known to be a

	(e) any loss of visual amenity or loss of natural character of the coastal environment; (f) effects on Outstanding Landscape Features and Outstanding Natural Features (refer to Appendices 1A and 1B in Part 4, and Resource Maps); (g) the extent to which the activity may adversely affect areas of significant indigenous vegetation or significant habitats of indigenous fauna; (h) the extent to which the activity may adversely affect heritage resources, especially archaeological sites; (i) the extent to which the activity may adversely affect the cultural and spiritual values of Maori, especially Sites of Cultural Significance to Maori and waahi tapu (as listed in Appendix 1F in Part 4, and shown on the Resource Maps); (j) any cumulative adverse effects on the environment arising from the activity; (k) the effectiveness of any proposals to avoid, remedy or mitigate any adverse effects arising from the activity; (l) the ability to monitor the activity and to take remedial action if necessary; (m) the criteria in Section 11.20 Development Plans in Part 2. (n) the criteria (p) in Section 17.2.7 National Grid Yard.	site of cultural significance. The national grid does not traverse the site.
OTHER RELEVANT CHAPTER 12 PROVISIONS		
12.4.6.1.2	Fire Risk to Residential Units (a) Residential units shall be located at least 20m away from the drip line of any trees in a naturally occurring or deliberately planted area of scrub or shrubland, woodlot or forest; (b) Any trees in a deliberately planted woodlot or forest shall be planted at least 20m away from any urban environment zone, Russell Township or Coastal Residential Zone boundary, excluding the replanting of plantation forests existing at July 2003.	Complies The dwelling will be greater than 20m from any are of scrub, shrubland, woodlot or forest.

12.7.6.1.1	Setback from Lakes, Rivers and the Coastal Marine Area Any building and any impermeable surface must be set back from the boundary of any lake (where a lake bed has an area of 8ha or more), river (where the average width of the riverbed is 3m or more) or the boundary of the coastal marine area, except that this rule does not apply to man-made private water bodies other than the Manuwai and Waingaro Reservoirs. The setback shall be: (a) a minimum of 30m in the Rural Production, Waimate North, Rural Living, Minerals, Recreational Activities, Conservation, General Coastal, South Kerikeri Inlet and Coastal Living Zones; (b) a minimum of 26m in the Residential, Coastal Residential and Russell Township Zones; (c) a minimum of 20m in the Commercial and Industrial Zones. Setback form Smaller Lakes, Rivers and Wetlands Any building and any impermeable surface must be set back from the boundary of lakes (where the lake bed has an area of less than 8ha) smaller continually flowing rivers (where the average width of the river bed is less than 3m) and wetlands except that this rule does not apply to man-made private water bodies. The setback shall be: (a) 3 x the area (ha) of the lake (e.g. if the lake is 5ha in area, the setback shall be 15m); and/or (b) 10 x the average width of the river where it passes through or past the site; provided that in both cases the minimum setback shall be 10m and the maximum setback shall be no more than the minimum required by Rule 12.7.6.1.1 above; (c) 30m for any wetland of 1ha or more in area.	The dwelling will be greater than 30m form any lake, river or coastal marine area.
12.7.6.1.4	Land Use Activities involving the discharges of Human Sewage Effluent Land use activities which produce human sewage effluent (including grey water) are	Complies The dwelling will have an on-site treatment system which is greater than 30m from a waterbody.

	permitted provided that: (a) the effluent discharges to a lawfully established reticulated sewerage system; or (b) the effluent is treated and disposed of on-site such that each site has its own treatment and disposal system no part of which shall be located closer than 30m from the boundary of any river, lake, wetland or the boundary of the coastal marine area.	
15 TRANSPORTATION		
15.1.6	RULES	
15.1.6A	Coastal Living Permitted- 20 maximum daily one way traffic movements. Restricted Discretionary 21-40 maximum daily one way traffic movements. Discretionary Activity More than 40 maximum daily one-way traffic movements. Traffic Intensity Factor- 10 per standard residential unit.	Complies The dwelling is estimated to generate a maximum total of 10 daily one-way traffic movements.
15.1.3B	Parking 15.1.6B.1.1 On-Site Car Parking Spaces Standard Residential Unit- 2 per unit Size set out in Appendix 3D All parking, loading, access drives and manoeuvring areas shall be formed and provided with an all-weather surface, drained, marked out and maintained to the satisfaction of the Council, and shall be kept free and available for the uses intended. Where a parking area provides four or more car parking spaces is adjacent to a road, a kerb or a barrier shall be provided to prevent direct access except at the designated vehicle access point.	Complies There is sufficient space surrounding the dwelling, within the metalled area, to accommodate at least 2 car parking spaces.
15.1.6C.1	Access VEHICLE CROSSING STANDARDS IN RURAL AND COASTAL ZONES (a) Private	No change The dwelling will rely on the existing established joint access.

	access off roads in the rural and coastal zones the vehicle crossing is to be constructed in accordance with Council's "Engineering Standards and Guidelines" (June 2004 – Revised 2009). (b) Where the access is off a sealed road, the vehicle crossing plus splays shall be surfaced with permanent impermeable surfacing for at least the first 5m from the road carriageway or up to the road boundary, whichever is the lesser. (c) Where the vehicle crossing serves two or more properties the private accessway is to be 6m wide and is to extend for a minimum distance of 6m from the edge of the carriageway.	


QRD28