Far North District Council

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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 Form 9)

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):

Ø Land Use O Fast Track Land Use* Ø Subdivision O Discharge
O Extension of time (s.125) O Change of conditions (s.127) O Change of Consent Notice (s.221(3))
O Consent under National Environmental Standard (e.g. Assessing and Managing Contaminants in Soil)
O Other (please specify) _____

***The fast track for simple land use consents is restricted to consents with a controlled activity status and requires you provide an electronic address for service.**

3. Would you like to opt out of the Fast Track Process? Yes / No

4. Applicant Details:

Name/s: [redacted]

Electronic Address for Service (E-mail):

Phone Numbers: Work: _____ Home: _____

Postal Address: (*or* alternative method of service under section 352 of the Act)

_____ Post Code: _____

5. Address for Correspondence: *Name and address for service and correspondence (if using an Agent write their details here).*

Name/s: Melissa Hallett

Electronic Address for Service (E-mail): MelissaH@barker.co.nz

Phone Numbers: Work: 0272147028 Home: _____

Postal Address: (*or* alternative method of service under section 352 of the Act) 20 Baxter Street, Warkworth, 0910

_____ Post Code: _____

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

6. 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: Housing New Zealand Ltd.

Property Address/: Location: Contact details as above for applicant.

7. Application Site Details:

Location and/or Property Street Address of the proposed activity:

Site Address/ Location: 1 Masters Place, Kaitaia

Legal Description: Lot 9 DP 54761 Val Number:

Certificate of Title: NA102D/439

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.

8. Description of the Proposal:

Please enter a brief description of the proposal here. Attach a detailed description of the proposed activity and drawings (to a recognized scale, e.g. 1:100) to illustrate your proposal. Please refer to Chapter 4 of the District Plan, and Guidance Notes, for further details of information requirements.

The proposal seeks to relocate two residential units to the application site and undertake a concurrent subdivision around the proposed residential units.

If this is an application for an Extension of Time (s.125); Change of Consent Conditions (s.127) or 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) or extension being sought, with reasons for requesting them.

9. Would you like to request Public Notification

Yes/No

10. Other Consent required/being applied for under different legislation (more than one circle can be ticked):

O Building Consent (BC ref # if known)

O Regional Council Consent (ref # if known)

O National Environmental Standard consent

O Other (please specify)

11. 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 (further information in regard to this NES is available on the Council's planning web pages):

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)

O yes ✓ no O don't know

Is the proposed activity an activity covered by the NES? (If the activity is any of the activities listed below, then you need to tick the 'yes' circle).

O yes ✓ no O don't know

O Subdividing land

O Changing the use of a piece of land

O Disturbing, removing or sampling soil

O Removing or replacing a fuel storage system

12. 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.

Please attach your AEE to this application.

13. 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 all names in full) [redacted]

Email:

Postal Address:

Post Code:

Phone Numbers: Work: [redacted] Home: Fax:

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: [redacted] (please print)

Signature: (signature of bill payer – **mandatory**) Date: 14/03/2024

14. 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.

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

Name: [redacted] (please print)

Signatu[redacted] (signature) Date: 14/03/2024

(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)
- ○ 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.

Only one copy of an application is required, but please note for copying and scanning purposes, documentation should be:

UNBOUND **SINGLE SIDED** **NO LARGER THAN A3 in SIZE**

Construction of Two New Dwellings and Subdivision

1 Masters Place, Kaitaia

Assessment of Environmental Effects and Statutory Analysis

14 March 2024

B&A
Urban & Environmental

Prepared for:
Kāinga Ora – Homes and Communities

B&A Reference:

WRK20577

Status:

Final

Date:

14 March 2024

Prepared by:

[redacted]

Melissa Hallett

Senior Planner, Barker & Associates Limited

Reviewed by:

[redacted]

Alisa Neal

Senior Associate, Barker & Associates Limited

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Appendices

Appendix 1: Record of Title

Appendix 2: Architectural Drawings

Appendix 3: Scheme Plan

Appendix 4: Civil Infrastructure Report

Appendix 5: Geotechnical Review

Appendix 6: PSI/DSI

Appendix 7: FNDP Rules Assessment

1.0 Applicant and Property Details

To:	Far North District Council (**FNDC**)
Site Address:	1 Masters Place, Kaitaia
Applicant Name:	Kāinga Ora – Homes and Communities
Address for Service:	Barker & Associates Ltd 20 Baxter Street Warkworth 0910 Attention: Melissa Hallett
Legal Description:	Lot 9 DP 54761 (refer to Record of Title as **Appendix 1**)
Site Area:	726m^2
Site Owner:	Housing New Zealand Limited
District Plan:	Far North District Plan (**FNDP**)
FNDP Zoning:	Residential
FNDP Precinct:	None
FNDP Overlays & Controls:	None
Designations:	None
Additional Limitations:	The site is identified by Northland Regional Council as being subject to 1-50 and 1-100 year River Flood Hazard.
Locality Diagram:	Refer to **Figure 1**
Brief Description of Proposal:	The proposal seeks to relocate two residential units to the application site and undertake a concurrent subdivision around the proposed residential units.
Summary of Reasons for Consent:	**FNDP**: Resource consent for landuse to establish two residential units as a discretionary activity including non-compliances with relocated buildings, residential intensity, and sunlight. Resource consent is also sought for subdivision as a non-complying activity. A full list of reasons for consent is set out in **Section 5** of this report.

2.0 Background

Kāinga Ora – Homes and Communities (Kāinga Ora) are in the process of increasing the rate and scale of housing supply across New Zealand and developing existing state-owned land in a more efficient manner, through the Regional Housing Programme. This programme is a response to the New Zealand Government's commitment to managing urgent housing demand, and runs in parallel with other Housing programmes.

A pre-application meeting was not held with Council however email correspondence has been had with Northland Transport Alliance (**NTA**) and Council's Development Engineer Sujeet Tikaram regarding the proposed vehicle manoeuvring arrangement and stormwater servicing. The following is noted in response to the key matters raised:

- **Transport** – Due to the low-speed environment and lack of crash history, reversing onto the roadway has been proposed with a pedestrian priority footpath through the vehicle crossing.
- **Stormwater management** – Following advice regarding kerb-outlets being a last resort option, each lot has been designed to have an individual stormwater connection via a typical stormwater lateral connecting to the existing public stormwater manhole located just south of the vehicle crossing of 26 Bonnett Road on Masters Place. Refer to stormwater assessment in the Civil Infrastructure Report in **Appendix 4.**

Discussions from the pre-app queries have informed the development of the proposal and the preparation of this AEE.

3.0 Site Context

3.1 Site Description

The subject site is located at 1 Masters Place, Kaitaia and is legally described as Lot 9 DP 54761. The site previously contained a dwelling but is currently vacant land following a house fire. The subject site has an area of 726m^2, and in terms of topography is relatively flat. The site is located within the area of benefit for three water servicing as identified on Councils GIS mapping. Power and telecommunications connections exist to the boundary.

Figure 1: Locality plan. Source: Emaps.

The site has an existing vehicle crossing to Masters Place located at the northern edge of the front boundary. Masters Place is a low-speed cul-de-sac road ending just south of the subject site with footpath and kerb on both sides.

3.2 Surrounding Locality

The surrounding environment is predominantly residential in nature. Built development typically features one-storey standalone residential units with some variety in architectural style. In terms of amenities, a local dairy is located within 400m of the site with the commercial centre of Kaitaia being within a 1km walking radius. Mathews Park is within proximity to the site, and Parkdale Park adjoining to the rear. Existing footpaths along Bonnett Road provides safe pedestrian access to these facilities.

4.0 Proposal

A summary of the key elements of the proposal is set out below. More detailed descriptions on particular aspects of the proposal are set out in the specialist reports and plans accompanying the application.

- **Residential Units:** It is proposed to relocate two newly built stand-alone residential units, consisting of one two-bedroom dwelling and one three-bedroom dwelling to the site. The site layout, including associated access, parking and outdoor amenity areas are as shown in **Figure 2** below. Further detail of the proposed development is provided on the drawings prepared by CTM Architectural Ltd, included as **Appendix 3**. The dwellings are currently under

construction by the Dargaville High School Building Academy and are proposed to be relocated to site once completed. It is proposed that the new dwellings all achieve a FFL of 13.2m to mitigate the potential for flood risk.

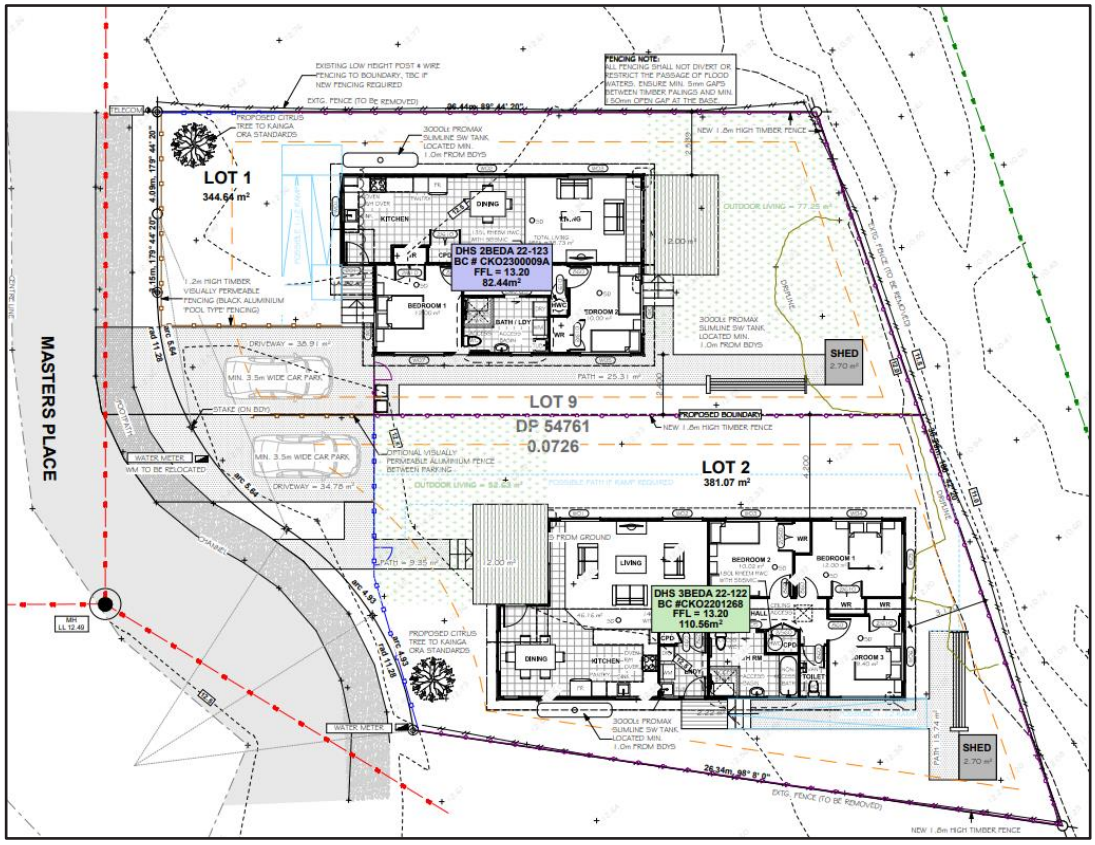


Figure 2: Site layout. Full scale image provided in Appendix 3.

- Access and Parking: The site has an existing vehicle crossing from Masters Place. The existing crossing will be removed and a new double width crossing is proposed in the centre of the road frontage to serve proposed Lot 1 & 2. Both Lots will be provided with provided with one on-site carparking space.
- Landscaping: Each lot is proposed to be fenced and provided with a citrus tree each. Each lot will also be provided with outdoor washing lines and a storage shed. No other landscaping is proposed as the reminder of the site will be retained as lawn area.
- Earthworks: Earthworks of approximately 79m^3 are proposed across the site to facilitate the proposal as indicated in the Site Plan prepared by CTM Architectural Ltd provided as Appendix 2. Erosion and Sediment control will be undertaken in accordance with Auckland Council Standard GDO5.
- Servicing: The servicing strategy for the proposed development is set out in the report and accompanying drawings by Land Development and Engineering (LDE), included as Appendix 4. In summary, it is concluded that all household units can be appropriately serviced in terms of stormwater, wastewater, water supply, power and telecommunications.
- Subdivision: It is proposed to carry out a concurrent fee simple subdivision creating two residential lots (see proposed scheme plan in Appendix 3), resulting in each of the proposed

residential units being contained on its own lot. A summary of the gross site area of the lots is as follows:

- Lot 1: 344.64m^2
- Lot 2: 381.07m^2

- **Geotechnical Investigation:** A Geotechnical Report prepared by LDE has been undertaken for the site and is attached as **Appendix 5**. The findings of the report concludes that the site is suitable for development.
- **Contaminated Soil:** A Preliminary and Detailed Site Investigation prepared by Tonkin + Taylor which assess the site is provided as **Appendix 6.** Site history review and soil testing results indicate that the site has not been subjected to an activity on the Hazardous Activities and Industry List (**HAIL**). As such the National Environmental Standards for Contaminated Soil does not apply to the proposed redevelopment work and consent is not required.

5.0 Reasons for Consent

A rules assessment against the provisions of the Far North District Plan ('**FNDP**') is attached as **Appendix 7.** The site is Residential and is not subject to any overlays. The proposal requires consent for the matters outlined below.

5.1 Far North District Plan

5.6 Residential Zone

- **7.6.5.1.1 Relocated Buildings:** The proposed buildings will be relocated to site and all work required to reinstate the exterior of the building will be completed within six months but the proposal does not comply with Rules 7.6.5.1.2 Residential Intensity and 7.6.5.1.5 Sunlight. **Discretionary activity.**
- **7.6.5.1.2 Residential Intensity:** The site is connected to sewer; the proposal does not comply with the permitted 600m^2 net site area per residential unit, but does comply with the restricted discretionary threshold (300m^2 net site area). **Restricted discretionary activity.**
- **7.6.5.1.5 Sunlight**: The proposal results in a minor non-compliance with the permitted threshold due to the residential unit within proposed Lot 2 causing an infringement on the south western and eastern boundaries. **Restricted discretionary activity**.

13 Subdivision

- **Table 13.7.2.1 Minimum Lot Sizes**: Proposed Lots 1 & 2 can comply with the restricted discretionary threshold of the 300m^2 gross site area for sewered sites. **Discretionary activity.**
- **13.7.2.2 Allotment Dimensions**: None of the lots can comply with the required 14m x 14 dimensions. **Non-complying activity.**

15 Transportation

- **15.1.6B.1.1 On-site Car Parking Spaces:** Lots 1 & 2 are provided with one carparking space. **Discretionary activity**.

- **Rule 15.1.6C.1.4 Access over Footpath:** The double width vehicle crossing when measured from the splays is greater than 6m in width. **Discretionary activity.**

5.7 Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011

Pursuant to Regulation 6(B) of the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (**NES CS**), were gazetted on 13th October 2011 and took effect on 1st January 2012.

A Preliminary and Detailed Site Investigation has been undertaken by Tonkin + Taylor (see **Appendix 6**) and confirms that based on desktop analysis and soil sampling that no HAIL activities have been undertaken on the site, meaning the site is not land covered by this regulation. Accordingly, no consents are required under this legislation.

5.8 Activity Status

Overall, this application is for a non-complying activity.

6.0 Public Notification Assessment (Sections 95A, 95C and 95D)

6.1 Assessment of Steps 1 to 4 (Sections 95A)

Section 95A specifies the steps the council is to follow to determine whether an application is to be publicly notified. These are addressed in statutory order below.

6.1.1 Step 1: Mandatory public notification is required in certain circumstances

Step 1 requires public notification where this is requested by the applicant; or the application is made jointly with an application to exchange of recreation reserved land under section 15AA of the Reserves Act 1977.

The above does not apply to the proposal.

6.1.2 Step 2: If not required by step 1, public notification precluded in certain circumstances.

Step 2 describes that public notification is precluded where all applicable rules and national environmental standards preclude public notification; or where the application is for a controlled activity; or a restricted discretionary, discretionary or non-complying boundary activity.

In this case, the applicable rules do not preclude public notification, and the proposal is not a controlled activity or boundary activity. Therefore, public notification is not precluded.

6.1.3 Step 3: If not required by step 2, public notification required in certain circumstances.

Step 3 describes that where public notification is not precluded by step 2, it is required if the applicable rules or national environmental standards require public notification, or if the activity is likely to have adverse effects on the environment that are more than minor.

As noted under step 2 above, public notification is not precluded, and an assessment in accordance with section 95A is required, which is set out in the sections below. As described below, it is considered that any adverse effects will be less than minor.

6.1.4 Step 4: Public notification in special circumstances

If an application is not required to be publicly notified as a result of any of the previous steps, then the council is required to determine whether special circumstances exist that warrant it being publicly notified.

Special circumstances are those that are:

- Exceptional or unusual, but something less than extraordinary; or
- Outside of the common run of applications of this nature; or
- Circumstances which make notification desirable, notwithstanding the conclusion that the adverse effects will be no more than minor.

The proposal seeks to undertake residential development within a Residential Zone.

It is considered that there is nothing noteworthy about the proposal. It is therefore considered that the application cannot be described as being out of the ordinary or giving rise to special circumstances.

6.2 Section 95D Statutory Matters

In determining whether to publicly notify an application, section 95D specifies a council must decide whether an activity will have, or is likely to have, adverse effects on the environment that are more than minor.

In determining whether adverse effects are more than minor:

- Adverse effects on persons who own or occupy the land within which the activity will occur, or any land adjacent to that land, must be disregarded.

  The land to be excluded from the assessment is listed in section 6.3 below.

- Adverse effects permitted by a rule in a plan or national environmental standard (the 'permitted baseline') may be disregarded.

  In this case there is no baseline for the subdivision component. However, the land use permitted activity thresholds provides useful baseline when considering the potential adverse effects that may be generated by this proposal.

  The application site has an area of 726m^2. Accordingly, as a permitted activity across the application site, 363m^2 of built development comprising one residential unit with 4 or more bedrooms, plus a sleep out that are dependent on the principal dwelling (e.g., don't include a kitchen sink) could be achieved.

These residential buildings could be established on the site within the permitted height, setback and sunlight requirements of the FNDP, generating the same or similar residential intensity effects as those likely from the non-complying 2 unit development.

- Trade competition must be disregarded.

This is not considered to be a relevant matter in this case.

- The adverse effects on those persons who have provided their written approval must be disregarded.

No persons have provided their written approval for this proposal.

The sections below set out an assessment in accordance with section 95D, including identification of adjacent properties, and an assessment of adverse effects.

6.3 Land Excluded from the Assessment

In terms of the tests for public notification (but not for the purposes of limited notification or service of notice), the adjacent properties to be excluded from the assessment are shown in **Figure 3** below, and include:

- 24 Bonnett Road;
- 26 Bonnett Road (owned by Kāinga Ora);
- 2 Masters Place (owned by Kāinga Ora);
- 3 Masters Place (owned by Kāinga Ora);
- 3A Masters Place
- 4 Masters Place (owned by Kāinga Ora);
- 5 Masters Place (owned by Kāinga Ora);
- 6 Masters Place (owned by Kāinga Ora);
- 7 Masters Place (owned by Kāinga Ora);

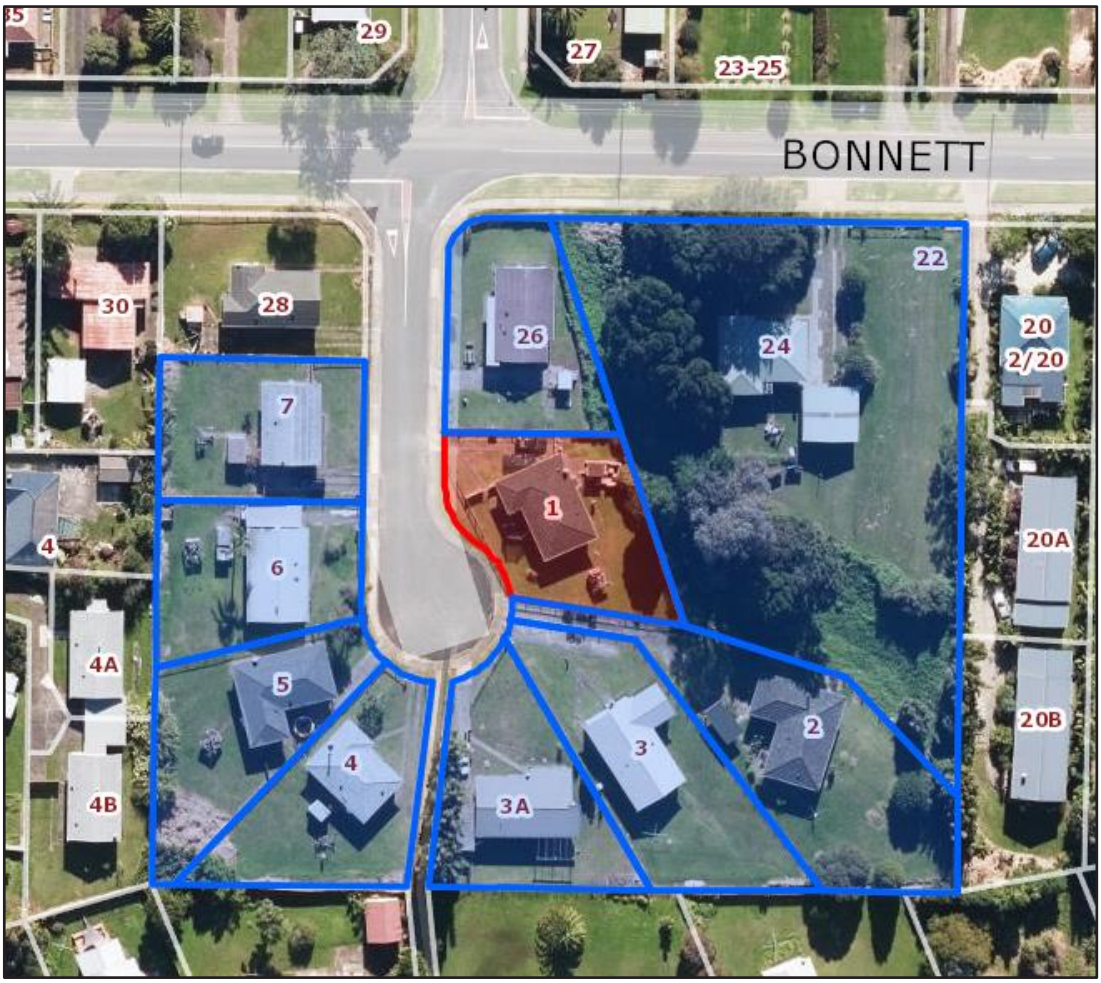


Figure 3: Adjacent properties in relation to subject site. Source: Emaps.

6.4 Assessment of Effects on the Wider Environment

The following sections set out an assessment of wider effects of the proposal, and it is considered that effects in relation to the following matters are relevant:

- Built character and amenity;
- Transportation;
- Infrastructure and servicing; and
- Construction activities.

These matters are set out and discussed below.

6.4.1 Built Character and Amenity

As described in section 3.2 above, the surrounding locality is residential in nature, and typically features one-storey residential units with some variety in architectural style. Overall, the existing character of the area can be described as suburban.

The proposed dwellings will be relocated to site following construction in Dargaville by the Dargaville High School students. As new builds it is considered there will be minimal reinstatement works required and it is proposed that reinstatement works will be completed within six months

of arriving on site. The dwellings are both rectangular shaped stand alone, single level dwellings similar to those already found on Masters Place and the surrounding local streets.

While two residential units are proposed where one had previously been located, it is noted that in terms of density, with respect to built character and amenity, the dwellings will appear consistent with the wider environment.

With the above in mind, and based on the site area, it is noted that two residential units could be anticipated as a restricted discretionary activity. Accordingly, if the two dwellings were proposed without subdivision, it is highlighted that the remaining non-compliances in this instance would largely be minor in nature and generally relate to access design.

The development otherwise sits within the permitted height requirements for the zone, and largely complies with the other bulk and location controls suggesting that from a built character and amenity perspective, the bulk of this development aligns with what is anticipated in the plan as a restricted discretionary activity in this environment.

The exception to this is a minor non-compliance with the height in relation to boundary requirements with the proposed dwelling on Lot 2 infringing the boundaries in the south western portion of the site and the north eastern portion of the site. The sunlight non-compliance is not considered to be visually noticeable within the context of the wider environment and is assessed in section 7.0 of this report with respect to the relevant adjoining neighbours.

1.8m timber pail fencing is proposed along the external boundaries, except at the interface with Masters Place where 1.2m visually permeable fencing has been proposed to facilitate visibility and soften the interface with the road. The internal boundaries also utilise the 1.8m timber pail fencing, all of which is shown in the site plans provided as Appendix 2. In general, the fencing has been designed to consider the orientations of the proposed dwelling, raised floor levels of the builds and to ensure a degree of privacy, and amenity for the future residents of each dwelling.

The proposed landscaping, will consist of a combination of paved, decking and law areas, selected fruit trees, and as explained earlier a variety of fencing types. It is considered that no further landscaping is required to mitigate adverse effects resulting from infringements above the permitted baseline.

The combination of the above factors will ensure that the proposed scale of residential activities will not visually dominate the suburban residential character of the locality. The development will enable the integration of the future residential development within this area which is anticipated to experience ongoing change in accordance with the residential zoning.

Overall, the proposal is considered to feature a carefully designed residential site layout, with residential units that address the street and public realm, and provide a high level of visual amenity. As such, any adverse effects on existing built character and amenity within the wider environment will be less than minor.

6.4.2 Transportation

The proposed site layout provides for safe and efficient vehicle access to and from the site. The proposal involves the utilisation of one double vehicle crossing onto Masters Place which will be formed as required to ensure compliance with the relevant standards. It is understood the new proposed crossing complies with the separation requirements from intersections and will comply with the relevant construction and design requirements in the FNDP. The double width crossing

will be over footpaths and marginally wider than 6m due to the curve of the road in this location, however, this is not considered to generate concerns from a safety perspective for pedestrians. A pedestrian priority formation is proposed to ensure safe crossing for pedestrians.

Traffic movements comply with the permitted thresholds and it is considered that future vehicle movements can readily be absorbed into the roading network.

Each of the dwellings will be provided with one car park. One car park is considered adequate for the proposed dwellings given their size, and should additional parking be required on occasion, road side parking is available on Masters Place or adjoining local streets.

Overall, it is considered that any adverse effects with respect to transportation-related matters in the wider environment will be less than minor and acceptable.

6.4.3 Servicing

The site is within the area of benefit for three waters as identified on Councils GIS mapping system and connection to Council's infrastructure is proposed. Detail regarding the provision of infrastructure has been considered and further detailed in the servicing report prepared by LDE (**Appendix 4**).

Councils' development engineer Sujeet Tikaram confirmed capacity for three waters was available via email correspondence with LDE refer to **Appendix 4.** Each lot will be provided with a connection to the water, stormwater and wastewater services.

In terms of water supply for firefighting; there is a hydrant located directly across the street from the site. Councils' development engineer Sujeet Tikaram confirmed that a hydrant flow test was not required for the subdivision.

With the above in mind, it is considered that the proposed development can be suitably serviced and will not generate any adverse effects on the wider environment in this regard.

6.4.4 Construction activities

Minor earthworks of up to 79m^3 are required to facilitate the development as indicated in the Earthworks Plan provided as **Appendix 2.** During construction it is proposed to install sediment and erosion control measures, which will be designed in accordance with the Auckland Council guidelines prescribed in Guideline Document 2016/005 ('GD05'). This will ensure that the appropriate amount of sediment is removed from stormwater runoff prior to discharge from the site. On the basis of the above, it is considered that any adverse effects associated with silt and sediment runoff (and resulting effects on water quality) will be less than minor.

It is anticipated that the construction works will be able to comply with the FNDP noise and vibration standards having regard to the nature of the proposal. It is considered that any adverse effects associated with noise and vibration would be temporary in nature, and are considered to be less than minor.

There is sufficient space on the subject site and within the surrounding road reserves to provide for parking for construction vehicles. Traffic and parking capacity effects of the construction period will be able to be appropriately managed and will be temporary in nature.

Overall, it is considered that any adverse construction effects will be less than minor, as a result of the nature and proposed management of the works.

6.4.5 Cultural Impacts

Kāinga Ora have previously engaged with mana whenua groups in the area of interest who have been consistent in their support for homes for Whanau balanced with consideration of cultural values.

The proposal is for a residential development on an existing residential site. The site has already been significantly modified through the establishment of the previous dwellings on the site and surrounds. As such it is considered that any adverse cultural effects will likely be less than minor.

6.5 Summary of Effects

Overall, it is considered that any adverse effects on the environment relating to this proposal will be less than minor.

6.6 Public Notification Conclusion

Having undertaken the section 95A public notification tests, the following conclusions are reached:

- Under step 1, public notification is not mandatory;
- Under step 2, public notification is not precluded;
- Under step 3, public notification is not required as it is considered that the activity will result in less than minor adverse effects; and
- Under step 4, there are no special circumstances.

Therefore, based on the conclusions reached under steps 3 and 4, it is recommended that this application be processed without public notification.

7.0 Limited Notification Assessment (Sections 95B, 95E to 95G)

7.1 Assessment of Steps 1 to 4 (Sections 95B)

If the application is not publicly notified under section 95A, the council must follow the steps set out in section 95B to determine whether to limited notify the application. These steps are addressed in the statutory order below.

7.1.1 Step 1: Certain affected protected customary rights groups must be notified

Step 1 requires limited notification where there are any affected protected customary rights groups or customary marine title groups; or affected persons under a statutory acknowledgement affecting the land.

The above does not apply to this proposal.

7.1.2 Step 2: Certain affected protected customary rights groups must be notified

Step 2 describes that limited notification is precluded where all applicable rules and national environmental standards preclude limited notification; or the application is for a controlled activity (other than the subdivision of land).

In this case, the applicable rules do not preclude limited notification and the proposal is not a controlled activity. Therefore, limited notification is not precluded.

7.1.3 Step 3: If not precluded by step 2, certain other affected persons must be notified

Step 3 requires that, where limited notification is not precluded under step 2 above, a determination must be made as to whether any of the following persons are affected persons:

- In the case of a boundary activity, an owner of an allotment with an infringed boundary;
- In the case of any other activity, a person affected in accordance with s95E.

The application is not for a boundary activity, and therefore an assessment in accordance with section 95E is required and is set out below.

Overall, it is considered that any adverse effects on persons will be less than minor, and accordingly, that no persons are adversely affected.

7.1.4 Step 4: Further notification in special circumstances

In addition to the findings of the previous steps, the council is also required to determine whether special circumstances exist in relation to the application that warrant notification of the application to any other persons not already determined as eligible for limited notification.

In this instance, having regard to the assessment in section 6.1.4 above, it is considered that special circumstances do not apply.

7.2 Section 95E Statutory Matters

If the application is not publicly notified, a council must decide if there are any affected persons and give limited notification to those persons. A person is affected if the effects of the activity on that person are minor or more than minor (but not less than minor).

In deciding who is an affected person under section 95E:

- Adverse effects permitted by a rule in a plan or national environmental standard (the 'permitted baseline') may be disregarded;
- Only those effects that relate to a matter of control or discretion can be considered (in the case of controlled or restricted discretionary activities); and
- The adverse effects on those persons who have provided their written approval must be disregarded.

These matters were addressed in section 6.2 above, and an no written approvals have been provided.

Having regard to the above provisions, an assessment is provided below.

7.3 Assessment of Effects on Persons

Adverse effects in relation to character and amenity, visual dominance, shading, privacy, residential intensity and subdivision layout on persons are considered below.

Wider effects, such as built character and amenity, transportation, servicing and construction activities were considered in section 6.4 above, and it considered that any adverse effects in this regard will be less than minor in terms of the wider environment, the same applies in regards to these matters, where relevant, in the localised context.

7.3.1 Persons at 26 Bonnett Road and 2, 3, 3A, 4, 5, 6 & 7 Masters Place

These properties are all owned by Kāinga Ora (with the exception of 3A Masters Place), however written approvals have not been sought from the occupiers, as such these properties have been considered as part of the limited notification assessment. Overall, and adverse effects on these properties, particularly when considering the permitted baseline, are considered to be less than minor for the following reasons:

- Visual dominance, shading and privacy: The proposed residential units comply with all required setbacks removing any potential risk for shading effects to occur beyond those provided for by the plan.

  The proposal provides generous landscaped areas creating a high degree of open space within the setbacks with the buildings sited centrally within each proposed lot which will have the effect of reducing their apparent size.

  This combined with the placement of windows, use of varying materials and landscaping including the use of fruit trees within these frontages will assist in reducing any potential dominance and privacy effects beyond what could otherwise be achieved as a permitted baseline.

  The proposed dwelling on Lot 2 will result in a minor infringement to the sunlight standards in the south western portion of the site adjoining Lot 8 DP 54761 (2 Masters Place). The infringement in this location (refer to Figure 4) is a small portion of the eaves only. This adjacent property is a rear site and the area adjacent to the infringement is the pan handle accessway to this property. As such it is considered that the proposed infringement will have less than minor effects on sunlight and shading on the adjoining property. Further, the proposed infringement is not anticipated to result in any adverse effects on privacy. The bulk of the building including all external walls comply with the required setbacks and as such the infringement does not result in habitable rooms and associated windows being within the boundary setbacks or area of sunlight infringement. As such no issues of overlooking or privacy are expected to result from this proposed infringement.

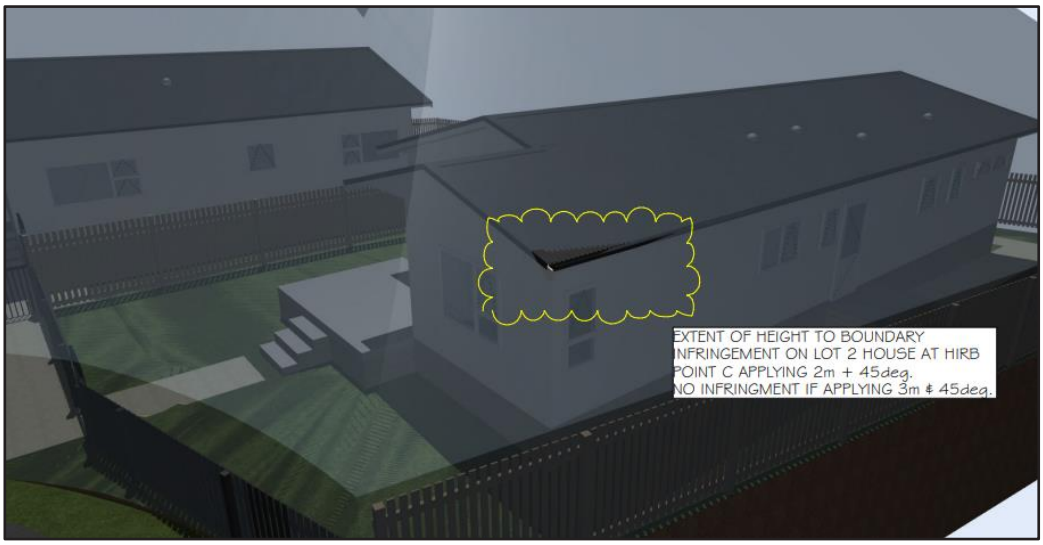


Figure 4: Sunlight infringement adjoining 2 Masters Place. Source: CTM Architectural Ltd.

- Residential Intensity: As a permitted activity across the site, building coverage of 45% could be provided for. Due to the considered design, while two residential units are proposed this results in only 27% coverage across the site. As indicated earlier, the density could have been achieved as a restricted discretionary activity had it not been for the shortfall in minimum dimensions.

  The bulk of the built development generally complies with what is permitted in this zone, and the intensity of development is similar to that which can be anticipated as a restricted discretionary activity in this zone. It is considered that the non-complying breach to the residential intensity rule does not result in any adverse effects on neighbouring properties which are minor or more than minor.

- Traffic movements: Access to the lots will be via a double width vehicle crossing. It is acknowledged that the proposal will generate more traffic movements, however, the proposal results in compliance with the permitted traffic intensity thresholds.

7.3.2 Persons at 24 Bonnett Road

In addition to the above assessment, any adverse effects beyond the permitted baseline on the property at 24 Bonnett Road are considered to be less than minor for the following reasons:

- Visual dominance, shading and privacy: The property at 24 Bonnett Road adjoins the rear boundary of the application site. The proposal achieves a high level of compliance with the bulk and location controls, particularly with this adjoining property.

  The only infringement on this boundary is a sunlight breach occurring at the rear boundary, the degree of non-compliance is shown in Figure 5 below. It's considered that any adverse shading effects caused by this noncompliance beyond what could be achieved as a permitted baseline will be less than minor.

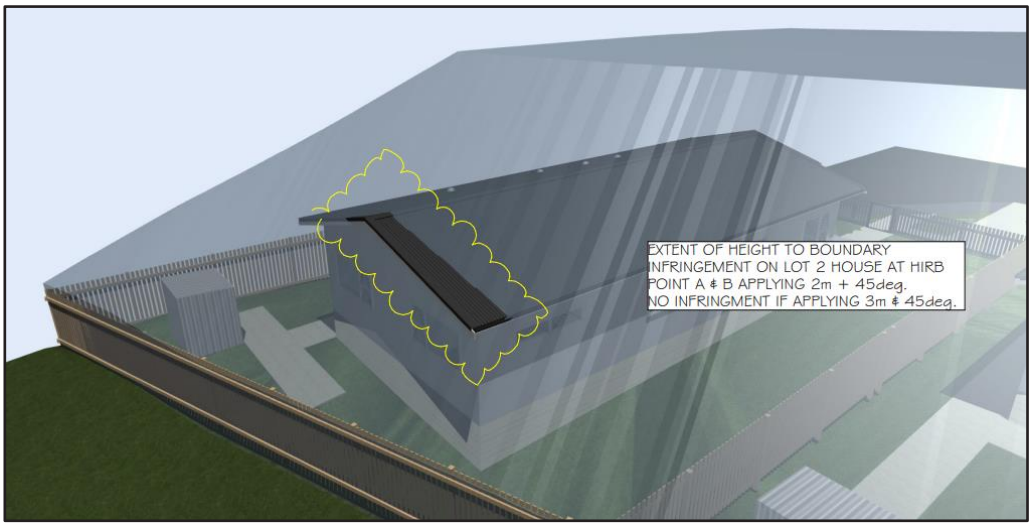


Figure 5 showing the sunlight infringement. Source: CTM Architectural Ltd.

The portion of the property at 24 Bonnett Road which is adjacent to the proposed infringement area contains a swale-like feature which is densely vegetated with mature vegetation and contains no habitable buildings nor is it likely to in this location due to the stormwater storage depression. The existing dwelling on this site is located nearer to the front of the site and is approximately 23m from the proposed infringement. As such it is considered that the proposed infringement will not result in any adverse shading or privacy effects on the adjoining property that are minor or more than minor.

7.3.3 Summary of Effects

Taking the above into account, it is considered that any adverse effects on persons at the aforementioned properties beyond the permitted baseline will be less than minor in relation to visual dominance, shading, privacy, residential intensity and traffic movements effects. Wider effects, were assessed in section 6.4 above and are considered to be less than minor.

It is considered, therefore, that there are no adversely affected persons in relation to this proposal.

7.4 Limited Notification Conclusion

Having undertaken the section 95B limited notification tests, the following conclusions are reached:

- Under step 1, limited notification is not mandatory;
- Under step 2, limited notification is not precluded;
- Under step 3, limited notification is not required as it is considered that the activity will not result in any adversely affected persons; and
- Under step 4, there are no special circumstances.

Therefore, it is recommended that this application be processed without limited notification.

8.0 Consideration of Applications (Section 104)

8.1 Statutory Matters

Subject to Part 2 of the Act, when considering an application for resource consent and any submissions received, a council must, in accordance with section 104(1) of the Act have regard to:

- Any actual and potential effects on the environment of allowing the activity;
- Any relevant provisions of a national environmental standard, other regulations, national policy statement, a New Zealand coastal policy statement, a regional policy statement or proposed regional policy statement; a plan or proposed plan; and
- Any other matter a council considers relevant and reasonably necessary to determine the application.

As a non-complying activity, section 104D of the Act states that a council may only grant the application if:

(a) adverse effects will be no more than minor; or

(b) the activity is not contrary to the objectives and policies of the relevant plans.

9.0 Effects on the Environment (Section 104(1)(A))

In the context of the wider environment the following actual and potential effects of the proposed activity were assessed:

- built character and amenity (including visual dominance, shading, privacy, intensity and traffic movements);
- transportation;
- infrastructure and servicing, and
- construction activities.

Having regard to these actual and potential effects on the environment, and the mitigation measures proposed which include carefully considered siting and design, it was concluded in the assessment above that any wider adverse effects relating to the proposal will be less than minor and that no persons would be adversely affected by the proposal.

Further, it is considered that the proposal will also result in positive effects including:

- The development of two new residential units in an established residential area that will give effect to the environmental quality and amenity value outcomes sought by the FNDP;
- The housing will provide a positive response to increased demand for housing, and importantly a range of housing typologies. It will provide warm, dry, safe and low maintenance homes that will accommodate residents'; and
- The additional homes will provide living opportunities that are in close proximity to a range of local amenities.

Overall, it is considered that when taking into account the positive effects, any actual and potential adverse effects on the environment of allowing the activity are acceptable.

10.0 District Plan and Statutory Documents (Section 104(1)(B))

10.1 Objectives and Policies of the FNDP

10.1.1 Chapter 7 Urban Environment & Chapter 7.6 Residential Zone

Given the sites location within the Residential Zone, the objectives and policies of Chapter 7 Urban Environment have been considered. Objectives 7.3.1 – 7.3.6 Urban Environment Chapter generally seek to enable a variety of urban activities, particularly where infrastructure is underutilised, where adverse effects on the environment and the character and amenity of the area are not adversely affected.

The policies of relevance (7.4.1-7.4.5, and 7.4.6- 7.4.9) seek to provide for this by ensuring that the level of effect is commensurate with what is appropriate for a residential setting, and that new urban development avoids adversely effecting natural values, areas of natural hazards where it could adversely affect the physical resources of the urban environment or pose a risk to safety. In addition, they seek to ensure that adverse effects on infrastructure are avoided, remedied or mitigated, and that urban areas with distinctive characteristics will be managed to maintain and enhance that value.

Objectives of relevance within Chapter 7.6 Residential Zone (7.6.3.1 ,7.6.3.2 and 7.6.3.3) further refine this by specifying that development of new residential areas should be at similar densities sites to existing residential areas, that a wide range of activities should be enabled where the effects are compatible with residential activities and that special amenity values on urban fringes should be protected.

The policies of particular relevance (7.6.4.4, 7.6.4.7 – 7.6.4.6.10) seek to achieve this by providing for a range of housing types and forms, have sufficient land to provide for on-site amenity, parking and manoeuvring.

It is considered that the proposal generally accords with the objectives and policies of these chapter for the following reasons:

- The only natural hazard applicable to the site is flooding. Fixed floor levels and stormwater management has been designed on the latest available information to ensure that no exacerbation of the flood risk results, and that there are no adverse effects to the safety of future residents;
- The proposal will result in efficient use of infrastructure through intensification within an existing residential area which is considered a sustainable outcome;
- While it is acknowledged that the proposed lot size is slightly smaller to the current lot sizes on Masters Place, the residential intensity and style of buildings proposed is consistent with the surrounding environment. The proposal also makes efficient use of a serviced site while ensuring that the character and amenity of the existing environment (which in this case is not considered to be 'distinctive' or 'special' in anyway) is not adversely affected through sensitive design and site layout;

- Onsite amenity has been carefully considered:
    - Detailed site planning and building design has been applied to ensure that a good level of internal and external amenity is provided for each residential unit. It is considered that future residents will experience a good level of amenity and liveability, and privacy through central placements of the dwellings creating spacious outdoor areas with good solar access.
    - The internal layouts are efficiently designed, and all of the residential units are relatively generous in terms of their floor area, including modest sized bedrooms and living areas as detailed on the floor plans in Appendix 2. The living areas of each of the respective units open onto decks which are sized to easily accommodate a table and chairs. The units also have large areas of lawn in addition to the decks. The outdoor spaces are directly accessible from main living areas, which have reasonably generous areas of glazing to allow for good daylight and solar access.
    - Overall, the size, private open space, daylight access, and ventilation of the proposed units will provide quality living environments for future residents. The proposed landscaping treatment, which includes a variety of hardscape surfaces and planting (including fruit trees), will also provide positive benefits for the residents.
- The development generally complies with the bulk and location controls and therefore is generally in keeping with the anticipated built form. Careful consideration has been given to ensuring a level of privacy and peacefulness both internally and externally as assessed earlier and it considered that the potential to adversely affect adjacent residential activities in this regard have been avoided or mitigated through careful placement to ensure that while minor non compliances have occurred, less than minor effects will result when considering the permitted baseline. In summary, the density proposed enables a range of housing that meets the needs of the community while remaining consistent with the general character of the neighbourhood. As such, it is considered that the proposal sits comfortably with policy direction for this zone.

10.1.2 Chapter 13 Subdivision

The relevant objectives (13.3.1, 13.3.2, 13.3.5 – 13.3.10) and policies (13.4.1 – 13.4.5, 13.4.8, 13.4.11 - 13.4.15) generally seek to ensure that land is developed in a manner that is consistent with the zoning, does not accelerate natural hazards and does not generate reverse sensitivity effects, or compromise the life supporting capacity of soil, air, water or ecosystems. They also seek to ensure that subdivisions are adequately serviced, encourage design that supports energy efficient design including through orientation, and efficient use of infrastructure.

The proposal is considered to accord with the objectives and policies of this chapter for the following reasons:

- The proposed lot sizes are smaller than those existing within the surrounding residential environment. However, it is noted that most of these titles pre-date the current FNDP which could suggest that there has not been an economic incentive or the demand within this area to uptake the development intensity enabled in the plan as a discretionary activity;

- While the required allotment dimensions can't be achieved, the design of the development is such that residential units can be established largely within the permitted bulk and location controls, and a high level of on-site amenity achieved;
- Safe and efficient vehicular and pedestrian access can be achieved to the new properties;
- Connections to services have been provided for;
- The report prepared by LDE confirms that the proposal will not accelerate flood risk within the catchment;
- The proposal is not greenfield development and instead seeks to increase housing supply on an existing residential site; this is considered to not only result in an efficient use of existing infrastructure and land, but reduce the potential for reverse sensitivity;
- The residential units have been orientated where possible to support energy efficient design; and
- Stormwater and earthworks will be managed so as to ensure the life supporting capacity of water is not compromised, while the life supporting capacity of the soil will be reduced, the intensification of an existing site is considered a preferable outcome.

In summary, the proposed lot sizes are smaller than that anticipated in the FNDP as a controlled activity, however, meet the alternative threshold for Discretionary activities. While the proposal will result in a slightly denser development than currently existing in the surrounding environment, it is considered to be consistent with the general character being a single storey, single detached dwelling on an individual lot. The proposal facilitates sustainable development through the efficient use of infrastructure within a residential zone and provides housing that is desperately needed within this area in particular, but in general the wider district. On this basis, the proposal is not considered to contradict the anticipated outcomes of the Subdivision chapter and is not contrary to the directions of the Residential Zone.

10.1.3 Chapter 15 Transportation

The relevant objectives (15.1.3.1, 15.1.3.3, and 15.1.3.5) and policies (15.1.4.1 – 15.1.4.4, 15.1.4.6 -15.1.4.7) generally seek to ensure adverse effects on the existing transportation network are minimised, and that appropriate provision for carparking, pedestrian safety and efficient movement of vehicles is provided for.

The proposal results in some non-compliances with the transportation chapter due to the reduced number of carparks proposed and the width of the double crossings. However as assessed earlier, this does not compromise the ability for pedestrian safety and efficient movement of vehicles to be accommodated within the site, and at the interface with the wider environment.

The proposal will result in increased traffic movements, but the volume of anticipated traffic movements accords with what is anticipated in this zoned.

In summary, the proposal is in keeping with the objectives and policies of this chapter.

10.2 Objectives and Policies of the Proposed Far North District Plan

The proposed Far North District Plan is operative in part with only limited provisions having immediate legal effect.

10.2.1 General Residential Zone

Objectives of the General Residential Zone seek to provide a variety of densities, housing types and lot sizes, consolidate urban residential development where appropriately serviced, functional and high amenity living environments and build resilient communities.

The objectives are met as the proposal is for two new residential dwellings in the General Residential Zone within an existing residential area of Kaitaia. The proposal has adequate connection to development infrastructure and has a high amenity living environment, this supports the role and function of the General Residential Zone.

Policies of the General Residential Zone seek to enable development where it can be appropriately serviced, is consistent with the scale, character and amenity anticipated in the residential environment, incorporates onsite water storage, and provides for high quality residential environments.

The above is met as the proposal is for two new residential dwellings in the General Residential Zone. The proposal has adequate connection to development infrastructure and has a high amenity living environment that has sufficient outdoor living space and access to sunlight, supporting the role and function of the general residential zone.

While the proposed objectives and policies have little relevance as they do not have any immediate effect, it is considered that the proposal achieves the anticipated outcomes sought by the zone.

10.3 Objectives and Policies of the Northland Regional Policy Statement

The Northland Regional Policy Statement (**NRPS**) covers the management of natural and physical resources across the Northland Region. The provisions within the NRPS give guidance at a higher planning level in terms of the significant regional issues. As such it does not contain specific rules that trigger the requirement for consent but rather give guidance to consent applications and the development of District Plans on a regional level.

Amongst other things the RPS presents policies regarding regional form in 5.1.1 which are relevant for the consideration of the proposed development.

5.1.1 Policy – Planned and coordinated development

Subdivision, use and development should be located, designed and built in a planned and co-ordinated manner which:

(a) Is guided by the 'Regional Form and Development Guidelines' in Appendix 2;

(b) Is guided by the 'Regional Urban Design Guidelines' in Appendix 2 when it is urban in nature;

(c) Recognises and addresses potential cumulative effects of subdivision, use, and development, and is based on sufficient information to allow assessment of the potential long-term effects;

(d) Is integrated with the development, funding, implementation, and operation of transport, energy, water, waste, and other infrastructure;

(e) Should not result in incompatible land uses in close proximity and avoids the potential for reverse sensitivity;

(f) Ensures that plan changes and subdivision to / in a primary production zone, do not materially reduce the potential for soil-based primary production on land with highly versatile soils10,

or if they do, the net public benefit exceeds the reduced potential for soil-based primary production activities; and

(g) Maintains or enhances the sense of place and character of the surrounding environment except where changes are anticipated by approved regional or district council growth strategies and / or district or regional plan provisions.

(h) Is or will be serviced by necessary infrastructure.

Particular consideration has been given to 5.1.1(a) and (b) and it is considered that the proposal is in accordance with the Regional Form Development Guidelines and the Regional Urban Design Guidelines. In particular, the proposed development incorporates quality urban design principles including context, character, choice, connections, creativity custodianship and collaboration.

With specific reference to 5.1.1(d) and (h), the proposal can be adequately serviced in terms of transportation, water, wastewater, and stormwater by existing and proposed infrastructure as highlighted within the Engineering memo (see Appendix 4).

In addition, the proposed development is considered to be compatible with the predominantly residential land uses. It is considered that the sense of place and character associated with the surrounding environment will be maintained. It is highlighted that the bulk of the built development generally complies with what is permitted in this zone and the intensity of development is similar to that which can be anticipated as a restricted discretionary activity in this zone. Thereby, the proposal satisfies 5.1.1(e) and (g).

For these reasons, it is considered that the proposal is consistent with the relevant RPS provisions.

10.4 National Policy Statement Urban Development

The National Policy Statement Urban Development 2020 (NPS UD) requires councils to plan well for growth and ensure a well-functioning urban environment for all people, communities and future generations. The NPS UD also provides Councils the necessary policy direction to allow further urbanisation where it may not have previously been anticipated or supported by operative planning frameworks.

The NPS UD 2020 recognises the national significance of:

- Having well-functioning urban environments that enable all people and communities to provide for their social, economic, and cultural wellbeing, and for their health and safety, now and into the future.
- Providing sufficient development capacity to meet the different needs of people and communities.

Kaitaia is not captured as a tier 1-3 urban environment currently, but could be within the lifetime of this policy statement. Regardless, the general direction of the NPS UD seeks to support the appropriate urbanisation and intensification of land zoned residential land which has high accessibility to open space, schools and commercial centres (as outlined in section 3.1) is considered to be of some relevance. Whilst the density proposed does not meet the minimum requirements of the ODP to be assessed as a controlled activity, the NPS UD further supports the proposed land use and subdivision. In particular, the proposal:

- Provides for additional household units which will result in a more efficient use of the site, as anticipated and required by the NPS UD;

- Allows for greater intensification of residential activities in an area that is already zoned for residential development and that is already serviced by existing infrastructure and a public transport network;
- Contributes to a well-functioning urban environment by enabling a range of homes to meet the needs, in terms of type, price and location, of different households;
- Provides an opportunity for an urban environment, including its amenity value, to develop and change over time; and
- Is generally consistent with Central Governments expectations for forthcoming urban infill developments for urban environments.

For these reasons the proposal is considered consistent with the relevant provisions of the NPS-UD.

10.5 Summary

It is considered that the proposed development is generally in accordance with the objectives and policies of the FNDP, NRPS and NPS UD.

11.0 Part 2 Matters

Section 5 of Part 2 identifies the purpose of the RMA as being the sustainable management of natural and physical resources. This means managing the use, development and protection of natural and physical resources in a way that enables people and communities to provide for their social, cultural and economic well-being and health and safety while sustaining those resources for future generations, protecting the life supporting capacity of ecosystems, and avoiding, remedying or mitigating adverse effects on the environment.

Section 6 of the Act sets out a number of matters of national importance including (but not limited to) the protection of outstanding natural features and landscapes and historic heritage from inappropriate subdivision, use and development.

Section 7 identifies a number of "other matters" to be given particular regard by Council and includes (but is not limited to) Kaitiakitanga, the efficient use of natural and physical resources, the maintenance and enhancement of amenity values, and maintenance and enhancement of the quality of the environment.

Section 8 requires Council to take into account the principles of the Treaty of Waitangi.

Overall, as the effects of the proposal are considered to be less than minor and acceptable, and the proposal accords with the relevant FNDP objectives and policies, it is considered that the proposal will not offend against the general resource management principles set out in Part 2 of the Act.

12.0 Other Matters (Section 104(1)(C))

12.1 Record of Title Interests

The Record of Title for the site are subject to a number of interests (refer **Appendix 1**). None of these are anticipated to affect the resource consent application as discussed in **Table 1** below:

Table 1: Record of Title interests

Interest	Comment
Lot 9 DP 54761	
10328082.1 Certificate under section 178(1) of the Te Aupouri Claims Settlement Act 2015	This certificate establishes that the land is subject to a Right of First Refusal to Te Aupouri should it be sold or leased and is of no direct relevance to the application, however, it is acknowledged that Te Aupouri will likely be considered an interested party.
10368119.1 Certificate under 177(1) NgaiTakoto Claims Settlement Act 2015	Same as above but the Right of First Refusal is to NgaiTakoto.
10369060.1 Certificate under 106 Te Rarawa Claims Settlement Act 2015	Same as above but the Right of First Refusal is to Te Rarawa.

13.0 Section 104D Non-complying Activities

To be able to grant consent to a non-complying activity, a council must be satisfied that either the adverse effects of the activity on the environment will be minor (s104D(1)(a)), or the proposed activity will not be contrary to the objectives and policies of a proposed plan or plan (s104D(1)(b)). This consideration is commonly known as the 'threshold test' or the 'gateway test'. If either of the limbs of the test can be passed, then the application is eligible for approval, but the proposed activity must still be considered under section 104. There is no primacy given to either of the two limbs, so if one limb can be passed then the 'test' can be considered to be passed.

As identified in the assessment above, the adverse effects of the activity on the environment will be less than minor and the proposed activity will not be contrary to the objectives and policies of the plan. As such the application can be considered under section 104 and a determination made on the application as provided by section 104B.

14.0 Section 106 Subdivision

Under section 106 of the Act, a consent authority may refuse to grant a subdivision consent if it considers that there is significant risk from natural hazards, or sufficient provision has not been made for legal and physical access to each allotment to be created by the subdivision.

The site is not identified within any mapped hazard areas in the Operative District Plan, but is mapped by Northland Regional Council as being affected by the 1-50 and 1-100 year River Flood

Hazard. Overall, it is considered that the proposed subdivision satisfies section 106 of the RMA for the following reasons:

- LDE have undertaken assessment based on more up to date information included more detailed design of the proposed activity included in Appendix 4 (see section referenced Flood Risk. The LDE report concludes that FFL of 13.2m (NZVD) across the proposed new development will achieve compliance with the freeboard required in the FNDC Engineering standards when based on the NRC modelled 100-year event level. With regards to section 106, considering the FFL proposed, and the piled foundations the proposed development is not considered to accelerate or worsen material damage to land or structures as a result from flooding.
- To address any potential land stability effects, a geotechnical review was undertaken by LDE (included as Appendix 5) which covers on-site soil conditions and suitable building platforms and foundations. The report finds that the proposed development is suitable from a geotechnical perspective on the basis of adherence with their recommendations which is anticipated to be required by way of condition of consent.
- Taking into account the above matters, it is considered that the proposed development does not present significant risk from natural hazards nor through the subdivision of land accelerate, worsen or result in material damage on other land, structures or the subject site. All structural matters will be assessed as part of the building consent process. These building works will be undertaken in accordance with the Building Act and Building Code standards.
- Sufficient provision has been made as part of the subdivision for legal and physical access to all allotments.

On the basis of the above, it is considered that the proposed subdivision satisfies there is any grounds for Council to refuse consent under Section 106.

15.0 Conclusion

The proposal involves the construction of two new residential units, and a concurrent two lot fee simple subdivision around the proposed residential development at 1 Masters Place, Kaitaia.

Based on the above report it is considered that:

- Public notification is not required as adverse effects in relation to built character and amenity, transportation, infrastructure and servicing and construction are considered to be less than minor. There are also positive effects including two new residential units within an established residential neighbourhood;
- Limited notification is not required as no persons at adjacent properties are considered to be adversely affected by the proposal. While the density of development is not necessarily consistent with the immediately adjoining properties this on its own does not necessarily generate adverse effects. In this instance, when taking into account the planned built environment, the design, landscaping, and separation distances achieved it considered that effects on adjoining properties will be less than minor;
- The proposal accords with the relevant FNDC, NRPS and NPS UD; and
- The proposal is considered to be consistent with Part 2 of the Act.

It is therefore concluded that the proposal satisfies all matters the consent authority is required to assess, and that it can be granted on a non-notified basis.

RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier	**NA102D/439**
Land Registration District	**North Auckland**
Date Issued	26 April 1996

Prior References
NA6B/415

Estate	Fee Simple
Area	726 square metres more or less
Legal Description	Lot 9 Deposited Plan 54761
Registered Owners	

Housing New Zealand Limited

Interests

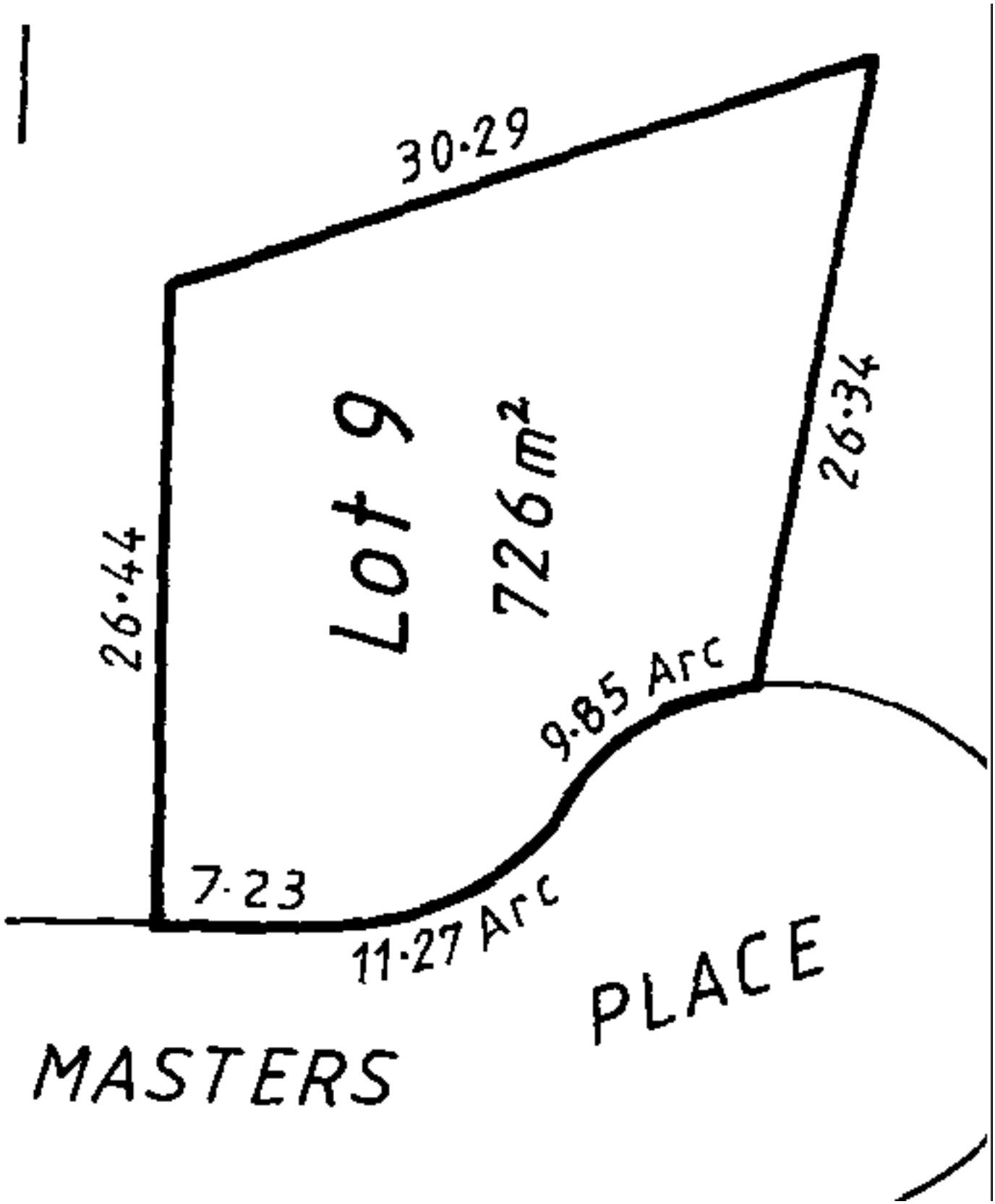
Subject to Part IV A Conservation Act 1987

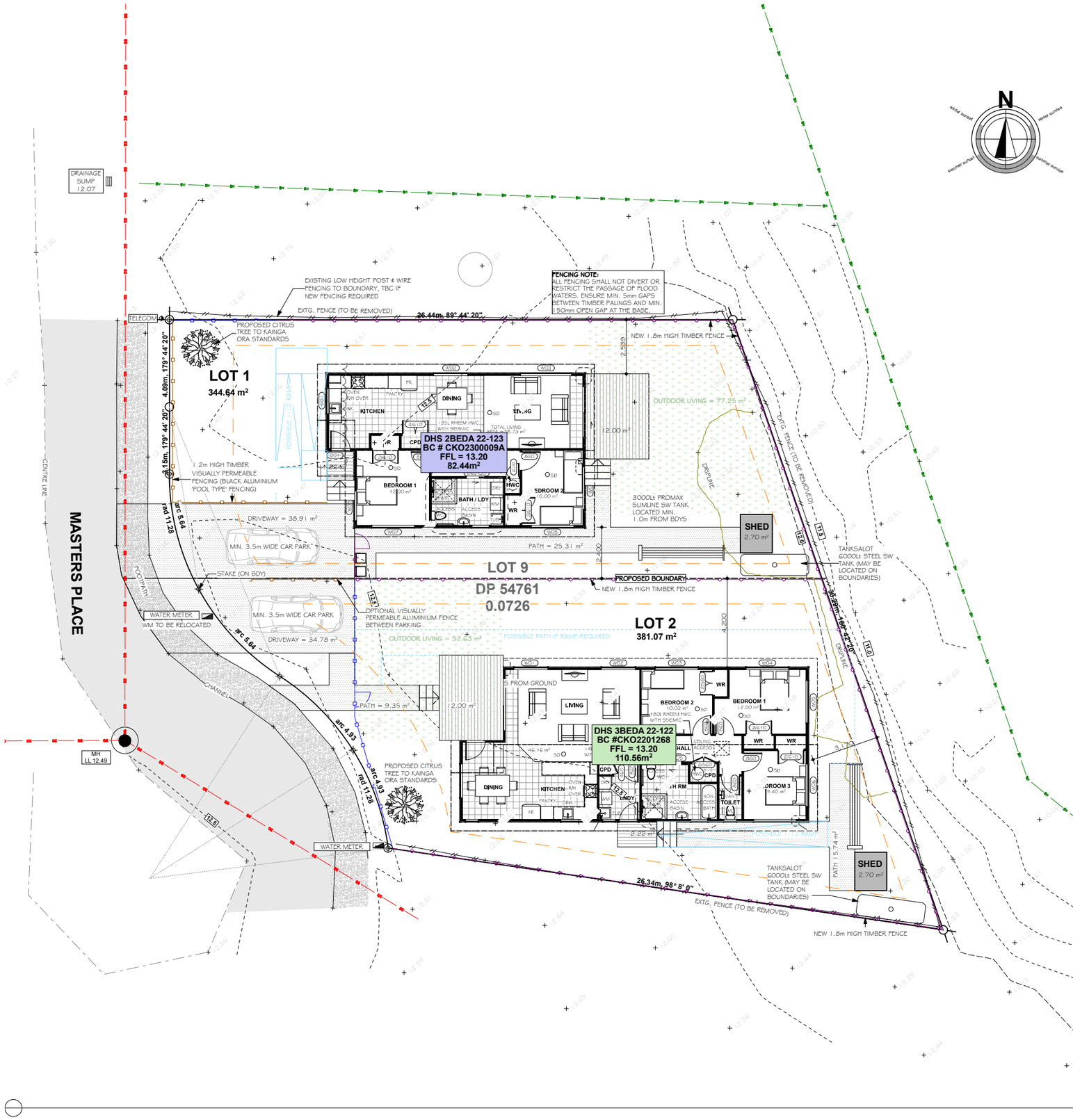
Subject to Section 11 Crown Minerals Act 1991

10328082.1 Certificate under section 178(1) of the Te Aupouri Claims Settlement Act 2015 that the within land is RFR land as defined in section 154 and is subject to Subpart 4 of Part 3 of the Act (which restricts disposal, including leasing, of the land) - 9.2.2016 at 7:00 am

10368119.1 Certificate under section 177(1) of the NgaiTakoto Claims Settlement Act 2015 that the within land is RFR land as defined in section 154 and is subject to Subpart 4 of Part 3 of the Act (which restricts disposal, including leasing, of the land) - 17.3.2016 at 7:00 am

10369060.1 Certificate under section 206 of the Te Rarawa Claims Settlement Act 2015 that the within land is RFR land as defined in section 183 of that Act and is subject to Subpart 4 of Part 3 of the Act (which restricts disposal, including leasing, of the land) - 17.3.2016 at 7:00 am


30·29
26·34
26·44
Lot 9
726m²
9·85 Arc
7·23
11·27 Arc
PLACE
MASTERS



LEGAL DESCRIPTION & SITE DETAILS

1 MASTERS PLACE,
KAITAIA
TERRITORIAL AUTHORITY-
FAR NORTH DISTRICT COUNCIL

LOT 9 DPS 54761
SITE AREA 726m²

OPERATIVE PLANNING ZONE:
RESIDENTIAL
PROPOSED PLANNING ZONE:
GENERAL RESIDENTIAL

SITE DETAILS PER BRANZ MAPS

CLIMATE ZONE	1
CORROSION ZONE	ZONE C OUTSIDE SEASPRAY
EARTHQUAKE ZONE	ZONE 1
RAINFALL INTENSITY	80-90mm
WIND REGION	A
WIND ZONE	MEDIUM

LEGEND

- PROPOSED 1.2m TIMBER FENCE
- 1.2m VISUALLY PERMEABLE FENCE
- PROPOSED 1.8m TIMBER FENCE
- EXISTING FENCE
- EXTG STORMWATER DRAIN
- NEW STORMWATER DRAIN
- EXTG WASTE WATER DRAIN
- NEW WASTE WATER DRAIN
- YARD SETBACKS

SHED NOTE:
INSTALL NEW PROPRIETARY GALV STEEL GARDEN SHED ON CONCRETE PAD TO EACH LOT AS INDICTATED. SHED 1.8x1.5x2.0m HIGH (OR SIMILAR SIZE). LOCATE MIN 1.0m OFF BOUNDARIES. C.O.S FINAL LOCATION.

STEPS & PATH NOTE:
STEPS SHALL BE ACCESSIBLE ie MIN. 310mm TREAD DEPTH AND MAX. 180mm RISER.
PATHS TO BE MIN. 1200mm WIDE (EXCEPT THAT SERVICE AREA PATHS MAY BE LESS TO MIN. 800mm WIDE). MAXIMUM CROSS FALL OF 1:50 TO PREVENT WATER PONDING.

Operative Far North District Plan: Residential Zone
The Residential Zone enables the development of residential areas where the effects of activities permitted in the zone are compatible with sustainable development and with the existing character and amenity, which is typically medium density residential living.

An activity is a permitted activity in the Residential Zone if:
a) it complies with the standards for permitted activities set out in Rules 7.6.5.1.1 to 7.6.5.1.17 below; and
b) it complies with the relevant standards for permitted activities set out in Part 3 of the Plan - District Wide Provisions.

Otherwise, consent is required as a restricted discretionary or discretionary activity.

Rules 7.6.5.1.1 to 7.6.5.1.17

- Each residential unit for a single household shall have available to it a minimum net site area of 600m² (sewered sites)
  - This minimum net site area may be for the exclusive use of the residential unit, or as part of land held elsewhere on the property, provided that a ratio of one residential unit per minimum net site area (as stated above) is not exceeded.
  - *Site area greater than 300m² per dwelling = Restricted discretionary activity under 7.6.5.3.1*
  - *Site area less than 300m² per dwelling = Discretionary activity under 7.6.5.4(c)*
- Maximum building height 8m
  - *Restricted discretionary activity under rule 7.6.5.3.3 to increase up to 9m in height*
- Height in relation to boundary 2m + 45
  - A building may exceed this standard for a maximum distance of 10m along any one boundary other than a road boundary, provided that the maximum height of any building where it exceeds the standard is 2.7m
  - 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
    - Note with respect to 4 / 4a Guerin to the west – these are KO owned so written approval is implicit for any height in relation to boundary infringements but regardless, these sites are served by an access lot and as such the height in relation to boundary can be taken from the furthest point of this boundary
  - *Restricted discretionary activity under 7.6.5.3.4 to use 3m + 45*
- Impervious area – 50%
  - *Controlled activity under 7.6.5.2.1 to increase to 60% - Stormwater Report required*
- Building coverage – 45%
  - *Restricted discretionary activity under 7.6.5.3.5 to increase to 55%*
- Minimum building setback from road boundaries – 3m
- Minimum setback from other boundaries – 1.2m
- At least 50% of that part of the site between the road boundary and a parallel line 3m therefrom, which is not occupied by buildings or driveways, shall be landscaped.

Part 3 of the Plan - District Wide Provisions

- Earthworks – permitted if within 200m³ in any 12 month period per sit and 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.
  - *Restricted discretionary activity for up to 500m³ in volume*
- Transport
  - Maximum daily one way traffic movements – 20 permitted, 21-40 restricted discretionary and more than 40 discretionary
  - Access widths – 3m if serving no more than four residential units, otherwise 5m width required
  - Parking spaces – 2 per unit, *Refer below re NPS-UD.*
    NPS-UD (National Policy Statement on Urban Design) removes the minimum car parking rates from the district plan of tier 1, 2 & 3 territorial authorities.

Subdivision

- 13.6.10 - Any application arising from non-compliance with zone standards caused by the proposed subdivision shall be considered jointly with the subdivision consent
- **Controlled** activity to subdivide a minimum lot size of 600m² and **discretionary** activity to subdivide a minimum lot size of 300m² – includes vacant lots and new lots which already accommodate structures
- Must have a means for the disposal of collected stormwater from the roof of all potential or existing buildings and from all impervious surfaces. Preference is for this to be via piping to an approved outfall, each new allotment shall be provided with a piped connection to the outfall laid at least 600mm into the net area of the allotment.

SITE PLAN
SCALE AT A1 = 1:100

Kāinga Ora Homes and Communities

RevID	ChID	Revision	Date

CLIENT
KAINGA ORA - HOMES AND COMMUNITIES

ADDRESS
1 MASTERS PLACE
KAITAIA

FAR NORTH DISTRICT COUNCIL

PROJECT
PROPOSED RELOCATION - KO REF: - DHS 2BedA (22-123) and DHS 3BedA (22-122)

CTM ARCHITECTURAL Ltd

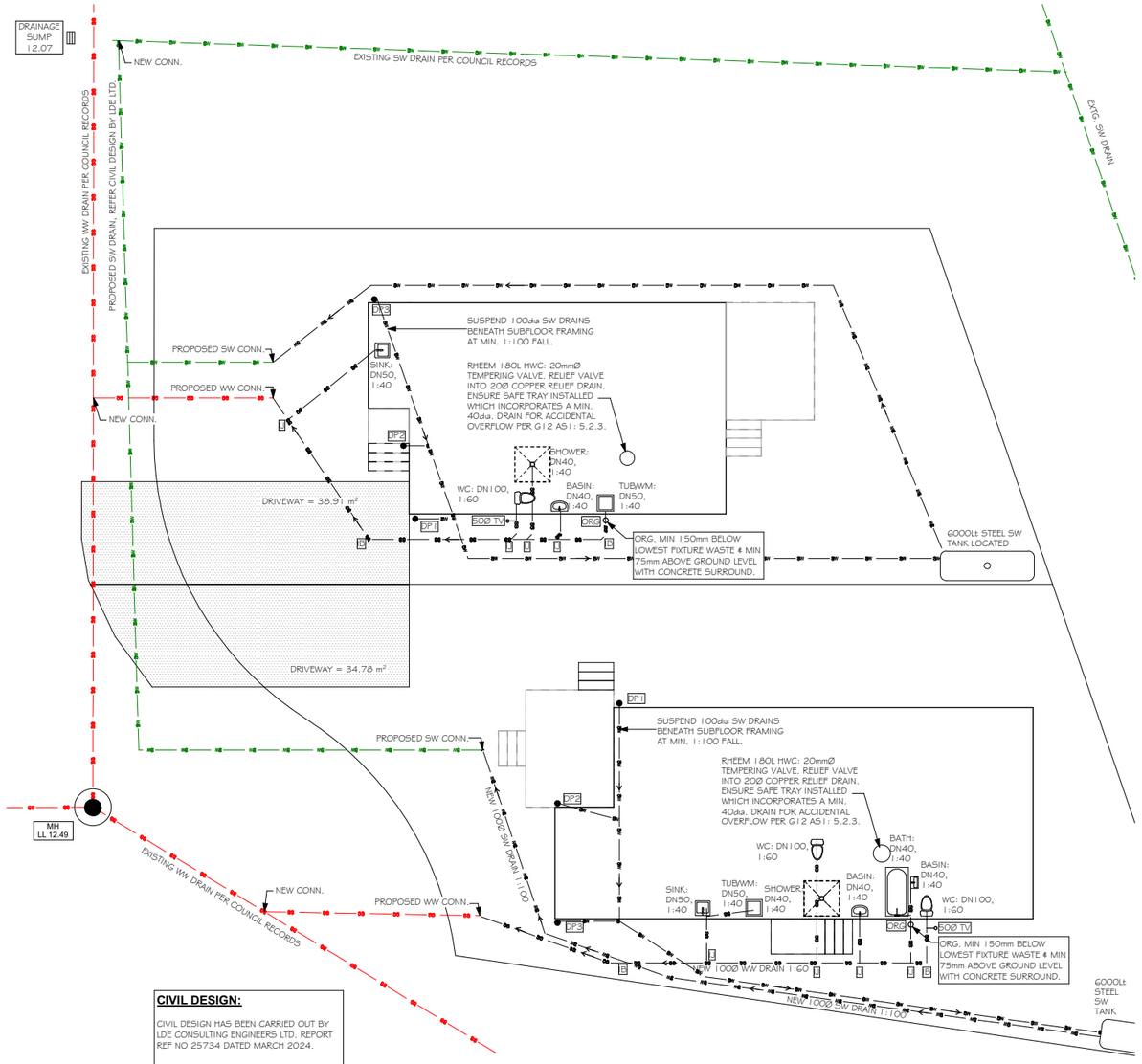
CTM ARCHITECTURAL LTD
18 SWEETCORN PLACE,
PUKEKOHE, 2120
PO Box 547
PUKEKOHE, 2340
ph/fax- 09 238 4414
web- www.ctm.net.nz
e-mail- info@ctm.net.nz

LICENSED BUILDING PRACTITIONERS
www.dbh.govt.nz
BUILDING CONFIDENCE

WORK TO N.Z.B.C. AND RELEVANT CODES
DIMENSIONS SUPERSEDE SCALE
CHECK AND VERIFY ALL LEVELS AND DIMENSIONS ON SITE BEFORE STARTING ANY WORK.

ISSUE
SCHEME 3A

DRAWN: AMY	SCALE: AS SHOWN	**A01**	
DATE: 14/03/2024	SHT FORMAT: A1		
JOB REF: 23-104	TOTAL SHTS: 04	SHEET	REVISION



PLUMBING PLAN
SCALE AT A1 = 1:100

CIVIL DESIGN:

CIVIL DESIGN HAS BEEN CARRIED OUT BY LDE CONSULTING ENGINEERS LTD. REPORT REF NO 25734 DATED MARCH 2024.

THEIR REPORT & DRAWINGS, ALONG WITH APPROVED EPA SHALL BE READ IN CONJUNCTION WITH THESE DRAWINGS.

SERVICES LEGEND:

ww	PRIVATE WW DRAIN.
ww	WW DRAIN PER CIVIL DESIGN
sw	PRIVATE SW DRAIN.
sw	SW DRAIN PER CIVIL DESIGN.
SW	STORMWATER
WW	WASTE WATER
IJ	INSPECTION JUNCTION
IB	INSPECTION BEND
ORG	OVERFLOW RELIEF GULLY
TV	50dia. TERMINAL VENT
AAV	AIR ADMITTENCE VALVE
RE	RODDING EYE
DP	MIN. 80dia. DOWN PIPE
C.O.S.	CHECK ON SITE

ALL PLUMBING & DRAINAGE WORKS TO AS3500.

PLUMBING KEY:

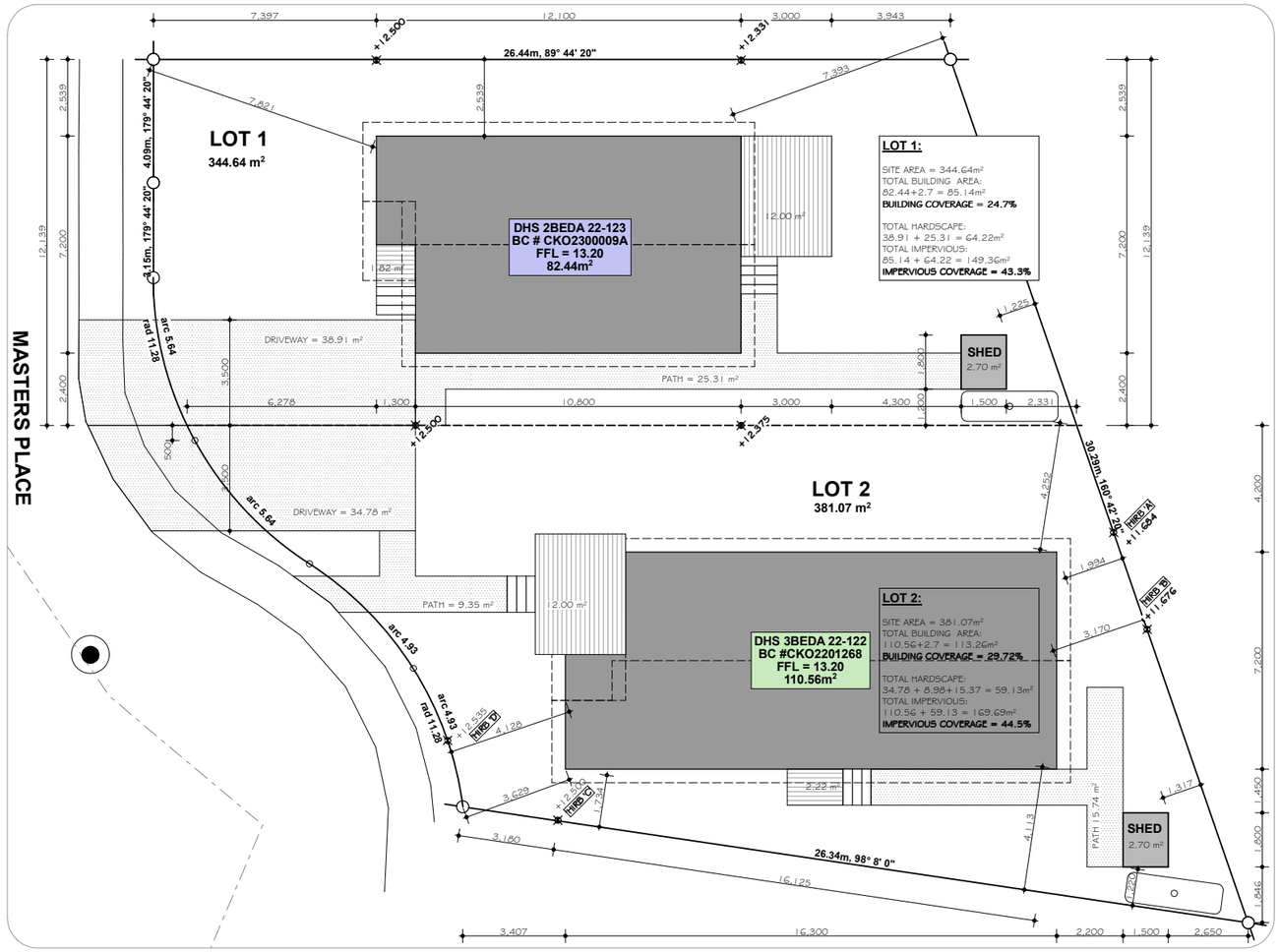
DN40 1:40
HAND BASIN
BATH
VANITY
SHOWER

DN50 1:40
SINK/DW
TUB/WM

DN100 1:60
WC

NOTES:
ALL DRAINS TO COMMENCE FROM TOP OF FLOORING UNLESS FIXTURES ARE CONNECTED TO AN ORG OR FWG. MINIMUM 65mmØ UNLESS STATED OTHERWISE.

ALL WW PIPES UNDER FLOOR TO BE MIN DNG5 1:40 UNLESS NOTED OTHERWISE



SITE PLAN - SETOUT
SCALE AT A3 = 1:100

EARTHWORKS:

PER REMEDIAL WORKS INSTRUCTION REPORT BY TONKIN AND TAYLOR REF NO 1015804.0112, SURFACE SOILS AT THIS SITE DO NOT REQUIRE REMOVAL FROM A CONTAMINATION PERSPECTIVE AS THEY ARE BELOW THE ADOPTED NESCS SCS CRITERIA.

PROPOSED EARTHWORKS:

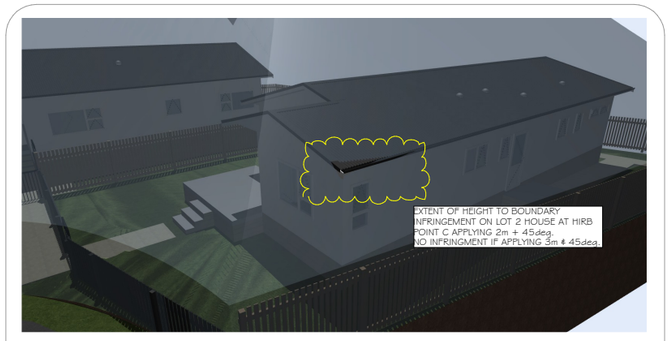
LOT 1
APPROX AREA: 185m²
(BLDG FOOTPRINT,CURTILAGE PLUS DRIVEWAY SCRAPE)
APPROX. VOLUME: 37m³
CUT HEIGHT: 0.2m
FILL HEIGHT: 0m

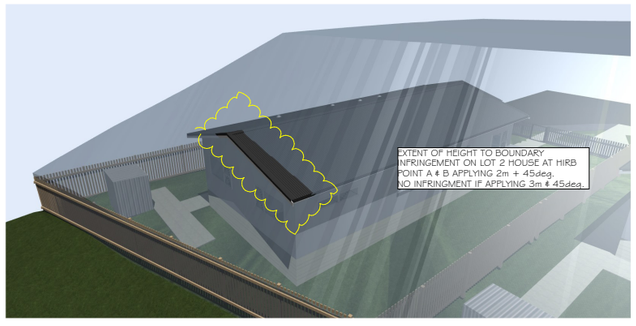
LOT 2
APPROX AREA: 210m²
(BLDG FOOTPRINT,CURTILAGE PLUS DRIVEWAY SCRAPE)
APPROX. VOLUME: 42m³
CUT HEIGHT: 0.2m
FILL HEIGHT: 0m

TOTAL AREA = 395m²
TOTAL VOLUME = 79m³

BLDG. AREAS HAVE BEEN INCLUDED AS A WORST CASE SCENARIO AS TIMBER SUBFLOOR FOUNDATIONS MAY GO INTO THE GROUND WITHOUT THE REMOVAL OF TOPSOIL PER NZS3604:2011 SECTION 3.5.2.

ALL CUT MATERIAL TO REMAIN ON SITE, SHAPED AROUND THE SITE TO SUIT. SHOULD IT BE DECIDED ON SITE TO REMOVE ANY SOILS THEN THE REMEDIAL WORKS INSTRUCTION SHALL BE ADHERED TO.





HEIGHT TO BOUNDARY INFRINGEMENT IMAGES - LOT 2 ONLY

Kāinga Ora Homes and Communities

RevID	ChID	Revision	Date

CLIENT
KAINGA ORA - HOMES AND COMMUNITIES

ADDRESS
1 MASTERS PLACE
KAITAIA

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WORK TO N.Z.B.C. AND RELEVANT CODES
DIMENSIONS SUPERSEDE SCALE
CHECK AND VERIFY ALL LEVELS AND DIMENSIONS ON SITE BEFORE STARTING ANY WORK.

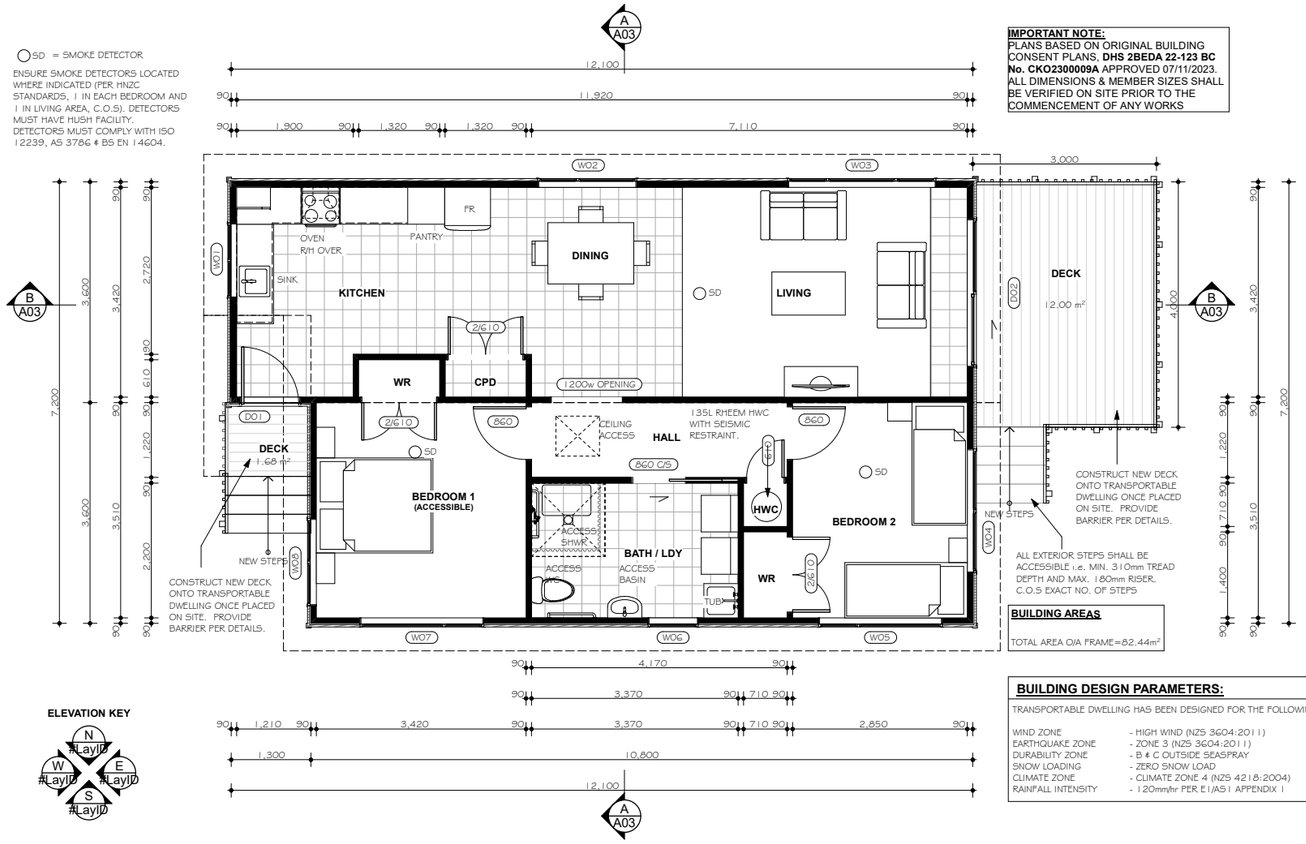
ISSUE
SCHEME 3A

DRAWN	SCALE		
AMY	AS SHOWN	A02	
DATE	SHT FORMAT		
14/03/2024	A1		
JOB REF	TOTAL SHTS	SHEET	REVISION
23-104	04		

NOTE:
THIS SHEET OF PLANS IS INDICATIVE OF HOUSE ON LOT 1
DHS 2BEDA 22-123
BC # CKO2300009A

SD = SMOKE DETECTOR

ENSURE SMOKE DETECTORS LOCATED WHERE INDICATED (PER NNZ STANDARDS, 1 IN EACH BEDROOM AND 1 IN LIVING AREA, C.O.S). DETECTORS MUST HAVE HUSH FACILITY. DETECTORS MUST COMPLY WITH ISO 12239, AS 3786 & BS EN 14604.



IMPORTANT NOTE:
PLANS BASED ON ORIGINAL BUILDING CONSENT PLANS, **DHS 2BEDA 22-123 BC No. CKO2300009A** APPROVED 07/11/2023. ALL DIMENSIONS & MEMBER SIZES SHALL BE VERIFIED ON SITE PRIOR TO THE COMMENCEMENT OF ANY WORKS

BUILDING AREAS

TOTAL AREA O/A FRAME=82.44m²

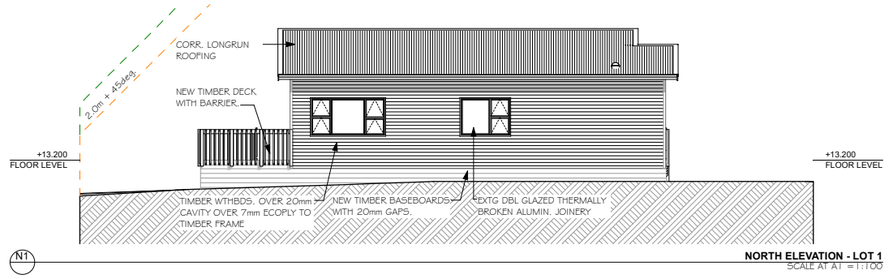
BUILDING DESIGN PARAMETERS:

TRANSPORTABLE DWELLING HAS BEEN DESIGNED FOR THE FOLLOWING:

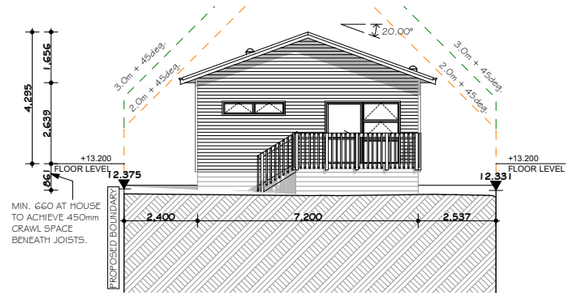
WIND ZONE	- HIGH WIND (NZS 3604:2011)
EARTHQUAKE ZONE	- ZONE 3 (NZS 3604:2011)
DURABILITY ZONE	- B & C OUTSIDE SEASPRAY
SNOW LOADING	- ZERO SNOW LOAD
CLIMATE ZONE	- CLIMATE ZONE 4 (NZS 4218:2004)
RAINFALL INTENSITY	- 120mm/hr PER E1/AS1 APPENDIX 1

ELEVATION KEY

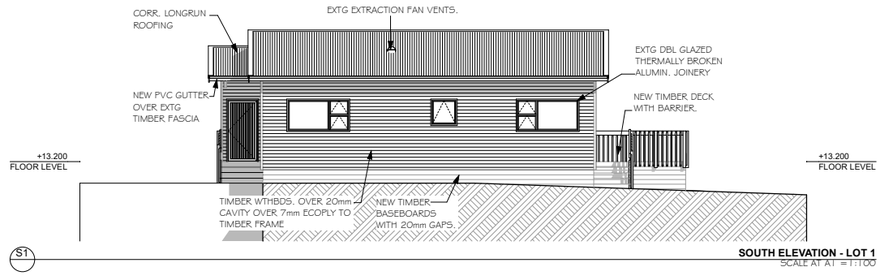
FLOOR PLAN - AS BUILT
SCALE AT A1 =1:50



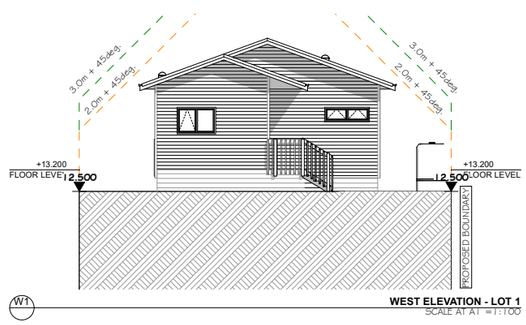
N1 **NORTH ELEVATION - LOT 1**
SCALE AT A1 =1:100



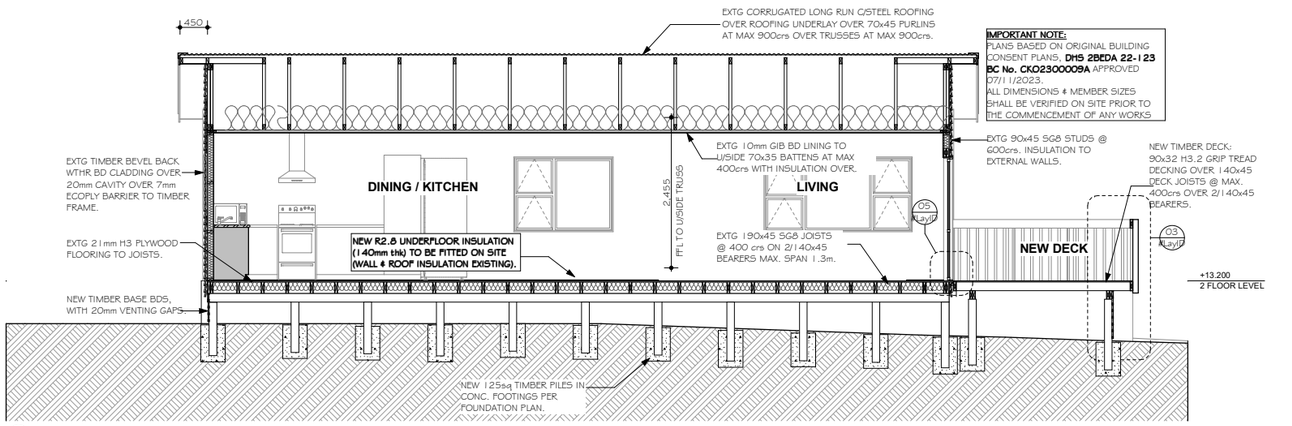
E1 **EAST ELEVATION - LOT 1**
SCALE AT A1 =1:100



S1 **SOUTH ELEVATION - LOT 1**
SCALE AT A1 =1:100



W1 **WEST ELEVATION - LOT 1**
SCALE AT A1 =1:100



B **SECTION BB**
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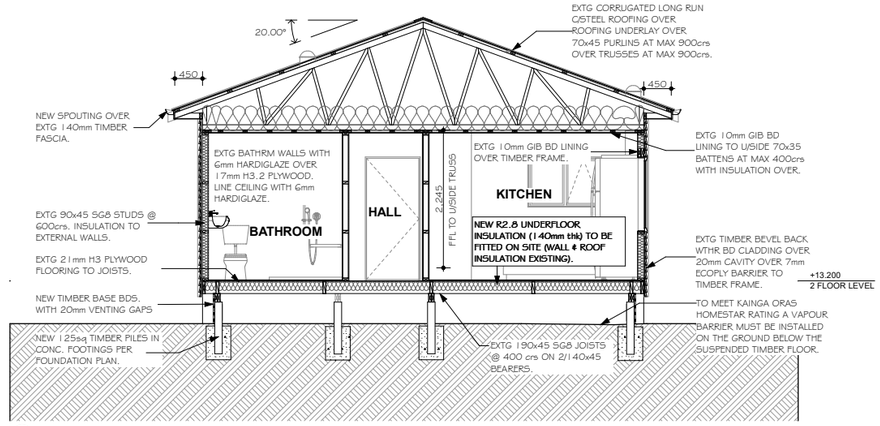

A **SECTION AA**
SCALE AT A1 =1:50

Kāinga Ora Homes and Communities

RevID	ChID	Revision	Date

CLIENT
KAINGA ORA - HOMES AND COMMUNITIES

ADDRESS
1 MASTERS PLACE
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FAR NORTH DISTRICT COUNCIL

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DIMENSIONS SUPERSEDE SCALE
CHECK AND VERIFY ALL LEVELS AND DIMENSIONS ON SITE BEFORE STARTING ANY WORK.
NOTE:-ALL ELECTRONIC AND HARDCOPY DOCUMENTS INCLUDING INTELLECTUAL PROPERTY, ARE CONFIDENTIAL & REMAIN THE PROPERTY OF "CTM ARCHITECTURAL LTD".

ISSUE
SCHEME 3A

DRAWN: AMY	SCALE: AS SHOWN	A03	
DATE: 14/03/2024	SHT FORMAT: A1		
JOB REF: 23-104	TOTAL SHTS: 04	SHEET	REVISION

NOTE:
THIS SHEET OF PLANS IS INDICATIVE OF HOUSE ON LOT 2
DHS 3BEDA 22-122
BC #CKO2201268

BUILDING DESIGN PARAMETERS:

TRANSPORTABLE DWELLING HAS BEEN DESIGNED FOR THE FOLLOWING:

WIND ZONE	- HIGH WIND (NZS 3604:2011)
EARTHQUAKE ZONE	- ZONE 3 (NZS 3604:2011)
DURABILITY ZONE	- B & C OUTSIDE SEASPRAY
SNOW LOADING	- ZERO SNOW LOAD
CLIMATE ZONE	- CLIMATE ZONE 4 (NZS 4218:2004)
RAINFALL INTENSITY	- 120mm/hr PER E1/AS1 APPENDIX 1

ELEVATION KEY

FLOOR PLAN - AS BUILT
SCALE AT A1 = 1:50

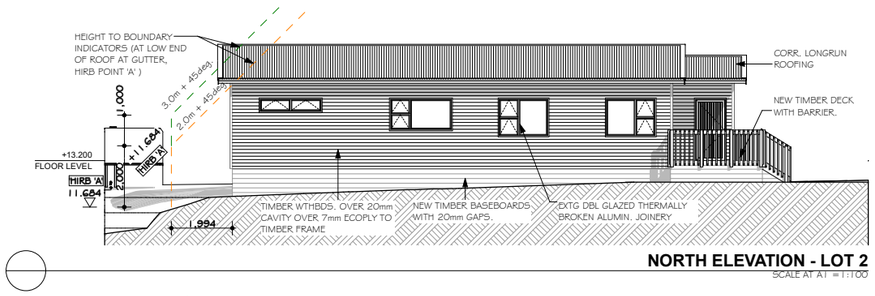
IMPORTANT NOTE:
PLANS BASED ON PREVIOUS CONSENT PLANS **DHS 3BEDA 22-122, BC No. CKO2201268 APPROVED 01/02/23 & AMENDMENT FEB 2024.**
ALL DIMENSIONS & MEMBER SIZES SHALL BE VERIFIED ON SITE PRIOR TO THE COMMENCEMENT OF ANY WORKS

BUILDING AREAS

TOTAL AREA O/A FRAME = 110.56m²

○SD = SMOKE DETECTOR

ENSURE SMOKE DETECTORS LOCATED WHERE INDICATED (PER KO STANDARDS, 1 IN EACH BEDROOM AND 1 IN LIVING AREA, C.O.S). DETECTORS MUST HAVE HUSH FACILITY. DETECTORS MUST COMPLY WITH ISO 12239, AS 3786 & BS EN 14604.



NORTH ELEVATION - LOT 2
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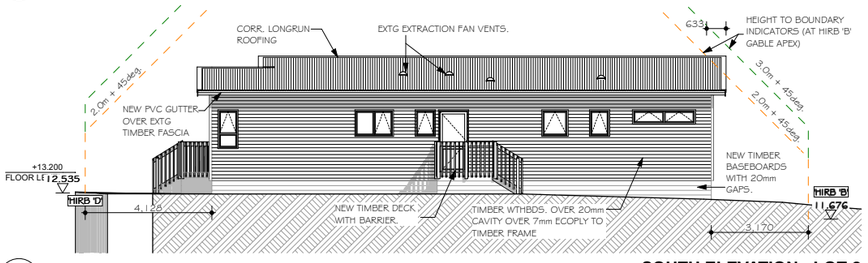

SOUTH ELEVATION - LOT 2
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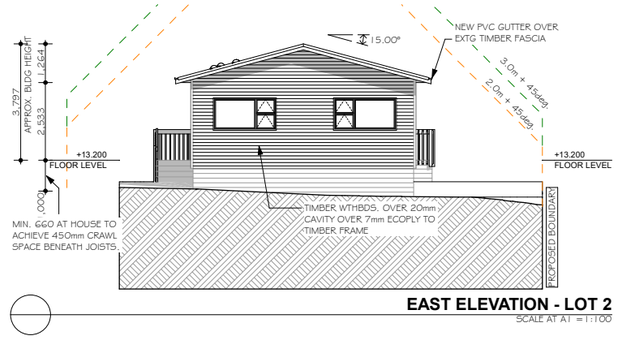

EAST ELEVATION - LOT 2
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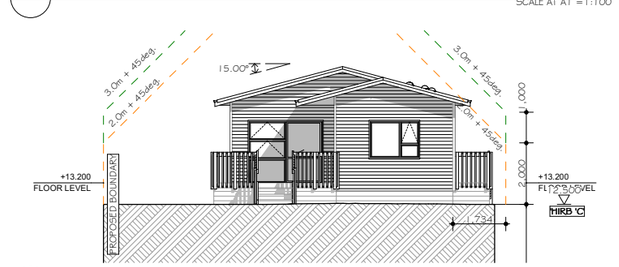

WEST ELEVATION - LOT 2
SCALE AT A1 = 1:100

IMPORTANT NOTE:
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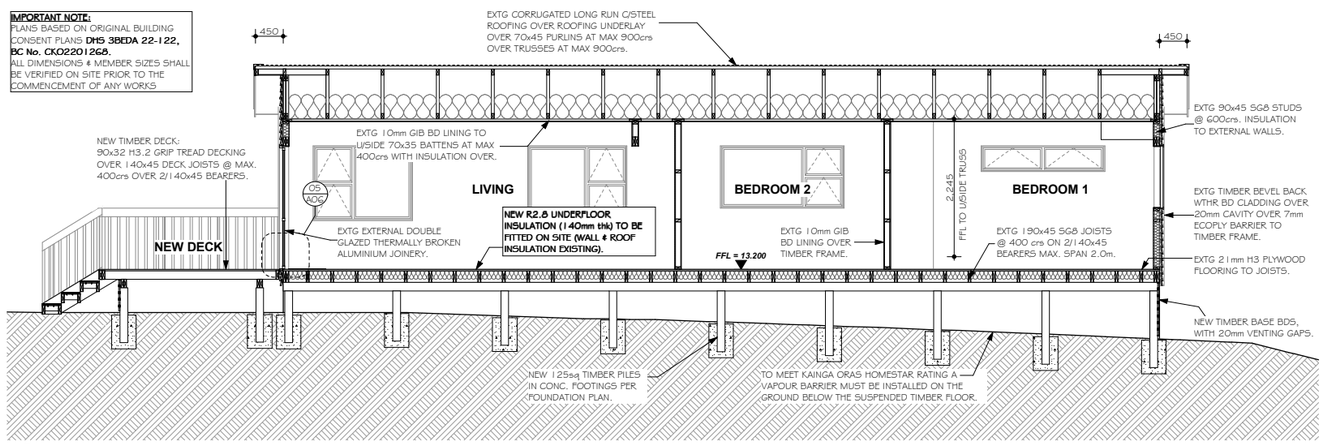

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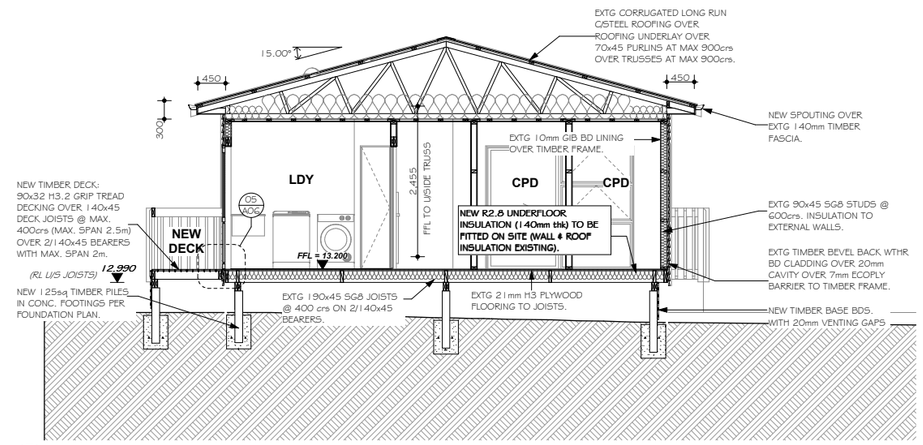

SECTION AA
SCALE AT A1 = 1:50

RevID	ChID	Revision	Date

CLIENT
KAINGA ORA - HOMES AND COMMUNITIES

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ISSUE
SCHEME 3A

DRAWN	SCALE		
AMY	AS SHOWN	**A04**	
DATE	SHT FORMAT		
14/03/2024	A1		
JOB REF	TOTAL SHTS	SHEET	REVISION
23-104	04		

Lot 10
DP 54761

Notes: -
1. Please see Land Development Engineering Ltd's plans for civil design details.
2. Please see CTM Architecture's plans for land use condition compliance and site specific design.

MASTERS PLACE

Lot 1
345m²

Proposed Dwelling

Proposed Shed

Lot 2
381m²

Proposed Dwelling

Proposed Shed

Pt Lot 5
Dds 108

Lot 7
DP 54761

Lot 8
DP 54761

26.44
7.23
12.84
29.51
5.08
6.2
9.85
17.45
26.35

new h/h conn.

Existing Wastewater

Existing Stormwater

Existing Watermain

REF. DRAWING No.	REFERENCE DRAWINGS	REV.	DESCRIPTION	DATE	DESIGNED	DRAWN	CHECKED	APP'D	CLIENT

CONSULTANT DRAWING No.

CONSULTANT JOB No.

Elrick & CO PLANNING & SURVEYING

SURVEYED:	DATE:
DRAWN: KGH	DATE: 08/03/24
CHECKED:	DATE:
APPROVED:	DATE:
SCALE: 1:150@ A3	
STATUS: ISSUED	SHEET SIZE A3

DRAWING TITLE:
Proposed Lots 1 & 2 Being a Subdivision of Lot 9 DP 54761
1 Masters Place, Kaitaia
Scheme Plan

DRAWING No. 6259-001

REVISION C

C:\Users\KerryHarford\Elrick & Co\Main site - Documents\2.0 Projects\6200 - 6299\6259 - 1 Masters Place, Kaitaia\3.0 Survey and Design\3.5 Drawings and CAD\3.5.1 CAD\6259-001 SP.dwg Mar 11, 2024 - 2:31pm

Kāinga Ora - Homes and Communities

CIVIL INFRASTRUCTURE REPORT

1 Masters Place, Kaitaia

Project Reference: 25734
March 14, 2024

DOCUMENT CONTROL

Version	Date	Comments
A	28/02/2024	Issued for Resource Consent
B	14/03/2024	Amendments to Attenuation Design

Version	Issued For	Prepared By	Reviewed &Authorised By
A	Issued for Consent	[redacted] Gobind (Gordon) Grover Civil Engineer BE Civil (Hons)	[redacted] Sarah Duncan Senior Civil Engineer BE, MEngNZ
B	Issued for Consent	[redacted] Gobind (Gordon) Grover Civil Engineer BE Civil (Hons)	[redacted] Jamie Simson Civil Manager BE (Hons), MEngNZ

CONTENTS

1 INTRODUCTION

LDE Ltd was engaged by Kainga Ora Homes and Communities to undertake an engineering assessment of the infrastructure servicing the property at 1 Masters Place, Kaitaia, to determine the suitability of the site for a proposed re-development. Figure 1 below shows the site location plan.

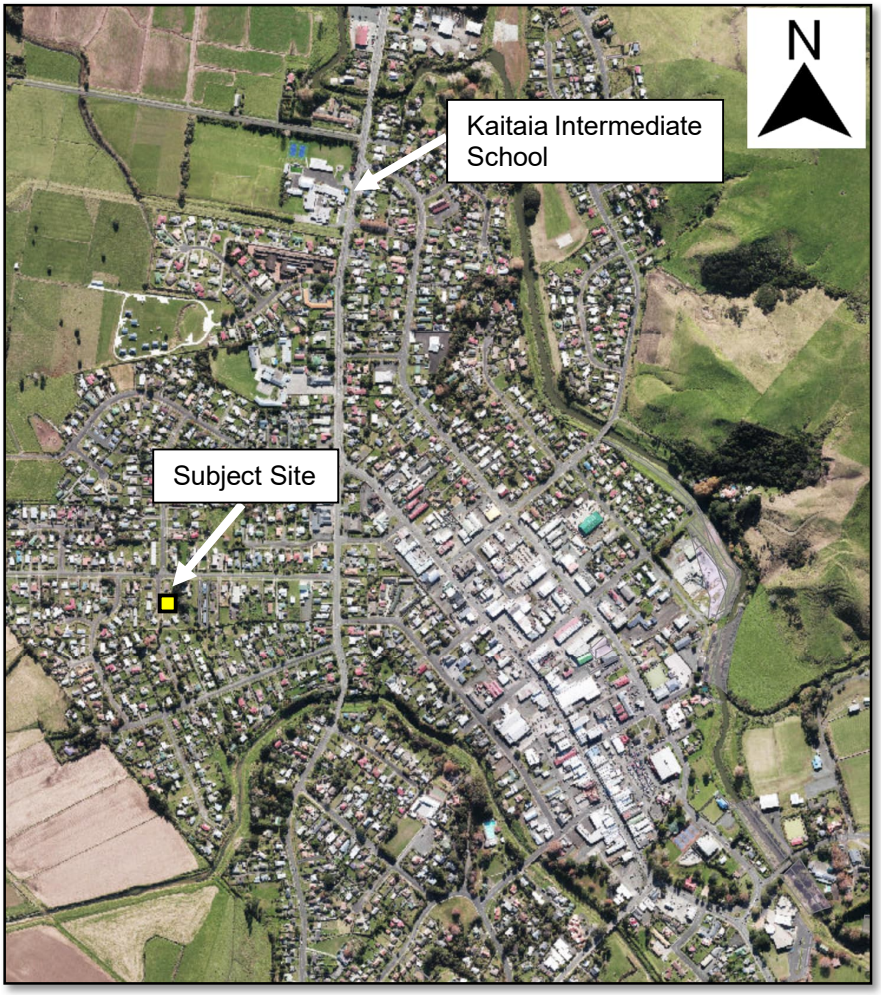


Figure 1: Site location plan. Source: Far North District Council's GIS.

As communicated by the client, the old building at the site was damaged by fire and had been removed. It is proposed to subdivide the property into two lots. Two new relocatable residential dwellings will be installed on each (subdivided) lot.

This report provides the desktop infrastructure assessment deliverable associated with the site. We have completed the assessment associated with the 3-waters and site access. The assessment is based on consultation with the Far North District Council (FNDC), Northland Regional Council (NRC), Fire and Emergency New Zealand (FENZ) and analysis of available information concerning the site. This review and report have been prepared to support the Resource Consent application and related work for the subdivision.

2 SITE DESCRIPTION

The site area is 725m^2 approximately (from FNDC's GIS) and has legal description of Lot 9 DP 54761. It is situated close to the town centre of Kaitaia (approximately 800m to the east). The site is within 1.5km of the local community facilities such as Kaitaia Hospital, Kaitaia Intermediate School etc.

Figure 2: Subject site outline in cyan colour. Source: FNCD's GIS

Currently, the site does not have any dwelling or associated structure such as a garage. All hardstands appeared to have been removed. The site still has a concrete vehicle crossing (on the west boundary to Masters Place) aligned with the old accessway. Most of the property is covered in grass and the east boundary with vegetation. Along the eastern boundary of the site exists a swale-like feature (see Section 4.2 of this report for more information). The site is relatively flat and the eastern section of the site has a gentle to moderate slope towards the east where the swale exists. Masters Place has public infrastructure services located within the street as shown in Figure 3 below. These services include wastewater, water supply, stormwater and site access to Masters Place.

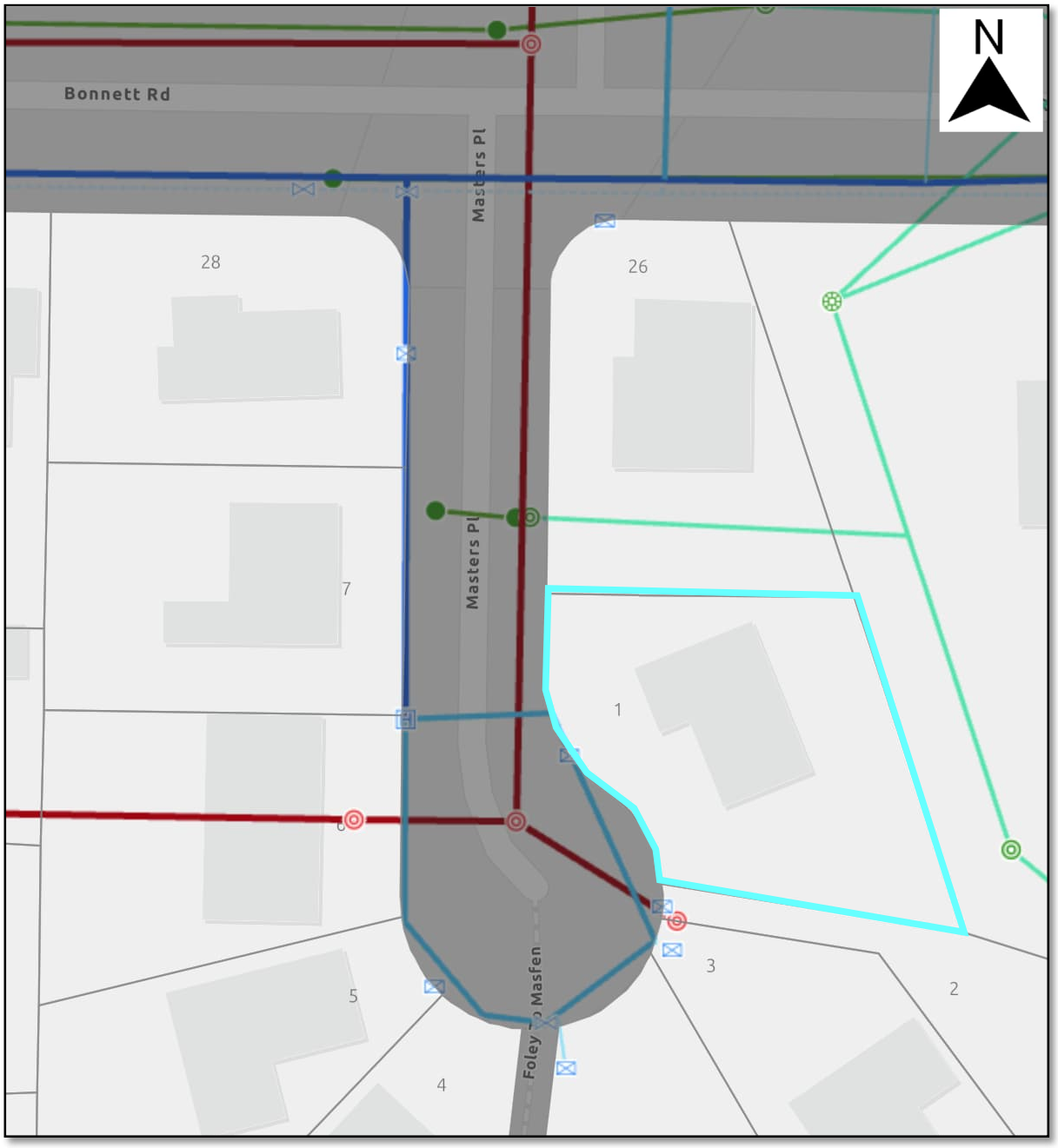


Figure 3: Public services (cyan= lot boundary, green=stormwater, red=wastewater, dark blue=water supply main, light blue=water supply rider main). Source: FNDC's GIS

3 PROPOSED DEVELOPMENT

The parent lot is to be subdivided into two lots, the northern lot with an area of 344.64m^2 and the southern lot with an area of 381.07m^2. It is proposed to relocate a two-bedroom (on Lot 1) and a three-bedroom (on Lot 2) residential dwelling; constructed offsite by Dargaville Trade Academy. Both dwellings are advised to be single-storey and have one car park space (per lot) provided, see Figure 4 for the scheme plan. Each dwelling will have a roof cover,

hardstand (e.g. accessway, footpath etc.) and grass area. Section 4.6.1 of this report provides further detail related to the site coverages.

The impervious site coverage of Lot 1 will include a 103m^2 dwelling roof, a 3m^2 shed and paved areas of approximately 49m^2. The remainder of the new lot will be grassed.

The impervious site coverage of Lot 2 will include a 138m^2 dwelling roof, 3m^2 shed and paved areas of approximately 49m^2. The remainder of the new lot will be grassed.

The new dwellings shall be serviced from the existing public networks located in the vicinity of the site. Appendix E shows communication between LDE and FNDC regarding access to public three water infrastructure for the re-development. Appendix F is an email from a Fire and Emergency New Zealand (FENZ) representative confirming sufficient firefighting supplies from the existing fire hydrant in the vicinity of the proposed subdivision.

See Figure 4 below for the proposed (architectural) site plan. The Scheme plan is Appended to this report.

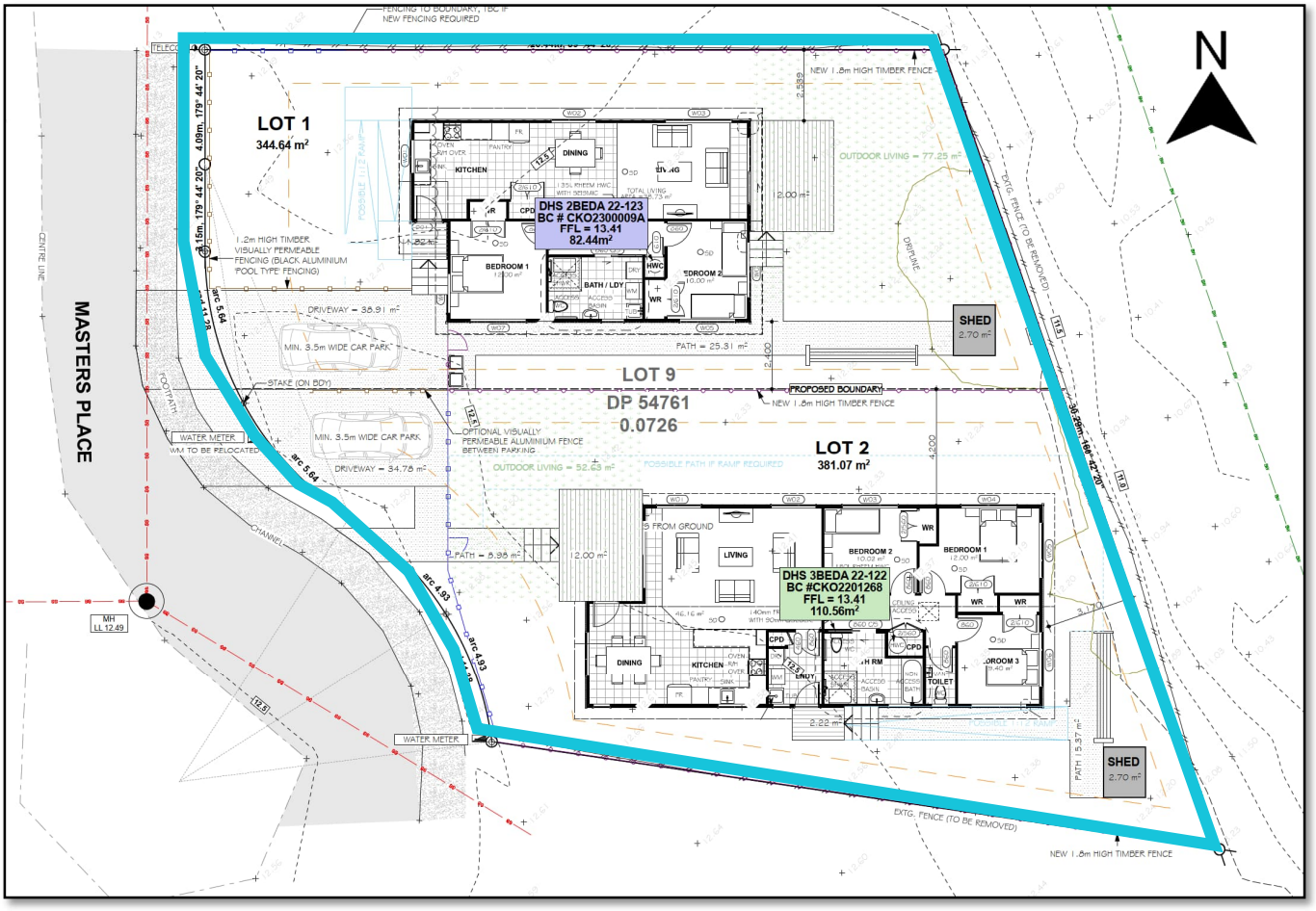


Figure 4: Proposed site plan, cyan colour represents the whole site boundary. Source: CTM Architectural Ltd.

4 STORMWATER

4.1 Existing Infrastructure

Based on the information available to us, it cannot be determined whether the site has an existing connection to the public stormwater services.

Public stormwater infrastructure exists on Masters Place. A stormwater sump along the eastern kerbline of Masters Place (close to the vehicle crossing of 26 Bonnetts Road) appears to drain the pavement into a concrete dia 225 lateral. The lateral is connected to a concrete dia 900 stormwater main located east of the site spanning from south to north direction. The stormwater main ultimately discharges the collected stormwater into Tangonge Drain located in the southern direction of the site. The drain is approximately 300m (the shortest distance) away from the site.

4.2 Overland Flow Paths/Flood Risk

There are currently no overland flow paths (OLFPs) maps available for the Far North Region. The site and surrounding areas are relatively flat except for a swale-like feature (stormwater storage depression) along the eastern boundary of the site. The storage depression is predominantly part of 22 Bonnett Road and it doesn't appear to have an outlet. In the south direction of 22 Bonnett Road, the depression feature appears to flatten out (just north of the dwelling at 17 Lake Road). All property-sharing boundary with depression-like feature has gentle to moderate slopes towards the storage area.

Communication between NRC and LDE concerning flooding maps for the site is appended to this report (Appendix G). As per the information provided by NRC, both the 'Priority' and 'Regionwide' flood models exist for the catchment containing the site. As per NRC, the Priority River model takes precedence over the Regionwide flood model for this specific catchment and a snip of the model (for a 1% AEP storm with 1% climate change), in the vicinity of the site, (provided by NRC) is shown in Figure 1Figure 5 below. The flood zone overlay slightly covers the eastern boundary of the site and matches the location of the swale-like feature in 22 Bonnett Road.

Figure 5: Flood model of the priority river model (light blue colour) for 1% AEP storm with 1% climate change (cyan colour represents site boundary). Source: NRC.

A snapshot of the Regionwide Flood Model for 2% and 1% AEP storms is shown in Figure 6 below (sourced from NRC's Hazard Maps). Comparing the Regionwide (Figure 5) and Priority River (Figure 6) Flood Models, it can be seen that the flood extent for the Regionwide model covers all dwellings (including the site) at Masters Place for 1% AEP storm event. For the 2% AEP storm, the flood extent is expected to be confined to the eastern boundary of the site as shown in the figure below.

Figure 6: Regionwide flood model for 2% (dark blue colour) and 1% AEP (light blue colour) storm from NRC's Hazard Maps; cyan colour represents the site boundary.

Noticeably, the FNDC's GIS maps show the eastern edge of the site to be within a 1% AEP flood area based on the GHD (2007) flood modelling, see Figure 7 below. This modelling is based on Maximum Potential Development and accounts for climate change.

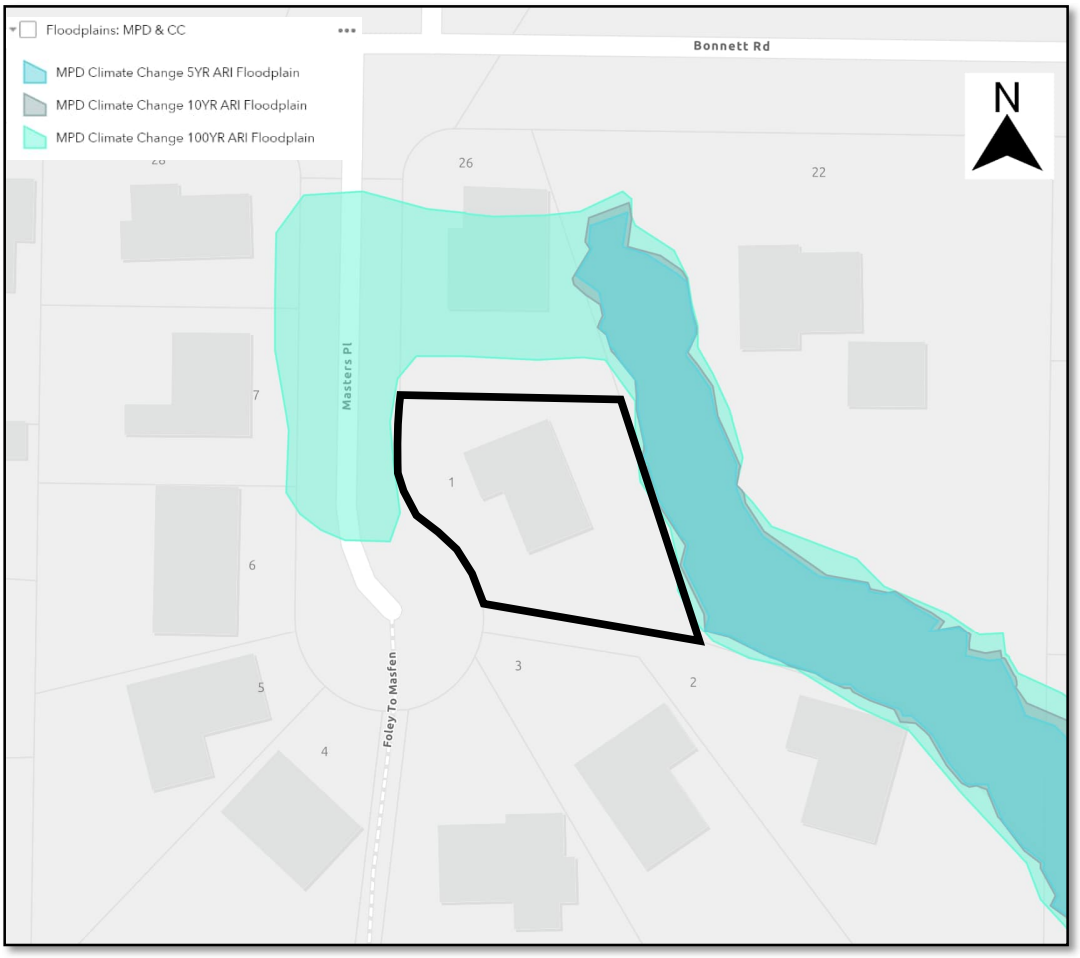


Figure 7: FNDC's Flood Modelling 2007 (GHD) showing the extent of flood for various storm events (black colour represents site boundary). Source: FNDC's GIS.

4.3 Minimum Habitable Floor Level

As per NZBC E1, the floor level for a site where secondary flows are present and flood depth is 100mm or more, the minimum allowance for freeboard is 500mm above the 1% AEP level of flood water.

Referring to the latest model (priority rivers model) supplied by NRC for 1% AEP storm with 1% climate change, the flood level slightly covers the eastern boundary of the site and has a flood level of 11.89m New Zealand Vertical Datum (NZVD), refer to Appendix G. In contrast, the flood level surveyed in July 2007 along the bank of Tangonge Drain is 12.56m NZVD which is identical to the highest road level surveyed for Masters Place as shown in Figure 8 below. The highest point on the site is 12.73m (NZVD) which is higher than the crown level of Masters Place. We also note that the crown level of Lake Road, located between the drain and the site, is 12m NZVD (in the vicinity of the site) (as per NRC's GIS) which is lower than the last surveyed flood level along the drain. Therefore, in the event of a large flood event, the flood water from the drain will likely overtop the crown of Lake Road and flood the site.

Considering the above information and site drainage characteristics discussed (such as slope, relative site levels etc), it is deemed suitable to assume the flood height at the site to be 12.7m for a 1% AEP storm. Following the verification method provided by NZBC E1 for a site where a secondary flow path is present, the recommended minimum floor level is to be 12.7m plus 0.5m (allowance for wave generated from vehicle on Master Place during flooding) (i.e. 13.2m NZVD). Therefore, we proposed the minimum floor level to be 13.2m (NZVD).

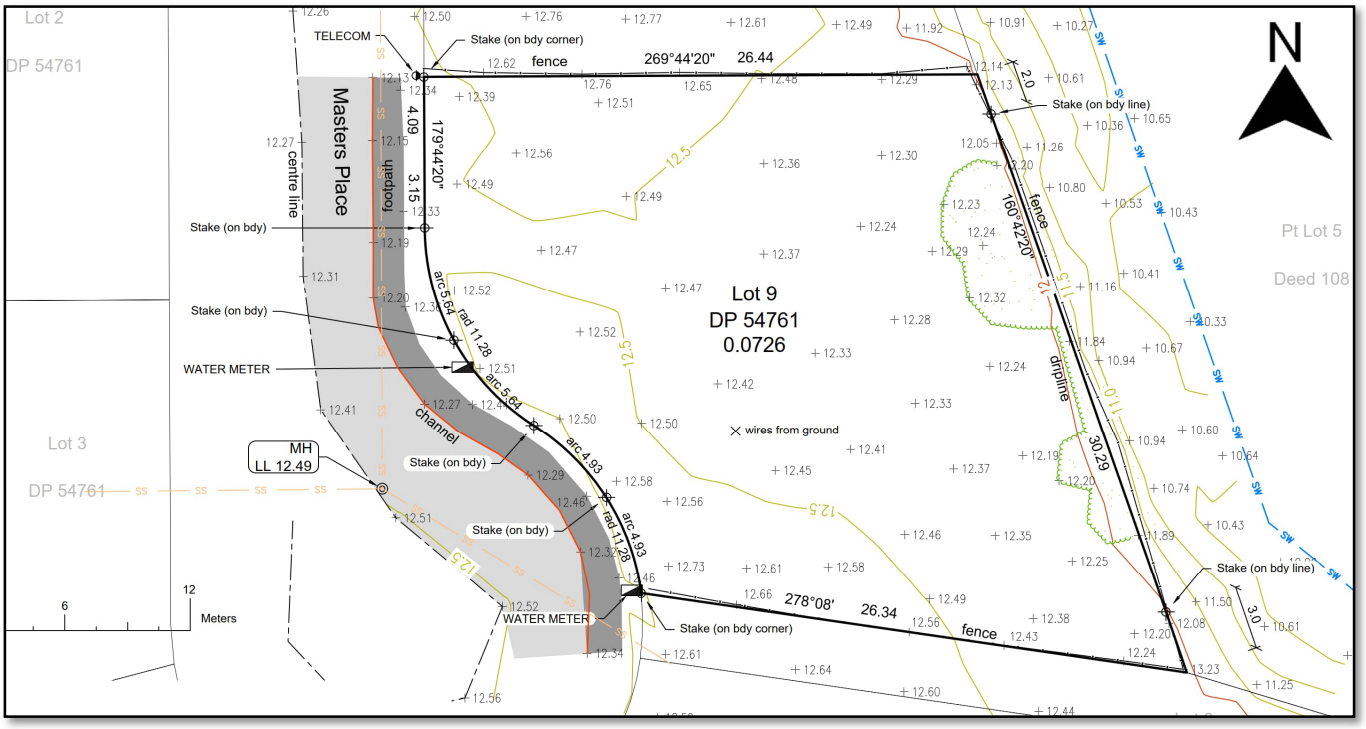


Figure 8: Survey plan including spot level provided by Boundary Hunter Ltd; site boundary is shown as a black line.

4.4 Proposed Earthworks and Effects on Flood Levels

Depending upon the recommended foundation type, the building platforms may need to be elevated due to minimum habitable flood level requirements. Additionally, it is recommended to grade the site so that the stormwater is collected on-site and directed away from the site to Masters Place.

Figure 9 below shows the extent of 1% AEP flood (regionwide flood model) overlaying the subject site. The figure shows that the subject site area is negligible compared to the whole 1% AEP flood overlay. Therefore, the effects of earthworks on the surrounding properties from the proposed redevelopment are deemed to be minimal as the overall storage capacity of the flood zone is disproportionally large in comparison to that which would be removed for the redevelopment.

Furthermore, we do not believe there would be any adverse effects on the overland flows due to earthwork. In our opinion, this combined with the minimal reduction in storage areas will result in negligible, or 'less than minor' effects on the surrounding properties.

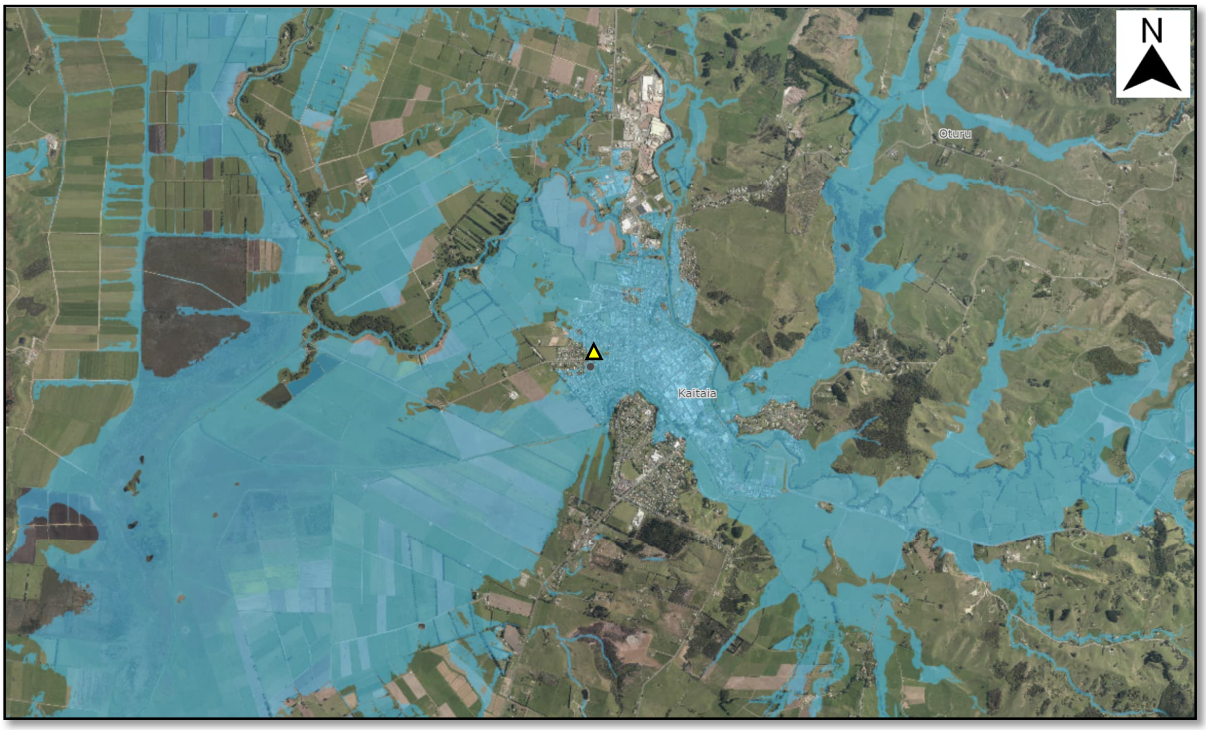


Figure 9: Extent of 1% AEP regionwide floods model including climate change (blue shade represents flood extent, yellow triangle represents site location). Source: NRC's Hazards Map.

4.5 Fencing

Any fencing proposed as part of the development should be designed with consideration of the following:

- Avoid, remedy or mitigate any effects of flooding as a result of any fence construction, and
- Ensuring that any fence constructed does not divert or restrict the passage of flood waters.

Referring to Sections 4.2 and 4.3 of this report, in an event of 1% AEP flood (low-probable event) or larger, it is likely that the flood water will overtop the kerb of Lake Road, filling up the swale-like feature before running under the fence line of the site from east direction towards Masters Place. In our opinion, a permeable fencing will allow the passage of these waters and must be provided.

4.6 Stormwater Analysis

We have utilised HEC-HMS software to analyse both pre- and post-development scenarios to calculate the required storage volumes and the configuration of outlet orifices to achieve stormwater attenuation. It is to be noted that only the new impervious areas to be constructed are considered (attenuated) for the proposed development. The post-development stormwater discharge can be attenuated to 80% of the pre-development discharge using this method.

The pre-development rainfall depths used in the stormwater analysis have been taken from the historical data downloaded from NIWA HIRDS V4. The post-development rainfall depths were increased using climate change

factor of 20% for 50% and 10% AEP (as per clause 13.7.3.4(a) from Operative District Plan of FNDC) and 1% AEP storm (as per Table 4-2 of FNDC's Engineering Standards).

4.6.1 Analysis Parameters

New impervious areas will be created with this development and stormwater management devices must be utilised to minimise the impact of the increase impact of the increase in runoff. The assessment of existing and proposed impervious areas is in Table 1 below.

For both pre-development and post-development scenario, only the areas contributing to increase in peak discharge from the development are considered, rather than the entire redevelopment area. Pre-development lot 1 and lot 2 were modelled in the software such that each lot represents the proportion of increase in impervious area post-development, see Table 1 below for more information.

Table 1: Summary of pervious and impervious areas used in the model.

Areas	Pre-development Area Lot 1 (m^2)	Pre-development Area Lot 2 (m^2)	Post-development Area Lot 1 (m^2)	Post-development Area Lot 2 (m^2)
Roof areas	63	82	106	138
Driveway/other impervious areas	32.5	32.5	49	49
Total impervious area	95.5	114.5	155	187
Total pervious area	59.5	72.5	-	-
Total area	155	187	155	187

The storm runoff for 50%, 10% and 1% AEP storm events is required to be attenuated. This attenuation shall account for the new impervious areas created as part of the development as well as an increase in rainfall from climate change.

Using HEC-HMS software, stormwater runoff models for the pre-and post-development scenarios have been created to calculate the peak flow rates for the 50%, 10% and 1% AEP rainfall events. HEC-HMS uses a 24-hour rainfall gauge as a nested storm event and a time of concentration of 10 minutes has been used due to the small catchment area being assessed.

Table 2 below shows the parameters used in the HEC-HMS hydrological/hydraulic model of the site. Table 4-3 from FNDC's ES is used to determine hydrologic soil class and curve number for various land cover of the site. A

hydrological soil group, Class C, was adopted for the model. The hydrological soil group was inferred based on site-specific geotechnical information. FNDC's ES was used to determine hydrologic soil class and curve number for various land cover of the site.

Table 2: HEC-HMS model parameters.

Land Use, Group C Soils	Runoff Curve Number	Initial Rainfall Abstraction (mm)
Deck & Landscaped Ares	79	2.5
Roof Area	98	0
Other Impervious Area	98	0

Schematics of the pre-development and post-development models and the computed results are shown in Appendix D. The models were based on existing site conditions and proposed developed conditions.

4.6.2 Stormwater Analysis Results

Table 3 below shows the pre- and post-development peak flow rates produced by the proposed design. The full output tables from the HEC-HMS modelling are attached in Appendix D.

Table 3: Peak runoff flow rates for the 10% and 1% AEP storm events

AEP (%)	Lot 1 Pre-development Flow (L/s)	Lot 1 Post-development Flow Lot 1 (L/s)	Lot 2 Pre-development Flow (L/s)	Lot 2 Post-development Flow (L/s)
50	7.9	6.3	9.5	7.5
10	13.4	10.6	16.1	12.8
1	23.9	18.9	28.8	23.1

The results show that the proposed design attenuates the post-development peak flows to less than 80% of the pre-development flows from the subject site.

If impermeable areas greater than those analysed in this design are proposed, then a revision of the design outlined in this report will be required and we should be contacted.

4.6.3 Tank Details and Connection Recommendation

Stormwater runoff from the new roof areas on Lot 1 and Lot 2 will be attenuated by a 6,000L above-ground water tank (Slimline Tank from Tanksalot). The tanks have been oversized to also offset runoff from the new hardstand area.

Table 4: New dwellings tank orifice outlet summary.

Orifice	Lot 1		Lot 2	
	Diameter (mm)	Height* (m)	Diameter (mm)	Height* (m)
Outlet 1	14	0.1	16	0.1
Outlet 2	10	0.58	12	0.67
Outlet 3	12	0.95	14	1.09
Overflow	100	1.8	100	1.8

** Height from the base of the tank to the centre of the orifice*

An increase in flow due to new hardstand areas such as driveway, footpath etc will be accounted for by over-attenuating runoff from the roof areas such that the overall flow from the site post-development is less than 80% of the pre-development flows.

4.7 Design

We note that the above attenuation design is for resource consent and a specific design will be required to accompany any building consent application.

Each lot shall have an individual stormwater connection. It is proposed that the new dwellings will connect to the public stormwater infrastructure via a typical stormwater lateral. The lateral shall connect to the existing public stormwater manhole (Asset ID KT_SWP0557) located just south of the vehicle crossing of 26 Bonnett Road on Masters Place, as shown in Figure 11. As it is proposed to attenuate storm runoff up to 1% AEP, therefore increase in impermeable areas will have negligible effects on the downstream infrastructure. Furthermore, consultation with FNDC also indicate no issue connecting to public reticulated services as long as attenuation is achieved, see Appendix E.

All new stormwater laterals should be laid with a minimum grade of 1.0% with minimum cover, trenching, pipe bedding and backfill as required by the New Zealand Building Code (NZBC) Clause E1 and FNDC's Engineering Standards.

5 WASTEWATER

5.1 Existing Infrastructure

As per FNDC's GIS, an existing Ø150mm AC wastewater main run along the western edge of Masters Place. There also exists a wastewater manhole on the cul-de-sac section (southern end) of Masters Place (in front of the site), as shown in Figure 3.

The council's GIS does not show any wastewater lateral, currently, servicing the lot.

5.2 Expected Wastewater Flow (post-development)

The expected additional peak flows created as a result of the development are shown below. It is assumed that the removed/burnt dwelling was a three-bedroom house. Hence, the increase in wastewater flow will be from Lot 1 of the proposed development only (which is a two-bedroom house). Flows from Lot 2 (the three-bedroom house) is expected to be the same as the removed house (both being three-bedroom houses).

These estimates are based on the following assumptions taken from FNDC's ES (version 0.6, May 2023):

- Design flow rate: 200 Litres/person/day
- 2 bedrooms: design occupancy of 4 people
- Peaking factor: Dry weather peak daily flow (normal PDWF): 2.5
- Peaking factor: Peak wet weather flow (PWWF): 5

Design ADWF: 4 people x 200 L/p/day = 800 L / day = 0.009 L/s
PDWF: 0.009 x 2.5 = 0.023L/s
PWWF: 0.009 x 5 = 0.045 L/s
The amount of peak flows calculated above are negligible considering relevant size of the catchment that will receive the increase in discharge.

5.3 Connection Recommendation

It is proposed that the new dwellings will connect to the wastewater main via typical wastewater laterals. Each lot shall have an individual wastewater connection. The proposed changes will have negligible effects on the downstream properties of this wastewater main, as discussion in Section 5.2 above; further supported by the comments provided by FNDC attached as Appendix E.

All new wastewater laterals should be laid with a minimum grade of 1.0% with minimum cover, trenching, pipe bedding and backfill as required by the New Zealand Building Code (NZBC) Clause G13 and FNDC's Engineering Standards.

6 WATER SUPPLY

6.1 Existing Infrastructure

There is an existing uPVC dia 50mm rider main and water meter providing potable water supply to the site. The rider main is looped back (along the cul-de-sac) to an AC dia 100mm water main along the western footpath of Masters Place as shown in Figure 3. There is no existing lateral pipe connecting the water to the rider main shown in FNDC's GIS. It is assumed that there is an existing lateral pipe which connects the water main to the water meter located on the front of the property servicing the removed dwelling.

At the boundary of 6 and 7 Masters Place (along the western footpath of Masters Place as per FNDC's GIS), there exists a fire hydrant approximately 30m away from the proposed development. The second closest fire hydrant is located at the boundary of 30 and 32 Bonnetts Road (along the southern footpath of the road) approximately 130m away from the site. Note the distances are measured along a path a fire hose would potentially follow to the main entrance of the proposed dwelling.

This is less than the 135m and 270m required in PAS 4509:2008. Given these fire hydrants currently serve the surrounding dwellings we assume they provide sufficient flows for the firefighting demands of the development.

Figure 10: Location of two nearest fire hydrants (yellow circles), site boundary shown in cyan colour. Source: FNDC's GIS.

6.2 Expected Increase in Demand

The expected additional peak flows created as a result of the development are shown below. It is assumed that the removed/burnt dwelling was a three-bedroom house. Hence, the increase in wastewater flow will be from Lot 1 of the proposed development only (which is a two-bedroom house). Flows from Lot 2 (the three-bedroom house) is expected to be the same as the removed house (both being three-bedroom houses).

These estimates are based on the following assumptions taken from FNDC's ES (version 0.6, May 2023):

- Design flow rate: 300 Litres/person/day
- 2 bedrooms: design occupancy of 4 people
- Peak daily flow factor: 2.0
- Peak hourly demand factor: 5

Average Daily Demand: 4 people x 300 L/p/day = 1200 L / day
Peak Daily Demand: 1200 L/day x 2 = 2400 L / day
Peak Hourly Demand: 1200 L/day x 5 / 24 hours = 250 L/h = 0.069 L/s
The amount of peak demand calculated above are negligible considering relevant size of the catchment which get the water supply.

6.3 Connection Recommendations

It is proposed that each lot be provided with a new dia 20mm PE lateral connection to service the proposed dwellings. The lot connections will be saddled onto the existing uPVC dia 50mm rider main in the roadside berm with a service valve, including a backflow prevention device, located adjacent to the property boundary within the road reserve. As per FNDC requirements, a toby and water meter are to be installed for each new dwelling. We consider that the proposed changes will have negligible effects on the downstream properties for the water supply supplemented by FNDC's comment shown in Appendix E.

7 Proposed Service Alignment

Figure 11 shows a plan of the proposed stormwater, wastewater and water supply service alignments and connection points to the existing public infrastructure.

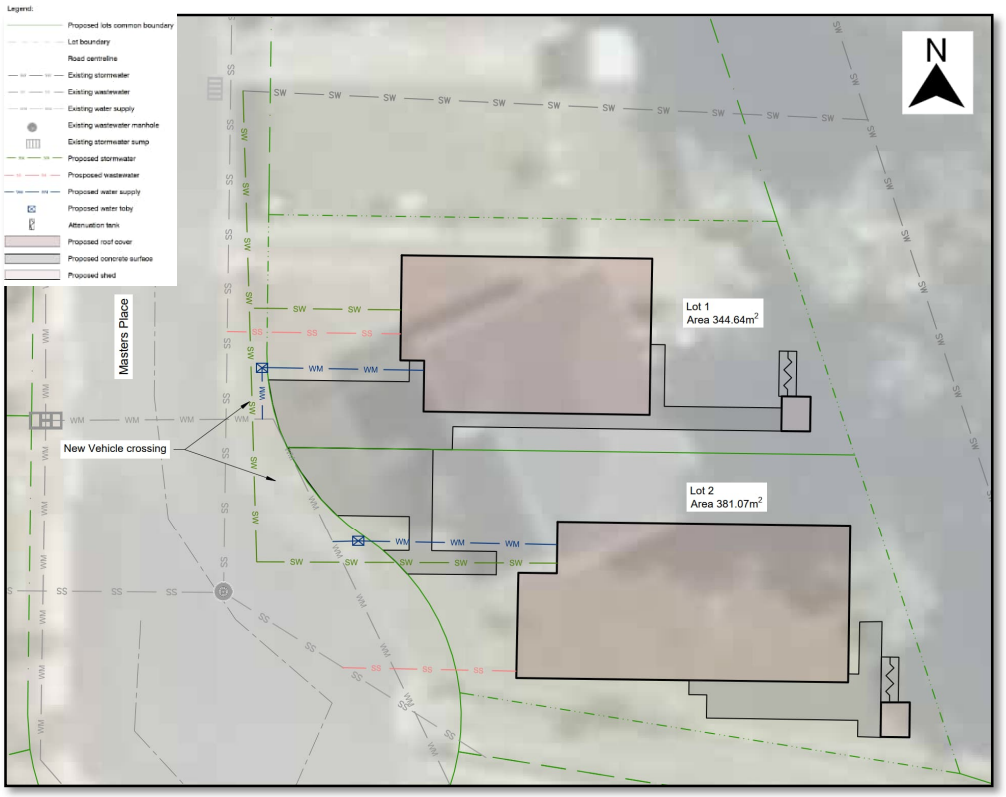


Figure 11: Proposed services alignments.

8 PAVEMENT

8.1 Vehicle Crossings and Accessway

New vehicle crossings and accessways shall be constructed to service the subdivision. Both vehicle crossings are proposed to be from Masters Place. The old accessway appeared to be removed. The vehicle crossing shall be demolished, and the surrounding kerb and channel and berm made good as per FNDC's ES requirements. As per FNDC's Operative Plan (FNDC's OP, Appendix 3B-1), the minimum width of the accessways and crossing for each lot shall be 3.0m and have a sealed surface.

The new vehicle crossings to meet the requirements of FNDC's OP and ES.

Referring to Crash Analysis System (CAS) provided by NZTA, Masters Place have recorded only one non-injury (low crash record) crash dated 2018/19.

As per mobileroad.org, average daily traffic (ADT) for Masters Place is 75; and as per Table 3-1 from FNDC's ES, Masters Place is considered to be low volume access road. The distance between the closest intersection between Bonnett Road and Masters Place is 40m approximately which is more than the minimum separation distance required between a vehicle crossing and the intersection (of Masters Pl and Bonnetts Rd) (as per Table 3-15 of FNDC's ES). The proposed accesses to the properties are located within a cul-de-sac (Masters Pl) without any

through traffic. South of the site only seven dwellings have access via Masters Place. Furthermore, the fence of Lot 1 along the road is proposed to be permeable (e.g. pool like fencing) having a 1.2m height which will further enhance the visibility. Considering the above we appraise that the site visibility appears to be satisfactory considering low access via cul de sac street. Refer to Appendix F for NTA comments on the proposed development.

Due to Masters Place being a low volume access road with only seven dwellings having access to the road (south of the development), we expect the pedestrian traffic on this road to be negligible. In the interest of public (pedestrian) safety, we also recommend that the vehicle crossing for the development to have pedestrian priority vehicle crossing, an example of such vehicle crossing is shown in Figure 12 below.

Figure 12: An example of Pedestrian Priority Vehicle Crossing. Source: NZTA official website.

9 Conclusion

The purpose of this report is to accompany a resource consent application for the proposed two-lot subdivision and residential development of 1 Masters Place, Kaitaia, Northland. We consider that the proposed development can be adequately serviced with regard to water supply, wastewater, stormwater and access as existing networks are available.

10 Limitations

This report should be read and reproduced in its entirety including the limitations to understand the context of the opinions and recommendations given.

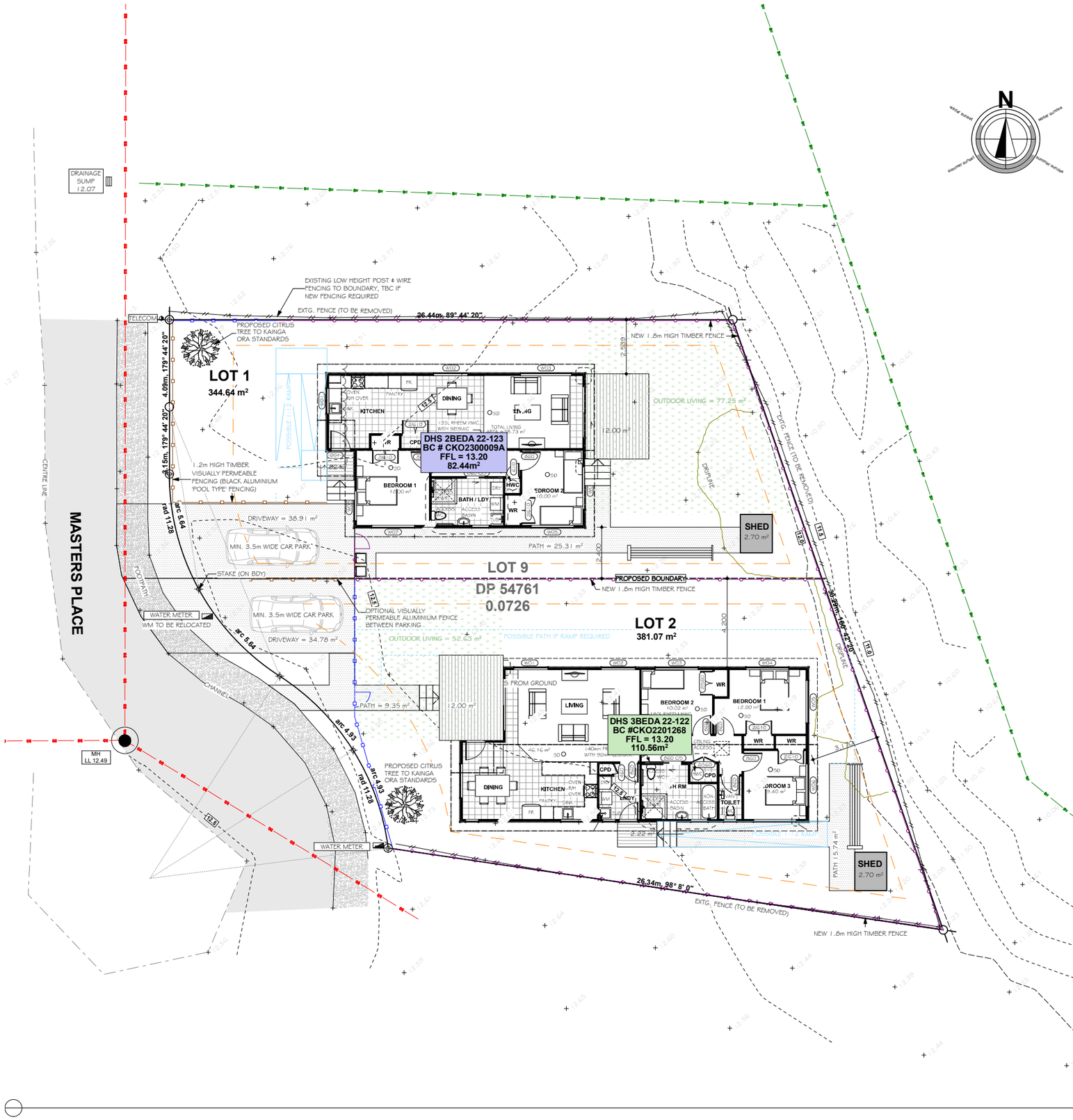
This report has been prepared exclusively for Kāinga Ora - Homes and Communities in accordance with the brief given to us or the agreed scope and they will be deemed the exclusive owner on full and final payment of the invoice. Information, opinions, and recommendations contained within this report can only be used for the purposes for which it was intended. LDE accepts no liability or responsibility whatsoever for any use or reliance on the report by

any party other than the owner or parties working for or on behalf of the owner, such as local authorities, and for purposes beyond those for which it was intended.

This report was prepared in general accordance with current standards, codes and best practices at the time of this report. These may be subject to change.

APPENDIX A

ARCHITECTS SCHEME PLAN



LEGAL DESCRIPTION & SITE DETAILS

1 MASTERS PLACE,
KAITAIA
TERRITORIAL AUTHORITY-
FAR NORTH DISTRICT COUNCIL

LOT 9 DPS 54761
SITE AREA 726m²

OPERATIVE PLANNING ZONE:
RESIDENTIAL
PROPOSED PLANNING ZONE:
GENERAL RESIDENTIAL

SITE DETAILS PER BRANZ MAPS

CLIMATE ZONE	1
CORROSION ZONE	ZONE C OUTSIDE SEASPRAY
EARTHQUAKE ZONE	ZONE 1
RAINFALL INTENSITY	80-90mm
WIND REGION	A
WIND ZONE	MEDIUM

LEGEND

- PROPOSED 1.2m TIMBER FENCE
- 1.2m VISUALLY PERMEABLE FENCE
- PROPOSED 1.8m TIMBER FENCE
- EXISTING FENCE
- EXTG STORMWATER DRAIN
- NEW STORMWATER DRAIN
- EXTG WASTE WATER DRAIN
- NEW WASTE WATER DRAIN
- YARD SETBACKS

SHED NOTE:
INSTALL NEW PROPRIETARY GALV STEEL GARDEN SHED ON CONCRETE PAD TO EACH LOT AS INDICTATED. SHED 1.8x1.5x2.0m HIGH (OR SIMILAR SIZE). LOCATE MIN 1.0m OFF BOUNDARIES. C.O.S FINAL LOCATION.

STEPS & PATH NOTE:
STEPS SHALL BE ACCESSIBLE ie MIN. 310mm TREAD DEPTH AND MAX. 180mm RISER.
PATHS TO BE MIN. 1200mm WIDE (EXCEPT THAT SERVICE AREA PATHS MAY BE LESS TO MIN. 800mm WIDE). MAXIMUM CROSS FALL OF 1:50 TO PREVENT WATER PONDING.

Operative Far North District Plan: Residential Zone
The Residential Zone enables the development of residential areas where the effects of activities permitted in the zone are compatible with sustainable development and with the existing character and amenity, which is typically medium density residential living.

An activity is a permitted activity in the Residential Zone if:
a) it complies with the standards for permitted activities set out in Rules 7.6.5.1.1 to 7.6.5.1.17 below; and
b) it complies with the relevant standards for permitted activities set out in Part 3 of the Plan - District Wide Provisions.

Otherwise, consent is required as a restricted discretionary or discretionary activity.

Rules 7.6.5.1.1 to 7.6.5.1.17
- Each residential unit for a single household shall have available to it a minimum net site area of 600m² (sewered sites)
  - This minimum net site area may be for the exclusive use of the residential unit, or as part of land held elsewhere on the property, provided that a ratio of one residential unit per minimum net site area (as stated above) is not exceeded.
  - *Site area greater than 300m² per dwelling = Restricted discretionary activity under 7.6.5.3.1*
  - *Site area less than 300m² per dwelling = Discretionary activity under 7.6.5.4(c)*
- Maximum building height 8m
  - *Restricted discretionary activity under rule 7.6.5.3.3 to increase up to 9m in height*
- Height in relation to boundary 2m + 45
  - A building may exceed this standard for a maximum distance of 10m along any one boundary other than a road boundary, provided that the maximum height of any building where it exceeds the standard is 2.7m
  - 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
    - Note with respect to 4 / 4a Guerin to the west – these are KO owned so written approval is implicit for any height in relation to boundary infringements but regardless, these sites are served by an access lot and as such the height in relation to boundary can be taken from the furthest point of this boundary
  - *Restricted discretionary activity under 7.6.5.3.4 to use 3m + 45*
- Impervious area – 50%
  - *Controlled activity under 7.6.5.2.1 to increase to 60% - Stormwater Report required*
- Building coverage – 45%
  - *Restricted discretionary activity under 7.6.5.3.5 to increase to 55%*
- Minimum building setback from road boundaries – 3m
- Minimum setback from other boundaries – 1.2m
- At least 50% of that part of the site between the road boundary and a parallel line 3m therefrom, which is not occupied by buildings or driveways, shall be landscaped.

Part 3 of the Plan - District Wide Provisions
- Earthworks – permitted if within 200m³ in any 12 month period per sit and 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.
  - *Restricted discretionary activity for up to 500m³ in volume*
- Transport
  - Maximum daily one way traffic movements – 20 permitted, 21-40 restricted discretionary and more than 40 discretionary
  - Access widths – 3m if serving no more than four residential units, otherwise 5m width required
  - Parking spaces – 2 per unit, *Refer below re NPS-UD.*
    NPS-UD (National Policy Statement on Urban Design) removes the minimum car parking rates from the district plan of tier 1, 2 & 3 territorial authorities.

Subdivision
- 13.6.10 - Any application arising from non-compliance with zone standards caused by the proposed subdivision shall be considered jointly with the subdivision consent
- **Controlled** activity to subdivide a minimum lot size of 600m² and **discretionary** activity to subdivide a minimum lot size of 300m² – includes vacant lots and new lots which already accommodate structures
- Must have a means for the disposal of collected stormwater from the roof of all potential or existing buildings and from all impervious surfaces. Preference is for this to be via piping to an approved outfall, each new allotment shall be provided with a piped connection to the outfall laid at least 600mm into the net area of the allotment.

SITE PLAN
SCALE AT A1 = 1:100

Kāinga Ora Homes and Communities

RevID	ChID	Revision	Date

CLIENT
KAINGA ORA - HOMES AND COMMUNITIES

ADDRESS
1 MASTERS PLACE
KAITAIA

FAR NORTH DISTRICT COUNCIL

PROJECT
PROPOSED RELOCATION - KO REF: - DHS 2BedA (22-123) and DHS 3BedA (22-122)

CTM ARCHITECTURAL Ltd
CTM ARCHITECTURAL LTD
18 SWEETCORN PLACE,
PUKEKOHE, 2120
PO Box 547
PUKEKOHE, 2340
ph/fax- 09 238 4414
web- www.ctm.net.nz
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LICENSED BUILDING PRACTITIONERS
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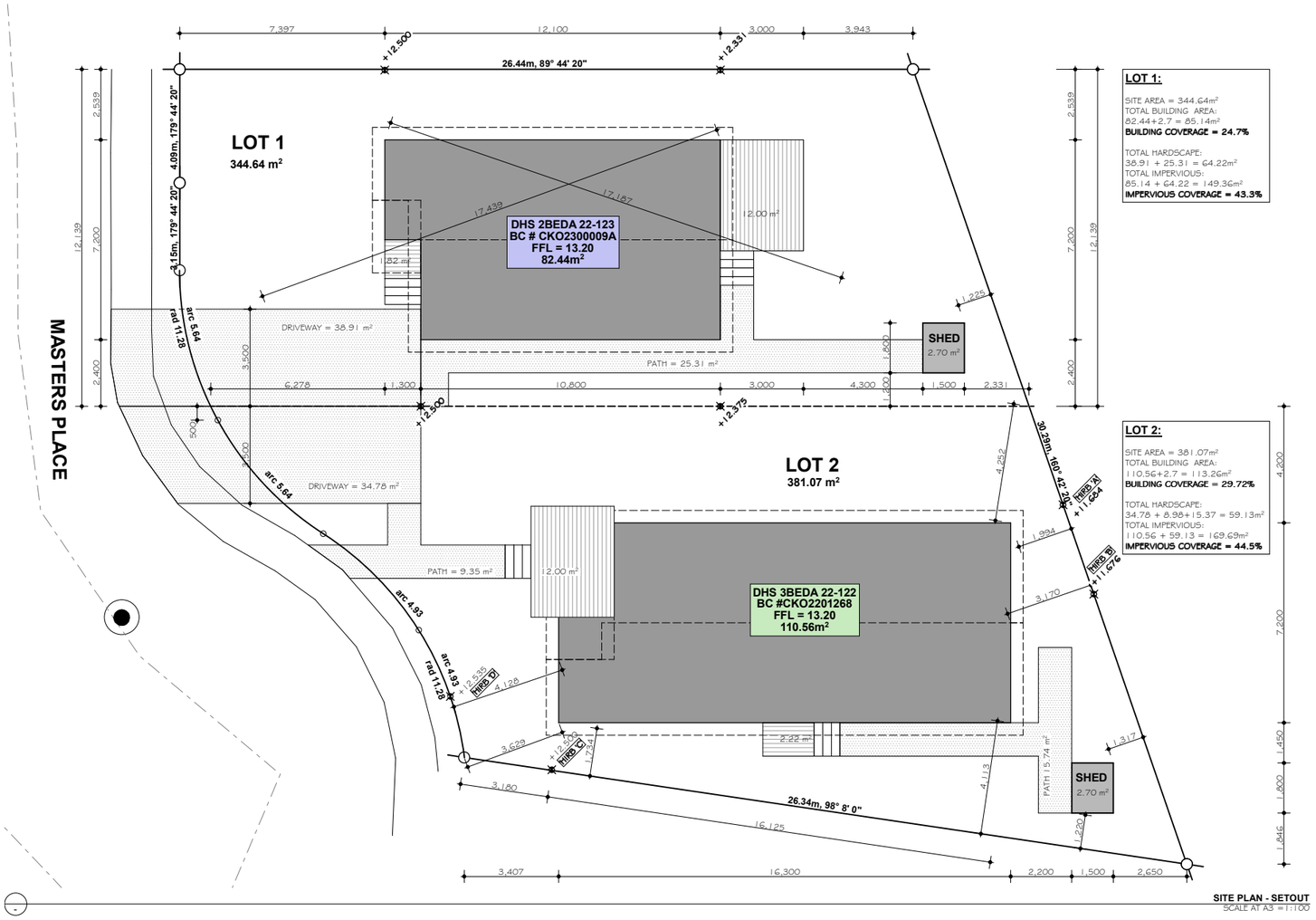
BUILDING CONFIDENCE

WORK TO N.Z.B.C. AND RELEVANT CODES
DIMENSIONS SUPERSEDE SCALE
CHECK AND VERIFY ALL LEVELS AND DIMENSIONS ON SITE BEFORE STARTING ANY WORK.

ISSUE
SCHEME 2A

DRAWN: AMY	SCALE: AS SHOWN	A01	
DATE: 15/02/2024	SHT FORMAT: A1		
JOB REF: 23-104	TOTAL SHTS: 02	SHEET	REVISION



LOT 1:

SITE AREA = 344.64m²
TOTAL BUILDING AREA:
82.44+2.7 = 85.14m²
BUILDING COVERAGE = 24.7%

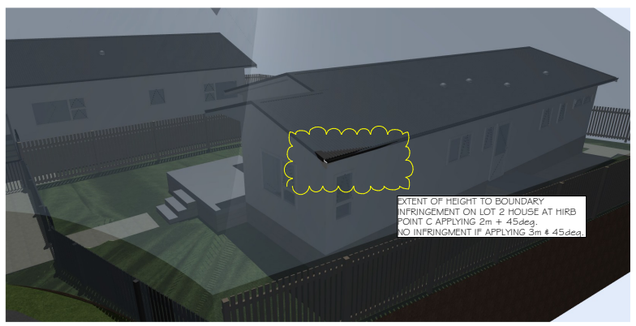
TOTAL HARDSCAPE:
38.91 + 25.31 = 64.22m²
TOTAL IMPERVIOUS:
85.14 + 64.22 = 149.36m²
IMPERVIOUS COVERAGE = 43.3%

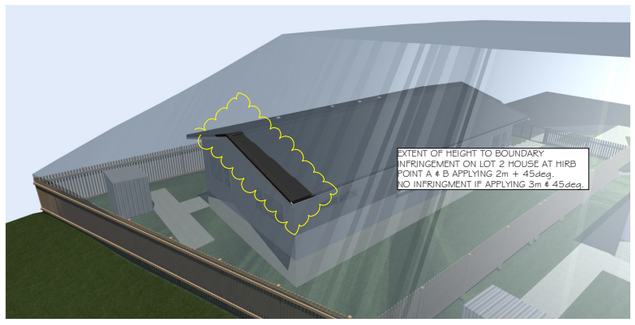
LOT 2:

SITE AREA = 381.07m²
TOTAL BUILDING AREA:
110.56+2.7 = 113.26m²
BUILDING COVERAGE = 29.72%

TOTAL HARDSCAPE:
34.78 + 8.98+15.37 = 59.13m²
TOTAL IMPERVIOUS:
110.56 + 59.13 = 169.69m²
IMPERVIOUS COVERAGE = 44.5%

SITE PLAN - SETOUT
SCALE AT A3 = 1:100





Kāinga Ora
Homes and Communities

RevID	ChID	Revision	Date

CLIENT
KAINGA ORA - HOMES AND COMMUNITIES

ADDRESS
1 MASTERS PLACE
KAITAIA

FAR NORTH DISTRICT COUNCIL

PROJECT
PROPOSED RELOCATION -
KO REF: - DHS 2BedA (22-123)
and DHS 3BedA (22-122)

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BUILDING CONSTRUCTION

WORK TO N.Z.B.C. AND RELEVANT CODES
DIMENSIONS SUPERSEDE SCALE
CHECK AND VERIFY ALL LEVELS AND DIMENSIONS ON SITE BEFORE STARTING ANY WORK.

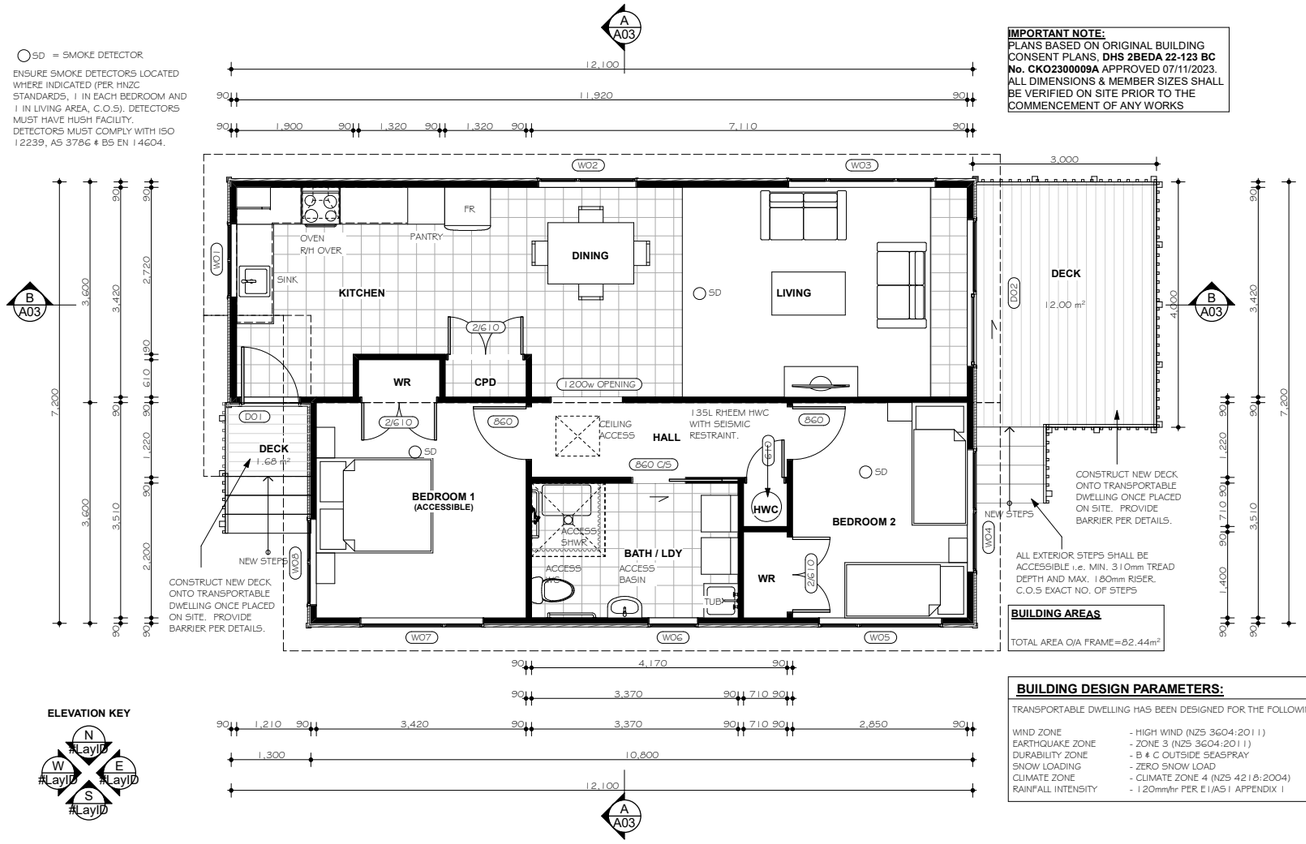
ISSUE
SCHEME 2A

DRAWN	SCALE		
AMY	AS SHOWN	**A02**	
DATE	SHT FORMAT		
15/02/2024	A1		
JOB REF	TOTAL SHTS	SHEET	REVISION
23-104	02		

NOTE:
THIS SHEET OF PLANS IS INDICATIVE OF HOUSE ON LOT 1
DHS 2BEDA 22-123
BC # CKO2300009A

SD = SMOKE DETECTOR

ENSURE SMOKE DETECTORS LOCATED WHERE INDICATED (PER NZC STANDARDS, 1 IN EACH BEDROOM AND 1 IN LIVING AREA, C.O.5). DETECTORS MUST HAVE HUSH FACILITY. DETECTORS MUST COMPLY WITH ISO 12239, AS 3786 & BS EN 14604.



IMPORTANT NOTE:
PLANS BASED ON ORIGINAL BUILDING CONSENT PLANS, **DHS 2BEDA 22-123 BC No. CKO2300009A** APPROVED 07/11/2023. ALL DIMENSIONS & MEMBER SIZES SHALL BE VERIFIED ON SITE PRIOR TO THE COMMENCEMENT OF ANY WORKS

BUILDING AREAS

TOTAL AREA O/A FRAME=82.44m²

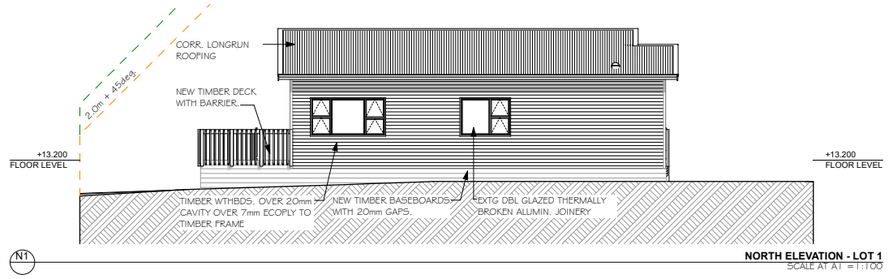
BUILDING DESIGN PARAMETERS:

TRANSPORTABLE DWELLING HAS BEEN DESIGNED FOR THE FOLLOWING:

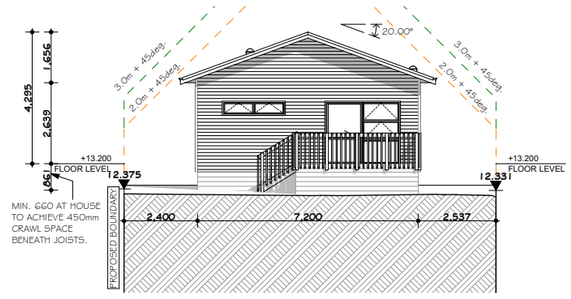
WIND ZONE	- HIGH WIND (NZS 3604:2011)
EARTHQUAKE ZONE	- ZONE 3 (NZS 3604:2011)
DURABILITY ZONE	- B & C OUTSIDE SEASPRAY
SNOW LOADING	- ZERO SNOW LOAD
CLIMATE ZONE	- CLIMATE ZONE 4 (NZS 4218:2004)
RAINFALL INTENSITY	- 120mm/hr PER E1/AS1 APPENDIX 1

ELEVATION KEY

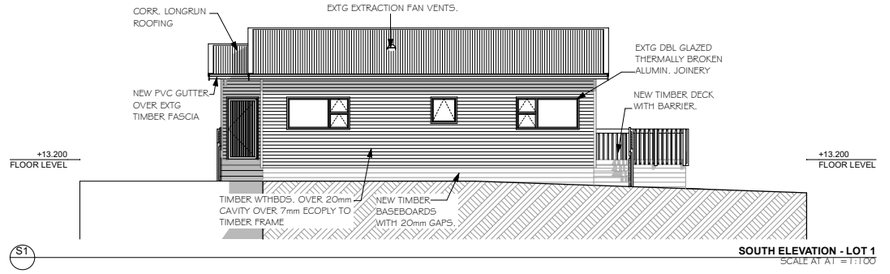
FLOOR PLAN - AS BUILT
SCALE AT A1 =1:50



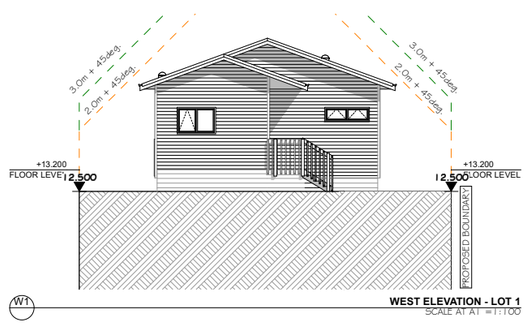
N1
NORTH ELEVATION - LOT 1
SCALE AT A1 =1:100



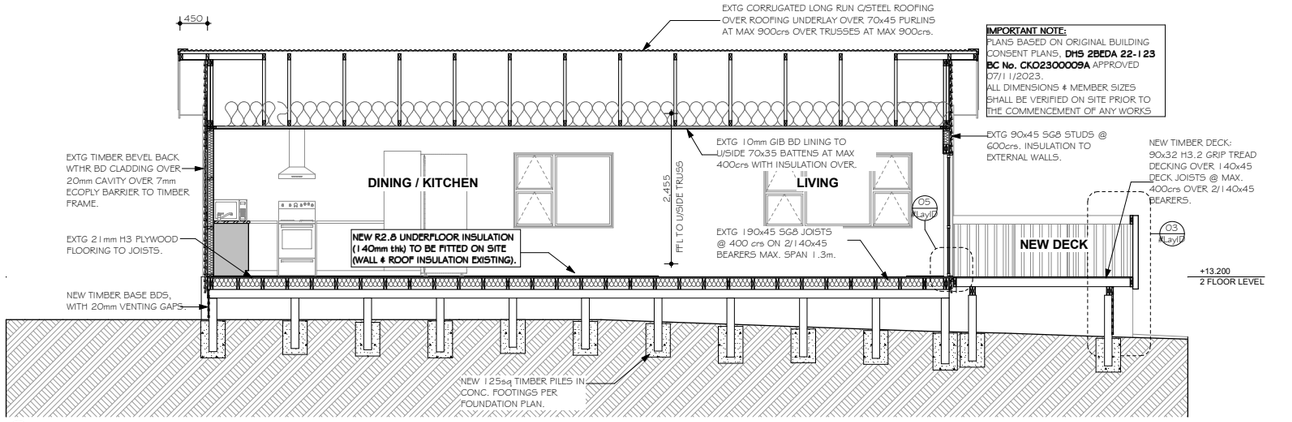
E1
EAST ELEVATION - LOT 1
SCALE AT A1 =1:100



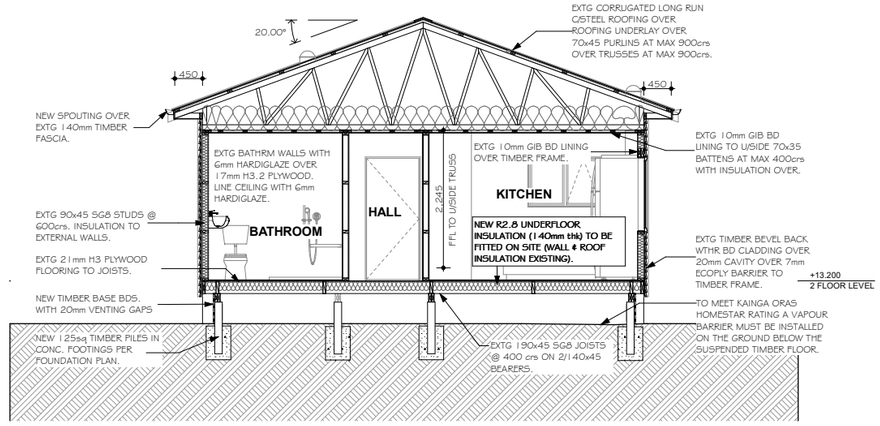
S1
SOUTH ELEVATION - LOT 1
SCALE AT A1 =1:100



W1
WEST ELEVATION - LOT 1
SCALE AT A1 =1:100



B
SECTION BB
SCALE AT A1 =1:50



A
SECTION AA
SCALE AT A1 =1:50

Kāinga Ora Homes and Communities

RevID	ChID	Revision	Date

CLIENT
KAINGA ORA - HOMES AND COMMUNITIES

ADDRESS
1 MASTERS PLACE
KAITAIA

FAR NORTH DISTRICT COUNCIL

PROJECT
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ISSUE
SCHEME 2A

DRAWN	SCALE		
AMY	AS SHOWN	A03	
DATE	SHT FORMAT		
15/02/2024	A1		
JOB REF	TOTAL SHTS	SHEET	REVISION
23-104	02		

NOTE:
THIS SHEET OF PLANS IS INDICATIVE OF HOUSE ON LOT 2
DHS 3BEDA 22-122
BC #CKO2201268

BUILDING DESIGN PARAMETERS:

TRANSPORTABLE DWELLING HAS BEEN DESIGNED FOR THE FOLLOWING:

WIND ZONE	- HIGH WIND (NZS 3604:2011)
EARTHQUAKE ZONE	- ZONE 3 (NZS 3604:2011)
DURABILITY ZONE	- B & C OUTSIDE SEASPRAY
SNOW LOADING	- ZERO SNOW LOAD
CLIMATE ZONE	- CLIMATE ZONE 4 (NZS 4218:2004)
RAINFALL INTENSITY	- 120mm/hr PER E1/AS1 APPENDIX 1

IMPORTANT NOTE:
PLANS BASED ON PREVIOUS CONSENT PLANS **DHS 3BEDA 22-122, BC No. CKO2201268 APPROVED 01/02/23 & AMENDMENT FEB 2024.**
ALL DIMENSIONS & MEMBER SIZES SHALL BE VERIFIED ON SITE PRIOR TO THE COMMENCEMENT OF ANY WORKS

BUILDING AREAS

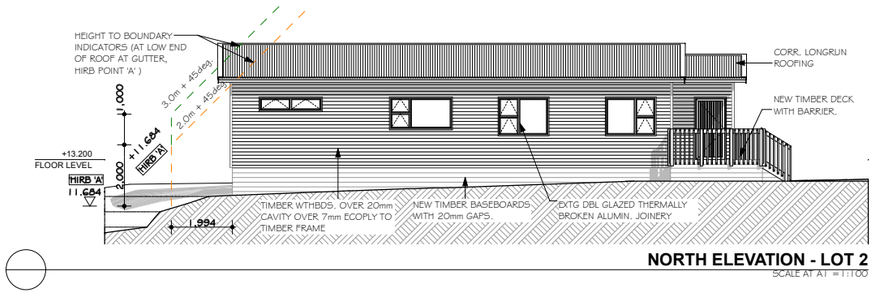
TOTAL AREA O/A FRAME = 110.56m²

SD = SMOKE DETECTOR

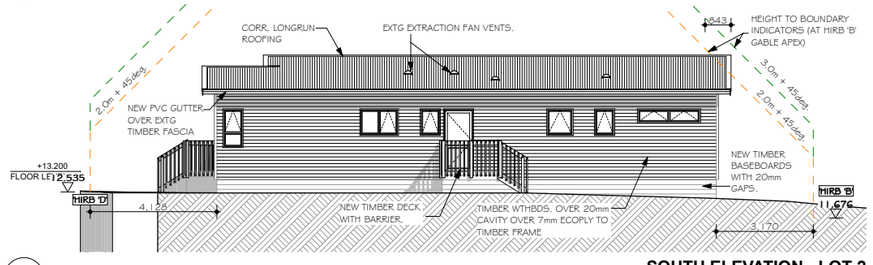
ENSURE SMOKE DETECTORS LOCATED WHERE INDICATED (PER KO STANDARDS, 1 IN EACH BEDROOM AND 1 IN LIVING AREA, C.O.S). DETECTORS MUST HAVE HUSH FACILITY. DETECTORS MUST COMPLY WITH ISO 12239, AS 3786 & BS EN 14604.

ELEVATION KEY

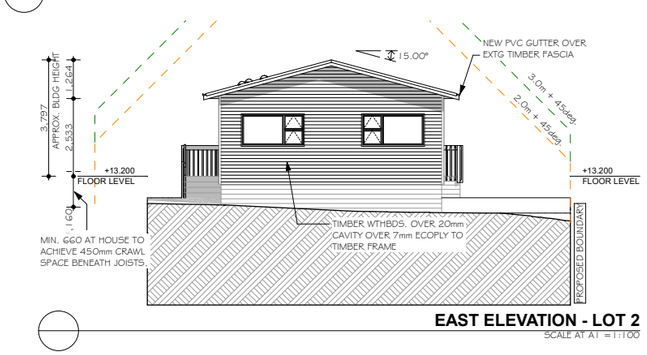
FLOOR PLAN - AS BUILT
SCALE AT A1 = 1:50



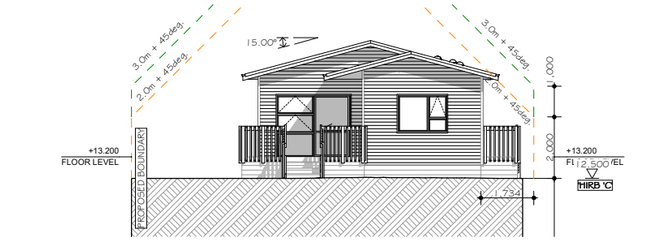
NORTH ELEVATION - LOT 2
SCALE AT A1 = 1:100



SOUTH ELEVATION - LOT 2
SCALE AT A1 = 1:100

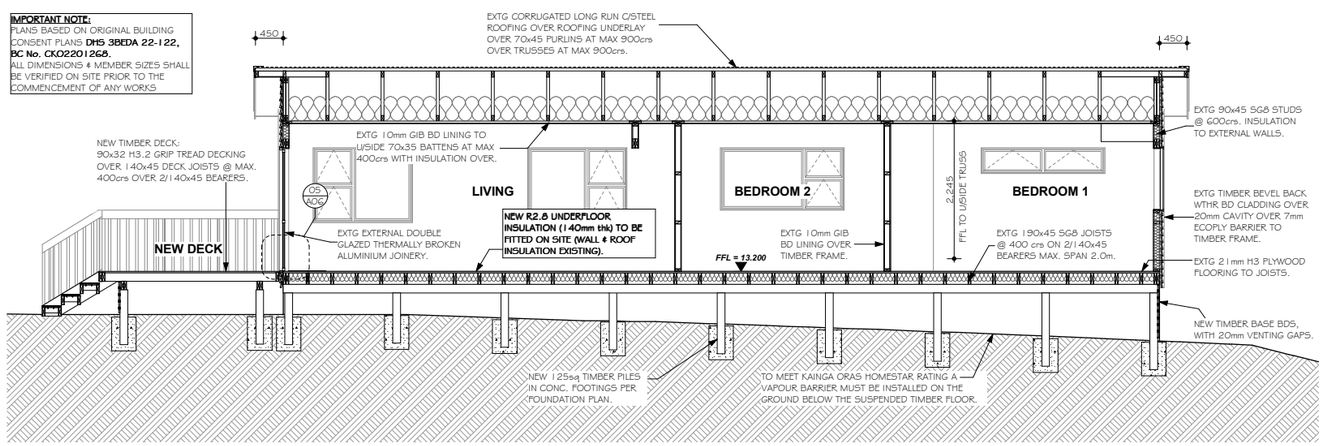


EAST ELEVATION - LOT 2
SCALE AT A1 = 1:100



WEST ELEVATION - LOT 2
SCALE AT A1 = 1:100

IMPORTANT NOTE:
PLANS BASED ON ORIGINAL BUILDING CONSENT PLANS **DHS 3BEDA 22-122, BC No. CKO2201268.**
ALL DIMENSIONS & MEMBER SIZES SHALL BE VERIFIED ON SITE PRIOR TO THE COMMENCEMENT OF ANY WORKS



SECTION BB
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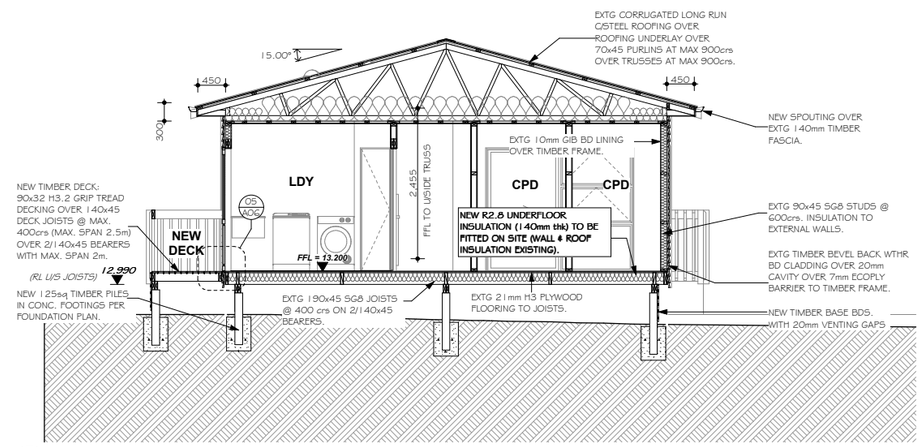

SECTION AA
SCALE AT A1 = 1:50

Kāinga Ora Homes and Communities

Rev	CHD	Revision	Date

CLIENT
KAINGA ORA - HOMES AND COMMUNITIES

ADDRESS
1 MASTERS PLACE
KAITAIA

FAR NORTH DISTRICT COUNCIL

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ISSUE
SCHEME 2A

DRAWN	SCALE		
AMY	AS SHOWN	A04	
DATE	SHT FORMAT		
15/02/2024	A1		
JOB REF	TOTAL SHTS		
23-104	02	SHEET	REVISION

APPENDIX B

CIVIL DRAWINGS

Legend:

- Lot boundary
- 1.0m contour
- 0.5m contour
- Road centreline
- SW — Existing stormwater
- SS — Existing wastewater
- WM — Existing water supply
- Existing wastewater manhole
- Existing stormwater sump
- Existing water toby
- Existing fire hydrant
- Existing public footpath

N

26 Bonnetts Road

22 Bonnetts Road

2 Masters Place

Masters Place

Existing vehicle crossing to be demolished

Access is demolished

Dwelling and shed is removed

Toby to be demolished

Depressed feature

Lot 9 DP 54761
Area: 726m2 (approx.)

Notes:
1. Drawing Coordinates are in NZTM.
2. Land parcels are taken from LINZ.
3. Location of water main, fire hydrant and toby are inferred from FNDC's GIS.
4. Location of public stormwater and wastewater infrastructure are taken from survey done by Boundary Hunters.

0 2 4 6 8 10
Scale 1:200 (m)
Original size = A3

Client	Kāinga Ora - Homes and Communities		
Project	1 Masters Place Re-development Kaitaia Northland		
Drawing Title	Existing Site Plan		

LDE LAND DEVELOPMENT & ENGINEERING

No.	Issue/Revision	Aprvd	Date
A	Issued for Resource Consent	GG	13/02/2024

Design:	G Grover
Drawn:	G Grover
Approved:	S Duncan
Scale A3:	1:200

Project status: Resource Consent
Project: 25734
Drawing No: C01
Issue/Rev: A

Legend:

- Proposed lots common boundary
- Lot boundary
- Road centreline
- Existing stormwater
- Existing wastewater
- Existing water supply
- Existing wastewater manhole
- Existing stormwater sump
- Proposed stormwater
- Prosposed wastewater
- Proposed water supply
- Proposed water toby
- Attenuation tank
- Proposed roof cover
- Proposed concrete surface
- Proposed shed

Notes:

1. Drawing coordinates are in NZTM.
2. Land parcels are taken from LINZ.
3. Attenuation tank to be above ground Slimline tank or similar. Engineer to be consulted if tank dimensions specified in Sheet C03 changes.
4. Areas and dimensions may be subject to scale error.
5. Attenuation tank capacity to be 3,000L.
6. All stormwater, wastewater and water connections to public main to be installed in accordance with FNDC's Engineering Standards.
7. All private networks to be installed per NZ Building Code.
8. Location of attenuation tanks to be determined at detailed design.

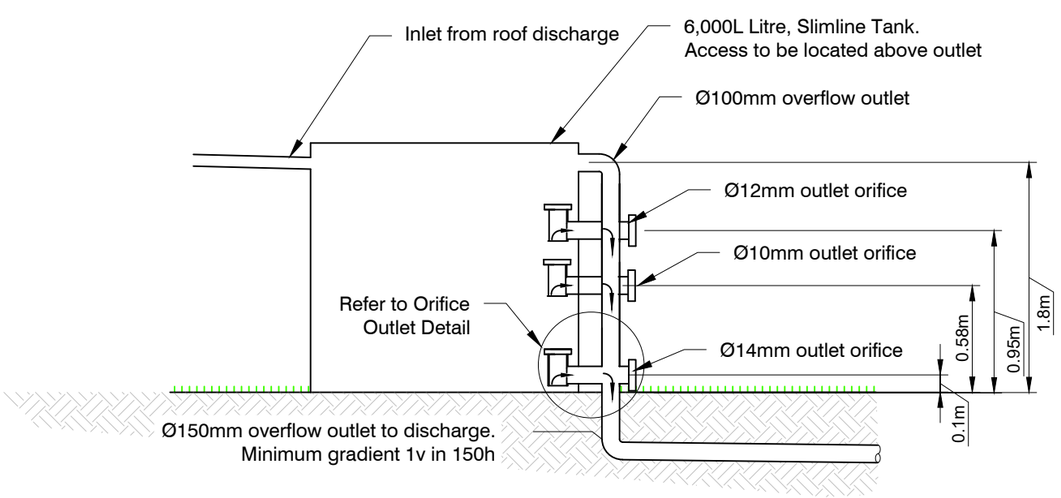
Client	Kāinga Ora - Homes and Communities
Project	1 Masters Place Re-development Kaitaia Northland
Drawing Title	Proposed Site Plan

LDE LAND DEVELOPMENT & ENGINEERING

No.	Issue/Revision	Aprvd	Date
A	Issued for Resource Consent	GG	13/02/2024

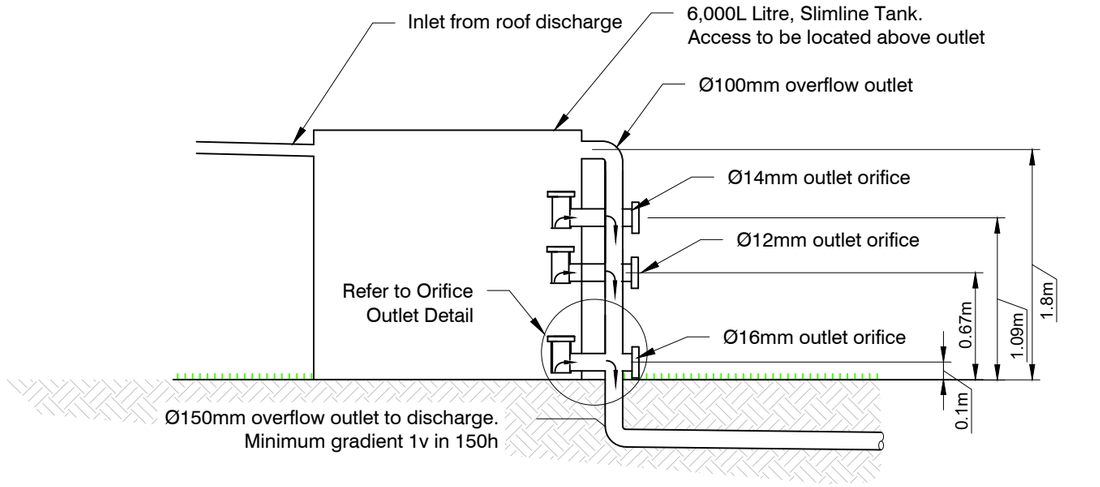
Design:	G Grover
Drawn:	G Grover
Approved:	S Duncan
Scale A3:	1:200

Project status: Resource Consent
Project: 25734
Drawing No: C02
Issue/Rev: A



Lot 1 6,000L ABOVE GROUND TANKSALOT SLIMLINE TANK

N.T.S.

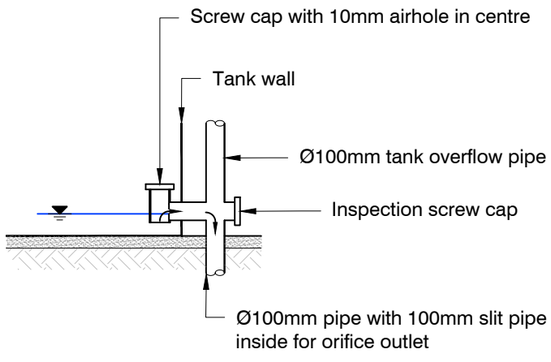


Lot 2 6,000L ABOVE GROUND TANKSALOT SLIMLINE TANK

N.T.S.

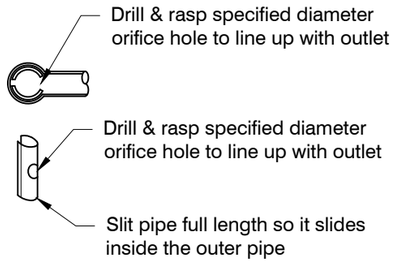
Notes:

1. 6,000L Tanksalot Slimline tank have 3.2m length, 2.02m height and 1.0m width.
2. A similar tank having identical capacity required to be re-designed for heights and size of tank orifices.



ORIFICE OUTLET

N.T.S.



ORIFICE SECTION

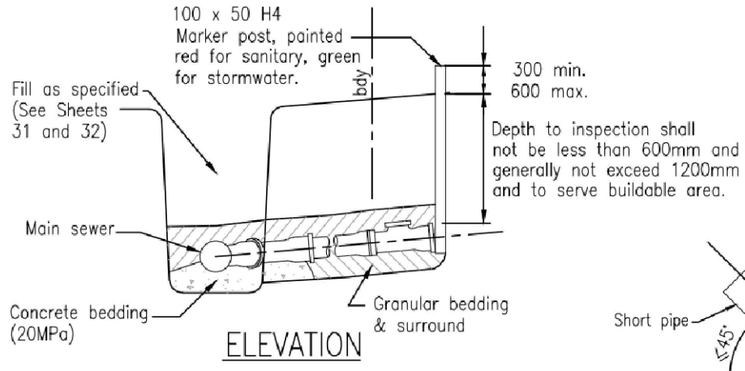
N.T.S.

Original size = A3

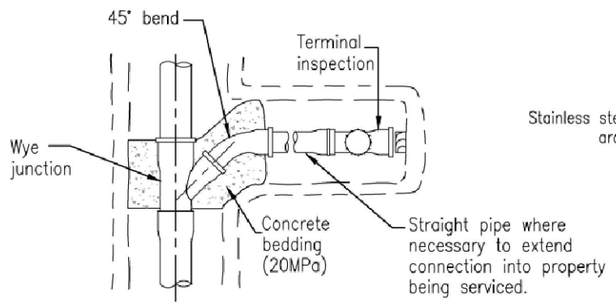
Client	Kāinga Ora - Homes and Communities	Project	1 Masters Place Re-development Kaitaia Northland
Drawing Title	Attenuation Tank Detailing	LDE LAND DEVELOPMENT & ENGINEERING	

No.	Issue/Revision	Aprvd	Date
B	Issued for Resource Consent	GG	14/03/2024
A	Issued for Resource Consent	GG	13/02/2024

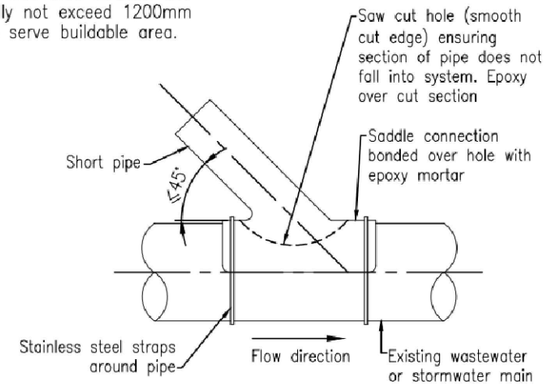
Design:	G Grover	Project status:	Resource Consent
Drawn:	G Grover	Project:	25734
Approved:	J Simson	Drawing No:	C03
Scale A3:	N.T.S.	Issue/Rev:	B



ELEVATION



PLAN STANDARD CONNECTION

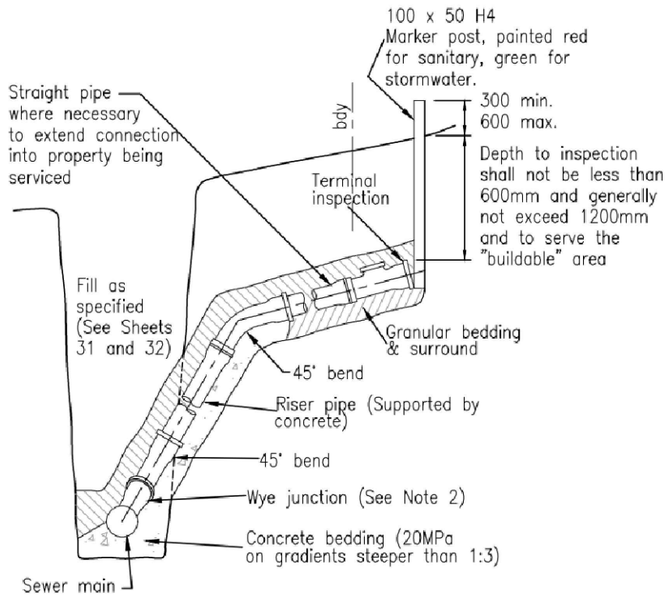


SADDLE CONNECTION

If main > 225mm

NOTES:

1. The terminal inspection shall be located not less than 300mm inside the property being serviced and be free of obstructions
2. For stormwater connections, junctions to be: (in order of preference)
   a. Prefabricated standard wye junctions,
   b. Prefabricated factory special connection, epoxy mortared saddled flange connection with appropriate insert adapter > DN 225.
3. Terminal blank end required for stormwater connections.
4. Pipes and fittings are to be sewer grade uPVC, or concrete to relevant NZ Standard
5. Pipelines that are likely to carry commercial or industrial waste are to satisfy the manufacturers requirements.
6. Specific design may be required in potentially unstable areas.
7. Joint flexibility is to be maintained where pipelines are in contact with concrete. Pipes shall be separated from concrete using DPC.
8. AS-BUILT plans are required for all connections.



RAMPED RISER CONNECTION

Original size = A3

Client: Kāinga Ora - Homes and Communities	Project: 1 Masters Place Re-development, Kaitaia, Northland	Drawing Title: Stormwater & Wastewater Pipe Connection Detailing As Per FNDC's ES 2023 V0.6	LDE LAND DEVELOPMENT & ENGINEERING	A / Issued for Resource Consent / GG / 13/02/2024	Design: G Grover	Drawn: G Grover	Approved: S Duncan	Scale A3: N.T.S.	Project status: Resource Consent; Project: 25734; Drawing No: C04; Issue/Rev: A

APPENDIX C

NIWA HIRDS V4 RAINFALL DATA

Historical Data (mm/hr) from HIRDS V4 NIWA

Rainfall + 1.64 Standard Error (mm)										
ARI	**10m**	**20m**	**30m**	**60m**	**2h**	**6h**	**12h**	**24h**	**48h**	**72h**
2	11.3	16.8	20.8	30.2	42.1	68.1	87.4	93.6	111.2	120.4
5	15.0	22.2	27.8	40.0	55.7	89.7	116.2	125.0	148.3	160.5
10	17.7	26.7	33.3	47.9	66.5	107.5	138.2	149.1	178.1	192.9
20	20.9	31.6	39.5	56.7	78.6	125.6	161.8	177.0	210.3	228.0
30	22.9	34.7	43.5	62.2	85.9	137.9	177.7	193.3	230.2	251.5
40	24.4	37.1	46.5	66.5	91.2	147.2	189.0	208.2	247.2	269.4
50	25.6	39.0	48.9	69.9	95.8	154.4	198.3	216.9	258.4	281.7
60	26.6	40.7	51.1	72.6	99.8	161.7	205.6	226.2	268.1	293.0
80	28.4	43.4	54.4	76.9	106.9	171.0	218.5	239.4	284.0	312.6
100	29.6	45.4	57.0	80.7	111.5	180.9	229.4	251.4	297.9	327.5

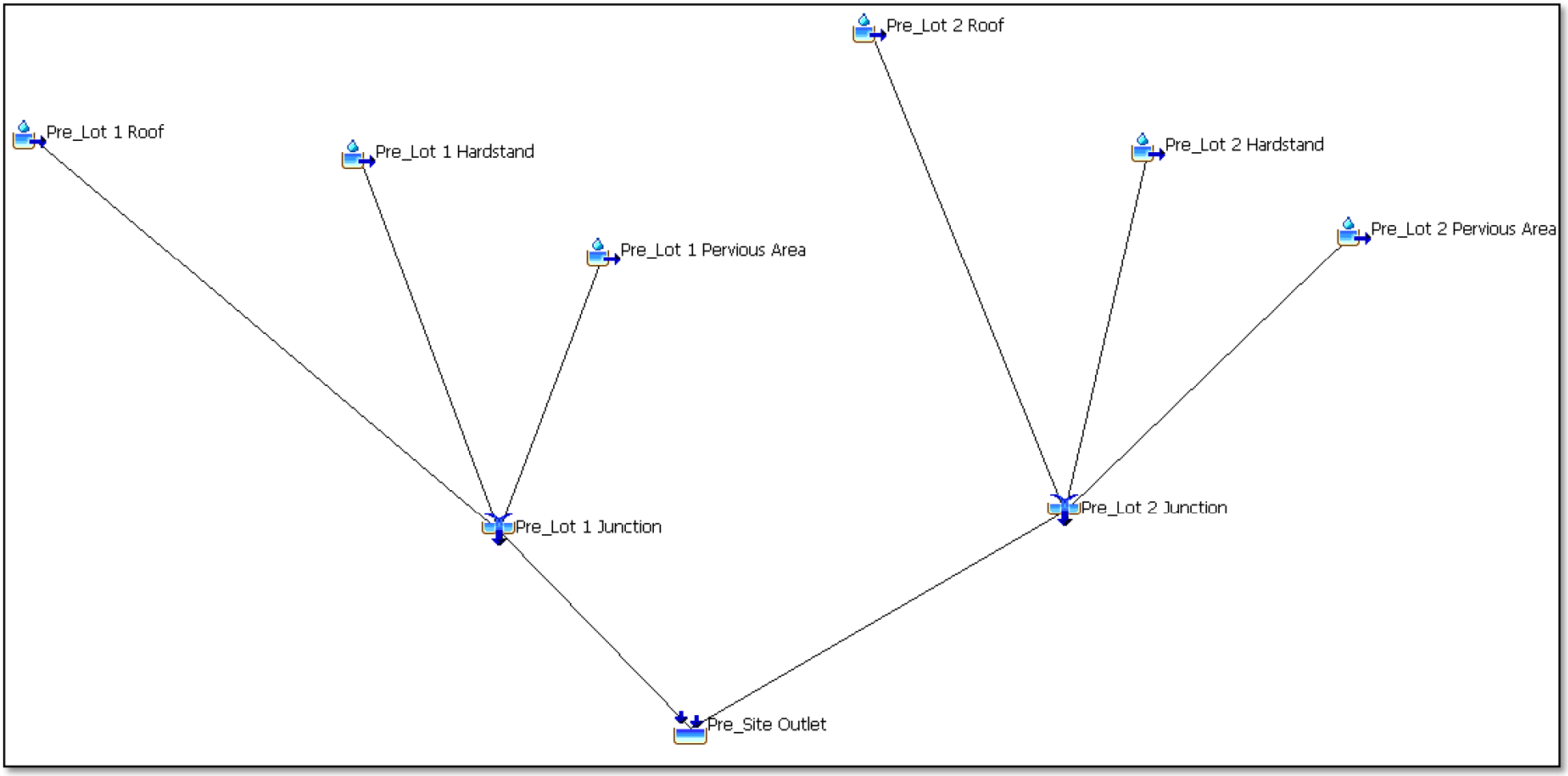
Post-development Rainfall Data Including 20% Increase for Climate Change

Rainfall +	**20%**	**for Climate Change**								
ARI	**10m**	**20m**	**30m**	**60m**	**2h**	**6h**	**12h**	**24h**	**48h**	**72h**
2	13.6	20.1	24.9	36.2	50.5	81.7	104.9	112.3	133.5	144.5
5	18.0	26.6	33.3	48.0	66.8	107.6	139.5	150.0	178.0	192.6
10	21.3	32.0	40.0	57.5	79.8	129.0	165.9	179.0	213.7	231.5
20	25.1	37.9	47.4	68.0	94.3	150.7	194.2	212.4	252.4	273.6
30	27.5	41.7	52.2	74.6	103.1	165.5	213.3	232.0	276.3	301.8
40	29.3	44.6	55.8	79.8	109.5	176.6	226.8	249.9	296.6	323.3
50	30.8	46.8	58.7	83.9	114.9	185.3	237.9	260.3	310.1	338.1
60	31.9	48.8	61.3	87.1	119.8	194.1	246.7	271.4	321.7	351.6
80	34.1	52.0	65.3	92.3	128.3	205.2	262.2	287.3	340.8	375.1
100	35.5	54.5	68.4	96.8	133.8	217.1	275.3	301.6	357.5	393.0

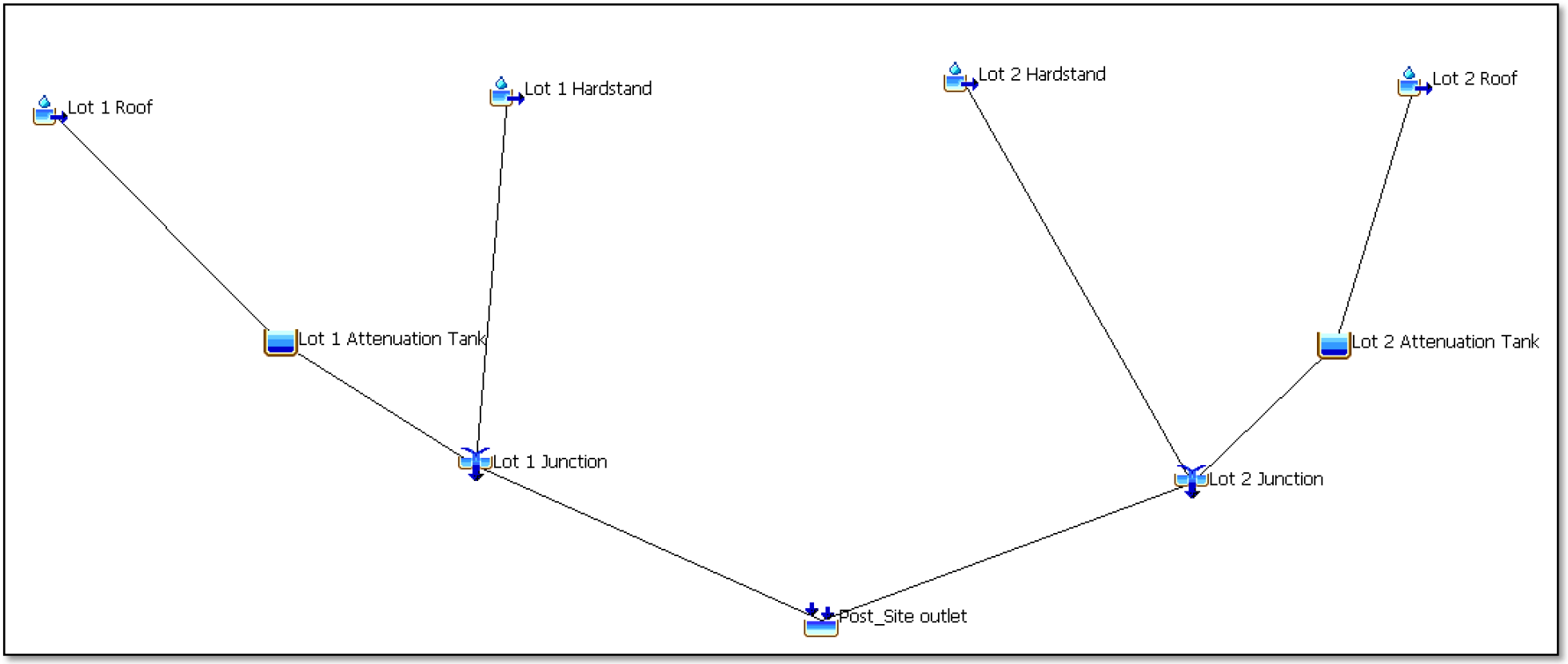
APPENDIX D

HEC-HMS MODELS AND RESULTS

PRE-DEVELOPMENT MODEL



POST-DEVELOPMENT MODEL



50% AEP Pre-Development Output Summary

Global Summary Results for Run "2yr Pre_Run"

Project: HEChms Model Simulation Run: 2yr Pre_Run

Start of Run: 01Jan2000, 00:00
End of Run: 02Jan2000, 00:00
Compute Time: 14Mar2024, 10:20:23

Basin Model: Pre-development
Meteorologic Model: 2yr pre Metro setup
Control Specifications: Control 1

Show Elements: All Elements Volume Units: (•) MM ( ) 1000 M3 Sorting: Watershed Explorer

Hydrologic Element	Drainage Area (KM2)	Peak Discharge (M3/S)	Time of Peak	Volume (MM)
Pre_Lot 1 Roof	0.00006	0.00038	1 January 2000, 0...	88.82730
Pre_Lot 1 Pervious...	0.00006	0.00021	1 January 2000, 0...	52.43581
Pre_Lot 1 Hardstand	0.00003	0.00020	1 January 2000, 0...	88.82730
Pre_Lot 2 Roof	0.00008	0.00050	1 January 2000, 0...	88.82730
Pre_Lot 2 Pervious...	0.00007	0.00025	1 January 2000, 0...	52.43581
Pre_Lot 2 Hardstand	0.00003	0.00020	1 January 2000, 0...	88.82730
Pre_Lot 2 Junction	0.00019	0.00095	1 January 2000, 0...	74.71830
Pre_Lot 1 Junction	0.00015	0.00079	1 January 2000, 0...	74.85766
Pre_Site Outlet	0.00034	0.00174	1 January 2000, 0...	74.78146

50% AEP Post-development Output Summary

Global Summary Results for Run "2yr Post_Run"

Project: HEChms Model Simulation Run: 2yr Post_Run

Start of Run: 01Jan2000, 00:00
End of Run: 02Jan2000, 00:00
Compute Time: DATA CHANGED, RECOMPUTE

Basin Model: Post-development
Meteorologic Model: 2yr post Metro setup
Control Specifications: Control 1

Show Elements: All Elements Volume Units: (•) MM ( ) 1000 M3 Sorting: Watershed Explorer

Hydrologic Element	Drainage Area (KM2)	Peak Discharge (M3/S)	Time of Peak	Volume (MM)
Lot 2 Roof	0.00014	0.00101	1 January 2000, 0...	106.73567
Lot 2 Attenuation ...	0.00014	0.00044	1 January 2000, 0...	106.20376
Lot 2 Hardstand	0.00005	0.00036	1 January 2000, 0...	106.73567
Lot 2 Junction	0.00019	0.00075	1 January 2000, 0...	106.34314
Lot 1 Roof	0.00011	0.00077	1 January 2000, 0...	106.73567
Lot 1 Attenuation ...	0.00011	0.00032	1 January 2000, 0...	106.01952
Lot 1 Hardstand	0.00005	0.00036	1 January 2000, 0...	106.73567
Lot 1 Junction	0.00015	0.00063	1 January 2000, 0...	106.24592
Post_Site outlet	0.00034	0.00138	1 January 2000, 0...	106.29907

Summary Results for Reservoir "Lot 1 Attenuation Tank"

Project: HEChms Model Simulation Run: 2yr Post_Run
Reservoir: Lot 1 Attenuation Tank

Start of Run: 01Jan2000, 00:00
End of Run: 02Jan2000, 00:00
Compute Time: 14Mar2024, 10:24:22

Basin Model: Post-development
Meteorologic Model: 2yr post Metro setup
Control Specifications: Control 1

Volume Units: (•) MM ( ) 1000 M3

Computed Results

Peak Inflow:	0.00077 (M3/S)	Date/Time of Peak Inflow:	01Jan2000, 07:58
Peak Discharge:	0.00032 (M3/S)	Date/Time of Peak Discharge:	01Jan2000, 08:28
Inflow Volume:	106.73567 (MM)	Peak Storage:	0.00182 (1000 M3)
Discharge Volume:	106.01952 (MM)	Peak Elevation:	0.58304 (M)

Summary Results for Reservoir "Lot 2 Attenuation Tank"

Project: HEChms Model Simulation Run: 2yr Post_Run
Reservoir: Lot 2 Attenuation Tank

Start of Run: 01Jan2000, 00:00
End of Run: 02Jan2000, 00:00
Compute Time: DATA CHANGED, RECOMPUTE

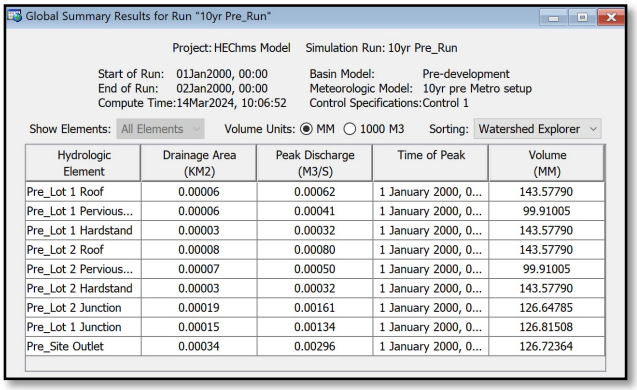
Basin Model: Post-development
Meteorologic Model: 2yr post Metro setup
Control Specifications: Control 1

Volume Units: (•) MM ( ) 1000 M3

Computed Results

Peak Inflow:	0.00101 (M3/S)	Date/Time of Peak Inflow:	01Jan2000, 07:58
Peak Discharge:	0.00044 (M3/S)	Date/Time of Peak Discharge:	01Jan2000, 08:26
Inflow Volume:	106.73567 (MM)	Peak Storage:	0.00211 (1000 M3)
Discharge Volume:	106.20376 (MM)	Peak Elevation:	0.66671 (M)

10% AEP Pre-development Output Summary



Global Summary Results for Run "10yr Pre_Run"

Project: HEChms Model Simulation Run: 10yr Pre_Run

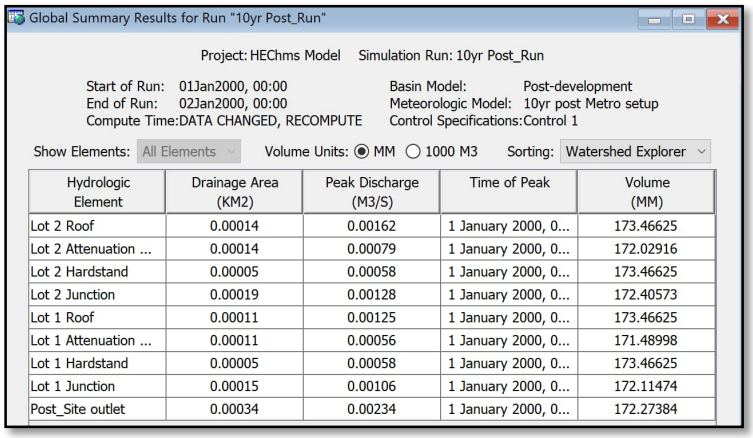
Start of Run: 01Jan2000, 00:00
End of Run: 02Jan2000, 00:00
Compute Time: 14Mar2024, 10:06:52

Basin Model: Pre-development
Meteorologic Model: 10yr pre Metro setup
Control Specifications: Control 1

Show Elements: All Elements Volume Units: (•) MM ( ) 1000 M3 Sorting: Watershed Explorer

Hydrologic Element	Drainage Area (KM2)	Peak Discharge (M3/S)	Time of Peak	Volume (MM)
Pre_Lot 1 Roof	0.00006	0.00062	1 January 2000, 0...	143.57790
Pre_Lot 1 Pervious...	0.00006	0.00041	1 January 2000, 0...	99.91005
Pre_Lot 1 Hardstand	0.00003	0.00032	1 January 2000, 0...	143.57790
Pre_Lot 2 Roof	0.00008	0.00080	1 January 2000, 0...	143.57790
Pre_Lot 2 Pervious...	0.00007	0.00050	1 January 2000, 0...	99.91005
Pre_Lot 2 Hardstand	0.00003	0.00032	1 January 2000, 0...	143.57790
Pre_Lot 2 Junction	0.00019	0.00161	1 January 2000, 0...	126.64785
Pre_Lot 1 Junction	0.00015	0.00134	1 January 2000, 0...	126.81508
Pre_Site Outlet	0.00034	0.00296	1 January 2000, 0...	126.72364

10% AEP Post-development Output Summary



Global Summary Results for Run "10yr Post_Run"

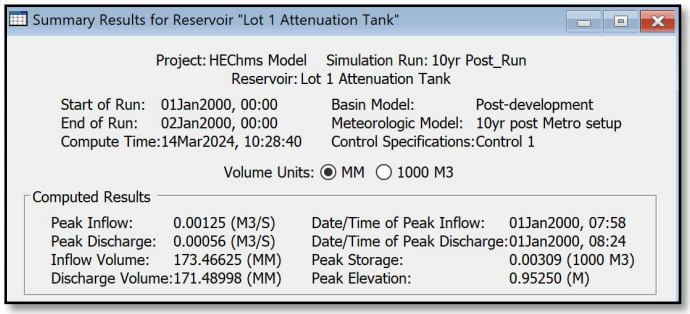
Project: HEChms Model Simulation Run: 10yr Post_Run

Start of Run: 01Jan2000, 00:00
End of Run: 02Jan2000, 00:00
Compute Time: DATA CHANGED, RECOMPUTE

Basin Model: Post-development
Meteorologic Model: 10yr post Metro setup
Control Specifications: Control 1

Show Elements: All Elements Volume Units: (•) MM ( ) 1000 M3 Sorting: Watershed Explorer

Hydrologic Element	Drainage Area (KM2)	Peak Discharge (M3/S)	Time of Peak	Volume (MM)
Lot 2 Roof	0.00014	0.00162	1 January 2000, 0...	173.46625
Lot 2 Attenuation ...	0.00014	0.00079	1 January 2000, 0...	172.02916
Lot 2 Hardstand	0.00005	0.00058	1 January 2000, 0...	173.46625
Lot 2 Junction	0.00019	0.00128	1 January 2000, 0...	172.40573
Lot 1 Roof	0.00011	0.00125	1 January 2000, 0...	173.46625
Lot 1 Attenuation ...	0.00011	0.00056	1 January 2000, 0...	171.48998
Lot 1 Hardstand	0.00005	0.00058	1 January 2000, 0...	173.46625
Lot 1 Junction	0.00015	0.00106	1 January 2000, 0...	172.11474
Post_Site outlet	0.00034	0.00234	1 January 2000, 0...	172.27384



Summary Results for Reservoir "Lot 1 Attenuation Tank"

Project: HEChms Model Simulation Run: 10yr Post_Run
Reservoir: Lot 1 Attenuation Tank

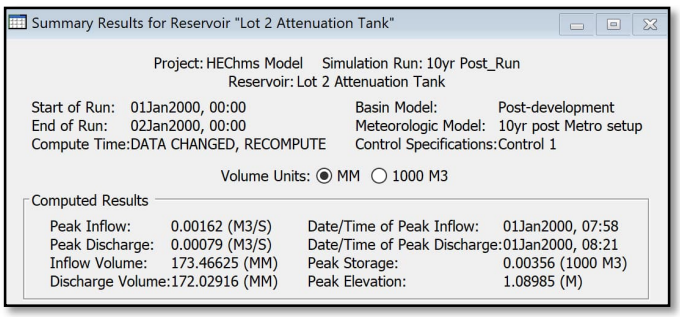
Start of Run: 01Jan2000, 00:00
End of Run: 02Jan2000, 00:00
Compute Time: 14Mar2024, 10:28:40

Basin Model: Post-development
Meteorologic Model: 10yr post Metro setup
Control Specifications: Control 1

Volume Units: (•) MM ( ) 1000 M3

Computed Results

Peak Inflow:	0.00125 (M3/S)	Date/Time of Peak Inflow:	01Jan2000, 07:58
Peak Discharge:	0.00056 (M3/S)	Date/Time of Peak Discharge:	01Jan2000, 08:24
Inflow Volume:	173.46625 (MM)	Peak Storage:	0.00309 (1000 M3)
Discharge Volume:	171.48998 (MM)	Peak Elevation:	0.95250 (M)



Summary Results for Reservoir "Lot 2 Attenuation Tank"

Project: HEChms Model Simulation Run: 10yr Post_Run
Reservoir: Lot 2 Attenuation Tank

Start of Run: 01Jan2000, 00:00
End of Run: 02Jan2000, 00:00
Compute Time: DATA CHANGED, RECOMPUTE

Basin Model: Post-development
Meteorologic Model: 10yr post Metro setup
Control Specifications: Control 1

Volume Units: (•) MM ( ) 1000 M3

Computed Results

Peak Inflow:	0.00162 (M3/S)	Date/Time of Peak Inflow:	01Jan2000, 07:58
Peak Discharge:	0.00079 (M3/S)	Date/Time of Peak Discharge:	01Jan2000, 08:21
Inflow Volume:	173.46625 (MM)	Peak Storage:	0.00356 (1000 M3)
Discharge Volume:	172.02916 (MM)	Peak Elevation:	1.08985 (M)

1% AEP Pre-development Output Summary

Global Summary Results for Run "100yr Pre_Run"

Project: HEChms Model Simulation Run: 100yr Pre_Run

Start of Run: 01Jan2000, 00:00
End of Run: 02Jan2000, 00:00
Compute Time: 14Mar2024, 11:45:58

Basin Model: Pre-development
Meteorologic Model: 100yr pre Metro setup
Control Specifications: Control 1

Show Elements: All Elements Volume Units: (•) MM ( ) 1000 M3 Sorting: Watershed Explorer

Hydrologic Element	Drainage Area (KM2)	Peak Discharge (M3/S)	Time of Peak	Volume (MM)
Pre_Lot 1 Roof	0.00006	0.00104	1 January 2000, 0...	245.22549
Pre_Lot 1 Pervious...	0.00006	0.00081	1 January 2000, 0...	194.74262
Pre_Lot 1 Hardstand	0.00003	0.00054	1 January 2000, 0...	245.22549
Pre_Lot 2 Roof	0.00008	0.00136	1 January 2000, 0...	245.22549
Pre_Lot 2 Pervious...	0.00007	0.00099	1 January 2000, 0...	194.74262
Pre_Lot 2 Hardstand	0.00003	0.00054	1 January 2000, 0...	245.22549
Pre_Lot 2 Junction	0.00019	0.00288	1 January 2000, 0...	225.65325
Pre_Lot 1 Junction	0.00015	0.00239	1 January 2000, 0...	225.84658
Pre_Site Outlet	0.00034	0.00528	1 January 2000, 0...	225.74087

1% AEP Post-development Output Summary

Global Summary Results for Run "100yr Post_Run"

Project: HEChms Model Simulation Run: 100yr Post_Run

Start of Run: 01Jan2000, 00:00
End of Run: 02Jan2000, 00:00
Compute Time: 14Mar2024, 10:30:51

Basin Model: Post-development
Meteorologic Model: 100yr post Metro setup
Control Specifications: Control 1

Show Elements: All Elements Volume Units: (•) MM ( ) 1000 M3 Sorting: Watershed Explorer

Hydrologic Element	Drainage Area (KM2)	Peak Discharge (M3/S)	Time of Peak	Volume (MM)
Lot 2 Roof	0.00014	0.00275	1 January 2000, 0...	296.06661
Lot 2 Attenuation ...	0.00014	0.00147	1 January 2000, 0...	291.50511
Lot 2 Hardstand	0.00005	0.00098	1 January 2000, 0...	296.06661
Lot 2 Junction	0.00019	0.00231	1 January 2000, 0...	292.70037
Lot 1 Roof	0.00011	0.00211	1 January 2000, 0...	296.06661
Lot 1 Attenuation ...	0.00011	0.00102	1 January 2000, 0...	289.57963
Lot 1 Hardstand	0.00005	0.00098	1 January 2000, 0...	296.06661
Lot 1 Junction	0.00015	0.00189	1 January 2000, 0...	291.63035
Post_Site outlet	0.00034	0.00421	1 January 2000, 0...	292.21542

Summary Results for Reservoir "Lot 1 Attenuation Tank"

Project: HEChms Model Simulation Run: 100yr Post_Run
Reservoir: Lot 1 Attenuation Tank

Start of Run: 01Jan2000, 00:00
End of Run: 02Jan2000, 00:00
Compute Time: 14Mar2024, 10:30:51

Basin Model: Post-development
Meteorologic Model: 100yr post Metro setup
Control Specifications: Control 1

Volume Units: (•) MM ( ) 1000 M3

Computed Results

Peak Inflow: 0.00211 (M3/S)
Peak Discharge: 0.00102 (M3/S)
Inflow Volume: 296.06661 (MM)
Discharge Volume: 289.57963 (MM)

Date/Time of Peak Inflow: 01Jan2000, 07:58
Date/Time of Peak Discharge: 01Jan2000, 08:21
Peak Storage: 0.00522 (1000 M3)
Peak Elevation: 1.57178 (M)

Summary Results for Reservoir "Lot 2 Attenuation Tank"

Project: HEChms Model Simulation Run: 100yr Post_Run
Reservoir: Lot 2 Attenuation Tank

Start of Run: 01Jan2000, 00:00
End of Run: 02Jan2000, 00:00
Compute Time: 14Mar2024, 10:30:51

Basin Model: Post-development
Meteorologic Model: 100yr post Metro setup
Control Specifications: Control 1

Volume Units: (•) MM ( ) 1000 M3

Computed Results

Peak Inflow: 0.00275 (M3/S)
Peak Discharge: 0.00147 (M3/S)
Inflow Volume: 296.06661 (MM)
Discharge Volume: 291.50511 (MM)

Date/Time of Peak Inflow: 01Jan2000, 07:58
Date/Time of Peak Discharge: 01Jan2000, 08:18
Peak Storage: 0.00596 (1000 M3)
Peak Elevation: 1.78695 (M)

APPENDIX E

CORRESPONDENCE WITH FNDC

Gordon Grover

From: Sujeet Tikaram <Sujeet.Tikaram@fndc.govt.nz>
Sent: Monday, 22 January 2024 3:04 pm
To: Gordon Grover
Subject: RE: 1 Masters Place, Kaitaia

Categories: M-Files
DSConversationProcStatus: PROC
M-FilesID: 425512
M-FilesVaultGUID: {152DC18A-601D-4CF9-8ACA-6EF80FEBB7A9}

Hi Gordon,
Just on point 3 below regarding water supply, please check if the hydrants are within the distances allowed in the firefighting code of practice.
I also recommend that FENZ are consulted to check that they are happy with the firefighting supplies from the existing hydrants, otherwise supplementary supplies (tanks) may be required.

Cheers

Sujeet Tikaram
Development Engineer - Far North Waters Alliance
M 027 566 1191 | P 6494015376 | Sujeet.Tikaram@fndc.govt.nz
An alliance between Far North District Council and Ventia

Pokapū Kōrero 24-hāora | 24-hour Contact Centre 0800 920 029
fndc.govt.nz

From: [redacted]
Sent: Monday, January 22, 2024 2:58 PM
To: Sujeet Tikaram <Sujeet.Tikaram@fndc.govt.nz>
[redacted]
Subject: RE: 1 Masters Place, Kaitaia

Thank you for your time over the phone this afternoon, Sujeet. We appreciate your speedy response.

Over the phone you have provided the following comments for us to proceed further:

1. Stormwater: SW connection requires attenuation as per the latest FNDC's Engineering Standards (ES) to prevent downstream effects from increasing in impermeable areas. Use the most conservative storm (as per FNDC's ES) for attenuation, as the downstream flooding issues exists.

2. Accessway: Contact NTA for comments.

3. Water: connection can be allowed, requires individual metered water connection for each lot. Fire Hydrant testing is not required for the subdivision.

4. Wastewater: connection can be allowed, each lot requires an individual connection.

We hope you have a great rest of the day.

Cheers

Kind regards,

Gordon Grover
Civil Engineer

+64 20 4037 1998
+64 9 974 8799

LDE Ltd
2A Herekino Street
Whangarei, 0140
www.lde.co.nz

Consulting Engineers - Geotechnical, Civil, Structural & Environmental.

Terms

[redacted]

Hi Gordon,
Can you please give me a call to discuss your queries below when you are available. My cell number is .

Cheers
Sujeet

-----Original Message-----
From: Kieran-Jade Nels[redacted]
Sent: Monday, January
To: Development Engin[redacted]
Subject: Allocated: RFS 4189456 Priority 3: Infrastructure & Asset Mgmt - Message Track.

A new Customer Request has been lodged and you have been assigned as the Actioning Officer. Please check the Customer Services system for further information.

22-Jan-2024 13:18:55 - Amit Nandi
Kia ora Marilyn,

Regards,
Amit

22-Jan-2024 08:28:15 - Marilyn Ruwhiu
ASK Other
1 Issue type (select)
Storm water
2 Tell us about the issue
Hi

My name is Gordon; and I work for LDE Ltd as a civil engineer. My query concerns 1 Masters Place in Kaitaia.

Our client Kainga Ora has removed a burnt house at the above-mentioned address and is planning to construct two dwellings at the property.

We want FNDC to confirm the following:

1. Do public network capacity issues exist for the stormwater/flooding, wastewater and potable water serving the property for the development?
2. Any relevant constraints that FNDC is aware of and required to be flagged/addressed in our infrastructure assessment of the property including access requirements?

Thank you

19-Jan-2024 14:17:22 - PUBLIC
Given Name: Gordon
Surname: Grover
Contact Customer: Yes
Email: [redacted]
Request Location: 1 Masters Place, Kaitaia Northland 0410
Request Latitude: -35.1113804
Request Longitude: 173.2548452
Visible to Public: No
Property Id: 3302845

Questionnaire:

1) Issue type (select)
Answer: Storm water

2) Tell us about the issue
Answer: Hi

My name is Gordon; and I work for LDE Ltd as a civil engineer. My query concerns 1 Masters Place in Kaitaia.

Our client Kainga Ora has removed a burnt house at the above-mentioned address and is planning to construct two dwellings at the property.

We want FNDC to confirm the following:

1. Do public network capacity issues exist for the stormwater/flooding, wastewater and potable water serving the property for the development?
2. Any relevant constraints that FNDC is aware of and required to be flagged/addressed in our infrastructure assessment of the property including access requirements?

Thank you

APPENDIX F

CORRESPONDENCE WITH FENZ

Gordon Grover

From: [redacted]
Sent: Tuesday, 30 January 2024 8:12 am
To: Gordon Grover
Subject: Water Supply Masters Place Kaitaia
Attachments: _ags_ce9db7b8-bed9-11ee-a1a3-005056983b2a.jpg

Follow Up Flag: Follow up
Flag Status: Flagged

DSConversationProcStatus:
PROC

Good morning,

There is a reticulated hydrant fed from one 100mm main located directly across from No 1.
This will meet the SNZPAS 4509:2008 Code of Practice and FENZ operational requirements.

Please contact me if you require any additional information.

Kind Regards

Jason Goffin
Advisor Risk Reduction – Kaitohutohu Matua Whakaheke Moorea
Specialist Fire Investigator – Kaititiro Ahi Maatanga
Te Tai Tokerau
Te Hiku Region 1
9 Homestead Road Kerikeri

Mobile: [redacted]
Email: [redacted]

Fire Fact "A House Fire Can Become Fatal within 5 Minutes"

APPENDIX G

CORRESPONDENCE WITH NRC

Gordon Grover

From: Nicole Basher <nicoleb@nrc.govt.nz>
Sent: Wednesday, 24 January 2024 1:40 pm
To: Gordon Grover
Subject: RE REQ.618987 LDE Limited Flood Level Request 1 Masters Place Kaitaia 20240119

Follow Up Flag: Follow up
Flag Status: Completed

DSConversationProcStatus:
PROC

Hi Gordon,

Note we have two types of modelling for this catchment, priority and regionwide. The priority river model takes precedent over the regionwide for this specific catchment. So, the extent may look different to the one in our online Natural Hazards map and this by default has both types of model displaying.

For the priority river model, only the 100 year CC (1% climate change) extent intersects the property at 1 Masters Place, Kaitaia, and that is just ever so slightly on its eastern side. See below image.

The flood level for those cells that intersect the property is 11.887m NZVD and the max depth I found in those intersecting cells is 0.233m.

Our modelling disclaimers are linked below:
Coastal Flood Hazard Disclaimer
River Flood Map Disclaimer

Kind regards,

Ngā mihi

Nicole Basher
Rivers and Natural Hazards Officer
Northland Regional Council » Te Kaunihera ā rohe o Te Taitokerau

M 0272162199
P 09 470 1210 | EXT 9240

Northland REGIONAL COUNCIL
Te Kaunihera ā rohe o Te Taitokerau

P 0800 002 004 » W www.nrc.govt.nz

APPENDIX F

CORRESPONDENCE WITH CLIENT'S PLANNER FOR NTA COMMENTS ON ACCESS

[redacted]

Reply | Reply All | Forward

Wed 21/02/2024 8:37 am

Morning all,

Further to my email below NTA has advised the following;

If there are options for manoeuvring on site that is always our first preference. This location does have a slow speed environment and a lack of crash history, happy to consider reversing on to the roadway if it can be shown that 1) there is adequate sight distance/no visual obstructions to seeing pedestrians and 2) that reconstruction of the VC will include a ped priority footpath (see example below)

Driveways | Waka Kotahi NZ Transport Agency (nzta.govt.nz)

Happy to discuss if there are any questions on this.

Ngā mihi | Kind regards,

MELISSA HALLETT
Senior Planner
027 214 7028
MelissaH@barker.co.nz

barker.co.nz

Kāinga Ora - Homes and Communities

GEOTECHNICAL ASSESSMENT REPORT FOR SUITABILITY OF PROPOSED SUBDIVISION

1 Masters Place, Kaitaia

Project Reference: 25734
27 February 2024

DOCUMENT CONTROL

Version	Date	Issued For / Comments
0	27/02/2024	Draft for Review

Prepared By	Reviewed & Authorised By
[redacted] Marcel Langton Engineering Geologist *BSc, PMEG*	[redacted] **Gareth Harding** Chartered Professional Engineer (Geotech/Civil) *CPEng, IntPE(NZ), BE, BSc, CMEngNZ*

CONTENTS

1 EXECUTIVE SUMMARY

Based on the investigation and appraisal of the site reported herein, the proposed building development has been assessed as stable and is generally considered to be suitable for conventional construction in accordance with the relevant codes of practice.

All other geotechnical hazards at the site have been assessed as either not present or of acceptable risk provided that the various mitigation measures and good practice recommendations made in this report are adopted.

2 INTRODUCTION

LDE Ltd has been engaged by Kāinga Ora - Homes and Communities to undertake a geotechnical suitability assessment for a proposed building development at 1 Masters Place, Kaitaia, as shown in figure one below. The proposed scheme plan is shown below and attached as Appendix A.

The purpose of the investigation was to determine the geotechnical suitability of the site for the proposed development in accordance with the Resource Management Act (1991) and the Far North District Council (FNDC) Engineering Standards (2023). The scope of our suitability assessment included consideration of any existing or potential geotechnical hazards at locations of the new buildings, consideration of engineering requirements for residential construction, and the servicing of buildings with respect to access, wastewater, and stormwater disposal.

Figure 1.Approximate location of site (red circle)[1]

2.1 Proposed Development

The client proposes to redevelop the site by dividing the existing lot into two, creating Lot 1 of ~344.6m^2 and Lot 2 of ~381m^2 lot. A two 2-bedroom dwelling with a floor area of ~82.4m^2 is to be relocated to Lot 1, and a 3-bedroom dwelling, floor area of ~110.5m^2, to be relocated to Lot 2 (Figure 2).

Each new dwelling would have a 3.5m wide carpark area, a garden shed of ~2.7m^2 on a concrete pad, and concrete pathways. The dwelling on Lot 1 is to have deck at its eastern end (12m^2) and dwelling on Lot 2 is to have a deck located at the western end of the dwelling (12.2m^2) and on the southern side of dwelling (2.4m^2)

The site can connect to existing council infrastructure for water supply, wastewater, and stormwater.

[1] Image sourced from Google Earth

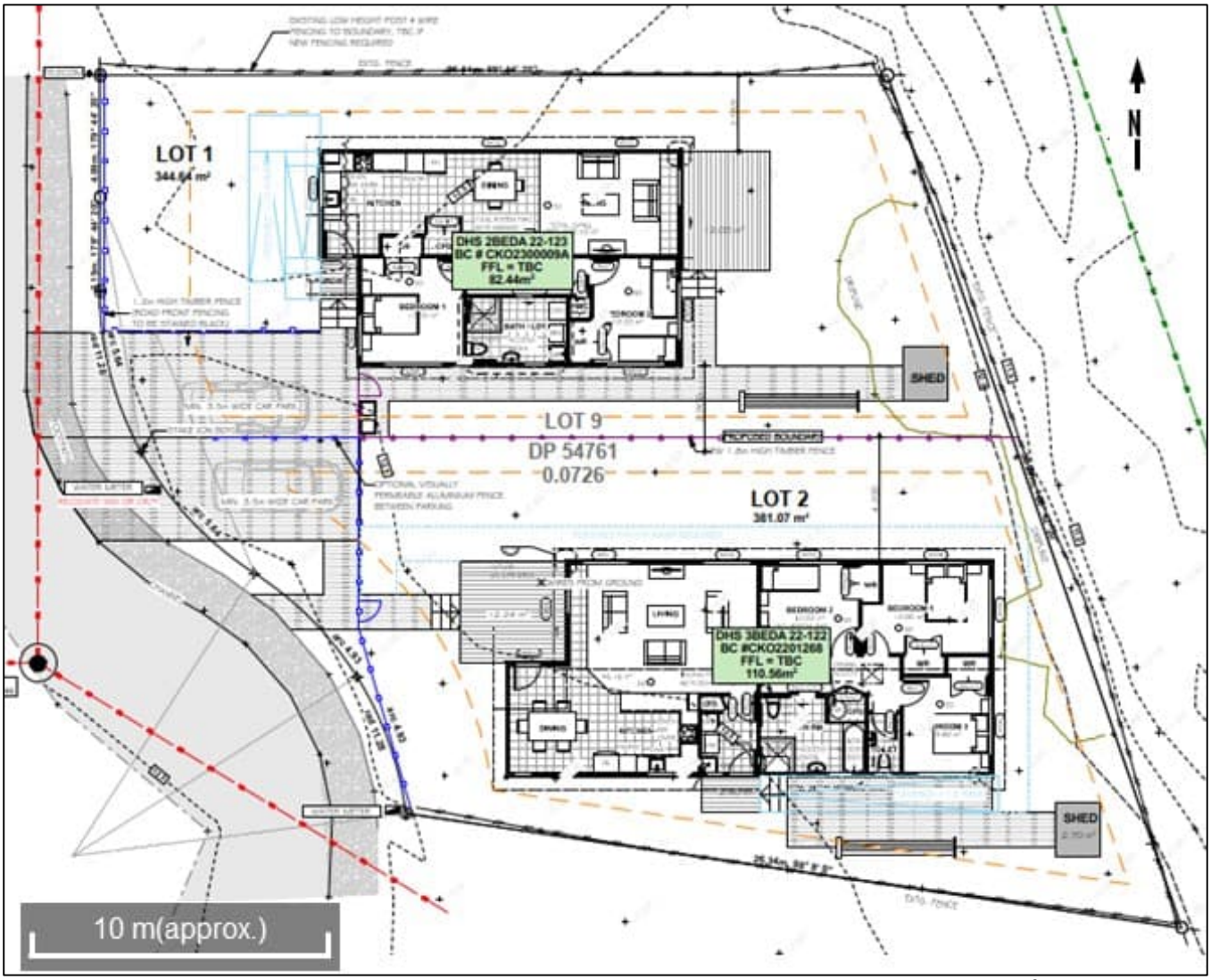


Figure 2. Image of draft Scheme Plan, showing proposed set out at 1 Masters Place, Kaitaia[2].

3 Desktop Study

3.1 Site Description

The irregular shaped site has a legal description of 'Lot 9, DP54761' and has an approximate area of 726m^2 (Figure 2). The previous dwelling and driveway have been removed and the site is currently grassed. The site is flat, with a slight fall towards the eastern boundary.

[2] Architectural Site Plan, for Kāinga Ora, by CTM Architectural, Ref 23-104, dated 01 February 2024

3.2 Hazard Mapping

A review of the Northland Regional Council (NRC) and the Far North District Council (FNDC) GIS maps was carried out to determine the risk posed to the site by natural hazards. The following information was found:

- The site is in an area of undetermined vulnerability to liquefaction.
- Based on the Priority Rivers models, the site is just outside the area mapped as being at risk of inundation during a river flooding event with a 100-year return period (Figure 3).

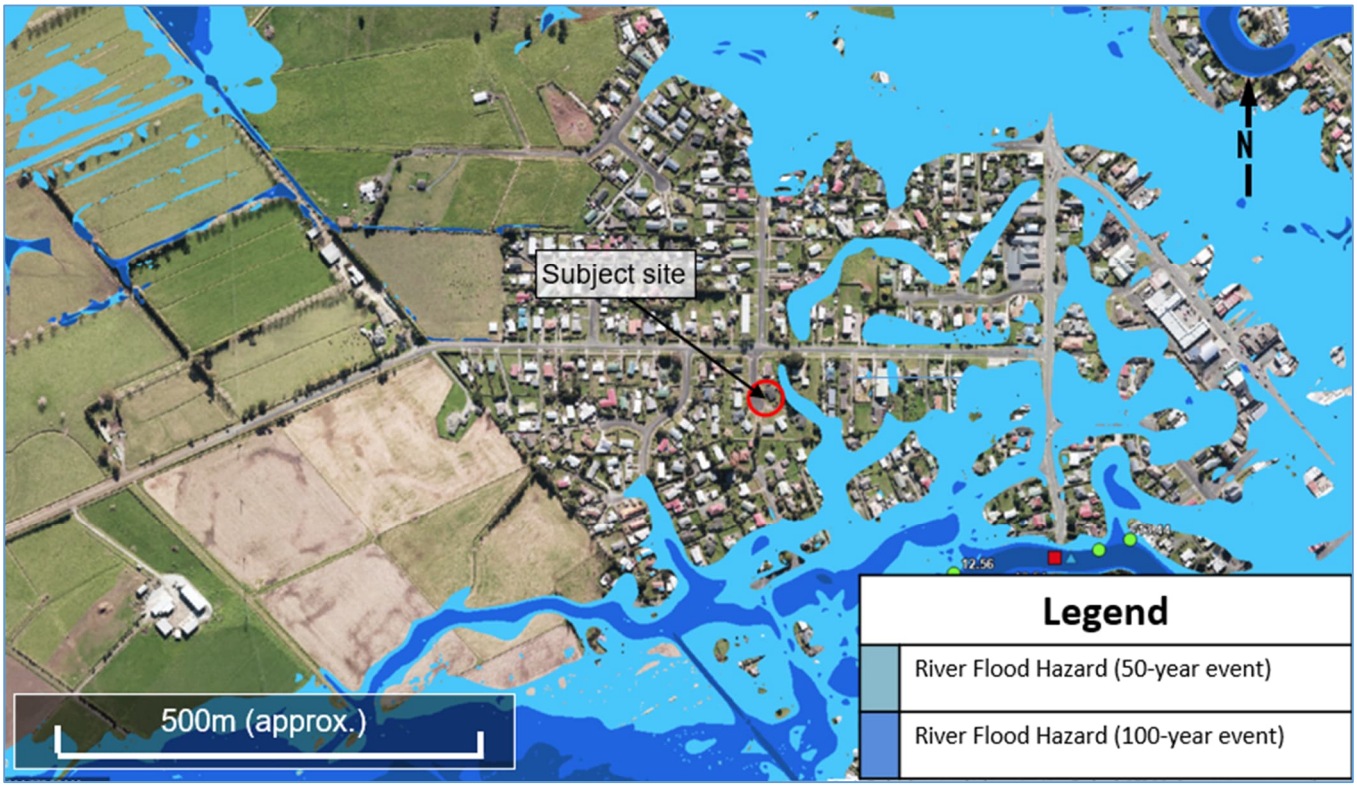


Figure 3.River flood hazard map for the site[3].

3.3 Previous Reporting

Previous investigations conducted at the site (Cook Costello, 18 Aug 2022[4]) identified:

- The at the site was underlain by silty Clay with some gravel to the maximum depth of the hand auger of 1.4m.
- Scala Penetrometer showed that ultimate bearing capacity >300kPa was present at a depth of 1.1m bgl.
- Ground water was not encountered.

[3] Image sourced from Northland Regional Council (https://nrcgis.maps.arcgis.com)
[4] Preliminary Geotechnical Report, 1 Masters Place, Kaitaia, Cook Costello, 18 August 2022, project 16850

3.4 Historical Aerial Imagery

A review of historical aerial imagery of the area sources from Retrolens[5] and Google Earth[6] show that the site appeared to be undeveloped farmland on the rural urban fringe from the earliest photos in 1950 until 1970 when the roadway for Masters Place is first present. Older aerial image show that the tree lined depression, on the neighbouring property east of the site, is part of a paleo channel for a creek that appears to have meandered around the site through the neighbouring properties of 26 and 28 Bonnett Road, and across Masters Place.

The previous dwelling on the site appears in images from 1973 and is last seen in Google images from November 2021. From November 2021 the site appears to have remained unoccupied. The aerial images show no evidence of ground movement or possible instability.

3.5 Geological Mapping

The 1:250,000 geological map of the region shows the site as being underlain by late Pleistocene to Holocene estuarine, river and swamp deposits, consisting of unconsolidated to poorly consolidated, sands, peat, mud, and shell deposits of the Karioitahi group.

Figure 4. Geology map of the local area[7].

[5] Retrolens – Historical Imagery Resource. https://retrolens.co.nz/map/. Imagery licensed by LINZ CC-BY 3.0
[6] Google Earth Pro- https://www.google.com/earth
[7] Geological & Nuclear Sciences 1:250,000 geological map (https://data.gns.cri.nz)

4 Ground Conditions

4.1 Subsurface Investigations

Our investigation of the sites included the following work:

- Four 50mm hand-augered boreholes (HA01 to HA04) put down to a target depth of 3m or refusal. Measurements of the undrained shear strength were taken at 200mm intervals within cohesive soils encountered down through the boreholes using a calibrated shear vane.
- Four supplementary Scala penetrometer tests put down from the base of HA01 to HA04. Results are shown on the corresponding borehole logs.

The locations of the subsurface investigations are on the Geotechnical Investigation Plan in Appendix B. Logs of the boreholes and penetrometer tests are presented in Appendix C.

The field work was completed in January 2024.

4.2 Subsurface Conditions

In summary, our investigations generally encountered a profile of stiff to very stiff clays, silts, and sands consistent with the mapped Kariotahi group material at the site.

A layer of topsoil 0.1 to 0.2m thick was found to be present in all four of the hand augers, over lying stiff to very stiff, moist, highly plastic silty Clay/clayey Silt, with minor fine sand.

Shear strengths through the upper 1m of the soil profile varied between 75 kPa to 169 kPa, increasing to between 107kPa to >210kPa to a depth of between 2.2m to 2.4m when they decreased slightly, to between 86kPa to >210kPa.

Scala penetrometer testing was carried out from the base of hand auger boreholes. The results ranged between 1 to 12 blows/50mm (Appendix C), with blow count varying from 1 to 2 blows/50mm between 3m to 4m below the surface, before increasing to ≥2 blows/50mm below 4m.

Bedrock was not encountered in the investigation. Based on the geomorphology of the site and our experience in this unit, it is expected that slightly weathered to fresh bedrock lies at some >12m depth below the site.

4.3 Soil Moisture Profile and Groundwater Conditions

The groundwater was not encountered in the hand augers but is inferred to be close to 3m below the ground surface due to inflow of groundwater into the borehole after Scala penetrometer testing.

The moisture content of the near surface soils is expected to be higher during the winter months or extended periods of wet weather resulting in their saturation at times. The extent of the wetting front will be dependent on the duration of the period of rainfall but may extend down some 1m to 2m of the surface. Similarly, the groundwater table is expected to rise some 1m to 2m during extended periods of wet weather. In our opinion complete saturation of the ground is possible but is a low probability occurrence. Complete saturation of the site is considered low probability to occur.

4.4 Seismic Subsoil Category

We consider that the site is a Class C shallow soil site as defined by NZS 1170.5 (2004) "Structural Design Actions: Part 5: Earthquake actions – New Zealand" as silt and clay underlying the site is likely to be less than 20m deep to the underly highly weathered bedrock.

5 Natural Hazards and Ground Deformation Potential

5.1 Definition and Legislation

This section summarises our assessment of the natural hazards within the property close proximity to the proposed buildings as broadly required by Section 106 of the Resource Management Act (1991 and subsequent amendments) and including geotechnical and coastal hazards given Section 71(3) of the Building Act (2004). This includes erosion, inundation, subsidence, and slippage.

This section also includes our assessment of ground beneath the building site which is outside the definition of "Good Ground" as defined by NZS3604 (2011) "Timber Framed Buildings".

5.2 Earthquake Hazards

Ministry of Business, Innovations and Employment (MBIE) guidelines for "Earthquake geotechnical engineering practice" Module1[8] indicates to use estimates of Peak Ground Acceleration (α_{max}) and earthquake magnitude (M_w) as the two parameters for evaluating potential seismic hazard.

These estimates are based on generic probabilistic seismic hazard assessment (PSHA) based on national seismic hazard model of New Zealand.

The MBIE guidelines provides a summary table (Table A1: Appendix A) of these of Peak Ground Acceleration (α_{max}) and earthquake magnitude (M_w). For the Northland region the guidelines recommend an estimated peak ground acceleration (α_{max}) of 0.19(g) based on a magnitude 6.5 ULS event, and 0.03g SLS event.

[8] Ministry of Business, Innovation, and Employment: Earthquake geotechnical engineering practice, Module 1, Overview of guidelines, November 2021; ISBN 978_0_947497-51-4

A review of the GNS New Zealand "Active Faults database" show that there are no active faults north of Auckland[9]. We therefore consider the hazard posed by surface fault rupture to be extremely low. Potential ground deformation associated with earthquake shaking is anticipated to be low to negligible.

5.3 Tsunami

The threat of Tsunami poses a risk to any low-lying coastal areas of New Zealand and can pose a risk of expected loss of life greater than (double) that of the near-source earthquake event itself. However, tsunami is not specifically identified under the Building Act (2004) in comparison to the specified inundation sources (flooding, overland flow, storm surge, tidal effects, and ponding).

Although tsunami will result in inundation of coastal lowlands, there are currently no prescriptive methods or specific code designs that need to be considered in building design, and it should be appreciated that to date some form of tsunami risk is knowingly or unknowingly accepted by the wider population and society of New Zealand for any low-lying titled land adjacent to the coast.

The site and surrounding area are identified in Northland Regional Council (NRC) Tsunami hazard map as being in a "Safe Zone".

5.4 Liquefaction

Liquefaction is the term used to describe the severe strength loss which can occur when saturated loose to medium dense sands and low plasticity silts are subject to seismic shaking.

In addition to strength loss, liquefaction may also result in the expulsion of sand, silt, and water at the surface, post seismic settlement, and lateral movement towards areas of lower elevation such as rivers or streams, referred to as lateral spreading. In addition, significant building settlement can occur due to the severe loss of strength and subsequent bearing capacity failure of the ground.

The site is underlain by Pleistocene to Holocene estuarine, river and swamp deposits, containing poorly consolidated peat, sands, and muds which appear to vary in thickness and density. Given the variation in the depth and strength of the layers across the site it is also considered that there are likely to be variations in the liquefaction-induced settlement that could potentially occur (i.e., differential settlement across the site). The site also has a relatively high groundwater table.

The site is considered to be at possible risk of liquefaction induced settlement, and or lateral spreading in response to earthquake shaking[10].

[9] GNS Active Fault Database. https://data.gns.cri.nz/af/
[10] Regional Liquefaction Vulnerability Assessment – Far North District Council, Vision Consulting Engineers, 20 Jan 2023, Job No J15221

To estimate the site-specific risk posed by liquefaction, and the possible extent of ground movement at the site, a quantitative analysis would need to be undertaken, requiring CPT testing and analysis using specialist liquefaction software, however nearby data may be utilised for the level of risk associated with this development.

LDE Ltd have previously completed multiple CPTs for the client a distance of 170m north of the subject site, in ground conditions with a very similar geological model. Analysis of this data shows that some minor to moderate (<100mm) liquefaction may occur at ULS but nil is expected at SLS level. The majority of the liquefaction is expected to occur below a depth of 10m so once depth weighting has been taken into account a Performance Level of L1 is considered to be suitable.

5.5 Slope Instability

5.5.1 Visual Stability Assessment

The site itself is relatively flat, with a slight fall towards the eastern boundary where the ground drops approximately 1m down into an overland flowpath gully on the neighbouring property. A walkover of the site and review of aerial imagery identified no surface characteristic of which would be associated with ground movement.

5.6 Flooding

Based on the priority rivers model the site is identified as being at low risk of flooding in the event of a flood event with a one-hundred-year return period[11].

5.7 Compressible Ground and Consolidation Settlement

Plastic soils can be subject to shrinkage and swelling due to soil moisture content variations which can result in apparent heaving and settlement of buildings, particularly between seasons. The magnitude of movement is a function of the reactivity of the clay minerals and the amount of clay as a fraction near surface soils. These factors are in turn associated with geological origin and the degree and nature of in-situ weathering.

As the site has previously been occupied by a dwelling for over 30 years, this is likely to have acted to consolidate the subsoils within the zone of influence of the building footprint. If the new buildings are of the same or lesser weight and located within the area influenced by the previous building, then settlement is expected to be negligible.

For a single storey building of lightweight construction, located anywhere on the section, settlements are expected to be less than 25mm, within the acceptable tolerance of NZ Building Code. Fill should be a maximum of 0.6m in height, otherwise further specific assessment will be required.

[11] Northland Regional Council hazard maps, https://nrcgis.maps.arcgis.com/

5.8 Ground Shrinkage and Swelling Potential

Plastic soils can be subject to shrinkage and swelling due to soil moisture content variations which can result in apparent heaving and settlement of buildings, particularly between seasons. The magnitude of movement is a function of the reactivity of the clay minerals and the amount of clay as a fraction near surface soils. These factors are in turn associated with geological origin and the degree and nature of in-situ weathering.

The near surface soils at the site were found to be highly plastic and predominantly clay. Based on our experience and past laboratory testing in similar geological conditions, we expect that the soils are moderately to highly expansive, with a liquid limit greater than 50% and linear shrinkage greater than 15%. The sites are therefore outside the definition of 'Good Ground' as defined in NZS3604 (2011).

Without further site-specific laboratory testing to classify the soils, we recommended that design of any concrete slab foundations assume Class H (highly reactive) in accordance with New Zealand Building Code (NZBC) and piled foundations should have increased embedment. Specific recommendations for foundation design are given in Section 6 below.

5.9 Conclusions

From our assessment of the natural hazard and ground deformation risks presented to the proposed development we consider that the site is suitable for development, provided that the recommendations given in Section 6 are adopted.

6 Engineering Recommendations

6.1 Site Preparation and Earthworks

Based on the architectural plans provided by Kāinga Ora, it is envisaged that only minor earthworks will be required, such as the removal of topsoil.

6.1.1 Cuts

The extent of excavation to form suitable foundations for the proposed extension is expected to only involve removal of organic topsoil material and pile hole spoil.

6.1.2 Fills

All fill forming part of the building platform needs to be placed in a controlled manner to an engineering specification that follows the general methodology given in NZS4431 (2022) "Engineered Fill Construction for Lightweight Structures". This includes the design, inspection and certification of the fill by a Chartered Professional Engineer or

Professional Engineering Geologist. This will be particularly important to enable the building proposed for the site to be able to be constructed in accordance with NZS3604 (2011) “Timber Framed Buildings”.

The following specification is recommended for earth fills:

1. All topsoil and unsuitable materials, including low strength ground, uncontrolled fill, rubbish etc shall be stripped from the footprint area of the fill.

2. Where fill is placed on subgrade slopes steeper than 1V:5H the subgrade shall be benched. Fill should not be placed on slopes steeper than 1V:3H without specific assessment.

3. The stripped subgrade surface should be inspected by the certifying engineer prior to placing any fill.

4. Compaction control should be principally in terms of a minimum allowable Scala penetrometer resistance, or minimum clegg impact value. Recommended compaction control criteria are presented in Table 1 below.

5. The testing frequency and specification should be confirmed with the contractor prior to commencing work.

6. Fill should be a maximum of 0.6m in height, built up in 200mm layers (uncompacted).

7. Provision should be made to ensure that the earthworks are conducted with due respect for the weather. The fill should not be placed on to wet ground, especially if ponded water is present.

Table 1. Recommended fill compaction criteria.

Compaction Criteria (Non-cohesive fill)		
Scala Penetrometer	Average not less than	2 blows per 50mm
Clegg Hamer	Minimum impact value	25
Compaction Criteria (Cohesive fill)		
Nuclear Densometer (NDM)	Shear strength	Minimum 150kPa
	Air Voids Ratio	Maximum 10%

*Specific Gravity testing is not typically required for house sites where a small volume of cohesive filling is required, however this will require on-site assessment of moisture content by a experienced geotechnical professional at the time of NDM testing.

6.2 Foundation Design and Construction Recommendations

Based on our investigation and appraisal of the building site, we consider that the proposed conventional shallow pile, or concrete slab-on-grade or raft-slab foundations will be suitable for the sites.

Due to the presence of expansive soils, the site is not considered ‘Good Ground” as defined in NZS3604 (2011). Shallow pile foundations designed in accordance with NZS3604 (2011) are expected to be suitable, provided that all footings are deepened to a minimum embedment of 0.9m below cleared ground level.

Conventional slab-on-grade foundations may be adopted without specific design in accordance with B1/AS1 Section 3.2: ‘Slab-on-ground on expansive soils’, for site Class H (highly expansive).

Raft-slab foundations are expected to be suitable for the site, subject to specific design in accordance with AS2870 (2011) and the recommendations of BRANZ Study Report 120A. Design should assume Class H1 (highly reactive) and a 300-year characteristic surface movement (y_s) of 60mm. This should be factored for design SLS and ULS events.

The foundation drawings should be reviewed by LDE Ltd at the building consent stage to determine if the proposed structure and foundation are suitable for the ground conditions.

6.3 Stormwater and Wastewater Management

Stormwater and wastewater management are addressed in a separate civil infrastructure report by LDE.

7 Section 72 Statement

Subject to the adoption in full of the recommendations within this report, it is our opinion in terms of section 72 of the building act;

a) The land is not subject to and is unlikely to be subject to 1 or more natural hazards; and

b) The building work to which an application for a building consent relates will not accelerate, worsen, or result in a natural hazard on the land on which the building work is to be carried out or on any other property.

8 Limitations

This report should be read and reproduced in its entirety including the limitations to understand the context of the opinions and recommendations given.

This report has been prepared exclusively for Kāinga Ora - Homes and Communities in accordance with the brief given to us or the agreed scope and they will be deemed the exclusive owner on full and final payment of the invoice. Information, opinions, and recommendations contained within this report can only be used for the purposes with which it was intended. LDE accepts no liability or responsibility whatsoever for any use or reliance on the report by any party other than the owner or parties working for or on behalf of the owner, such as local authorities, and for purposes beyond those for which it was intended.

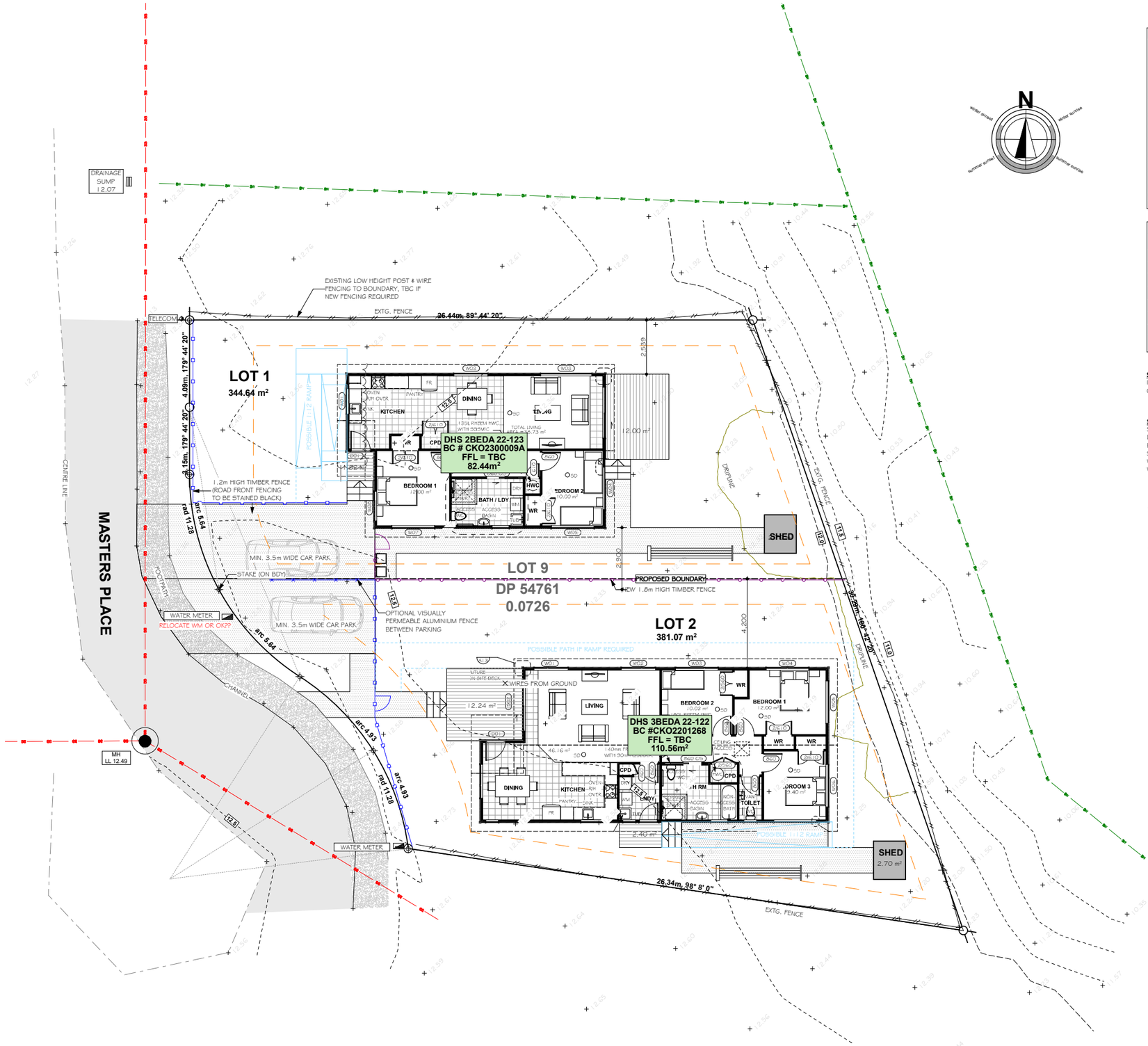
This report was prepared in general accordance with current standards, codes and best practice at the time of this report. These may be subject to change.

Opinions given in this report are based on visual methods and subsurface investigations at discrete locations designed to the constraints of the project scope to provide the best assessment of the environment. It must be appreciated that the nature and continuity of the subsurface materials between these locations are inferred and that

actual conditions could vary from that described herein. We should be contacted immediately if the conditions are found to differ from those described in this report.

APPENDIX A

ARCHITECTURAL DRAWINGS



LEGAL DESCRIPTION & SITE DETAILS

1 MASTERS PLACE,
KAITAIA
TERRITORIAL AUTHORITY-
FAR NORTH DISTRICT COUNCIL

LOT 9 DP5 54761
SITE AREA 726m²

OPERATIVE PLANNING ZONE:
RESIDENTIAL
PROPOSED PLANNING ZONE:
GENERAL RESIDENTIAL

SITE DETAILS PER BRANZ MAPS

CLIMATE ZONE	1
CORROSION ZONE	ZONE C OUTSIDE SEASPRAY
EARTHQUAKE ZONE	ZONE 1
RAINFALL INTENSITY	80-90mm
WIND REGION	A
WIND ZONE	MEDIUM

LEGEND

- PROPOSED 1.2m FENCE
- PROPOSED 1.8m FENCE
- EXISTING FENCE
- EXTG STORMWATER DRAIN
- NEW STORMWATER DRAIN
- EXTG WASTE WATER DRAIN
- NEW WASTE WATER DRAIN
- YARD SETBACKS

SHED NOTE:
INSTALL NEW PROPRIETARY GALV STEEL GARDEN SHED ON CONCRETE PAD TO EACH LOT AS INDICTATED. SHED 1.8x1.5x2.0m HIGH (OR SIMILAR SIZE). LOCATE MIN 1.0m OFF BOUNDARIES. C.O.S FINAL LOCATION.

STEPS & PATH NOTE:
STEPS SHALL BE ACCESSIBLE ie MIN. 310mm TREAD DEPTH AND MAX. 180mm RISER.
PATHS TO BE MIN. 1200mm WIDE (EXCEPT THAT SERVICE AREA PATHS MAY BE LESS TO MIN. 800mm WIDE). MAXIMUM CROSS FALL OF 1:50 TO PREVENT WATER PONDING.

Operative Far North District Plan: Residential Zone
The Residential Zone enables the development of residential areas where the effects of activities permitted in the zone are compatible with sustainable development and with the existing character and amenity, which is typically medium density residential living.

An activity is a permitted activity in the Residential Zone if:
a) it complies with the standards for permitted activities set out in Rules 7.6.5.1.1 to 7.6.5.1.17 below; and
b) it complies with the relevant standards for permitted activities set out in Part 3 of the Plan – District Wide Provisions.

Otherwise, consent is required as a restricted discretionary or discretionary activity.

Rules 7.6.5.1.1 to 7.6.5.1.17
- Each residential unit for a single household shall have available to it a minimum net site area of 600m² (sewered sites)
  - This minimum net site area may be for the exclusive use of the residential unit, or as part of land held elsewhere on the property, provided that a ratio of one residential unit per minimum net site area (as stated above) is not exceeded.
  - *Site area greater than 300m² per dwelling = Restricted discretionary activity under 7.6.5.3.1*
  - *Site area less than 300m² per dwelling = Discretionary activity under 7.6.5.4(c)*
- Maximum building height 8m
  - *Restricted discretionary activity under rule 7.6.5.3.3 to increase up to 9m in height*
- Height in relation to boundary 2m + 45
  - A building may exceed this standard for a maximum distance of 10m along any one boundary other than a road boundary, provided that the maximum height of any building where it exceeds the standard is 2.7m
  - 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
    - Note with respect to 4 / 4a Guerin to the west – these are KO owned so written approval is implicit for any height in relation to boundary infringements but regardless, these sites are served by an access lot and as such the height in relation to boundary can be taken from the furthest point of this boundary
  - *Restricted discretionary activity under 7.6.5.3.4 to use 3m + 45*
- Impervious area – 50%
  - *Controlled activity under 7.6.5.2.1 to increase to 60% - Stormwater Report required*
- Building coverage – 45%
  - *Restricted discretionary activity under 7.6.5.3.5 to increase to 55%*
- Minimum building setback from road boundaries – 3m
- Minimum setback from other boundaries – 1.2m
- At least 50% of that part of the site between the road boundary and a parallel line 3m therefrom, which is not occupied by buildings or driveways, shall be landscaped.

Part 3 of the Plan - District Wide Provisions
- Earthworks – permitted if within 200m³ in any 12 month period per sit and 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.
  - *Restricted discretionary activity for up to 500m³ in volume*
- Transport
  - Maximum daily one way traffic movements – 20 permitted, 21-40 restricted discretionary and more than 40 discretionary
  - Access widths – 3m if serving no more than four residential units, otherwise 5m width required
  - Parking spaces – 2 per unit, *Refer below re NPS-UD.*
    NPS-UD (National Policy Statement on Urban Design) removes the minimum car parking rates from the district plan of tier 1, 2 & 3 territorial authorities.

Subdivision
- 13.6.10 - Any application arising from non-compliance with zone standards caused by the proposed subdivision shall be considered jointly with the subdivision consent
- **Controlled** activity to subdivide a minimum lot size of 600m² and **discretionary** activity to subdivide a minimum lot size of 300m² – includes vacant lots and new lots which already accommodate structures
- Must have a means for the disposal of collected stormwater from the roof of all potential or existing buildings and from all impervious surfaces. Preference is for this to be via piping to an approved outfall, each new allotment shall be provided with a piped connection to the outfall laid at least 600mm into the net area of the allotment.

SITE PLAN
SCALE AT A1 = 1:100

Kāinga Ora Homes and Communities

RevID	ChID	Revision	Date

CLIENT
KAINGA ORA - HOMES AND COMMUNITIES

ADDRESS
1 MASTERS PLACE, KAITAIA

FAR NORTH DISTRCIT COUNCIL

PROJECT
PROPOSED RELOCATION - KO REF: - DHS 2BedA (22-123) and DHS 3BedA (22-122)

CTM ARCHITECTURAL Ltd

CTM ARCHITECTURAL LTD
18 SWEETCORN PLACE,
PUKEKOHE, 2120

PO Box 547
PUKEKOHE, 2340
ph/fax- 09 238 4414
web- www.ctm.net.nz
e-mail- info@ctm.net.nz

LICENSED BUILDING PRACTITIONERS www.dbh.govt.nz BUILDING CONFIDENCE

WORK TO N.Z.B.C. AND RELEVANT CODES
DIMENSIONS SUPERSEDE SCALE
CHECK AND VERIFY ALL LEVELS AND DIMENSIONS ON SITE BEFORE STARTING ANY WORK.

ISSUE
SCHEME 1

DRAWN	SCALE		
AMY	AS SHOWN	A01	
DATE	SHT FORMAT		
1/02/2024	A1		
JOB REF	TOTAL SHTS	SHEET	REVISION
23-104	03		

APPENDIX B

GEOTECHNICAL INVESTIGATION PLAN

LEGEND

Test Locations

- Hand auger + Scala
- Proposed New Dwellings
- Proposed boundary

Cadastral

- Road Names
- Parcels (Primary)

0 4 8 12 16 m

SCALE A3: 1:200

NOTES

1. Aerial basemap and property boundaries sourced from LINZ Data Service (CC-BY 4.0).
2. Topographic contours derived from NRC LiDAR DEM (2018-2019 survey).
2. Position of houses and boundary from architectural scheme plan (Job Ref 23-104)

CLIENT

Kainga Ora - Homes anf Communities

PROJECT

1 Masters Place
Kaitaia

DRAWING TITLE

Geotechnical Site Investigation Plan

LDE LAND DEVELOPMENT & ENGINEERING

PROJECT REF	DRAWING REF	REVISION
25734	G01	B
DATE	PREPARED BY	CHECKED BY
09/02/2024	MJL	CP

FILE PATH

M-FILES\LDE - Project\0-25734\25734_1 Masters Place, Kaitaia\1 Masters Place, Kaitaia.qgz

APPENDIX C

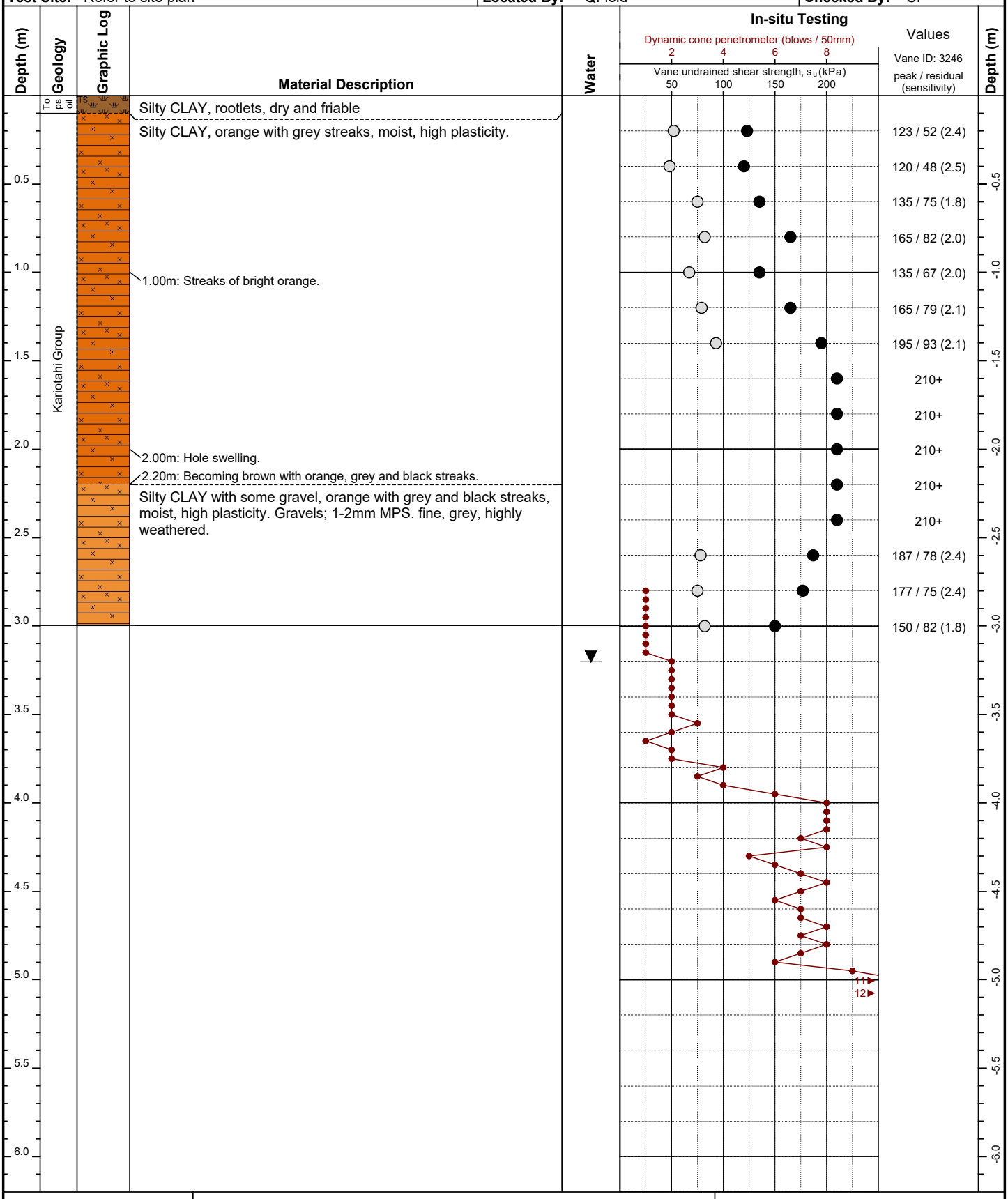
GEOTECHNICAL INVESTIGATION DATA

Hand Auger Borehole Log

Method: 50mm Hand Auger

Test ID:	**HA01**
Project ID:	25734
Sheet:	1 of 1

Client:	Kainga Ora	**Coordinates:**	6114571mN, 1623216mE	**Test Date:**	25/01/2024
Project:	Geotechnical Investigation	**System:**	NZTM	**Logged By:**	CF
Location:	Masters Place, Kaitaia	**Elevation:**	Ground	**Prepared By:**	CF
Test Site:	Refer to site plan	**Located By:**	QField	**Checked By:**	CP



Hole Depth: 3.00m **Termination:** Target Depth Reached

Remarks:

Materials are described in general accordance with NZGS 'Field Description of Soil and Rock' (2005).
No correlation is implied between shear vane and DCP values.

Vane peak
Vane residual
Vane UTP
Standing water level
Groundwater inflow
Groundwater outflow
UTP = Unable to Penetrate

Hand Auger Borehole Log

Method: 50mm Hand Auger

Test ID:	**HA02**
Project ID:	25734
Sheet:	1 of 1

Client:	Kainga Ora	**Coordinates:**	6114578mN, 1623230mE	**Test Date:**	25/01/2024
Project:	Geotechnical Investigation	**System:**	NZTM	**Logged By:**	CF
Location:	Masters Place, Kaitaia	**Elevation:**	Ground	**Prepared By:**	CF
Test Site:	Refer to site plan	**Located By:**	QField	**Checked By:**	CP

Depth (m)	Geology	Graphic Log	Material Description
0.0	Topsoil	TS	Organic SILT, dark brown, rootlets, moist
0.5	Kariotahi Group		Silty CLAY, light brown with orange and grey streaks, moist, high plasticity.
1.0			1.20m: Becoming friable.
1.5			1.60m: Fine gravels; 1-2mm MPS, highly weathered.
			1.80m: Becoming moist again.
2.0			2.20m: Becoming wet again.
2.5			Silty CLAY, brown with dark grey streaks, wet, high plasticity.
3.0			Silty SAND, brown with grey streaks, wet, low plasticity.
3.5			
4.0			
4.5			
5.0			
5.5			
6.0			

Water: ▼ at 3.0

In-situ Testing

Dynamic cone penetrometer (blows / 50mm): 2, 4, 6, 8

Vane undrained shear strength, s_u (kPa): 50, 100, 150, 200

Values	
Vane ID: 3246	peak / residual (sensitivity)
135 / 84 (1.6)	
133 / 84 (1.6)	
153 / 82 (1.9)	
138 / 75 (1.8)	
210+	
210+	
210+	
210+	
210+	
210+	
210+	
187 / 102 (1.8)	
142 / 60 (2.4)	
187 / 75 (2.5)	
210+	

Depth (m): -0.5, -1.0, -1.5, -2.0, -2.5, -3.0, -3.5, -4.0, -4.5, -5.0, -5.5, -6.0

Hole Depth: 3.00m **Termination:** Target Depth Reached

Remarks:

Materials are described in general accordance with NZGS 'Field Description of Soil and Rock' (2005).
No correlation is implied between shear vane and DCP values.

- Vane peak
- Vane residual
- Vane UTP
- Standing water level
- Groundwater inflow
- Groundwater outflow

UTP = Unable to Penetrate

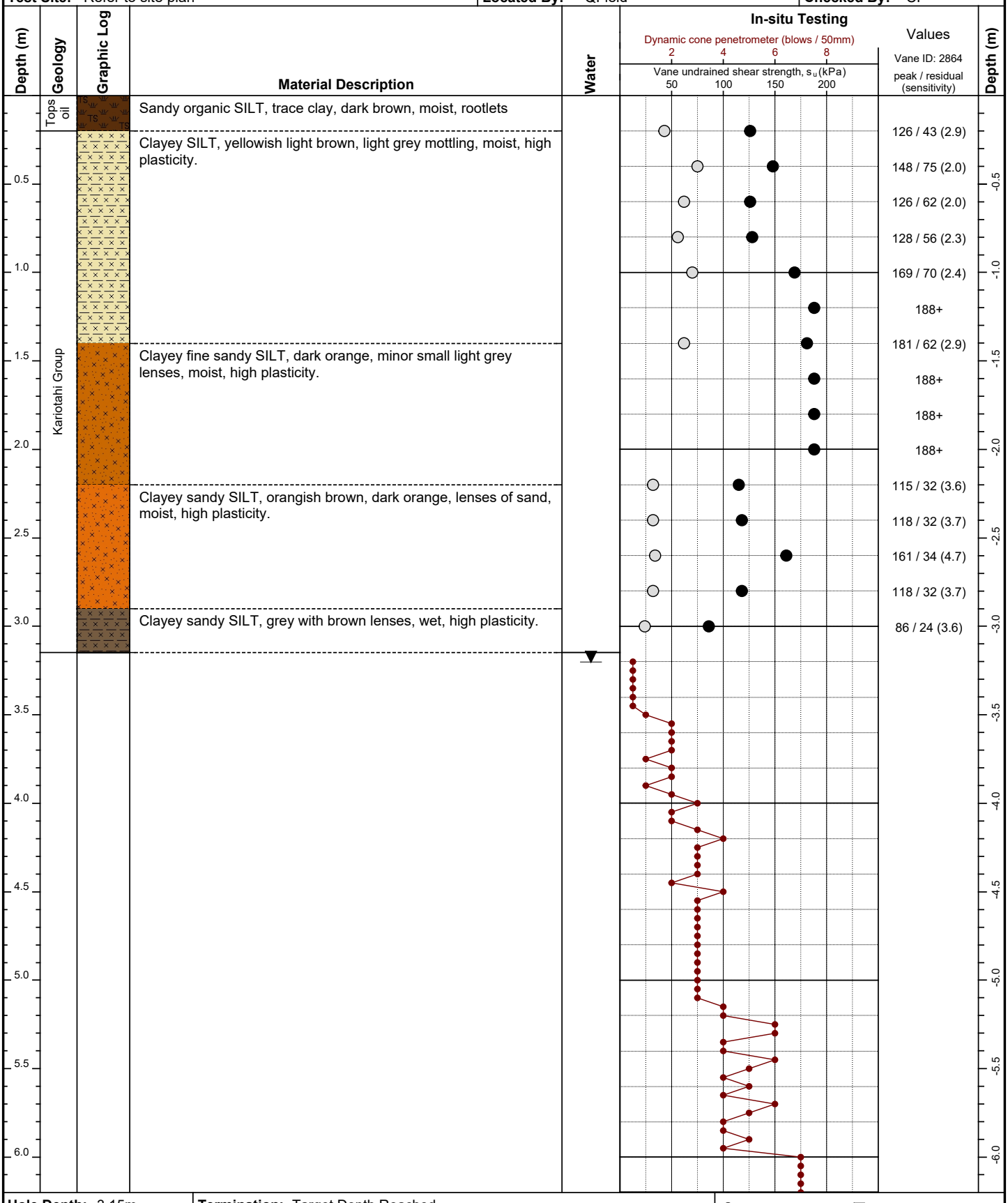
Generated with CORE-GS by Geroc - HAxTP Log v9 - 31/01/2024 2:50:52 pm

Hand Auger Borehole Log

Method: 50mm Hand Auger

Test ID:	**HA03**
Project ID:	25734
Sheet:	1 of 1

Client:	Kainga Ora	**Coordinates:**	6114565mN, 1623235mE	**Test Date:**	25/01/2024
Project:	Geotechnical Investigation	**System:**	NZTM	**Logged By:**	MJL
Location:	Masters Place, Kaitaia	**Elevation:**	Ground	**Prepared By:**	MJL
Test Site:	Refer to site plan	**Located By:**	QField	**Checked By:**	CP



Hole Depth: 3.15m **Termination:** Target Depth reached

Remarks:

Materials are described in general accordance with NZGS 'Field Description of Soil and Rock' (2005).
No correlation is implied between shear vane and DCP values.

Vane peak | Vane residual | Vane UTP | Standing water level | Groundwater inflow | Groundwater outflow

UTP = Unable to Penetrate

Generated with CORE-GS by Geroc - HAxTP Log v9 - 31/01/2024 2:50:55 pm

Hand Auger Borehole Log

Method: 50mm Hand Auger

Test ID:	**HA04**
Project ID:	25734
Sheet:	1 of 1

Client:	Kainga Ora	**Coordinates:**	6114560mN, 1623223mE	**Test Date:**	25/01/2024
Project:	Geotechnical Investigation	**System:**	NZTM	**Logged By:**	MJL
Location:	Masters Place, Kaitaia	**Elevation:**	Ground	**Prepared By:**	MJL
Test Site:	Refer to site plan	**Located By:**	QField	**Checked By:**	CP

Depth (m)	Geology	Material Description	Water	In-situ Testing: Dynamic cone penetrometer (blows / 50mm)	In-situ Testing: Vane undrained shear strength, s_u (kPa)	Values: Vane ID: 2864 peak / residual (sensitivity)
0.0	Topsoil	Sandy organic SILT trace clay, dark brown, minor orange flecks, dry, rootlets.				153 / 46 (3.3)
0.5	Kaniotahi Group	Clayey SILT, light grey orange mottling, moist, high plasticity.				86 / 43 (2.0)
		Clayey SILT, light brown with light grey patches, dark orange lenses of fine sand, moist, high plasticity.				97 / 46 (2.1)
1.0		1.00m: Hole squeezing.				78 / 38 (2.1)
						78 / 35 (2.2)
						107 / 48 (2.2)
1.5		Clayey SILT with some fine sand, orange with white mottling, moist, high plasticity.				142 / 67 (2.1)
						188+
						134 / 46 (2.9)
2.0		Clayey sandy SILT, dark orange, moist, high plasticity. Sand; fine.				188+
		2.20m: Hole squeezing				188+
2.5						185 / 67 (2.8)
		Silty CLAY, orangish brown, moist, high plasticity.				110 / 40 (2.8)
						99 / 35 (2.8)
3.0		Clayey fine sandy SILT, bluish grey with light brown streaks, moist, high plasticity.	▼			105 / 27 (3.9)
3.5						
4.0						
4.5						
5.0						
5.5						
6.0						

Hole Depth: 3.10m **Termination:** Target Depth Reached

Remarks:

Materials are described in general accordance with NZGS 'Field Description of Soil and Rock' (2005).
No correlation is implied between shear vane and DCP values.

● Vane peak ▼ Standing water level
○ Vane residual ◁ Groundwater inflow
◆ Vane UTP ▷ Groundwater outflow
UTP = Unable to Penetrate

REPORT

Tonkin+Taylor

Preliminary Site Investigation and Detailed Site Investigation

1 Masters Place, Kaitaia

Prepared for
Kāinga Ora - Homes and Community
Prepared by
Tonkin & Taylor Ltd
Date
December 2022
Job Number
1015804.0076.v1

Exceptional thinking together
www.tonkintaylor.co.nz

Document Control

Title: Preliminary Site Investigation and Detailed Site Investigation					
Date	**Version**	**Description**	**Prepared by:**	**Reviewed by:**	**Authorised by:**
December 2022	1	PSI and DSI	J. Hine	M. Robyns	M. Mechaelis

Distribution:

Kāinga Ora - Homes and Community	1 electronic copy
Tonkin & Taylor Ltd (FILE)	1 electronic copy

Table of contents

Executive summary

Tonkin & Taylor Ltd (T+T) has been engaged by Kāinga Ora Homes and Communities (Kāinga Ora) to undertake a Preliminary Site Investigation and Detailed Site Investigation (PSI / DSI) at 1 Masters Place, Kaitaia. The findings of this investigation are summarised as follows:

1 The site is currently vacant after the previous dwelling was removed, sometime within the last year, from the site following a fire. Prior to that, the site had been in residential use for at least 49 years, before which, the site was in pastoral use.

2 The site is underlain by a layer of topsoil up to approximately 0.3 metres (m) thick, which overlies a heterogeneous clay unit to the investigation depth of 0.6 m below ground level (bgl).

3 Soils sampled reported metals at concentrations below high-density residential land use NESCS[1] Soil Contaminant Standards (SCS). Asbestos was not detected in soil.

4 Site history review and soil testing results indicate that the site has not been subjected to an activity on the Hazardous Activities and Industry List (HAIL). As such the NESCS does not apply to the proposed redevelopment work and consent is not required.

5 The current Kāinga Ora nationwide redevelopment programme has considered that the upper surface soils may require removal for geotechnical purposes. Surface soils, up to 0.5 m bgl, from the site that require off-site removal, will need to be disposed of to an appropriately consented facility (a licensed cleanfill facility).

6 A Remediation Work Instruction (RWI) is recommended which sets out health, environmental and safety controls, the redevelopment earthwork contractor must employ during the redevelopment earthwork phase. The RWI will also provide mitigation controls to manage unexpected discovery of contaminants, including Asbestos Containing Material (ACM). The earthwork contractor will need to ensure that site staff are trained in asbestos awareness and how to recognise potential ACM during earthwork. The RWI will also assist the earthwork contractor with waste classification and disposal requirements for impacted materials generated from the site including asbestos waste.

7 This assessment should be revisited if the final development is not for residential land use.

[1] Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011

1 Introduction and background

T+T has been engaged by Kāinga Ora to undertake a PSI / DSI at 1 Masters Place, Kaitaia (the site) to support Kāinga Ora's site redevelopment.

The scope of work for the PSI / DSI was set out in our proposal dated 01 June 2022. The scope of work follows a standard contaminated site assessment protocol developed by Kāinga Ora. The key aims of the PSI / DSI were to determine:

- The site history, whether historic use is likely to have resulted in ground contamination and verify whether activities detailed on the HAIL, issued by the Ministry for the Environment (MfE)[2], apply to the site.
- Concentrations of contaminants of concern in the superficial soils on the site.
- Whether resource consents may be required to address ground contamination issues as part of the proposed redevelopment work with respect to the NESCS and AUP.
- Whether contamination at the site requires remedial work, poses material handling issues and/or off-site disposal/landfill constraints as part of the redevelopment programme.

The contaminated site assessment work performed follows the general reporting and investigation methodology presented in the MfE Contaminated Land Management Guidelines (CLMG) No. 1[3] and CLMG No. 5[4]. In addition, the requirements outlined in the Asbestos in Soil Guidelines has also been followed where appropriate.

The persons undertaking, managing, reviewing, and certifying this investigation are suitably qualified and experienced practitioners (SQEP), as required by the NESCS and defined in the NESCS Users' Guide[5].

2 Site description

The site is located on the southern end of Masters Place, approximately 300 – 400 m west of State Highway 1. The site is currently vacant after the previous dwelling was removed in the past year following a fire and is approximately 726 m^2 in area. The site identification details are presented in Table 2.1.

Table 2.1: Site identification

Address	Legal Description	Area (m^2)
1 Masters Place	Lot 1 DP 54761	726

Source: Northland Regional Council Property and Boundaries website[6]

T+T performed a site inspection on 1 August 2022. A summary of observed conditions is presented in Table 2.2. A photographic log of the site is presented as Appendix A.

[2] MfE. (2021, March 24). Land – Guidance and guidelines on contaminated land. Retrieved from https://www.mfe.govt.nz/land/hazardous-activities-and-industries-list-hail

[3] MfE, 2021, Contaminated Land Management Guidelines No. 1. Reporting on Contaminated Sites in New Zealand (Revised 2021

[4] MfE, 2021, Contaminated Land Management Guidelines No. 5. Site Investigation and Analysis of Soils (Revised 2021)

[5] MfE, 2012, Users Guide National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health

[6] Far North District Council, maps viewer. https://fndc.maps.arcgis.com/apps/webappviewer/index.html

Table 2.2: Site condition

Condition	Observation
Building	Vacant, no structures observed onsite
Site contour	The site is generally flat, sloping slightly to the east
Surface water	Minor pooling of water was observed in the front garden.
Local sensitive environments	The site is covered in lawn
Visible signs of plant stress	None observed
Visible signs of potential contamination sources	None

The current surrounding property use is presented in Table 2.3.

Table 2.3: Surrounding property use

Direction	Observation
North	Residential
South	Residential
East	Creek with residential beyond
West	Masters Place with residential beyond

Source: Based on site observations supported with information from NRC property and boundaries website

The Far North District Council website shows that the site is relatively flat, and slopes towards a creek located to the east of the site. Surface water runoff generated at the site is expected to collect in this creek.

Published geological information[7] shows the site to be underlain by estuarine, river and swamp deposits consisting mainly of mud and sand from the Karioitahi Group.

3 Historical site use

T+T has reviewed historic aerial photographs dating back to 1950 held on the Retrolens website[8]. A summary of selected historic aerial photography is presented in Table 3.1, and the historical aerial photographs are shown in Appendix B.

[7] Isaac M.J (complier) 1996. Geology of the Kaitaia Area, Scale: 1.250:000, Institute of Geological & Nuclear Sciences geological map 1 sheet +44p. Institute of Geologic & Nuclear Sciences, Lower Hutt, New Zealand

[8] Local Government Geospatial Alliance. (2022, August 19). Retrolens Historic Image Resource. Retrieved from http://retrolens.nz/

Table 3.1: Summary of historical aerial photographs

Year	Site	Surrounding land use
1950	The site is vacant and used for pastoral purposes. There is no road access.	The site is immediately surrounded by pastoral land. Bennett Road is located to the north of the site, and a small creek is visible to the east of the site. The main residential area of Kaitaia is located to the east/southeast.
1970	The site remains undeveloped, however the cul-de-sac for Masters Place has been developed.	Vegetation surrounding the creek to the east is now well established. The surrounding area especially along Bennett Road has been developed for residential use.
1973	The site is occupied by a dwelling.	Residential development of Masters Place has continued with seven other dwellings constructed along the street since 1970.
1973 to 2020	No significant changes observed between 1973 and 2020.	Further residential development has occurred in the surrounding area between 1973 – 2020.

A search of the Northland Regional Council (NRC) HAIL map confirms that the site is not identified on the council register. Additional information is provided in Appendix C.

4 Potential for contamination

Based on review of historical aerial photographs and Northland Regional Council records, it is concluded that the site is unlikely to have been subjected to an activity on the HAIL.

5 Sampling and analysis plan

Soil sampling has been undertaken mainly to inform soil disposal requirements and earthworks controls as the proposed earthworks is expected to require removal of some surface soil from the site.

The soil sampling and analysis plan for the site is provided in Table 5.1. In accordance with Kāinga Ora site investigation methodology, the Asbestos in Soil Guidelines[9] (Table 3 and the Current Kainga Ora Sampling Analyses Plan), was used to estimate the soil sampling density for the DSI. The site was split into an approximate 10 m grid to provide coverage. Samples were taken in general accordance with CLMG No 5 and the Asbestos in Soil Guidelines.

[9] BRANZ, 2017. *New Zealand Guidelines for Assessing and Managing Asbestos in Soil.*

Table 5.1: Soil sampling and analysis plan

Sample location	Sample type	Sample design	Depths (metres below ground level; m bgl)	Sample analysis*
KAI1-KAI5	One primary sample within each cell	Systematic	Surface to 0.1[+], 0.3 and 0.5 m bgl unless refusal encountered	Metals screen, Asbestos presence/absence, Asbestos semi-quantitative**
KAI6	Sampling of the former house footprint	Targeted	Surface to 0.1[+]	Metals screen, Asbestos presence/absence, Asbestos semi-quantitative**
KAIQA	Duplicate of KAI2	Systematic	Surface to 0.1[+]	Metals screen

Notes:

[+] Surface to 0.1 m bgl sample consists of a soil sample from designated sample cell.

* Analysis was performed on deeper primary sample(s) (0.3 and 0.5 m bgl) where shallow sample(s) result(s) (surface to 0.1mbgl) reported elevated contaminant concentrations.

** Semi quantitative asbestos analyses was performed on 500 ml samples (primary location only) where asbestos presents/absence samples returned positive test results.

The soil investigation was performed by T+T on 1 August 2022 in accordance with the sampling analysis plan above with no deviations. Soil analyses were carried out by IANZ accredited laboratories using industry standard methods. The soil sampling locations are shown in Figure 1.

5.1 Field observations

The following field observations were recorded as part of these investigations:

- Topsoil comprising of a brown sandy silt was observed at all locations. The overlying topsoil layer was found to be in general between 0.05 – 0.3 m in thickness.
- Natural material, comprising of orange-brown, grey silty clay was observed underlying the topsoil in all locations.

5.2 Data quality

A quality assurance and quality control (QA/QC) programme was implemented as part of field procedures to confirm data was fit for purpose and included:

- Decontamination of sampling equipment between sampling locations.
- Transportation of samples with accompanying chain of custody documentation.
- Compliance with sample holding times.

Standard laboratory QA/QC reports are attached along with the laboratory results in Appendix E.

In addition to routine quality control procedures (sample handling, chain of custody etc.), a field duplicate sample was collected and submitted for analysis for metals for the day of sampling at a one duplicate per five soil samples collected. The duplicate sample results and calculated relative percentage differences (RPDs) are presented in Appendix E, these ranged from approximately 0 to 68% indicating that variability in sample collection, handling and analysis is within the expected ranges and acceptable. The level of variability in RPD is interpreted to reflect the practical limitations

in collecting representative duplicate soil samples from heterogeneous and cohesive soils and is not considered to compromise the data quality for the purposes of this investigation.

5.3 Analytical results

The soil sample results are presented in Table 5.2, below. The laboratory reports are given in Appendix E.

Soil sample results were compared against criteria for the assessment of regulatory requirements, the proposed redevelopment land use and acceptance criteria for local soil disposal sites to meet the objectives of the investigation. The adopted assessment acceptance criteria included:

- High-Density Residential Land Use presented in the NESCS Users' Guide and MfE methodology[10].
- Human health soil guideline values presented in the Asbestos in Soil Guidelines.
- Expected background concentrations (non-volcanic)[11].
- Acceptance criteria for example cleanfill, managed fill and landfill sites.

The findings are summarised below:

1 Samples did not return concentrations at above high-density residential land use presented in the NESCS.

2 Asbestos was not detected in the soil sampled at the site.

3 Soil metal results are below the adopted background concentrations.

4 Based on the soil sample results, it is highly unlikely that there will be a risk to human health if the redevelopment activity is carried out on the site.

[10] MfE, 2011, Methodology for Deriving Standards for Contaminants in Soil to Protect Human Health (June 2011)
[11] Landcare Research, 2016. Background soil concentrations of selected trace elements and organic contaminants in New Zealand

Table 5.2: Soil analytical metal and asbestos results

					Asbestos[1]			Heavy Metals - Screen						
					Asbestos Containing Material (ACM) (Presence / absence and type)	Asbestos Containing Material (ACM) (% w/w)	Fibrous asbestos (FA) / Asbestos fines (AF) (% w/w)	Arsenic	Cadmium	Chromium	Copper	Lead	Nickel	Zinc
					-	%w/w	%w/w	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
NES Soil - High Density Residential[2]					**NA**	**0.04%**	**0.001%**	**45**	**230**	**1,500**	**>10,000**	**500**	**1,200 [4]**	**60,000 [4]**
Northland Background Concentrations[5]					**NAD**	<LoR	<LoR	**12.67**	**0.28**	**60.5**	**40.17**	**30.08**	**32.88**	**101.8**
Waste Acceptance Criteria - Managed fill (Dirtworks - woodhill)[6]					**<LoR**	**<0.1**	**<0.001**	**17**	**0.8**	**400**	**325**	**160**	**105**	**400**
Waste Acceptance Criteria - Redvale Landfill managed fill [6]						**ND**	**ND**	**30**	**20**	**400**	**325**	**250**	**320**	**1,160**
Waste Acceptance Screening Criteria - Whangarei Landfill [6]								**100**	**20**	**200**	**100**	**100**	**200**	**200**
Property Address	**Sample ID**	**Sample depth (m bgl)**	**Material Type**	**Sampled Date**										
1 Masters Place	KAI1	0.0-0.10	Topsoil	1/08/2022	NAD	-	-	1.6	0.04	47	13	5.5	14	41
	KAI2	0.0-0.10	Topsoil	1/08/2022	NAD	-	-	2.5	0.06	46	19	7.5	13	54
	KAI3	0.0-0.10	Topsoil	1/08/2022	NAD	-	-	1.2	0.09	45	17	6.3	19	58
	KAI4	0.0-0.10	Topsoil	1/08/2022	NAD	-	-	0.7	0.01	57	12	5	14	27
	KAI5	0.0-0.10	Topsoil	1/08/2022	NAD	-	-	1	0.03	28	23	5.1	13	48
	KAI6	0.0-0.10	Topsoil	1/08/2022	NAD	-	-	6.8	0.07	17	5.8	5	6.8	34

Comments

Results are in milligrams per kilogram (mg/kg) unless specified.

1 = BRANZ soil guideline value for asbestos based on relevant land use

2 = MfE, June 2011. Methodology for Deriving Standards for Contaminants in Soil to Protect Human Health.

4 = in the absence of availbale NES Soil criterion for nickel and zinc, the criterion has been adopted from Assessment of Site Contamination National Environment Protection Measures (ASC NEPM) Toolbox – http://www.nepc.gov.au/nepms/assessment-site-contamination/toolbox.

5 - Landcare Research, November 2015. Background soil concentrations of selected trace elements and organic contaminants in New Zealand. Soil type sandstone pakihi. 95% quantile estimates.

6 = Landfill criteria may vary. Verify with landfill prior to disposal.

NA = Not Applicable.

AD - Asbestos detected.

NAD - No asbestos detected.

<LoR - below laboratory reporting limits.

BOLD :	exceeded NES:CS SCS high density
BOLD :	exceeded NES:CS SCS residential
	above background concentrations
	exceeded Managed Fill acceptance criteria for Dirtworks - woodhill
	exceeded Managed fill acceptance criteria for Redvale Landfill
	exceeded Landfill acceptance criteria for Whangarei Landfill
- :	not tested for
m bgl:	metre below ground level

5.4 Conceptual site model

A conceptual site model (CSM) as defined by the MfE Contaminated Land Guideline No. 5[6], sets out known and potential sources of contamination, potential exposure pathways, and potential receptors. For there to be an effect from the proposed activity there has to be a contamination source and a mechanism (pathway) for contamination to affect human health or the environment (receptor).

The preliminary conceptual site model (used as a screening assessment) based on our review of available NRC ground contamination information, aerials and soil results is presented below in Table 5.3.

Table 5.3: Conceptual site model

SOURCE	EXPOSURE PATHWAY	POTENTIAL RECEPTOR	ACCEPTABLE RISK?
Asbestos in soil from dwelling/structure	Inhalation of asbestos fines	Site re-development workers Future site users Surrounding residents Receiving environment (in surrounds and at disposal facility)	**Yes** Asbestos in soil not detected.
Potential lead-based paint from dwelling exterior and other anthropogenic activity	Direct contact Ingestion of soil Inhalation of airborne dust Off-site discharge	Site re-development workers Future site users Surrounding residents Receiving environment (in surrounds and at disposal facility)	**Yes** Lead and metals below residential NESCS SCS.

Based on the source, pathway and receptor linkage, metals and asbestos in soil are not considered to have the potential to pose a risk to the health of future land users and/or the environment.

6 Regulatory requirements

Based on the results from the contaminated site assessment work described above, and given the anticipated redevelopment plans, a summary of the contaminated land regulatory requirements is presented below:

- Review of historical aerial photographs and NRC contamination records indicate the site has not been subjected to an activity on the HAIL. While some minor impact from anthropogenic activities has been identified this would only be considered to be a HAIL if it contributed a hazardous substance to ground in sufficient quantity that it could be a risk to human health or the environment (HAIL category I). As described in Section 5.3, the concentrations identified at the site do not present a risk to human health.
- As such, the NESCS does not apply to the piece of land.

7 Remedial work, material handling requirements and disposal

At the request of Kāinga Ora, the following soil excavation and remedial cost estimates were prepared based on the sample results of investigations. T+T has no knowledge of foundation design or cut and fill requirements of the proposed development. As a result, the actual soil excavation volume and remedial costs could change based on site specific redevelopment plans, particularly in areas under paving and the existing dwelling:

- The sample results indicate that surface soils at the site do not require remediation or off-site disposal from a contamination perspective as contaminants of concern are below adopted NESCS SCS criteria. However, if these surface soils require removal for other redevelopment purposes (example geotechnically unsuitable material to build on), soil testing indicates that it can be removed to an appropriately consented cleanfill facility (refer Figure 2).
- The estimated cost to dispose of soils up to 0.5 m bgl is:

Soil disposal areas	Estimated cost
Complete removal of site surface soil to 0.5 m bgl	$9,800

Notes:

- A breakdown of the costs is provided in Appendix G.
- Cost estimates are not inclusive of excavation, transportation charges, contractor P&G or markup, escalation, or GST.
- Estimates are based on disposal criteria and costs for disposal to Dirtworks Managed Fill and Whangarei Landfill at the time of this report. There may be other facilities with different consent requirements that may change the waste classification and disposal costs (higher or lower than estimated here).
- The MfE is proposing to impose higher waste levies, progressively over the next four years. The levy rate for landfills will increase from $10 per tonne to $60 per tonne by 2024. This means that the total cost in 2024, if the landfill gate remains at $60 per tonne, would become $120 per tonne ($60+$60). MfE has also proposed to impose a levy of $10 per tonne on managed fills, currently exempt from the scheme.

- The contractor in charge of the redevelopment work must discuss and agree disposal of the excavated soils with the chosen disposal facility operator prior to commencement of the excavation work and ensure the facility is consented by Council to receive the material.
- A contaminated soil RWI should be prepared for redevelopment earthwork at the site, setting out health and safety and environmental management controls, including the appropriate off-site disposal of excavated soils, and management practices for unexpected discovery of contamination, including ACM.
- At completion of the soil removal work photographs of the site excavation, disposal tickets and any independent asbestos assessor/competent person reports (if applicable) will be

furnished to T+T to provide verification that the work has been completed to the requirements in this document and Figure 2.

8 Recommendations

Based on the PSI / DSI, T+T recommends the following:

1 The soils at the site do not require off-site disposal from a contamination perspective as contaminants of concern are below adopted NESCS SCS criteria. However, if these surface soils require removal for other redevelopment purposes (example geotechnically unsuitable material to build on), they will need to be disposed of at appropriately consented facilities (refer to Figure 2).

2 A remediation work instruction (RWI) outlining health, environmental and safety controls, mitigation controls to manage unexpected discovery of contaminants, including ACM (underground services are common), and site soil disposal of excavated material based on available laboratory results. A site verification report showing excavated areas and soil disposal dockets should be completed upon completion of earthwork.

3 Site earthwork contractors should adopt measures to prevent adverse effects to human health and the environment from the excavation work, including health and safety plans, mitigation measures and erosion and sediment controls.

9 Applicability

This report has been prepared for the exclusive use of our client, Kāinga Ora - Homes and Community, with respect to the particular brief given to us and it may not be relied upon in other contexts or for any other purpose, or by any person other than our client, without our prior written agreement.

We understand and agree that our client may submit this report as part of an application for resource consent and that Far North District Council as the consenting authority will use this report for the purpose of assessing that application.

Recommendations and opinions in this report are based on discrete sampling data. The nature and continuity of subsoil away from the sampling points are inferred and it must be appreciated that actual conditions could vary from the assumed model.

Tonkin & Taylor Ltd

Environmental and Engineering Consultants

Report prepared by:

.....

Jonti Hine

Contaminated Land Consultant

Authorised for Tonkin & Taylor Ltd by:

.....

Michael Mechaelis

Project Director

Report reviewed by:

.....

Melody Robyns

Senior Contaminated Land Consultant

JOHI
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Figures

LEGEND

- Site Boundary
- Soil sample location
- Curtilage sample location

Tonkin+Taylor

www.tonkintaylor.co.nz

DRAWN	JOHI	08/22
DRAFTING CHECKED		
APPROVED		
FILE : CADFILE		
APPROX. SCALE (AT A4 SIZE) AS SHOWN		
PROJECT No. 1015804.0112		

Kainga Ora – Homes and Communities

Preliminary Site Investigation & Detailed Site Investigation

1 Masters Place, Kaitaia

Site Plan

FIG. No. Figure 1

REV. 0

LEGEND

- Site Boundary
- Soil sample location
- Curtilage sample location
- Cleanfill

Tonkin+Taylor

www.tonkintaylor.co.nz

DRAWN	JOHI	08/22
DRAFTING CHECKED		
APPROVED		
FILE : CADFILE		
APPROX. SCALE (AT A4 SIZE) AS SHOWN		
PROJECT No. 1015804.0112		

Kainga Ora – Homes and Communities

Preliminary Site Investigation & Detailed Site Investigation

1 Masters Place, Kaitaia

Soil disposal plan 0.0-0.5m

FIG. No. Figure 2

REV. 0

Appendix A: Site photos

Photograph Appendix A.1: Site condition looking south from KAI5.

Photograph Appendix A.2: Site condition looking north from KAI6.

Appendix B: Select historical aerials

Approximate site boundaries shown in red, top of photo is north

Year of photo: 1950

Source: Retrolens, Crown copyright reserved

Survey number: SN350, Run 1365, photo 9

Approximate site boundaries shown in red, top of photo is north

Year of photo: 1970

Source: Retrolens, Crown copyright reserved

Survey number: SN3025, Run 5024, photo 7

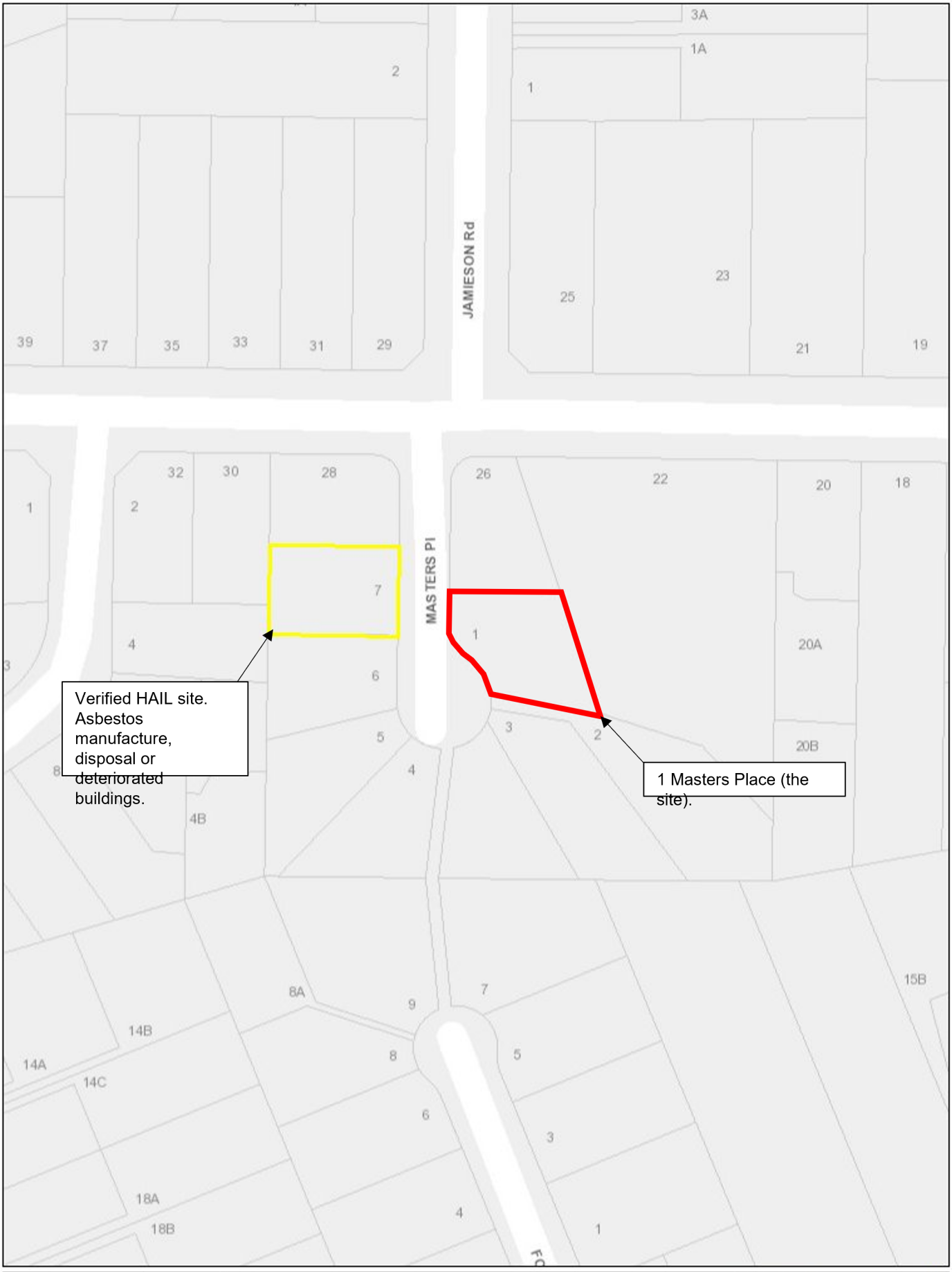
Approximate site boundaries shown in red, top of photo is north

Year of photo: 1973

Source: Retrolens, Crown copyright reserved

Survey number: SN3675, Run A, photo 16

Appendix C: Council Information



Northland REGIONAL COUNCIL

1 Masters Place SLU map

N

0 0.005 0.01 0.02 0.03 Kilometers

November 4 2022

Appendix D: Soil logs

Sampling Point	Soil Depth (meters)	Soil Description
KAI1	0.0-0.05	TOPSOIL. SANDY SILT, brown, moist
	0.05-0.60	CLAY some silt, orange-grey, moist
KAI2	0.0-0.05	TOPSOIL. SANDY SILT, brown, moist
	0.05-0.60	CLAY some silt, orange-brown with some grey, moist
KAI3	0.0-0.3	TOPSOIL. SANDY SILT, brown, moist
	0.3-0.6	CLAY some silt, orange-brown with some grey, moist
KAI4	0.0-0.05	TOPSOIL. SANDY SILT with some gravel, brown, moist
	0.05-0.60	CLAY some silt, light brown-grey with some orange, moist
KAI5	0.0-0.05	TOPSOIL. SANDY SILT, brown, moist
	0.05-0.60	CLAY some silt, light brown-grey with some orange, moist
KAI6	0.0-0.10	TOPSOIL. SANDY SILT, brown, moist

Appendix E: Quality assurance & quality control

Appendix E: Quality Assurance and Quality Control (duplicate) sample results comparison

Property address	Superlot Reference	Sample ID	Arsenic	Cadmium	Chromium	Copper	Lead	Nickel	Zinc
1 Masters Place		KAI2	2.5	0.06	46	19	7.5	13	54
		KAIQA	5.1	0.07	29	13	7.2	10	54
		RPD %	68	15	45	38	4	26	0

Note: Where both results were below the laboratory limit of reporting the RPD has been reported as 0%

Appendix F: Laboratory reports

Certificate of Analysis

Environment Testing

All tests reported herein have been performed in accordance with the laboratory's scope of accreditation

Tonkin and Taylor Ltd NZ
PO Box 5271 Wellesley Street
Auckland
NEW ZEALAND 1141

Attention:	Rachel Pickett
Report	911381-AID
Project Name	KOHC 1 MASTERS
Project ID	1015804.0112
Received Date	Aug 04, 2022
Date Reported	Aug 11, 2022

Methodology:

Asbestos Fibre Identification	Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques. *NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.*
Unknown Mineral Fibres	Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity. *NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.*
Subsampling Soil Samples	The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed. *NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.*
Bonded asbestos-containing material (ACM)	The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination.The resultant material is then further examined in accordance with AS 4964 - 2004. *NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.*
Limit of Reporting	The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w). The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence IANZ Accreditation does not cover the performance of this service (non-IANZ results shown with an asterisk). *NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos".This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.*

Project Name KOHC 1 MASTERS
Project ID 1015804.0112
Date Sampled Aug 01, 2022
Report 911381-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
KAI1 - 0.0-0.1	22-Au0008990	Aug 01, 2022	Approximate Sample 92g Sample consisted of: Fine grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
KAI2 - 0.0-0.1	22-Au0008991	Aug 01, 2022	Approximate Sample 156g Sample consisted of: Fine grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
KAI3 - 0.0-0.1	22-Au0008992	Aug 01, 2022	Approximate Sample 122g Sample consisted of: Fine grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
KAI4 - 0.0-0.1	22-Au0008993	Aug 01, 2022	Approximate Sample 109g Sample consisted of: Fine grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
KAI5 - 0.0-0.1	22-Au0008994	Aug 01, 2022	Approximate Sample 141g Sample consisted of: Fine grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
KAI6 - 0.0-0.1	22-Au0008995	Aug 01, 2022	Approximate Sample 122g Sample consisted of: Fine grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Auckland	Aug 05, 2022	Indefinite

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Tel: +64 9 526 45 51
IANZ# 1327

Christchurch
43 Detroit Drive
Rolleston,
Christchurch 7675
Tel: 0800 856 450
IANZ# 1290

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

Melbourne
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NATA# 1261 Site# 1254

Geelong
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Grovedale
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Tel: +61 3 8564 5000
NATA# 1261 Site# 1254

Sydney
179 Magowar Road
Girraween
NSW 2145
Tel: +61 2 9900 8400
NATA# 1261 Site# 18217

Canberra
Unit 1,2 Dacre Street
Mitchell
ACT 2911
Tel: +61 2 6113 8091

Brisbane
1/21 Smallwood Place
Murarrie
QLD 4172
Tel: +61 7 3902 4600
NATA# 1261 Site# 20794

Newcastle
4/52 Industrial Drive
Mayfield East NSW 2304
PO Box 60 Wickham 2293
Tel: +61 2 4968 8448
NATA# 1261 Site# 25079

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NATA# 2377 Site# 2370

Company Name: Tonkin and Taylor Ltd NZ - NI
Address: PO Box 5271 Wellesley Street
Auckland
NEW ZEALAND 1141

Project Name: KOHC 1 MASTERS
Project ID: 1015804.0112

Order No.: KOHC 1 MASTERS
Report #: 911381
Phone: 0011649 355 6047
Fax: 9 355 6066

Received: Aug 4, 2022 10:00 AM
Due: Aug 11, 2022
Priority: 5 Day
Contact Name: Rachel Pickett

Eurofins Analytical Services Manager : Karishma Patel

Sample Detail						Asbestos - AS4964	HOLD	Moisture Set	Metals M7 (NZ MfE)
Auckland Laboratory - IANZ# 1327						X	X	X	X
Christchurch Laboratory - IANZ# 1290									
External Laboratory									
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**				
1	KAI1 - 0.0-0.1	Aug 01, 2022		Soil	K22-Au0008990	X		X	X
2	KAI2 - 0.0-0.1	Aug 01, 2022		Soil	K22-Au0008991	X		X	X
3	KAI3 - 0.0-0.1	Aug 01, 2022		Soil	K22-Au0008992	X		X	X
4	KAI4 - 0.0-0.1	Aug 01, 2022		Soil	K22-Au0008993	X		X	X
5	KAI5 - 0.0-0.1	Aug 01, 2022		Soil	K22-Au0008994	X		X	X
6	KAI6 - 0.0-0.1	Aug 01, 2022		Soil	K22-Au0008995	X		X	X
7	KAIQA	Aug 01, 2022		Soil	K22-Au0008996			X	X
8	KAI1 - 0.3	Aug 01, 2022		Soil	K22-Au0008997		X		
9	KAI1 - 0.5	Aug 01, 2022		Soil	K22-Au0008998		X		
10	KAI2 - 0.3	Aug 01, 2022		Soil	K22-Au0008999		X		
11	KAI2 - 0.5	Aug 01, 2022		Soil	K22-Au0009000		X		
12	KAI3 - 0.3	Aug 01, 2022		Soil	K22-Au0009001		X		

eurofins

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Address: PO Box 5271 Wellesley Street
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NEW ZEALAND 1141

Project Name: KOHC 1 MASTERS
Project ID: 1015804.0112

Order No.: KOHC 1 MASTERS
Report #: 911381
Phone: 0011649 355 6047
Fax: 9 355 6066

Received: Aug 4, 2022 10:00 AM
Due: Aug 11, 2022
Priority: 5 Day
Contact Name: Rachel Pickett

Eurofins Analytical Services Manager : Karishma Patel

Sample Detail						Asbestos - AS4964	HOLD	Moisture Set	Metals M7 (NZ MfE)
Auckland Laboratory - IANZ# 1327						X	X	X	X
Christchurch Laboratory - IANZ# 1290									
External Laboratory									
13	KAI3 - 0.4	Aug 01, 2022		Soil	K22-Au0009002		X		
14	KAI4 - 0.3	Aug 01, 2022		Soil	K22-Au0009003		X		
15	KAI4 - 0.5	Aug 01, 2022		Soil	K22-Au0009004		X		
16	KAI5 - 0.3	Aug 01, 2022		Soil	K22-Au0009005		X		
17	KAI5 - 0.5	Aug 01, 2022		Soil	K22-Au0009006		X		
Test Counts						6	10	7	7

Internal Quality Control Review and Glossary General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. Information identified on this report with the colour **blue** indicates data provided by customer that may have an impact on the results.
5. Information identified on this report with the colour **orange** indicates sections of the report not covered by the laboratory's scope of NATA accreditation.
6. This report replaces any interim results previously issued.

Holding Times

Please refer to the most recent version of the 'Sample Preservation and Container Guide' for holding times (QS3001).
If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported. Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

Units

% w/w:	Percentage weight-for-weight basis, e.g. of asbestos in asbestos-containing finds in soil samples (**% w/w**)
F/fld	Airborne fibre filter loading as Fibres (**N**) per Fields counted (**n**)
F/mL	Airborne fibre reported concentration as Fibres per millilitre of air drawn over the sampler membrane (**C**)
g, kg	Mass, e.g. of whole sample (**M**) or asbestos-containing find within the sample (**m**)
g/kg	Concentration in grams per kilogram
L, mL	Volume, e.g. of air as measured in AFM (**V** = **r** x **t**)
L/min	Airborne fibre sampling Flowrate as litres per minute of air drawn over the sampler membrane (**r**)
min	Time (**t**), e.g. of air sample collection period

Calculations

Airborne Fibre Concentration: $C = \left(\frac{A}{a}\right) \times \left(\frac{N}{n}\right) \times \left(\frac{1}{r}\right) \times \left(\frac{1}{t}\right) = K \times \left(\frac{N}{n}\right) \times \left(\frac{1}{V}\right)$

Asbestos Content (as asbestos): $\%\, w/w = \frac{(m \times P_A)}{M}$

Weighted Average (of asbestos): $\%_{WA} = \sum \frac{(m \times P_A)_x}{x}$

Terms

%asbestos	Estimated percentage of asbestos in a given matrix. May be derived from knowledge or experience of the material, informed by HSG264 *Appendix 2*, else assumed to be 15% in accordance with WA DOH *Appendix 2* (**P_A**).
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded (non-friable) condition. For the purposes of the NEPM and WA DOH, ACM corresponds to material larger than 7 mm x 7 mm.
AF	Asbestos Fines. Asbestos contamination within a soil sample, as defined by WA DOH. Includes loose fibre bundles and small pieces of friable and non-friable material such as asbestos cement fragments mixed with soil. Considered under the NEPM as equivalent to "non-bonded / friable".
AFM	Airborne Fibre Monitoring, e.g. by the MFM.
Amosite	Amosite Asbestos Detected. Amosite may also refer to Fibrous Grunerite or Brown Asbestos. Identified in accordance with AS 4964-2004.
AS	Australian Standard.
Asbestos Content (as asbestos)	Total % w/w asbestos content in asbestos-containing finds in a soil sample (**% w/w**).
Chrysotile	Chrysotile Asbestos Detected. Chrysotile may also refer to Fibrous Serpentine or White Asbestos. Identified in accordance with AS 4964-2004.
COC	Chain of Custody.
Crocidolite	Crocidolite Asbestos Detected. Crocidolite may also refer to Fibrous Riebeckite or Blue Asbestos. Identified in accordance with AS 4964-2004.
Dry	Sample is dried by heating prior to analysis.
DS	Dispersion Staining. Technique required for Unequivocal Identification of asbestos fibres by PLM.
FA	Fibrous Asbestos. Asbestos containing material that is wholly or in part friable, including materials with higher asbestos content with a propensity to become friable with handling, and any material that was previously non-friable and in a severely degraded condition. For the purposes of the NEPM and WA DOH, FA generally corresponds to material larger than 7 mm x 7 mm, although FA may be more difficult to visibly distinguish and may be assessed as AF.
Fibre Count	Total of all fibres (whether asbestos or not) meeting the counting criteria set out in the NOHSC:3003
Fibre ID	Fibre Identification. Unequivocal identification of asbestos fibres according to AS 4964-2004. Includes Chrysotile, Amosite (Grunerite) or Crocidolite asbestos.
Friable	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory's remit to assess degree of friability.
HSG248	UK HSE HSG248, *Asbestos: The Analysts Guide*, 2nd Edition (2021).
HSG264	UK HSE HSG264, *Asbestos: The Survey Guide* (2012).
ISO (also ISO/IEC)	International Organization for Standardization / International Electrotechnical Commission.
K Factor	Microscope constant (**K**) as derived from the effective filter area of the given AFM membrane used for collecting the sample (**A**) and the projected eyepiece graticule area of the specific microscope used for the analysis (**a**).
LOR	Limit of Reporting.
MFM (also NOHSC:3003)	Membrane Filter Method. As described by the Australian Government National Occupational Health and Safety Commission, *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres*, 2nd Edition [NOHSC:3003(2005)].
NEPM (also ASC NEPM)	National Environment Protection (Assessment of Site Contamination) Measure, (2013, as amended).
Organic	Organic Fibres Detected. Organic may refer to Natural or Man-Made Polymeric Fibres. Identified in accordance with AS 4964-2004.
PCM	Phase Contrast Microscopy. As used for Fibre Counting according to the MFM.
PLM	Polarised Light Microscopy. As used for Fibre Identification and Trace Analysis according to AS 4964-2004.
SMF	Synthetic Mineral Fibre Detected. SMF may also refer to Man Made Vitreous Fibres. Identified in accordance with AS 4964-2004.
SRA	Sample Receipt Advice.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres (particularly asbestos) in a given sample matrix.
UK HSE HSG	United Kingdom, Health and Safety Executive, Health and Safety Guidance, publication.
UMF	Unidentified Mineral Fibre Detected. Fibrous minerals that are detected but have not been unequivocally identified by PLM with DS according the AS 4964-2004. May include (but not limited to) Actinolite, Anthophyllite or Tremolite asbestos.
WA DOH	Reference document for the NEPM. Government of Western Australia, *Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia* (updated 2021), including Appendix Four: *Laboratory analysis*
Weighted Average	Combined average % w/w asbestos content of all asbestos-containing finds in the given aliquot or total soil sample (**$\%_{WA}$**).

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Asbestos Counter/Identifier:

Laura Liu	Senior Analyst-Asbestos

Authorised by:

Katyana Gausel	Senior Analyst-Asbestos (Key Technical Personnel)

Katyana Gausel
Senior Analyst-Asbestos (Key Technical Personnel)

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates ISO/IEC 17025:2017 accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

eurofins | Environment Testing

Certificate of Analysis

All tests reported herein have been performed in accordance with the laboratory's scope of accreditation

Tonkin and Taylor Ltd NZ
PO Box 5271 Wellesley Street
Auckland
NEW ZEALAND 1141

Attention: **Rachel Pickett**

Report **911381-S**
Project name KOHC 1 MASTERS
Project ID 1015804.0112
Received Date Aug 04, 2022

Client Sample ID			**KAI1 - 0.0-0.1**	**KAI2 - 0.0-0.1**	**KAI3 - 0.0-0.1**	**KAI4 - 0.0-0.1**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**K22-Au0008990**	**K22-Au0008991**	**K22-Au0008992**	**K22-Au0008993**
Date Sampled			**Aug 01, 2022**	**Aug 01, 2022**	**Aug 01, 2022**	**Aug 01, 2022**
Test/Reference	LOR	Unit				
Metals M7 (NZ MfE)						
Arsenic	0.1	mg/kg	1.6	2.5	1.2	0.7
Cadmium	0.01	mg/kg	0.04	0.06	0.09	0.01
Chromium	0.1	mg/kg	47	46	45	57
Copper	0.1	mg/kg	13	19	17	12
Lead	0.1	mg/kg	5.5	7.5	6.3	5.0
Nickel	0.1	mg/kg	14	13	19	14
Zinc	5	mg/kg	41	54	58	27
% Moisture	1	%	29	31	28	30

Client Sample ID			**KAI5 - 0.0-0.1**	**KAI6 - 0.0-0.1**	**KAIQA**
Sample Matrix			**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**K22-Au0008994**	**K22-Au0008995**	**K22-Au0008996**
Date Sampled			**Aug 01, 2022**	**Aug 01, 2022**	**Aug 01, 2022**
Test/Reference	LOR	Unit			
Metals M7 (NZ MfE)					
Arsenic	0.1	mg/kg	1.0	6.8	5.1
Cadmium	0.01	mg/kg	0.03	0.07	0.07
Chromium	0.1	mg/kg	28	17	29
Copper	0.1	mg/kg	23	5.8	13
Lead	0.1	mg/kg	5.1	5.0	7.2
Nickel	0.1	mg/kg	13	6.8	10
Zinc	5	mg/kg	48	34	54
% Moisture	1	%	25	32	26

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Metals M7 (NZ MfE)	Auckland	Aug 04, 2022	6 Months
- Method: LTM-MET-3040 Metals in Waters Soils Sediments by ICP-MS			
% Moisture	Auckland	Aug 04, 2022	14 Days
- Method: LTM-GEN-7080 Moisture Content in Soil by Gravimetry			

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Company Name: Tonkin and Taylor Ltd NZ - NI
Address: PO Box 5271 Wellesley Street
Auckland
NEW ZEALAND 1141

Project Name: KOHC 1 MASTERS
Project ID: 1015804.0112

Order No.: KOHC 1 MASTERS
Report #: 911381
Phone: 0011649 355 6047
Fax: 9 355 6066

Received: Aug 4, 2022 10:00 AM
Due: Aug 11, 2022
Priority: 5 Day
Contact Name: Rachel Pickett

Eurofins Analytical Services Manager : Karishma Patel

Sample Detail						Asbestos - AS4964	HOLD	Moisture Set	Metals M7 (NZ MfE)
Auckland Laboratory - IANZ# 1327						X	X	X	X
Christchurch Laboratory - IANZ# 1290									
External Laboratory									
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**				
1	KAI1 - 0.0-0.1	Aug 01, 2022		Soil	K22-Au0008990	X		X	X
2	KAI2 - 0.0-0.1	Aug 01, 2022		Soil	K22-Au0008991	X		X	X
3	KAI3 - 0.0-0.1	Aug 01, 2022		Soil	K22-Au0008992	X		X	X
4	KAI4 - 0.0-0.1	Aug 01, 2022		Soil	K22-Au0008993	X		X	X
5	KAI5 - 0.0-0.1	Aug 01, 2022		Soil	K22-Au0008994	X		X	X
6	KAI6 - 0.0-0.1	Aug 01, 2022		Soil	K22-Au0008995	X		X	X
7	KAIQA	Aug 01, 2022		Soil	K22-Au0008996			X	X
8	KAI1 - 0.3	Aug 01, 2022		Soil	K22-Au0008997		X		
9	KAI1 - 0.5	Aug 01, 2022		Soil	K22-Au0008998		X		
10	KAI2 - 0.3	Aug 01, 2022		Soil	K22-Au0008999		X		
11	KAI2 - 0.5	Aug 01, 2022		Soil	K22-Au0009000		X		
12	KAI3 - 0.3	Aug 01, 2022		Soil	K22-Au0009001		X		

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Eurofins Analytical Services Manager : Karishma Patel

Sample Detail						Asbestos - AS4964	HOLD	Moisture Set	Metals M7 (NZ MfE)
Auckland Laboratory - IANZ# 1327						X	X	X	X
Christchurch Laboratory - IANZ# 1290									
External Laboratory									
13	KAI3 - 0.4	Aug 01, 2022		Soil	K22-Au0009002		X		
14	KAI4 - 0.3	Aug 01, 2022		Soil	K22-Au0009003		X		
15	KAI4 - 0.5	Aug 01, 2022		Soil	K22-Au0009004		X		
16	KAI5 - 0.3	Aug 01, 2022		Soil	K22-Au0009005		X		
17	KAI5 - 0.5	Aug 01, 2022		Soil	K22-Au0009006		X		
Test Counts						6	10	7	7

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

Units

mg/kg: milligrams per kilogram
mg/L: milligrams per litre
µg/L: micrograms per litre
ppm: parts per million
ppb: parts per billion
%: Percentage
org/100 mL: Organisms per 100 millilitres
NTU: Nephelometric Turbidity Units
MPN/100 mL: Most Probable Number of organisms per 100 millilitres

Terms

APHA	American Public Health Association
COC	Chain of Custody
CP	Client Parent - QC was performed on samples pertaining to this report
CRM	Certified Reference Material (ISO17034) - reported as percent recovery.
Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
LOR	Limit of Reporting.
LCS	Laboratory Control Sample - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
SRA	Sample Receipt Advice
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
TBTO	Tributyltin oxide (*bis*-tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment however free tributyltin was measured and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 5.4
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should be used as a guide only and may be different when site specific Sampling Analysis and Quality Plan (SAQP) have been implemented

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR: No Limit

Results between 10-20 times the LOR: RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.4 where no positive PFAS results have been reported have been reviewed and no data was affected.

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QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time.Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Metals M7 (NZ MfE)							
Arsenic	mg/kg	< 0.1			0.1	Pass	
Cadmium	mg/kg	< 0.01			0.01	Pass	
Chromium	mg/kg	< 0.1			0.1	Pass	
Copper	mg/kg	< 0.1			0.1	Pass	
Lead	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 0.1			0.1	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Metals M7 (NZ MfE)							
Arsenic	%	82			80-120	Pass	
Cadmium	%	82			80-120	Pass	
Chromium	%	86			80-120	Pass	
Copper	%	87			80-120	Pass	
Lead	%	84			80-120	Pass	
Nickel	%	86			80-120	Pass	
Zinc	%	92			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Metals M7 (NZ MfE)				Result 1					
Chromium	K22-Au0008694	NCP	%	80			75-125	Pass	
Copper	K22-Au0008694	NCP	%	81			75-125	Pass	
Nickel	K22-Au0008694	NCP	%	82			75-125	Pass	
Spike - % Recovery									
Metals M7 (NZ MfE)				Result 1					
Cadmium	K22-Au0008991	CP	%	85			75-125	Pass	
Lead	K22-Au0008991	CP	%	88			75-125	Pass	
Zinc	K22-Au0008991	CP	%	98			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1	Result 2	RPD	Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Metals M7 (NZ MfE)				Result 1	Result 2	RPD			
Arsenic	K22-Au0008990	CP	mg/kg	1.6	2.8	54	30%	Fail	Q02
Cadmium	K22-Au0008990	CP	mg/kg	0.04	0.05	15	30%	Pass	
Chromium	K22-Au0008990	CP	mg/kg	47	42	12	30%	Pass	
Copper	K22-Au0008990	CP	mg/kg	13	12	4.3	30%	Pass	
Lead	K22-Au0008990	CP	mg/kg	5.5	6.1	11	30%	Pass	
Nickel	K22-Au0008990	CP	mg/kg	14	13	8.3	30%	Pass	
Zinc	K22-Au0008990	CP	mg/kg	41	42	3.8	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	K22-Au0009014	NCP	%	38	36	6.0	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
Q02	The duplicate %RPD is outside the recommended acceptance criteria. Further analysis indicates sample heterogeneity as the cause

Authorised by:

Karishma Patel	Analytical Services Manager
Katyana Gausel	Senior Analyst-Asbestos
Michael Ritchie	Senior Analyst-Metal

Michael Ritchie
Head of Semi Volatiles (Key Technical Personnel)

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates IANZ accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

Appendix G: Soil disposal volumes and costs

Appendix G Table 1: Estimated costs for disposal of remaining topsoil to 0.5 m depth.

Sample location	Area (m^2)	Depth of excavation (m)	Thickness (m)	Soil volume (m^3)	Approx tonnage	Disposal site/ landfill	Disposal rate/ tonne	Indicative cost estimate
KAI 01	120.9	0-0.5	0.5	60.44	109	Cleanfill	$15.00	$1,632
KAI 02	94.09	0-0.5	0.5	47.05	85	Cleanfill	$15.00	$1,270
KAI 03	148.9	0-0.5	0.5	74.44	134	Cleanfill	$15.00	$2,010
KAI 04	117.8	0-0.5	0.5	58.90	106	Cleanfill	$15.00	$1,590
KAI 05	132.9	0-0.5	0.5	66.45	120	Cleanfill	$15.00	$1,794
KAI 06	110.7	0-0.5	0.5	55.37	100	Cleanfill	$15.00	$1,495
Totals				**362.64**	**653**			**$9,791**

Assumed weight of soil – 1.8 tonnes per m^3, price indicative only and to be confirmed

Based on acceptance criteria and pricing from Redvale Landfill and Dirtworks Managed fill / Cleanfill at the time of this report. There may be other facilities with different consent requirements that may change the waste classification and disposal costs (higher or lower than estimated here).

Cost estimates are not inclusive of excavation, transportation charges, contractor markup, escalation or GST.

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Rules Assessment

Proposal: Proposed residential development

Address: 1 Masters Place, Kaitaia

District Plan: Operative Far North District Plan (ODP)

Site Zoning	
Zone	**Residential Zone**
Overlays/Controls	None
Designations	None

Rule	Compliance	Non-Compliance
Residential Zone - 7.6.5.1 PERMITTED ACTIVITIES		
7.6.5.1.1 RELOCATED BUILDINGS Buildings are permitted activities provided that they comply with all the standards for permitted activities in the Plan, and further provided that where the building is a relocated building all work required to reinstate the exterior including painting and repair of joinery shall be completed within six months of the building being delivered to the site. Reinstatement work is to include connections to all infrastructure services and closing in and ventilation of the foundations.		**Does not comply** The proposed buildings will be relocated to site and the proposal does not comply with Rules 7.6.5.1.2 Residential Intensity and 7.6.5.1.5 Sunlight **Discretionary**
7.6.5.1.2 RESIDENTIAL INTENSITY (a) Each residential unit for a single household shall have available to it a minimum net site area of: Sewered sites: 600m² Unsewered sites: 3,000m² This minimum net site area may be for the exclusive use of the residential unit, or as part of land held elsewhere on the property, provided that a ratio of one residential unit per minimum net site area (as stated above) is not exceeded. Except that this rule shall not limit the use of an existing site for a single residential unit for a single household, provided that all other standards for permitted activities are complied with.		**Does not comply** The application site is sewered. The proposed Lots cannot comply with the with 300m² restricted discretionary net site area. **Restricted Discretionary**
7.6.5.1.3 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	The proposal is for residential dwellings, and will accommodate people who will	

Rule	Compliance	Non-Compliance
normally reside on the site or are members of the household shall not exceed: 2 persons per 600m² (sewered) 2 persons per 3,000m² (unsewered) 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) this number may be exceeded where persons are engaged in constructing or establishing an activity (including environmental enhancement) on the site; and (c) 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. Exemptions: The foregoing limits shall not apply to activities of a limited duration required by normal farming and plantation forestry activities, provided that the activity shall comply with the requirements of s16 of the Act.	consider the house their residence.	
7.6.5.1.4 BUILDING HEIGHT The maximum height of any building shall be 8m.	Complies as indicated in elevations provided as part of **Appendix 2**.	
7.6.5.1.5 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 that: (a) a building may exceed this standard for a maximum distance of 10m along any one boundary other than a road boundary, provided that the maximum height of any building where it exceeds the standard is 2.7m (refer to Recession Plane Diagram B within the definition of Recession Plane in Chapter 3 – Definitions); and (b) 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		**Does not comply** The proposal results in a minor breach to the sunlight thresholds on the northern boundary. (a) The building is more than 2.7 meters at this point, as such the exemption does not apply.

Rule	Compliance	Non-Compliance
farthest boundary of the entrance strip, private way, access lot, or access way.		(b) N/A Restricted discretionary
7.6.5.1.6 STORMWATER MANAGEMENT The maximum proportion of the gross site area covered by buildings and other impermeable surfaces shall be 50%.	Complies as indicated in site plans provided as part of Appendix 2.	
7.6.5.1.7 SET BACK FROM BOUNDARIES (a) The minimum building setback from road boundaries shall be 3m, except that; (i) no building shall be erected within 9m of any road boundary with Kerikeri Road on properties with a road frontage with Kerikeri Road between its intersection with SH10 and Cannon Drive; and (ii) no building shall be erected within 10m of the Cobham Road boundary on Lot 1 DP 28017 and Lot 1 DP 46656 or the Kerikeri Inlet Road boundary of Lot 1 DP 404507 (and any sites created as a result of a subdivision of these lots); (iii) no new buildings as of 25 March 2019 shall be erected within 10m of the Kerikeri Inlet boundary of Lot 2 DP 103531, Lot 1 DP 103531, Lot 2 DP 58333 and Pt Lot 1 DP 58333. (b) The minimum set-back from any boundary other than a road boundary, on all sites other than Lot 1 DP 28017, Lot 1 DP 46656, Lot 1 DP 404507, and Lot 1 DP 181291, Lot 2 DP 103531, Lot 1 DP 103531, Lot 2 DP 58333 and Pt Lot 1 DP 58333 (and any sites created as a result of a subdivision of these lots), shall be 1.2m except that no set-back is required for a maximum total length of 10m along any one such boundary; and (c) Not less than 50% of that part of the site between the road boundary and a parallel line 2m there from (i.e. a 2m wide planting strip along the road boundary) shall be landscaped, on all sites other than Lot 1 DP 28017, Lot 1 DP 46656, Lot 1 DP 404507, and Lot 1 DP 181291, Lot 2 DP 103531, Lot 1 DP 103531, Lot 2 DP 58333 and Pt Lot 1 DP 58333(and any sites created as a result of a subdivision of these lots). For the landscaping required on Lot 1 DP 28017 and Lot 1 DP 46656 (and any sites created as a result of a subdivision of these lots) refer to Rule 7.6.5.1.10 (b) below; and (d) The minimum set back from any other boundary other than the road boundary on Lot 1 DP 28017, Lot 1 DP 46656, Lot 1 DP 404507, and Lot 1 DP 181291, Lot 2 DP 103531, Lot 1 DP 103531, Lot 2 DP 58333 and Pt Lot 1 DP 58333 (and any	Complies as indicated in site plans provided as part of Appendix 2.	

Rule	Compliance	Non-Compliance
sites created as a result of a subdivision of these lots) shall be 3m.		
7.6.5.1.8 SCREENING FOR NEIGHBOURS - NON-RESIDENTIAL ACTIVITIES Except along boundaries adjoining a Commercial or Industrial zone, outdoor areas providing for activities such as parking, loading, outdoor storage and other outdoor activities associated with non-residential activities on the site shall be screened from adjoining sites by landscaping, wall/s, close boarded fence/s or trellis/es or a combination thereof. They shall be of a height sufficient to wholly or substantially separate these areas from the view of neighbouring properties. Structures shall be at least 1.8m in height, but no higher than 2.0m, along the length of the outdoor area. Where such screening is by way of landscaping it shall be a strip of vegetation which has or will attain a minimum height of 1.8m for a minimum depth of 2m.	N/A The proposal is for a residential activity	
7.6.5.1.9 OUTDOOR ACTIVITIES Except as otherwise provided by Rule 7.6.5.1.10, any activity may be carried out outside except that any commercial non-residential activity involving manufacturing, altering, repairing, dismantling or processing of any materials, live produce, goods or articles shall be carried out within a building.	N/A The proposal is for a residential activity	
7.6.5.1.10 VISUAL AMENITY (a) Within the Coopers Beachfront Estate (as defined on Planning Map 61) domestic vehicles, and recreational vessels which are on a road trailer, may be stored on a site provided that: (i) no materials, machinery, non-domestic vehicles or non-trailer borne vessels shall be stored; and (ii) no repair, restoration or maintenance of any vessels shall be carried out; and (iii) no new commercial non-residential activity involving manufacturing, altering, repairing, dismantling or processing of any materials, live produce, goods or articles, shall be carried out on a site in the Coopers Beachfront Estate, unless stored or carried out within a building, except during the period of construction and/or maintenance of a residential unit and/or accessory buildings on the site. (b) Prior to any building work on Lot 1 DP 28017 and Lot 1 DP 46656 located on Cobham Road, Kerikeri (and any sites created as a result of a subdivision of these lots or any amalgamation of the lots) the following shall be provided: (i) The entire length of the road boundary, other than access points, shall be fenced using a visually permeable fence of varying heights not exceeding 1.8m and shall be planted to	N/A The proposal is not located in the relevant locations.	

Rule	Compliance	Non-Compliance
a depth of at least 3m from the road boundary with trees and shrubs that reflect the non weed species present along the road corridor. The planting shall predominantly visually mitigate and screen the built development within the site when viewed from the road. Full screening of all built development is not required. This fencing and planting shall be maintained in perpetuity. (ii) All other external boundaries of the above sites, not including the road or stream boundaries, shall be fenced using a visually permeable fence not exceeding 1.8m in height and shall be planted to a depth of at least 1.5m from the site boundary with shrubs and trees that will, in time, achieve a height sufficient to ensure the mitigation and screening of buildings within the site from neighbouring properties. Full screening of all buildings is not required. This planting shall be maintained in perpetuity. (c) Prior to any building work on Lot 1 DP 404507, and Lot 1 DP 181291, Lot 2 DP 103531, Lot 1 DP 103531, Lot 2 DP 58333 and Pt Lot 1 DP 58333 located on Kerikeri Inlet Road, Kerikeri (and any sites created as a result of a subdivision of these lots or any amalgamation of the lots) a landscaping plan that has been approved by Council showing: • Screening of the entire length of the Kerikeri Inlet Road boundary, other than the access point, with a pittosporum hedge (or similar dense foliage evergreen hedge, or mix of species) capable of achieving a minimum height of 3m and a minimum of twenty trees capable of achieving a height of 5m within the 10m setback area behind the required hedge. Visually impermeable fencing can be installed on the road side of the hedge; • Screening of the eastern boundary of Lot 1 DP 404507 with an evergreen hedge capable of growing to a minimum height of 3m; • A hedge of Griselinia littoralis or similar along the western boundary of Lot 1 DP 404507 where it adjoins Lot 2 DP 103531 and Lot 1 DP 181291 to achieve a minimum height of 2.5m; • Tree planting along the northern boundary, and within the northern third of Lot 1 DP 404507 and Lot 1 DP 181291. The proposed species must reflect the character of the area and the proximity to the stream, be capable of attaining a minimum height of 10.0 metres, and shall be resistant to Myrtle Rust. The trees shall be planted as pb95 specimens. The objective of the tree planting is to soften and fragment views of the site from the north rather than screen views. • All planting shall be implemented and maintained in perpetuity.		
7.6.5.1.11 TRANSPORTATION	Refer to table below.	

Rule	Compliance	Non-Compliance
Refer to Chapter 15 – Transportation for Traffic, Parking and Access rules.		
7.6.5.1.12 SITE INTENSITY - NON-RESIDENTIAL ACTIVITIES (a) except as provided in (b) hereunder, the maximum net area of activities other than residential units on any site shall be 1,000m² for sewered sites, and 5,000m² for unsewered sites, except that this area may be exceeded for public reserves without buildings; (b) in the Coopers Beachfront Estate (as defined on Planning Map 61) retail sales of goods and services (excluding home stay accommodation, rental accommodation or holiday accommodation not being a camping ground or motor camp) are not a permitted activity.	N/A as proposal is for a residential activity.	
7.6.5.1.13 HOURS OF OPERATION - NON-RESIDENTIAL ACTIVITIES (a) the maximum number of hours the activity shall be open to visitors, clients or deliveries shall be 50 hours per week; and (b) hours of operation shall be limited to between the hours: 0700 - 2000 Monday to Friday 0800 - 2000 Saturday, Sunday and Public Holidays Provided that this rule does not apply: (i) where the entire activity is located within a building; and (ii) where each person engaged in the activity outside the above hours resides permanently on the site; and (iii) where there are no visitors, clients or deliveries to or from the site outside the above hours. Exemptions: This rule does not apply to activities that have a predominantly residential function such as lodges, motels and homestays.	N/A as proposal is for a residential activity	
7.6.5.1.14 KEEPING OF ANIMALS No site shall be used for factory farming, a boarding or breeding kennel or a cattery.	Keeping of animals is not proposed	
7.6.5.1.16 HELICOPTER LANDING AREA Helicopter landing areas are not permitted.	Helicopter landing area is not proposed	
7.6.5.1.17 BUILDING COVERAGE Any new building or alteration/addition to an existing building is a permitted activity if the total Building Coverage of a site does not exceed 45% of the gross site area.	Complies as indicated in site plans provided as part of Appendix 2.	
Natural and Physical Resource 12.3 – PERMITTED ACTIVITES		
Rule 12.3.6.1.3 Excavation and/or filling in the Residential Zone Excavation and/or filling, excluding mining and quarrying, on any site in the Residential, Industrial, Horticultural Processing, Coastal Residential or Russell Township Zones is permitted, provided that:	The proposal results in approximately 79m^3 of earthworks, cut and fill heights will be less than 1.5m (if any).	

Rule	Compliance	Non-Compliance
(a) it does not exceed 200m3 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.		
12.4.6.1.1 Setback from Lakes, Rivers and Wetlands 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.	The application site is not located near to any lakes or rivers.	
Transportation 15 – PERMITTED ACTIVITIES		
Rule 15.1.6A.2.1 Traffic Intensity 20 one-way daily traffic movements are permitted on a site within the Residential Zone. The first residential unit on a site and construction traffic associated with establishing the residential activity are exempt from this rule.	Based on the Traffic Intensity Factors in Appendix 3A each residential unit/household equivalent is equal to 10 one-way movements. When considering that the first residential unit on each site is exempt, the proposal across the application site will result in 10 one-way traffic movements total.	
Rule 15.1.6B.1.1 On-site Car Parking Spaces Two car parking spaces required per residential unit.		**Does not comply** Both Lots are provided with one carparking space. **Discretionary activity.**
Rule 15.1.6B.1.5 Car Parking Space Standards	Complies	

Rule	Compliance	Non-Compliance
Car parking spaces and manoeuvring areas shall be formed in accordance with the requirements of Appendix 3D and 3E of the District Plan.		
Rule 15.1.6C.1.4 Access over Footpath The following restrictions shall apply to vehicle access over footpaths: (a) no more than two crossings per site; and (b) the maximum width of a crossing shall be: 6m		**Does not comply** The double width vehicle crossing when measured from the splays is greater than 6m in width. **Discretionary activity.**
Rule 15.1.6C.1.6 Vehicle Crossing Standards in Urban Zone (a) Private access off streets in the urban zones the vehicle crossing is to be constructed in accordance with Council's "Engineering Standards and Guidelines" (June 2004 – Revised 2009). (b) Where the vehicle crossing serves two or more proposed the vehicle crossing is to be widened to provide a double width vehicle crossing.	• Crossing will be constructed to comply • N/A	
Rule 15.1.6C.1.7 General Access Standards (a) Provision shall be made such that there is no need for vehicles to reverse off a site except where there are less than 4 parking spaces gaining access from a local road. (b) All bends and corners on the private accessway are to be constructed to allow for the passage of a Heavy Rigid Vehicle. (c) Any access where legal width exceeds formation requirements shall have surplus areas (where legal width is wider than the formation) grassed. (d) Runoff from impermeable surfaces shall, wherever practicable, be directed to grass swales and/or shall be managed in such a way as will reduce the volume and rate of stormwater runoff and contaminant loads.	• N/A • N/A • N/A	
Rule 15.1.6C.1.8 Frontage to Existing Roads (a) Where any proposed subdivision has frontage to a road or roads that do not meet the legal road width standards specified by the Council in its "Engineering Standards and Guidelines" (June 2004 – Revised 2009), road widening shall be vested in the name of the Council. (b) Where any proposed subdivision has frontage to a road or roads that are not constructed to the standards specified by the Council in its "Engineering Standards and Guidelines" (June 2004 – Revised 2009), then the applicant shall complete the required improvements. (c) Where a site has more than one road frontage or frontage to a service lane or right-of-way (ROW) in addition to a road frontage, access to the site shall be in a place that:	• It is understood that Masters Place is formed to standard; no widening required • As above • N/A • N/A	

Rule	Compliance	Non-Compliance
(i) facilitates passing traffic, entering and exiting traffic, pedestrian traffic and the intended use of the site; (ii) is from the road or service lane or ROW that carries the lesser volume of traffic. (d) Where any proposed subdivision has frontage to a road on which the carriageway encroaches, or is close to the subject lot or lots, the encroachment or land shall vest in Council such that either the minimum berm width between the kerb or road edge and the boundary is 2m or the boundary is at least 6m from the centreline of the road whichever is the greater		
Subdivision 13		
13.7.2 Allotment Sizes, Dimensions and other Standards Table 13.7.2.1 Minimum Lot Size Controlled: The minimum lot sizes are 3,000m² (unsewered) and 600m² (sewered). Discretionary: The minimum lot sizes are 2,000m² (unsewered) and 300m² (sewered).		**Does not comply** The application site is connected to sewer and the lot area of both lots exceeds 300m² **Discretionary activity**
13.7.2.2 Allotment Dimensions Residential 14m x 14xm		**Does not comply** The proposed Lots cannot comply with the allotment dimensions **Non-complying activity**

District Plan: Proposed Far North District Plan 'PDP'

Site Zoning	
Zone	**General Residential Zone**
Overlays/Controls	None
Designations	None

Rule	Compliance	Non-Compliance
Rules and Standards That Have Immediate Legal Effect under the PDP		
Part 2 – District Wide Matters /Hazards and Risks / Hazardous Substances		
Hazardous Substances	N/A The proposal does not involve any hazardous substances.	

Rule	Compliance	Non-Compliance
Part 2 – District Wide Matters / Historical and Cultural Values		
Heritage Areas	N/A The proposal is not located in a Heritage Area.	
Historic Heritage	N/A The proposal does not involve any scheduled heritage resources.	
Notable Trees	N/A The proposal does not involve any notable trees.	
Sites and Areas of Significance to Māori	N/A The application site is not located within and sites or areas of significance to Māori.	
Part 2 – District Wide Matters / National Environment Values		
Ecosystems and Indigenous Biodiversity	N/A There is no vegetation clearance proposed.	
Part 2 – District Wide Matters / Subdivision		
Subdivision	N/A No Subdivision rules with legal effect apply to the proposal.	
Part 2 – District Wide Matters / General District Wide Matters		
Activities on the Surface of Water	N/A No activities on the surface of water are proposed.	
Earthworks		
EW-R12 Earthworks and the Discovery of Suspected Sensitive Material	Complies Accidental discovery protocols will be followed as necessary.	
EW-R13 Earthworks and Erosion and Sediment Control	Complies All necessary erosion and sediment control guidelines.	
Signs	N/A No signs are proposed.	
Part 3 – Area Specific Matters / Special Purpose Zones / Orongo Bay		
OBZ-R14 Comprehensive Development Plan	N/A	