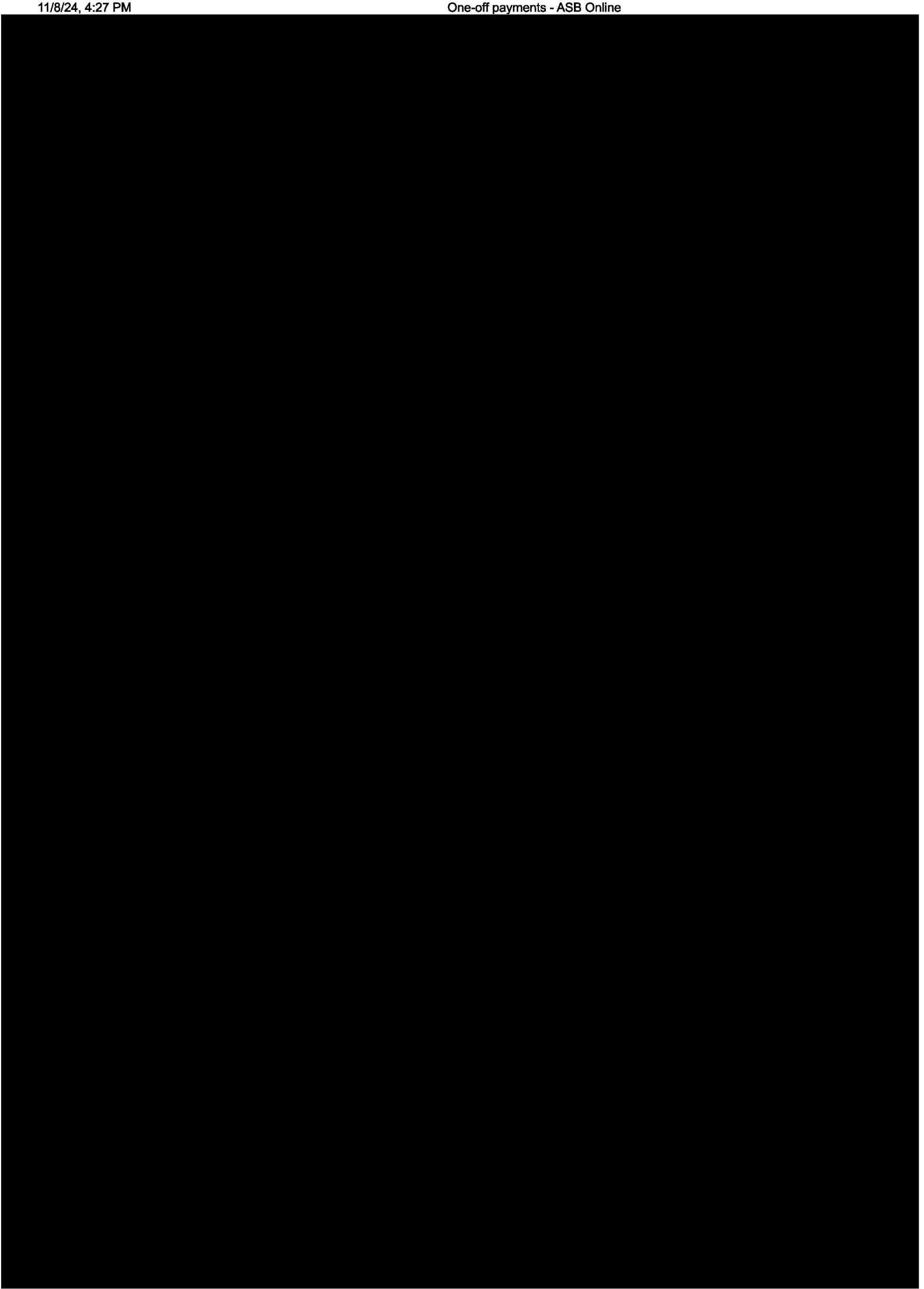


Donaldson's Su
90 Kerikeri Roa
Kerikeri 0245 -
P 09 407 9182
F 09 407 7366
E info@donald
W www.donald

DONALDSONS
REGISTERED LAND SURVEYORS
8462

8 November 2024

RESOURCE CONSENT APPLICATION TO SUBDIVIDE
JATT FARMERS LIMITED, 682 PUNGAERE ROAD KERIKERI

PLANNING REPORT

INTRODUCTION

The applicants, Jatt Farmers Limited, own 10.82 hectares off Pungaere Road, Kerikeri in the Rural Production zone and they seek a resource consent to subdivide into 5 allotments in a manner similar to that referred to as the Restrictive Discretionary 2ha rule under the operative District Plan, the only discretion being that the certificate of title does not meet the pre 28 April 2000 requirement.

In addition, a comprehensive Land Use Capability Report by Bob Cathcart is presented with this application which addresses the National Policy For Highly Productive Land.

Land Use consents are also requested due to breaches in access standards and NES 2011 as discretionary activities.

BRIEF ASSESSMENT

The property for the most part is under kiwifruit, on undulating contour, is irrigated by the Kerikeri Irrigation Company, there are no dwellings, is set back off the main thoroughfare and is in an area prolific with rural life style blocks.

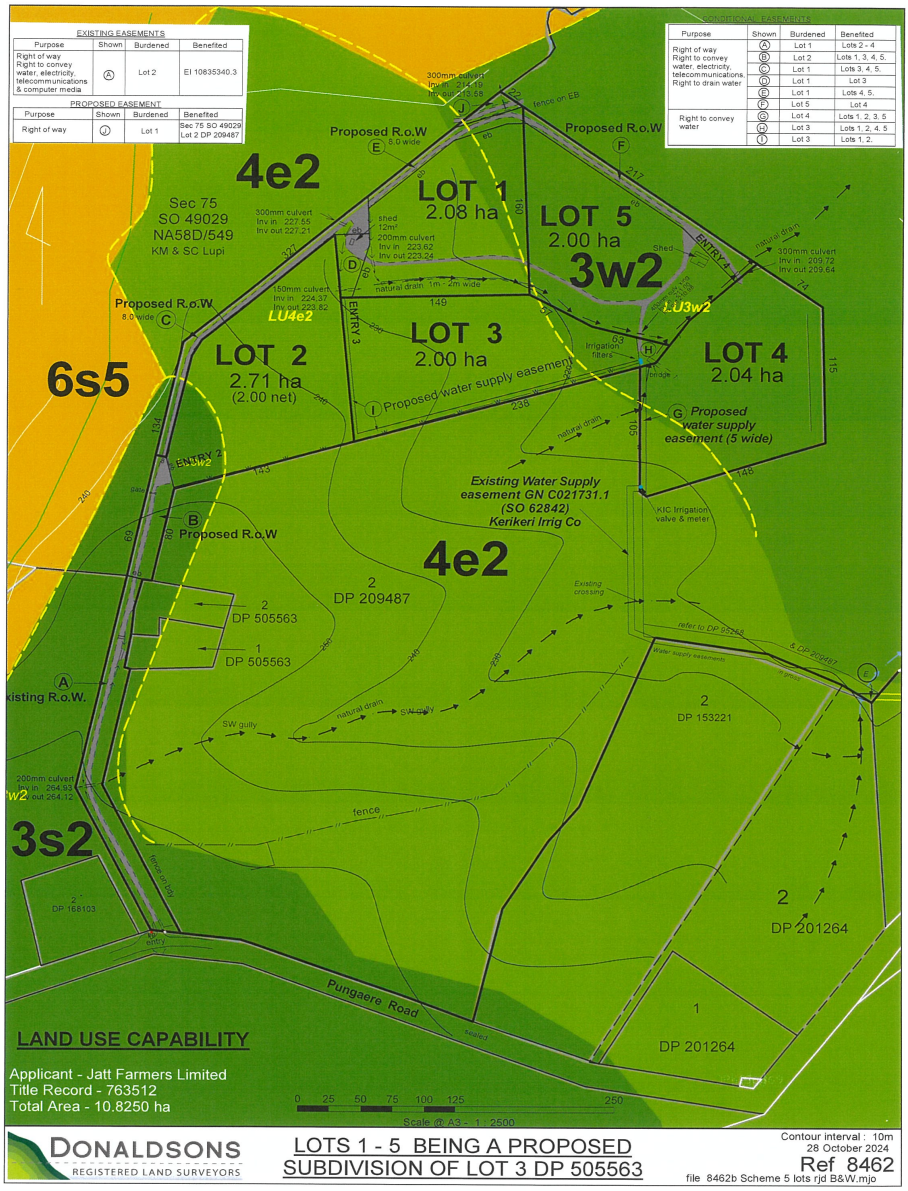
Current description – Lot 3 DP.505563 comprised in RT 783512 area 10.8250ha.

Outcome – Lot 1 at 2.08 ha, Lot 2 at 2.71 ha, Lot 3 at 2.00 ha, Lot 4 at 2.04 ha, Lot 5 at 2.00 ha.

Historically the property was created in 1984 as Lot 3 DP 95258 with an area of 10.8760 ha. Then, in 2017 an adjacent parcel of land, Lot 1 DP 209487, with an area of

just 4515 m², was subdivided into two small blocks, Lots 1 & 2 DP 505563 which at the same time included a small 50m² portion of the ingress strip of LOT 3 DP.95258 and as a consequence Lot 3 became Lot 3 DP 505563 with a new title dated 29 June 2017 having an area just 50m² less than it did in 1984.
Hence this application will be assessed as being a non complying activity.

Land Use Capability maps define 3 different categories over the property – 3s2, 3w2 and 4e2 which indicate a conflict with subdividing and the National Policy Statement for Highly Productive Land. However the report by Bob Cathcart addresses the issues and concludes that none of the property can be defined as being highly productive.



OPERATIVE DISTRICT PLAN

Under the Far North District Plan the property is zoned Rural Production. There are no Outstanding Landscape overlays associated with the property.

OBJECTIVES (*Subdivision*)

13.3.2 *To ensure that subdivision of land is appropriate and is carried out in a manner that does not compromise the life-supporting capacity of air, water, soil or ecosystems, and that any actual or potential adverse effects on the environment which result directly or indirectly from subdivision, including reverse sensitivity effects, are avoided, remedied or mitigated.*

13.3.4 *To ensure that subdivision does not adversely affect scheduled heritage resources through alienation of the resource from its immediate setting/context.*

13.3.5 *To ensure that all new subdivisions provide a reticulated water supply and/or on-site water storage sufficient to meet the needs of the activities that will establish all year round.*

The proposal is considered to uphold the subdivision objectives and there is no particular relevance to the policies due to the low environmental impact associated with the activity.

The level of effects from this non-complying activity align consistently with the restricted discretionary activity standards, meaning the proposals effects are in fact provided for by the plan, consequently objectives and policies respective to the gateway test are less relevant.

In outline of the Rural Production zone environmental provisions provides emphasis on the zones capacity to support a variety of activities and land uses.

Rural Environment

8.6.2 ENVIRONMENTAL OUTCOMES EXPECTED

8.6.2.1 *A Rural Production Zone where a wide variety of activities take place in a manner that is consistent with the sustainable management of natural and physical resources.*

8.6.2.2 *A Rural Production Zone which enables the social, economic and cultural well-being of people and communities, and their health and safety, while safeguarding the life supporting capacity of the environment and avoiding, remedying or mitigating adverse effects on it.*

The zone promotes a variety of land use activities, particularly those that are deemed sustainable to the natural and physical resources. The rural zone is intended to provide for social, economic and cultural wellbeing of people and communities, therefore insofar as effects are concerned the proposal to utilise a relatively small area of marginal land for alternative living purposes presents a viable use of the land, something that can be undertaken without compromise to the life supporting capacity of the soils and wider environment.

8.6.3 OBJECTIVES

8.6.3.1 To promote the sustainable management of natural and physical resources in the Rural Production Zone.

8.6.3.2 To enable the efficient use and development of the Rural Production Zone in a way that enables people and communities to provide for their social, economic, and cultural well being and for their health and safety.

8.6.3.3 To promote the maintenance and enhancement of the amenity values of the Rural Production Zone.

8.6.4 POLICIES

8.6.4.1 That a wide range of activities be allowed in the Rural Production Zone, subject to the need to ensure that any adverse effects, including any reverse sensitivity effects, on the environment resulting from these activities are avoided, remedied or mitigated.

8.6.4.2 That standards be imposed to ensure that the off site effects of activities in the Rural Production Zone are avoided, remedied or mitigated.

8.6.4.3 That land management practices that avoid, remedy or mitigate adverse effects on natural and physical resources be encouraged.

The proposal is considered to uphold the objectives and policies.

13. SUBDIVISION

13.7.2.1 ALLOTMENT SIZE
Restricted Discretionary minimum allotment size is 2 hectares subject to title date being pre 28 April 2000

LOT 1 = 2.08 ha
LOT 2 = 2.71 ha
LOT 3 = 2.00 ha
LOT 4 = 2.04 ha
LOT 5 = 2.00 ha

NON COMPLIANT – title is dated 29 June 2017

13.7.2.2 ALLOTMENT DIMENSIONS

Zone	Minimum Dimension
Rural Production	30m x 30m

COMPLIANT

13.7.3.1 PROPERTY ACCESS (Chapter 15 Transportation)
Access is by rights of way over the applicant owned ingress strip, currently used by 3 properties. On subdivision there will be a further 4 properties making a total of 7.
However, it should also be noted that the adjoining property, Lot 2 DP 209487, has an active consent to subdivide, application reference RC 2220784 dated 1/02/2023, which consents to four 2ha allotments having access over this same ingress strip. Therefore there could potentially be 11 users over the ingress area labelled 'A' on the scheme plan.

NON COMPLIANT – number of users could exceed 8

13.7.3.2 NATURAL HAZARDS

The whole property is a potential HAIL site by virtue of its kiwifruit farming operations.
On subdivision, whilst the lots remain in kiwifruit, each individual site can be accepted as being a HAIL site, however, should any one of them decide to build a dwelling then a Preliminary Site Inspection will be required on that site to determine the extent of the hazard.

COMPLIANT – whilst being a productive kiwifruit operation.

13.7.3.3 WATER SUPPLY

There is no reticulated potable water supply so, when required, it will need to be from roof water into storage tanks.
Non potable water is already reticulated by the Kerikeri Irrigation Company
COMPLIANT

13.7.3.4 STORMWATER DISPOSAL

Stormwater runoff is already adequately controlled by a drain running centrally through the property which is accessible by all of the lots. This drain commences in the south western corner of Lot 1 and exits at the northern corner of Lot 4.
Stormwater attenuation devises are not required at this stage because no additional impermeable surfaces are proposed.
COMPLIANT

13.7.3.5 SEWAGE DISPOSAL

There is no reticulated sewage system available.
All lots will rely on individual on-site systems as recommended in wastewater report.
COMPLIANT

13.7.3.6 ENERGY SUPPLY

Top Energy have no concerns .
COMPLIANT

13.7.3.7 TELECOMMUNICATIONS

Chorus have not been contacted but we envisage no problems.
COMPLIANT

13.7.3.8 EASEMENTS

Existing appurtenant easements exist over other land in favour of the Kerikeri Irrigation Company and enter the subject property at the southern corner of proposed Lot 4.

Existing subject easements exist over the ingress strip area ‘A’ in favour of Lots 1 & 2 DP.505563 as right of way and rights to convey water, electricity, telecommunications and computer media.

Easement ‘J’, in the northern most corner of Lot 1, is to facilitate the farming activities of the adjacent properties Lot 2 DP 209487 and Sec 75 SO 49029

Easements are proposed as scheduled on the scheme plan.
COMPLIANT

13.7.3.9 PRESERVATION AND ECOLOGY

There are no recorded significant or outstanding features .
COMPLIANT

13.7.3.10 ACCESS TO RESERVES
There are no reserves in the immediate vicinity.
COMPLIANT

13.7.3.11 LAND USE
Refer to Bob Cathcart report.
COMPLIANT

13.7.3.12 AIRPORTS
There are no airports affected.
COMPLIANT

13.10 ASSESSMENT CRITERIA OF NON COMPLYING SUBDIVISIONS

In considering whether or not to grant consent or impose conditions on applications for discretionary (subdivision) activities, the Council will have regard to s104, s105 and s106 of the Act, the objectives and policies of the Plan and to the assessment criteria set out below.
Note: Attention is drawn to the need to also refer to Chapter 15.1 for rules relating to property access.

13.10.1 ALLOTMENT SIZES AND DIMENSIONS

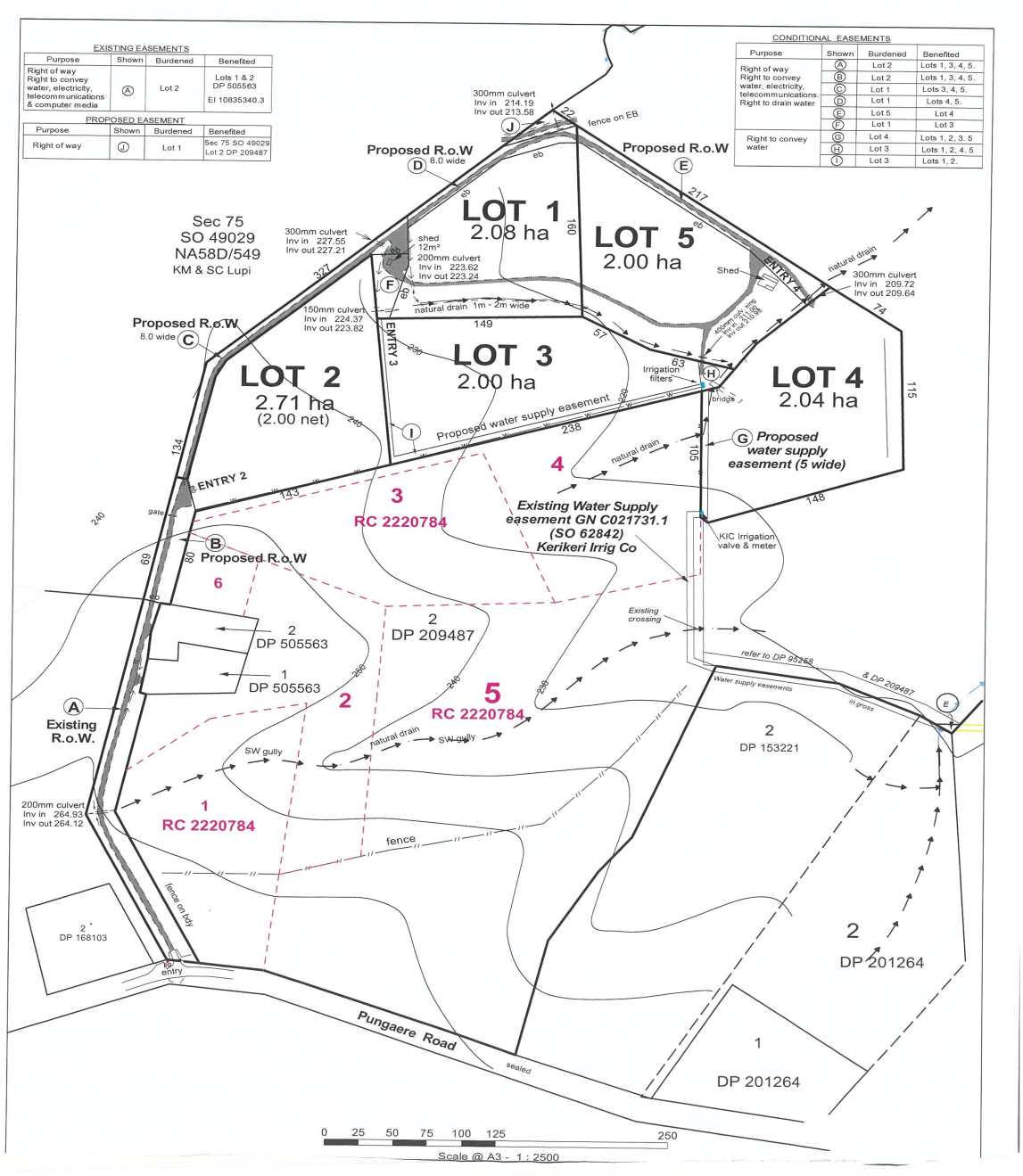
(a) Whether the allotment is of sufficient area and dimensions to provide for the intended purpose or land use, having regard to the relevant zone standards and any District wide rules for land uses.
Lots 1 – 5 are naturally segmented into parcels of workable independent kiwifruit blocks, which once divided may or may not remain as such but from all indications and their isolation it is anticipated they will eventually, over time, revert to being lifestyle properties in line with the neighbourhood.

(b) *Whether the proposed allotment sizes and dimensions are sufficient for operational and maintenance requirements.*
Lots 1 – 5 all contain ample area to accommodate a standard 30 x 30 house site if and when required.

(c) The relationship of the proposed allotments and their compatibility with the pattern of the adjoining subdivision and land use activities, and access arrangements
Lots 1 – 5 are well aligned with the surrounding pattern of mixed lifestyle allotments, although their current land use may be seen to be otherwise.

(d) Whether the cumulative and long term implications of proposed subdivisions are sustainable in terms of preservation of the rural and coastal environments.

Lots 1 – 5 are a natural progression of subdivision expected in this lifestyle/residential environment. See RC 2220784.



RC 2220784 OVERLAY

13.10.2 NATURAL AND OTHER HAZARDS

In assessing any subdivision, and for the purposes of s106 of the Act, the Council will have regard to:

(a) Any information held by the Council or the Northland Regional Council regarding natural hazards, contaminated sites or other hazards.

Every active kiwifruit orchard is deemed to be a HAIL site until proven otherwise and to this end a PSI will be required prior to any alternative occupation such as the construction of a dwelling house or the dis-establishment of kiwifruit as a business.

(b) Information obtained by suitably qualified experts, whose investigations are supplied for subdivision applications.

No further reports have been commissioned.

(c) Potential adverse effects on other land that may be caused by the subdivision or anticipated land use activities.

There are no known adverse effects.

(d) In relation to inundation from any source, the Council shall have regard to the following factors:

There is no inundation.

(e) In relation to erosion, falling debris or slippage, the need for ongoing conditions aimed at avoiding, remedying or mitigating future potential adverse effects, and any need for registration of consent notices on the allotment's Certificate of Title, pursuant to Rule 13.6.7.

There is no erosion or slippage that would give rise to mitigation conditioning.

(f) In relation to subsidence, the provision of suitability certificates, such as NZS 4431, or if not appropriate, the setting of ongoing conditions, with consent notices registered on the Certificates of Title, pursuant to Rule 13.6.7.

There are no subsidences.

(g) In relation to contaminated sites, any soil tests establishing suitability, and methods to avoid, mitigate or remedy the effects, including removal to approved disposal points.

Although Lots 1 – 5 are identified as HAIL sites there has been no need to test for contaminants at this stage.

(h) In relation to land filling and excavation operations, the following factors:

There has been no land filling or excavation.

13.10.3 WATER SUPPLY

(a) Where there is no reticulated water supply available for connection, whether it would be appropriate to allow a private restricted flow rural-type water supply system; such supply being always available and complying with "Drinking Water Standards of New Zealand" (1995).

There is no reticulated source of potable water but if required it will need to be through use of roof surface catchment and storage tanks and will require filtration whilst in proximity to horticultural activities.

Non potable water is available through the Kerikeri Irrigation Company. See comments below.

(b)

(c) Whether the provisions of the "Engineering Standards and Guidelines 2004 – Revised March 2009" (to be used in conjunction with NZS 4404:2004) have been met in respect of fire fighting water supply requirements.

Whilst there are no domestic buildings, there is no need for fire fighting provisions.

(c) Whether the provisions of the Council's "Engineering Standards and Guidelines" - Revised March 2009 (to be used in conjunction with NZS 4404:2004) have been met in respect of installation of all necessary water supply pipe lines, and ancillary equipment necessary for the subdivision, including extensions to existing supply systems, and including mains, sub-mains, service and fire hydrants.

There is no potable water supply.

(d)

(e) Whether the existing water supply systems, to which the connection will be made, have sufficient capacity to service the subdivision.

See comments from Kerikeri Irrigation Co, below.

From: Tony Corcoran - Kerikeri Irrigation <Manager@keriirrigation.co.nz>
Sent: Tuesday, 3 September 2024 1:18 PM
To: bob@donaldsons.net.nz
Subject: RE: Jatt Farmers Limited 682 Pungaere Road Kerikeri

This could be very straight forward, or not dependant on a few things.
The easy answer is we put 3 more meters where Jatt farms meter (s816 on attached map) is and they, or lot owners, reticulate their own water from that point.
It could depend on if the land use will continue the same as current.
The whole property only has a 5.7 hec allocation so if land use is changing then a non-commercial connection could be enough.
It looks like lot 2 does not have 2 irrigable hectares so it wouldn't qualify for a commercial connection anyway.
The other thing we would need to look into if more allocation was requested would be, is there spare capacity in the 80mm pipe that feeds that line.

Regards

Tony Corcoran
Manager

Kerikeri Irrigation Co Ltd
6 Norfolk Place, PO Box 343, Kerikeri 0245
D +64 9 4077813 | **M** 027 4939551 | **F** +64 9 4077692
E manager@keriirrigation.co.nz

(e) Whether it may be necessary to provide new reservoirs, pumping stations and rising mains, or increased pipe sizes leading to the subdivision in existing streets, or providing new wells and new pumping units.
Not applicable

(f) Whether there is a need for a local purpose reserve to be set aside and vested in the Council as a site for any public water supply utility required to be provided.
Not applicable

13.10.4 STORMWATER DISPOSAL

(a) Whether the application complies with any regional rules relating to any water or discharge permits required under the Act, and with any resource consent issued to the District Council

in relation to any urban drainage area stormwater management plan or similar plan.
Complies with regional rules – no permits required

(b) Whether the application complies with the provisions of the Council's "Engineering Standards and Guidelines" (2004) - Revised March 2009 (to be used in conjunction with NZS 4404:2004).
Council engineering standards are acknowledged and will be upheld during the course of upgrading the accesses and entries.

(c) Whether the application complies with the Far North District Council Strategic Plan - Drainage.
Not applicable

(d) The degree to which Low Impact Design principles have been used to reduce site impermeability and to retain natural permeable areas.
Not applicable

(e) The adequacy of the proposed means of disposing of collected stormwater from the roof of all potential or existing buildings and from all impervious surfaces.
There are no existing residential buildings.
Stormwater disposal from potential buildings can be addressed at the building consent stage.

(f) The adequacy of any proposed means for screening out litter, the capture of chemical spillages, the containment of contamination from roads and paved areas, and of siltation
Noted.

(g) The practicality of retaining open natural waterway systems for stormwater disposal in preference to piped or canal systems and adverse effects on existing waterways.
The natural waterway through the property is ideally situated to accept all the stormwater generated on site without causing any adverse effects upon down stream properties or ecosystems.

(h) Whether there is sufficient capacity available in the Council's outfall stormwater system to cater for increased run-off from the proposed allotments.
It is assumed that the natural waterway network can cater without concern.

(i) Where an existing outfall is not capable of accepting increased run-off, the adequacy of proposals and solutions for disposing of run-off.
No concerns

(j) The necessity to provide on-site retention basins to contain surface run-off where the capacity of the outfall is incapable of accepting flows, and where the outfall has limited capacity, any need to restrict the rate of discharge from the subdivision to the same rate of discharge that existed on the land before the subdivision takes place.

At this point in time retention basins and the need for attenuating devises is not required.

(k) Any adverse effects of the proposed subdivision on drainage to, or from, adjoining properties and mitigation measures proposed to control any adverse effects.

There are no serious inflows from adjoining properties that effect the onsite systems.

(l) In accordance with sustainable management practices, the importance of disposing of stormwater by way of gravity pipe lines. However, where topography dictates that this is not possible, the adequacy of proposed pumping stations put forward as a satisfactory alternative.

Not applicable

(m) The extent to which it is proposed to fill contrary to the natural fall of the country to obtain gravity outfall; the practicality of obtaining easements through adjoining owners' land to other outfall systems; and whether filling or pumping may constitute a satisfactory alternative.

Not applicable

(n) For stormwater pipes and open waterway systems, the provision of appropriate easements in favour of either the registered user or in the case of the Council, easements in gross, to be shown on the survey plan for the subdivision, including private connections passing over other land protected by easements in favour of the user.

Not applicable

(o) Where an easement is defined as a line, being the centre line of a pipe already laid, the effect of any alteration of its size and the need to create a new easement.

Not applicable

(p) For any stormwater outfall pipeline through a reserve, the prior consent of the Council, and the need for an appropriate easement.

Not applicable

(q) The need for and extent of any financial contributions to achieve the above matters.
Not applicable

(r) The need for a local purpose reserve to be set aside and vested in the Council as a site for any public utility required to be provided.
Not applicable

13.10.5 SANITARY SEWAGE DISPOSAL

(f) Where a reticulated system is not available, or a connection is impractical, whether a suitable sewage treatment or other disposal systems is provided in accordance with regional rules or a discharge system in accordance with regional rules or a discharge permit issued by the Northland Regional Council.
There is no reticulated sewage system available.
Effluent disposal, when required, will be on site and in accordance with the recommendations of the Wastewater Report.

13.10.6 ENERGY SUPPLY

KERIKERI

Email: bob@donaldsons.net.nz

To Whom It May Concern:

RE: PROPOSED SUBDIVISION
Jatt Farmers Limited. 682 Pungaere Road, Kerikeri Lot 3 DP 505563.

Thank you for your recent correspondence with attached scheme plans.

Top Energy's requirements for this subdivision are ni. Costs to make power available to could be provided after application and an on-site survey have been completed.
Link to application: Top Energy | Top Energy.

In order to get a letter from Top Energy upon completion of your subdivision, a copy of the resource consent decision must be provided.

If you have any further queries, please do not hesitate to contact the writer.

Yours sincerely

Aaron Birt
Planning and Design
T: 09 407 0685
E: aaron.birt@topenergy.co.nz

13.10.7 TOP ENERGY TRANSMISSION LINES

Not applicable

13.10.8 TELECOMMUNICATIONS

No comments sought

13.10.9 EASEMENTS AND COVENANTS

Existing, proposed and conditional easements are scheduled on the scheme plan.
Rights of Way easements have varied widths between 8.0 and 20.0.
Proposed consent notice covenants could include :

(i)
In conjunction with the construction of any dwelling, and in addition to a potable water supply, a water collection system with sufficient supply for fire fighting purposes is to be provided by way of tank or other approved means and to be positioned so that it is safely accessible for this purpose. The provisions will be in accordance with the New Zealand Fire Fighting Water Supply Code of Practice SNZ PAS 4509. **[LOTS 1 – 5]**

(ii)
Due to horticultural activities taking place in the vicinity, any dwelling constructed on the lot which will utilise rainwater as a potable water supply will require a suitable water filtration system to be installed. **[LOTS 1 - 5]**

(iii)
In conjunction with the construction of any building which includes a wastewater treatment & effluent disposal system, the lot owner shall obtain a Building Consent and install the wastewater treatment and effluent disposal system in general accordance with the report prepared by Kerikeri Drainage Ltd, dated 01/11/2024
[LOTS 1 – 5]

(iv)
The land is a known HAIL site and the subdivision resource consent did not remove the land from being a production based use and therefore any change of use to non-production, must be in accordance with the NES 2011 guidelines. **[LOTS 1 – 5]**

(v)
At the time of building consent for a dwelling, a Preliminary Site Investigation report (or if required a Detailed Site Investigation) shall be submitted for Council approval. The report shall confirm that the change in use from production to residential upholds the NES 2011 regulations and, depending on the report's conclusion, whether or not a resource consent will be required. **[LOTS 1 – 5]**

13.10.10 PROVISION OF ACCESS

(a) Whether provision for access to and within the subdivision, including private roads, has been made in a manner that will avoid, remedy or mitigate adverse effects on the environment, including but not limited to traffic effects, including effects on existing roads, visual effects, effects on vegetation and habitats, and natural character.

Access is to be provided by rights of way over the applicant owned ingress strip, currently used by 3 properties, Lots 1 – 3 DP 505563. On subdivision there will be a further 4 properties making a total of 7.
It should also be noted that the adjoining property, Lot 2 DP 209487, has an active consent to subdivide, application reference RC 2220784 dated 1/02/2023, which consents to four 2ha allotments having access over this same ingress strip, therefore there could potentially be 11 users over the ingress area labelled 'A' on the scheme plan.

The existing concrete entrance off Pungaere Road is not ideally positioned for maximum sight distances, but can readily be configured to achieve sufficient visibility in both directions in accordance with the posted speed limit.

There are no gradients over 1:5 .

Conditions of consent may include:
1/ That the entrance be constructed in accordance with council engineering standards and guidelines for a double width entry in seal or concrete.

2/ That Rights of Way 'A' and 'B' be upgraded to a 5.0m wide metalled carriageway in accordance with council engineering standards and guidelines, including provision for a three point turn around at the northern end of easement 'B'.

3/ That rights of way 'C', 'D' and 'E' be upgraded to a 3.0m wide carriageway, with passing bays at no more than 100m intervals, and in accordance with council engineering standards and guidelines.

4/ That formed and metalled entrances be provided to the boundaries of Lots 1 - 5

EXISTING ENTRANCE WITH POSTED SPEED

13.10.11 EFFECT OF EARTHWORKS AND UTILITIES

(a) Whether the effects of earthworks and the provision of services to the subdivision will have an adverse effect on the environment and whether these effects can be avoided, remedied or mitigated.
There will be little or no earthworks of consequence therefore there will be no adverse effects.

13.10.12 BUILDING LOCATIONS

(a) Whether the subdivision provides physically suitable building sites.
(b) Whether or not development on an allotment should be restricted to parts of the site.
(c) Where a proposed subdivision may be subject to inundation, whether the establishment of minimum floor heights for buildings is necessary in order to avoid or mitigate damage.
(d) Whether the subdivision design in respect of the orientation and dimensions of new allotments created facilitates the siting and design of buildings able to take advantage of passive solar gain (e.g. through a northerly aspect on an east/west axis)
Lots 1 – 5 all have suitable areas for constructing a dwelling house, containing wastewater and discharging stormwater on site without concern.

13.10.13 PRESERVATION AND ENHANCEMENT OF HERITAGE RESOURCES, VEGETATION, FAUNA AND LANDSCAPE, AND LAND SET ASIDE FOR CONSERVATION PURPOSES

There is no listed outstanding landscape as shown in the resource overlays or listed under Appendix 1a-1g of the District Plan.
There are no habits of indigenous fauna, heritage resources or landscape features of value.

13.10.14 SOILS

(a) The extent to which any subdivision will contribute to or affect the ability to safeguard the life supporting capability of soil.
(b) The degree to which the life supporting capacity of the soil may be adversely affected by the subdivision and the degree to which any soils classified as I, II or III in the NZ Land Resource Inventory Worksheets are adversely affected by the subdivision.
The subdivision has little or no effect upon the ability to safeguard the life supporting capability of the soil.

13.10.15 ACCESS TO WATERBODIES

There are no waterbodies within the subdivision worthy of providing public access.

13.10.16 LAND USE INCOMPATIBILITY

(a) The degree to which the proposed allotments take into account adverse effects arising from incompatible land use activities (including but not limited to noise, vibration, smell, smoke, dust and spray) resulting from an existing land use adjacent to the proposed subdivision.

The associated effects of farming and normal incompatibilities that occur alongside the use of land for rural residential purposes are not considered unreasonable given the surrounding environment and evident integration of non-farming activity.

All lots have adequate area to establish private screen planting and to position buildings away from boundaries, reducing any cross over effects from rural based activities.

13.10.17 PROXIMITY TO AIRPORTS
13.10.18 NATURAL CHARACTER OF THE COASTAL ENVIRONMENT
13.10.19 ENERGY EFFICIENCY AND RENEWABLE ENERGY
13.10.20 NATIONAL GRID CORRIDOR

Not applicable

Part 3 - District Wide Provisions

Natural and Physical Resources

There is no vegetation clearance required.

There is only minor earthworks associated with widening the existing access formation. No other works are required to complete the subdivision.

There is no cause for any concern regarding adversity on natural and physical resources.

15.1 TRAFFIC, PARKING AND ACCESS

15.1.6A.2 PERMITTED ACTIVITIES

15.1.6A.2.1 TRAFFIC INTENSITY
This rule only applies when establishing a new activity or changing an activity on a site.

The Traffic Intensity Factor for a site in this zone is 60 daily one way movements.
The Traffic Intensity Factor shall be determined by reference to Appendix 3A in Part 4.
This rule only applies when establishing a new activity on a site. It does not apply to existing activities, however, the Traffic Intensity Factor for the existing uses (apart from those exempted below) on site need to be taken into account when assessing new activities in order to address cumulative effects.
Exemptions: The first residential unit on a site, farming, forestry and construction traffic (associated with the establishment of an activity) are exempt from this rule.

Not applicable.

15.1.6B PARKING
15.1.6B.1 PERMITTED ACTIVITIES
15.1.6B.1.1 ON-SITE CAR PARKING SPACES
Where:
(i) an activity establishes; or
(ii) the nature of an activity changes; or
(ii) buildings are altered to increase the number of persons provided for on the site;

A lifestyle lot intended for a single residential unit (dwelling) requires 2 parks, and this is readily possible for all lots compliant with the required tracking curves.

15.1.6B.1.2 - 15.1.6B.1.4 (being access onto Williams Road, Kerikeri Road & Accessible car parks)
Not applicable.

15.1.6B.1.5 CAR PARKING SPACE STANDARDS
The lots are able to create onsite carparks and achieve safe manoeuvring compliant with dimension standards of Appendix 3D.

15.1.6B.1.6 LOADING SPACES
Not applicable.

15.1.6C ACCESS
15.1.6C.1 PERMITTED ACTIVITIES

***15.1.6C.1.1** Private accessways in all zones*
***(a)** The construction of private accessway, in addition to the specifics also covered within this rule, is to be undertaken in accordance with Appendix 3B-1 in Part 4 of this Plan.*

Appendix 3B-1 - *Standards for private access*

It is proposed to create additional Rights of Way over areas 'A' - 'E' which form a private access.
There are no grades over 1:5. The maximum gradient is approximately 1:12.
Rights of Way easements have varied widths between 8.0m and 20.0m.
The existing access formation width is 3-4m wide and the applicant offers to upgrade the access along easements 'A' & 'B' to 5.0m, easement 'C' to 3m with passing bays, and easements 'D', & 'E' to 3 m or more.
Overall, the proposal upholds Appendix 3B-1.

Appendix 3B-2 - *Standards for Roads to vest.*
There is no road to vest.

Appendix 3C - *Parking spaces required*.

All lots have ample area for onsite parking. No concern.

Appendix 3D - *Manoeuvring and parking space dimensions*
(90° regular user = width 2.5m (total depth one row 11.6m)

No concern.

Appendix 3E - *Tracking curves*
No concern the entire access follows a direct line.

15.1.6C.1.1
(b)
Applicable only to urban & commercial zones.

15.1.6C.1.1
(c)
A private accessway may serve a maximum of 8 household equivalents.

The access is currently used by **3 allotments** (Lots 1 - 3 DP 505563) created on EI 10835340.3. In addition RC 2220784 sits in the wind with approval for 4 more lots to use this access. Therefore, including this application, the total allocation is as follows :

Area 'A' would be used by **11 properties.**
Area 'B' would be used by **6 properties.**
Area 'C' would be used by **4 properties**
Area 'E' would be used by **2 properties**

(d)
Where a subdivision serves 9 or more sites, access shall be by public road.
Breaches – see assessment

(e) Access shall not be permitted:
(i) onto a State Highway or a Limited Access Road;

(ii) onto an arterial or collector road within 90m of its intersection with an arterial road or a collector road;
(*iii) onto an arterial or collector road within 30m of its intersection with a local road;*
(iv) onto a local road within 30m of its intersection with an arterial or collector road;
(v) onto Kerikeri Road (both sides of the road along the portion between Maraenui Drive and Cannon Drive). This rule does not apply to sites with lawfully established access points (as at 6 September 2001) onto Kerikeri Road.
(vi) onto Kerikeri Inlet Road from Lot 1 DP 404507 or Lot 1 DP 181291 (and any sites created as result of a subdivision of these lots), except from a single vehicle crossing or intersection at least 30m from the adjoining boundary with Lot 2 DP 103531 and with at least 115m visibility in each direction.
Not applicable.

15.1.6C.1.2 Private Accessways in urban zones
(a)
Urban zones
(b)
Commercial zones.
c)
All private accessways in all urban zones which serve two or more activities are to be sealed or concreted
Not applicable.

15.1.6C.1.3 Passing bays on private accessways in all zones
Noted

15.1.6C.1.4 ACCESS OVER FOOTPATHS
None applicable.

*15.1.6C.1.5 VEHICLE CROSSING STANDARDS IN **RURAL** AND COASTAL ZONES*
***(a)** Private access off roads in the rural and coastal zones the vehicle crossing is to be constructed in accordance with Council's "Engineering Standards and Guidelines" (June 2004 – Revised 2009).*
Noted

(b) Where the access is off a sealed road, the vehicle crossing plus splays shall be surfaced with permanent impermeable surfacing for at least the first 5m from the road carriageway or up to the road boundary, whichever is the lesser.
Noted

(d) Where the vehicle crossing serves two or more properties the private accessway is to be 6m wide and is to extend for a minimum distance of 6m from the edge of the carriageway
Noted

LAND USE ACTIVITIES

15.1.6C.4 ASSESSMENT CRITERIA

Breached rule 15.1.6C.1.1(d)

"Where a subdivision serves 9 or more sites, access shall be by public road".

The Council will consider the matters listed below:

15.1.6C.4.1 PROPERTY ACCESS

(a) Adequacy of sight distances available at the access location.
The existing concrete entrance off Pungaere Road is not ideally positioned for maximum sight distances but can readily be configured to achieve at least 200m in both direction by trimming vegetation, seal widening and constructing entrance to FNDC Engineering Standard Diagram 21 with some local widening.

(b) Any current traffic safety or congestion problems in the area.
Unlikely in this remote area.

(c) Any foreseeable future changes in traffic patterns in the area.
Unlikely.

(d) Possible measures or restrictions on vehicle movements in and out of the access.
None required

(e) The adequacy of the engineering standards proposed and the ease of access to and from, and within, the site.
Noted

(f) The provision of access for all persons and vehicles likely to need access to the site, including pedestrian, cycle, disabled and vehicular.
Noted

The provision made to mitigate the effects of stormwater runoff, and any impact of roading and access on waterways, ecosystems, drainage patterns or the amenities of adjoining properties.
Noted

NES 2011

The applicant seeks consent under the NES 2011 as a discretionary activity allowing Lots 1 – 5 to remain for production purposes, and

that a Preliminary Site Investigation, instead, be actioned at the time of change in use.
The level of effects associated with this request are less than minor where, for all intents and purposes, it proves ineffective to conduct an investigation one day when, on the following day, the site may be contaminated as a result of ongoing production based use. Therefore proving that it is imperative to leave any soil investigation until a defined change in use occurs.
The applicant offers mitigation measures by way of consent notice on the titles of all 5 lots, informing landowners of their responsibilities under NES 2011.

The Consent Notice wording, as described under easements and covenants, includes :

iv) The land is a known HAIL site and the subdivision resource consent did not remove the land from being a production based use and therefore any change of use to non-production, must be in accordance with the NES 2011 guidelines.

v) At the time of building consent for a dwelling, a Preliminary Site Investigation report (or if required a Detailed Site Investigation) shall be submitted for Council approval. The report shall confirm that the change in use from production to residential upholds the NES 2011 regulations and, depending on the report's conclusion, whether or not a resource consent will be required.

Pursuant to the discretionary standards of NES 2011 the proposed subdivision activity is considered to uphold a less than minor level of effects respective to the lands intended use (production), supporting the deferral of any soil investigation until there is certainty on the lands actual change in use to residential.

OPERATIVE REGIONAL POLICY STATEMENT

The Operative Northland Regional Policy Statement presents the latest initiatives and guidelines for the northland region, and because of its fresh direction holds particular relevance.

3.4 Indigenous ecosystems and biodiversity
Safeguard Northland's ecological integrity by:
a) Protecting areas of significant indigenous vegetation and significant habitats of indigenous fauna;
b) Maintaining the extent and diversity of indigenous ecosystems and habitats in the region;

3.5 Enabling economic wellbeing

Northland's natural and physical resources are sustainably managed in a way that is attractive for business and investment that will improve the economic wellbeing of Northland and its communities.

We need people and businesses to choose Northland as a place to invest, and our economic development needs to be aligned with environmental outcomes.

4.6.1 Policy – Managing effects on the characteristics and qualities natural character, natural features and landscapes

(2) Outside the coastal environment avoid significant adverse effects and avoid, remedy or mitigate other adverse effects (including cumulative adverse effects) of subdivision, use and development on the characteristics and qualities of outstanding natural features and outstanding natural landscapes and the natural character of freshwater bodies. Methods which may achieve this include:

a) In outstanding natural landscapes, requiring that the location and intensity of subdivision, use and built development is appropriate having regard to, natural elements, landforms and processes, including vegetation patterns, ridgelines and freshwater bodies and their margins;

b) In outstanding natural features, requiring that the scale and intensity of earthworks and built development is appropriate taking into account the scale, form and vulnerability to modification of the feature;

c) Minimising, indigenous vegetation clearance and modification (including earthworks / disturbance and structures) to natural wetlands, the beds of lakes, rivers and their margins.

(3) When considering whether there are any adverse effects on the characteristics and qualities of the natural character, natural features and landscape values in terms of (1)(a), whether there are any significant adverse effects and the scale of any adverse effects in terms of (1)(b) and (2), and in determining the character, intensity and scale of the adverse effects:

a) Recognise that a minor or transitory effect may not be an adverse effect;

b) Recognise that many areas contain ongoing use and development that:

(i) Were present when the area was identified as high or outstanding or have subsequently been lawfully established

(ii) May be dynamic, diverse or seasonal;

All physical effects exist, and the reduced allotment size, under 20ha, does not present any conflict with the policies intentions.

The site is near other areas of developed land.

The site is not an outstanding landscape or of high natural character.

The physical change to the landscape is consistent with the wider lifestyle theme.

There is no vegetation clearance or earthworks of significance.

The core infrastructure is already in place (access and power), and the subject environment is largely modified without the subdivision causing further physical modification.

6.1.1 Policy – Regional and district plans
Regional and district plans shall:
(a) Only contain regulation if it is the most effective and efficient way of achieving resource management objective(s), taking into account the costs, benefits and risks;
(b) Be as consistent as possible;
(c) Be as simple as possible;
(d) Use or support good management practices;
(e) Minimise compliance costs and enable audited self-management where it is efficient and effective;
***(f) Enable subdivision, use and development that accords with the Regional Policy Statement**; and*
(g) Focus on effects and where suitable use performance standards.

In summary, the Regional Policy Statement strives to encourage sustainable management and sets in place framework for subdivision activity to avoid environmental degradation, which the proposal is considered to uphold without concern.

RESOURCE MANAGEMENT ACT 1991

Part 2

Purpose and principles

In this Act, **sustainable management** means '**managing the use, development, and protection'** of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety while—

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

The assessment has discussed that the subdivision creates allotments that complement the wider farming activity and land use.

The site has implemented the necessary controls and effective management of land use, development, and protection of natural and physical resources.

All surrounding land use activity is consistent with the proposal. Reverse sensitivity effects are considered to be less than minor.

Positive effects are social and economic, increasing business opportunities through diversifying the orchard into smaller portions, whilst improving housing supply opportunities

SCHEDULE 4 RMA 1991

An application for Resource Consent for an activity must include the following:

ASSESSMENT OF THE ACTIVITY AGAINST ANY RELEVANT PROVISIONS OF A DOCUMENT REFERRED TO IN SECTION 104(1)(B)

Section 104(1)(b)	
any relevant provisions of—	
(i)	a national environmental standard:
(ii)	other regulations:
(iii)	a national policy statement:
(iv)	a New Zealand coastal policy statement:
(v)	a regional policy statement or *proposed regional policy statement*:
(vi)	a plan or proposed plan;

These provisions are covered within the assessment.

6 Matters of national importance

In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall recognise and provide for the following matters of national importance:

(a) the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development;

7 Other matters

In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall have particular regard to —

(b) the efficient use and development of natural and physical resources;

...

(c) the maintenance and enhancement of amenity values;

...

(f) maintenance and enhancement of the quality of the environment;

The proposal achieves the sustainable management purpose and principles of the RMA as it manages the use and development of each proposed lot in a manner which maintains environmental expectations while providing for economic, and social well-being.

The boundaries of the allotments have been designed with generous areas to mitigate, as far as practical, any adverse effects on the farming environment, and ensure it sits comfortably with the regional policy statement defining a piece of land that continues to have the ability to support on going production based use or home produce sites.

(3)
An application must also include an assessment of the activity's effects on the environment that –

(a) *includes the information required by clause 6*
(b) *address the matters specified in clause 7; and*
(c) *includes such detail as corresponds with the scale and significance of the effects that the activity may have on the environment*.

CLAUSE 6
(1) An assessment of the activity's effects on the environment must include the following information:
(a) *if it is likely that the activity will result in any significant adverse effects on the environment, a description of any possible alternative locations or methods for undertaking the activity:*

The activity exists as an isolated kiwifruit farm on marginal soils and in terms of being a commercial activity the results are marginal. The subdivision allows the activity to continue but in a less commercial manner, more suited to hobby farming lifestyle living expectations or absentee property ownership.

(b) *an assessment of the actual or potential effects on the environment of the activity.*

The Pungaere district is well recognised for its abundance of lifestyle farming properties and also for the lack of horticultural activity and consequently the levels of effects are considered adequately understood to be less than minor.

(c) *if the activity includes the use of hazardous substances and installations, an assessment of any risk to the environment that are likely to arise from such use.*

Not applicable.

(d) *if the activity includes the discharge of any contaminants, a description of –*
(i) the nature of the discharge and the sensitivity of the receiving environment to adverse effects; and

(ii) any possible alternative methods of discharge, including discharge into any other receiving environment:

As discussed, there are no concerns.

(e) *a description of the mitigation measures (including safeguards and contingency plans where relevant) to be undertaken to help prevent or reduce the actual or potential effects:*

Not applicable.

(f) *identification of the persons affected by the activity and consultation undertaken, and any response to the views of any person consulted:*

Having been through the planning assessment criteria and demonstrated a balanced environmental outcome, the effects based concept of the Far North District Plan implies that any adverse effects on the environment are less than minor, thereby the Resource Management Act does not require notification.

(g) *if the scale and significance of the activity's effects are such that monitoring is required, a description of how and by whom the effects will be monitored if the activity is approved:*

Monitoring is not required.

(h) *if the activity will, or is likely to, have adverse effects that are more than minor on the exercise of a protected customary right, a description of possible alternative locations or methods for the exercise of the activity (unless written approval for the activity is given by the protected customary rights group).*

No concern.

(2)
A requirement to include information in the assessment of environmental effects is subject to the provisions of any policy statement or plan.

Noted

CLAUSE 7 – Assessment of Environmental Effects
7 Matters that must be addressed by assessment of environmental effects

(1) An assessment of an activity's effects on the environment must address the following matters:

(a) any effect on those in the neighbourhood and, where relevant, the wider community, including any social, economic, or cultural effects:

The subject location has no direct influence on the public, being well screened, and without any change occurring to impact the social, economic or cultural effects.

(b) any physical effects on the locality, including any landscape, and visual effects.

There are none.

(c) Any effects on ecosystems, including effects on plants or animals and any physical disturbance of habitats in the vicinity.

There is no physical damage to ecosystems.

(d) any effect on natural and physical resources having aesthetic, recreational, scientific, historical, spiritual, or cultural values, or other special value, for present and future generations:

The site does not prove to be of significant natural value, and the physical subdivision effects are minor.

(e) any discharge of contaminants in to the environment, including any unreasonable emissions of noise, and options for the treatment and disposal of contaminants:

Stormwater and sewage are the main discharges and these prove to present a standard level of effects without concern.

(f) any risk to the neighbourhood, the wider community, or the environment through natural hazards or the use of hazardous substances or hazardous installations.

No concern.

PROPOSED DISTRICT PLAN

The property is zoned Horticulture under the proposed District Plan.
This subdivision application does not conflict with any rules or standards having legal effect because there are no earthworks, no vegetation clearance, no archaeological sites and no heritage concerns.

As an overview the requirements under the proposed district plan are not unlike those under the operative

district plan and therefore do not, for the sake of repetitiveness, warrant further assessment
The rural character and amenity of this environment is undoubtedly rural based, and the subdivision promotes this theme without introducing any physical change, being an asbuilt situation.

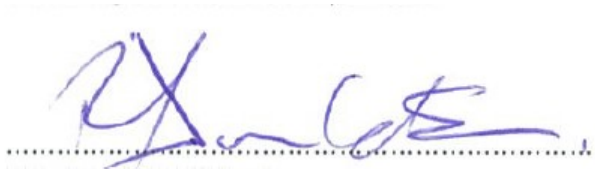
CONCLUSION

The proposal has been assessed against the relevant planning legislation on an effects basis, and is considered to fulfil the relevant objectives and policies.

The subdivision is considered consistent with the higher planning documents, the Regional Policy Statements, and the natural character of the property is not deemed 'significant', or even of 'high ecological value'.

Through implementation of the proposed management techniques, the effects overall are less than minor.

Land Use consents are supported.



R.J.Donaldson
Registered Surveyor
DONALDSONS
Land / Engineering Surveyors and Development Planners

RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier	**763512**
Land Registration District	**North Auckland**
Date Issued	29 June 2017

Prior References
NA135D/811

Estate	Fee Simple
Area	10.8250 hectares more or less
Legal Description	Lot 3 Deposited Plan 505563
Registered Owners	
Jatt Farmers Limited	

Interests

Subject to Section 59 Land Act 1948

Appurtenant hereto is a water right specified in Easement Certificate B388577.1 - 6.3.1985 at 2.13 pm

The easements specified in Easement Certificate B388577.1 are subject to Section 309 (1) (a) Local Government Act 1974

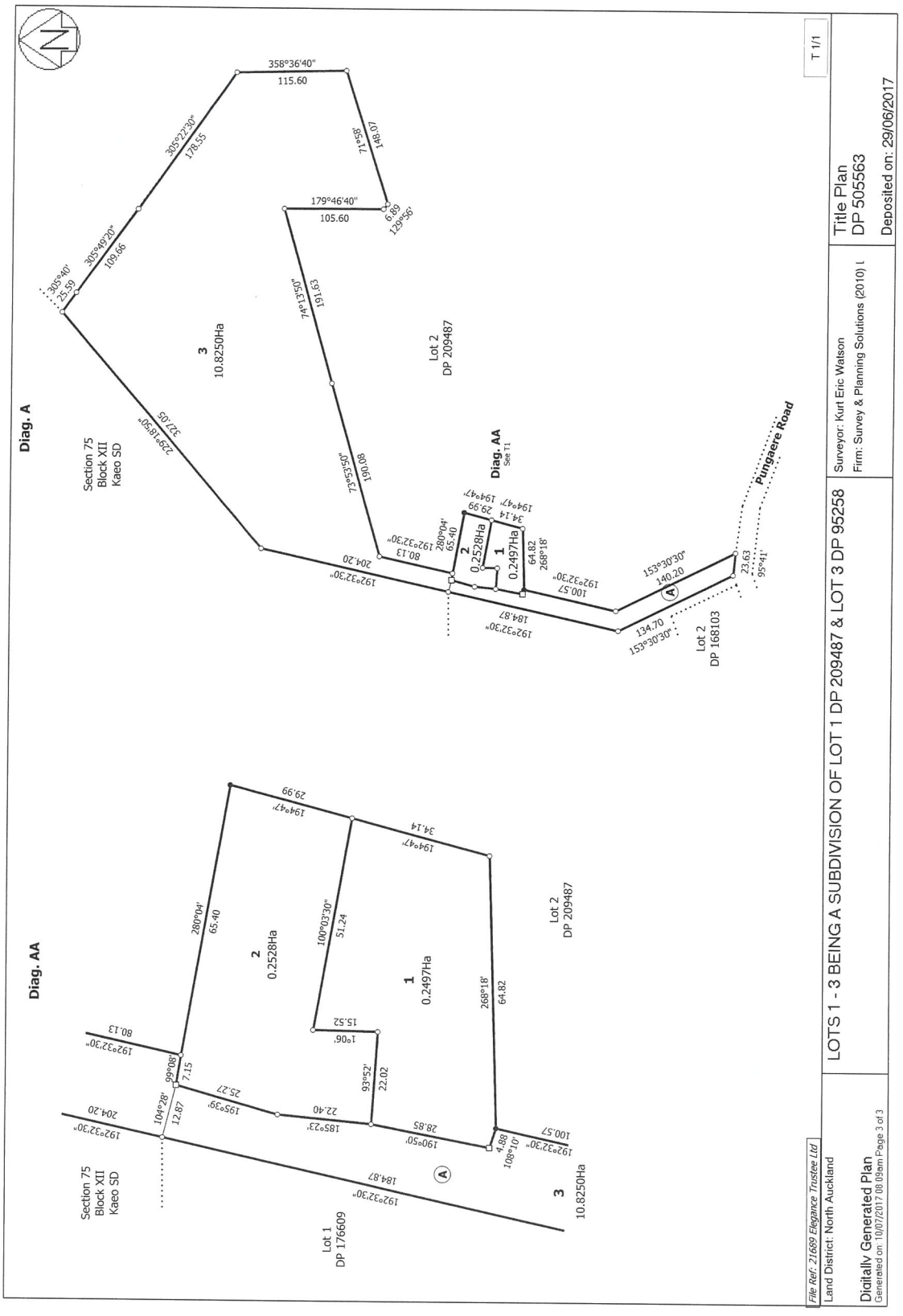
10835340.2 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 29.6.2017 at 11:24 am

Subject to a right of way and a right to convey water, electricity, telecommunications & computer media over part marked A on DP 505563 created by Easement Instrument 10835340.3 - 29.6.2017 at 11:24 am

The easements created by Easement Instrument 10835340.3 are subject to Section 243 (a) Resource Management Act 1991

11768888.10 Mortgage to ANZ Bank New Zealand Limited - 12.6.2020 at 4:46 pm

12136209.1 Variation of Mortgage 11768888.10 - 28.5.2021 at 3:28 pm


T 1/1
Title Plan
DP 505563
Deposited on: 29/06/2017
Surveyor: Kurt Eric Watson
Firm: Survey & Planning Solutions (2010) L
LOTS 1 - 3 BEING A SUBDIVISION OF LOT 1 DP 209487 & LOT 3 DP 95258
Land District: North Auckland
Digitally Generated Plan
Generated on: 10/07/2017 08:09am Page 3 of 3
File Ref: 21689 Elegance Trustee Ltd
Diag. A
Diag. AA
See T1
Section 75
Block XII
Kaeo SD
Lot 2
DP 209487
Lot 2
DP 168103
Lot 1
DP 176609
Pungaere Road
1
0.2497Ha
2
0.2528Ha
3
10.8250Ha
358°36'40"
115.60
305°27'30"
178.55
305°49'20"
109.66
305°40'
25.59
179°46'40"
105.60
74°13'50"
153°30'30"
140.20
192°32'30"
204.20
184.87
134.70
100.57
64.82
34.14
29.99
80.13
65.40
280°04'
268°18'
194°47'
100°03'30"
51.24
15.52
100°
93°52'
22.02
190°50'
28.85
185°23'
22.40
195°39'
25.27
104°28'
12.87
99°08'
7.15
108°10'
4.88
95°41'
23.63

Far North District Council

Private Bag 752, Memorial Ave
Kaitaia 0440, New Zealand
Freephone: 0800 920 029
Phone: (09) 401 5200
Fax: (09) 401 2137
Email: ask.us@fndc.govt.nz
Website: www.fndc.govt.nz

Te Kaunihera o Tai Tokerau Ki Te Raki

THE RESOURCE MANAGEMENT ACT 1991

SECTION 221: CONSENT NOTICE

REGARDING **RC 2170064**
Being the Subdivision of Lot 3 DP 95258 Lot 1 DP 209487
North Auckland Registry

PURSUANT to Section 221 and for the purpose of Section 224 (c) (ii) of the Resource Management Act 1991, this Consent Notice is issued by the **FAR NORTH DISTRICT COUNCIL** to the effect that conditions described in the schedule below are to be complied with on a continuing basis by the subdividing owner and the subsequent owners after the deposit of the survey plan, and these are to be registered on the titles of the allotments specified below.

SCHEDULE

Lot 3 DP 505563

I. Due to horticultural activities taking place in the vicinity, any dwelling to be constructed which will utilise rainwater as a potable water supply will require a suitable water filtration system to be installed.

II. In conjunction with the construction of any dwelling, and in addition to a potable water supply, a water collection system with sufficient supply for firefighting purposes is to be provided by way of tank or other approved means and to be positioned so that it is safely accessible for this purpose. These provisions will be in accordance with the New Zealand Fire Fighting Water Supply Code of Practice SNZ PAS 4509.

III. In conjunction with the construction of any building requiring a wastewater disposal system the lot owner shall obtain a Building Consent and install the wastewater treatment and effluent disposal system as detailed in the report prepared by Cook Costello dated 19 September 2016 and submitted with Resource Consent 2170064.

The installation shall include an agreement with the system supplier or its authorised agent for the on-going operation and maintenance of the wastewater treatment plant and the effluent disposal system. The estimated coast of the installed system is $8,400.00 + GST. The costing is valid for a period of 6 months from the date of issue of the 224(c) certificate. Following 12 months of operation of the wastewater treatment and effluent disposal system the lot owner shall provide certification to

Far North District Council

Private Bag 752, Memorial Ave
Kaikohe 0440, New Zealand
Freephone: 0800 920 029
Phone: (09) 401 5200
Fax: (09) 401 2137
Email: ask.us@fndc.govt.nz
Website: www.fndc.govt.nz

Te Kaunihera o Tai Tokerau Ki Te Raki

Council that the system is operating in accordance with its design criteria. Where a wastewater treatment and effluent disposal system is proposed that differs from that detailed in the above mentioned report, a new TP 58/Site and Soil Evaluation Report will be required to be submitted and Council's approval of the new system must be obtained, prior to its installation.

IV Electricity supply is not a condition of this consent and power has not been reticulated to the boundary of Lot 3. The lot owner is responsible for the provision of a power supply to operate an on-site aerobic wastewater treatment plant and any other device which requires electrical power to operate.

V. National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health Regulations 2011.
Land within Lot 3 has been identified as land that will potentially be covered by the above legislation. As it was production land at time of subdivision, and the subdivision did not remove the land from being production land, the developer did not address the regulations at time of subdivision. It will be the responsibility of the lot owner to address the regulations if proposing any development on the site. Activities covered by the regulations include the removing or replacing of a fuel storage system; soil sampling, disturbance and/or removal; subdivision; and changing the use of the land.

SIGNED: P.J. Killalea Mr Patrick John Killalea
By the FAR NORTH DISTRICT COUNCIL
Under delegated authority:
PRINCIPAL PLANNER – RESOURCE MANAGEMENT

DATED at **KERIKERI** this 28th day of June 2017

AgFirst Northland Ltd
1a Douglas Street, PO Box 1345
Whangarei 0140, New Zealand
+64 9 430 2410
northland@agfirst.co.nz www.agfirst.co.nz

Date

10 May 2024

As requested, please find enclosed a land use capability report on your property and its relevance to the National Policy Statement for Highly Productive Land.

Should you have any queries please do not hesitate to contact me. I will be in Europe from 14 May until 24 June but can be contacted by email.

Regards

Bob Cathcart
Land and Environment Consultant

Independent
Agriculture
& Horticulture
Consultant
Network

Lot 3, DP505563, 682 Pungaere Road, Kerikeri

Prepared for Jatt Farmers Ltd
By Bob Cathcart
AgFirst Northland
10 May 2024

1.0 SUMMARY

1. The land use capability of Lot 3, DP505563 at 682 Pungaere Road has been reassessed as the information on the nzlri-luc database[(1)] is not at a scale that can record detail within a 10.85ha property. The smallest area that can be separately recorded on a 1:50,000 scale map is 10ha, therefore, only one Land Use Capability Unit can be recorded on Lot 3. The polygon boundaries, the boundaries between the different land types, are not accurately drafted in this locality and do not conform to natural feature boundaries – they are, at best, diagrammatic.

2. The nzlri-luc database records the lower part of the property, 42% of the whole property, as Class 3w2, which according to the soil maps accompanying the Northland Regional Council's Soils Fact Sheets, has Waipapa soils. On more accurately mapping the soils, it is found that only 14% of the total property area is on these heavy terrace soils and that the area has a complex of Waipapa and Otaha soils, land too wet to be considered Class 3. Instead, it has been assessed as Class 4s2, a LUC unit described by Harmsworth[(2)] and listing these mature soils on basalt lava flows and sediment from basalt soils and rocks.

3. Kiwifruit on these lower terrace soils have, at best, only produced 40% of the volume of fruit per unit area that the orchards on the hill part of the property have produced. The vines are now dying due to wet and anaerobic soil conditions, an inherent characteristic of these soil types which cannot be mitigated by land drainage. At the present rate of loss, there will be few vines alive next season. That is, these terrace soils are not suited to kiwifruit or to many perennial crops. As noted, this area has been re-assessed as Class 4s2, it is neither highly productive, nor is it versatile land so should not be recorded as 'highly productive land'.

4. The balance of the property has Pungaere and Okaihau soils, mature 'ironstone soils' which have high levels of iron and aluminium in their subsoils, elements which limit the range of crops which may be grown. That is, while, thanks to careful management, it is successfully growing kiwifruit, it is correctly recorded as Class 4e2 on the nzlri-luc database.

5. That is, there is no land on the orchard property of Jatt Farmers Ltd that is assessed as Classes 1, 2 or 3 or should be considered highly productive land under the National Policy Statement for Highly Productive Land.[(3)] Re-assessing the 1.45ha kiwifruit block on the lower terrace as Class 4s2 will not affect the production of kiwifruit on the balance of the property as the vines on this block will cease production and die within the next few years. There is a risk that the struggling vines could become diseased and threaten the health of productive vines on the hill blocks. This terrace block is not versatile land, being limited to pastoral farming with an occasional fodder crop in a 'good year', that is, it is not horticultural land.

2.0 BACKGROUND

At the request of Gary Singh of Jatt Farmers Ltd, I have undertaken a survey of Lot 3 of their property at 682 Pungaere Road to determine the soil types and Land Use Capability of the land. This involved a 'walk-over' of the land, digging and augering holes to expose and assess the soil profile (variations at depth), measuring slope with an Abney level and assessing the health of the kiwifruit vines which occupy the productive land on Lot 3. The assessment followed the procedures set out in the 3rd Edition Land Use Capability Survey Handbook,(4) the accepted practice guidelines for assessing Land Use Capability(LUC) in New Zealand.
While Lots 1 and 2 are owned by the same company, they were not assessed for land use capability as they comprise residential (house, implement sheds and surroundings) Lots, not land being used for primary production.

3.0 NATIONAL POLICY STATEMENT FOR HIGHLY PRODUCTIVE LAND (NPS-HPL)

The National Policy Statement for Highly Productive Land 1922(3), which came into effect in October 2022, is a regulation under the Resource Management Act 1989 aimed at protecting New Zealand's actually or potentially most productive land productive, land suited to growing food and fibre. Until a database at a more detailed scale is available, identification of 'highly productive land' is by reference to the New Zealand Land Resource Inventory – Land Use Capability (nzlri-luc) database(1), a digital database with national coverage, maintained by Manaaki Whenua (Landcare Research Ltd). Land identified as Land Use Capability Classes 1, 2 or 3 on this database is considered 'highly productive land' and councils, regional and district, are instructed to protect this land for the production of food and fibre.

With only 11.75% of the land north of Auckland (Northland and the former Rodney County) being assessed as Classes 1, 2 and 3(2), it is extremely important to protect what little potentially highly productive and versatile land remains. This percentage is now outdated as most of what was assessed as Class 1 and some Class 2 around Whangarei and Class 2 land in Kerikeri has now been lost to urban expansion.

Interpretation and implementation of the NPS-HPL varies between Councils in respect of the default position of the nzlri-luc database, some councils accepting that the national database is inadequate for identifying highly productive land on small properties and that, in some locations, the national database may not meet the standards for assessment now required under the 3rd Edition of the New Zealand Land Use Capability Survey Handbook.(4) Some councils or council staff state that if the subject land is within an area depicted as Class 1, 2 or 3 on the nzlri-luc database, then there is no question as to whether it is or is not HPL; if it appears on the computer screen as Class 1, 2 or 3 on the database, it **is** highly productive land. Other Councils, or the staff of other councils recognise the limitations, particularly of scale, of the database and seek advice or require the applicant to seek advice from a suitably qualified LUC assessor. ***The following section explains the strengths and weaknesses of the nzlri-luc database in defining highly productive land.***

4.0 ASSESSING LAND USE CAPABILITY

The 3rd Edition, New Zealand Land Use Capability Survey Handbook, sets out the accepted method and standards for assessing land use capability (LUC) in New Zealand. These procedures have been followed in surveying this property Lot 3, DP505563 and assessments made based on land resource inventory collected in a field survey, a search of available land resource data and on the almost 60 years' experience of the author in assessing LUC, over 50 years of that in Northland.

It has proved difficult to match the data gathered by field survey with both the published soil maps[5] and soil maps derived from the nzlri-luc, as both maps are based on data field mapped at a scale of 1:50,000 and both have been simplified or diagrammatically presented and digitised several times, losing much of their accuracy or definition of soil boundaries. The Northland Regional Council's (NRC) mapping database accompanying their Soils Fact Sheets,[6] which is based on the nzlri-luc database and its accompanying land resource inventory data, does identify 3 soil types within Lot 3 although a detailed field survey suggests the proportions of the property with each of these soil types differs from what the NRC database suggests. The NRC soils database is, however, a valuable guide and the accompanying 'Fact Sheets' explain the characteristics of the different soil types mapped in this more detailed survey. That is, the soil and land use capability polygon boundaries defined by this more detailed field survey can be linked generally to the appropriate Harmsworth LUC Unit descriptions and the NRC Soil Fact Sheet description, subject to some provisos.

5.0 WHAT IS LAND USE CAPABILITY?

Land Use Capability, as described in the Land Use Capability Survey Handbook, is an 8-Class method of ranking New Zealand land according to its capability for sustained primary production. The system uses four arable classes, Classes 1 to 4, with Class 1 being the most versatile and potentially productive land, and Class 4 suited to much fewer crops or horticultural uses, but only marginally suited to arable use. Classes 5, 6 and 7 are not suited to arable uses but are suited to pastoral farming, some tree crops, and to forestry. Class 8 land, by definition, has no productive value, being too steep, stony wet or erosion-prone, but may have important watershed protection or biodiversity values.

The 8 Classes are further subdivided according to the dominant limitation to use of the land, whether that be '**e**' (erosion), '**w**' (wetness), '**s'** (a soil limitation such as stoniness or some other inherent characteristic of the soil) and '**c**' (climate).

The most detailed level of LUC assessment is the LUC Unit. This level identifies land types that have the same potential level of production, other attributes and limitations, and require the same forms of management. While an attempt was made, initially, to place the LUC Units within a region in some order of productivity, that is Class 4e1 has the potential to produce more primary products than Class 4e2, and so on, this has proven impractical, and even more so to attempt a national 'order of merit'. Unfortunately, LUC unit numbers in one class do not necessarily match unit numbers in another class, that is, Class 2e1 does not lead on to Class 3e1 and then 4e1 as the land becomes steeper. It is, therefore, very important to read the full Unit descriptions and take note of the LUC succession shown in extended legends as LUC 'sub-suites.' **A detailed description of Northland LUC units is found in Harmsworth, but the unit number needs to be correlated with the latest national nzlri-luc (nzcu) unit numbers.**

6.0 LAND USE CAPABILITY AND THE NEW ZEALAND LAND USE CAPABILITY DATABASE (NZLRI-LUC DATABASE)

'Highly Productive Land,' in the context of the National Policy Statement **is not**:

i. a measure of the current physical or financial level of primary production from that land; nor is it

ii. determined by soil 'testing', measuring its nutrient status or similar attributes.

It is based on an assessment of Land Use Capability (LUC).

The Land Use Capability Classification is ***a systematic arrangement of different kinds of land according to those properties that determine its capacity for long-term sustained production***. ***Capability*** is used in the sense of ***suitability for productive use or uses*** after considering the physical limitations of the land.
Land Use Capability(LUC) has been assessed for the whole of New Zealand and is published (generally) at a 1:50,000 scale on the New Zealand Land Resource Inventory - Land Use Capability database, a digital database maintained by Manaaki Whenua - Landcare Research. Until regional councils introduce more detailed maps of 'highly productive land' in their regional plans, it is this database that is being used to delineate areas of 'highly productive land.' While some of this LUC Class1, 2 or 3 land may not currently be used for intensive market gardening, horticulture, arable and/or pastoral farming, it has the potential to be used that way by application of known technology and management practices, using irrigation, for example.

7.0 CAUTIONS WITH RESPECT TO THE NZLRI DIGITAL DATABASE

Scale of Map Data - As noted above, as a general rule LRI and LUC information in the nzlri-luc database should not be enlarged beyond the scale at which it was originally recorded. As is explained in the Handbook, problems will arise when personnel untrained in resource inventory and luc assessment use Geographic Information Systems (GIS) to seek information on small areas of land by enlarging the imaging beyond the scale at which it was originally captured/mapped. Significantly enlarging the scale can produce unreliable and misleading results or result in information that is, at best, nonsense.

The minimum size of a polygon or discrete parcel of land that can be safely delineated on a 1:50,000 scale map is 10 hectares. 1:50,000 rural reconnaissance maps should not be used to definitively assess the soil type, geology or land use capability on 800m^2 urban sections or are, in this case, at best indicative **within** a 10ha property.

Date on which the data was collected – While there have been some minor changes to the nzlri–luc online data, the contents of the database and the assessment of LUC rely mainly on the original resource inventory data collected in the early to mid-1970s. The data does not identify land use changes or significant modifications to the land or its use in recent years. Around Kerikeri-Waipapa, for example, the author of this report has in the last two years assessed five properties where there has been significant excavation. In each case, the whole soil profile to a depth of 2.0 or more metres has been removed from a significant area of the property. While still recorded as Class 2s1 (nz2s-16) and Class 3s2 (nz3s-1) land on the nzlri database, this land is no longer 'highly productive land'. It has no soil, instead it has exposed weathered rock, clay, aggregate fill or a paved surface, and any primary production from the land would need to be by hydroponics or similar non-soil growing techniques. Because any future use of the land is not dependent on the intrinsic properties of soil, this land has not been and cannot be assessed as to Land Use Capability.

When searching land use capability data on the national database, remember that:

1. Land Resource Inventory and land use capability surveys, first published as hard-copy maps between 1973 and 1976 as the Ministry of Works and Development Land Use Capability Worksheets, have been digitised to create national coverage in the nzlri-luc database. There have been opportunities for errors each time the maps have been redrafted or digitised;

2. The 3rd Edition of the Land Use Capability Survey Handbook has been published (2009), updating earlier handbooks, introducing new techniques and standards, and establishing a consistent method/standard of LUC assessment across the whole of New Zealand;

3. Whereas the eight LUC classes were previously written as Roman numerals (I, II, III, IV, etc.), the Handbook now requires the eight capability classes to be written as Arabic numerals (1, 2, 3, 4 etc.). Harmsworth's extended legion was published prior to the change to the publication of the LUC Survey Handbook and still uses Arabic numerals Roman numerals – Class IVe1, rather than 4e1;

4. While Class 5 was rarely used because of previous very restricted definitions, the Handbook now provides an opportunity to record, for example, Class 5e. Class 5e is land too steep to cultivate or too erodible when under cultivation, providing a logical progression from Class 3e to 4e to 5e, 6e and 7e as the land becomes progressively more erodible; and

5. Consultants working in the Auckland and Northland Regions have introduced several new land use capability Units to fill gaps in Harmsworth's legend. These include LUC Units to subdivide some of Harmsworth's Units, Units able to be defined by more detailed farm and orchard scale mapping, and so on. [See surveys in Northland by Cathcart(7), Hicks(8) and Hanmore(9) - each have mapped and described new LUC units when working at a 'farm scale' or 'orchard scale' in the Auckland, Northland and Waikato Regions.]

7.0 LOT 3 OF 682 PUNGAERE ROAD

Physical Description - The property comprises a boomerang-shaped parcel of land at the end of a long driveway. It extends down two broad northeast-facing ridges, the dissected edge of an old basaltic plateau-forming lava flow which extends from north of Okaihau to the eastern Bay of Islands. The lava flowed over micaceous mudstone and sandstone in this locality and this underlying rock and podzolised soils formed on it appear in valley bottoms near this property. While the volcanic rock is relatively free-draining and stores water, the underlying sandstone and mudstone is not permeable and water draining through the volcanic material is forced to the surface as springs and seepages where it encounters the sedimentary rocks around the lower slopes of this property.

Mature 'ironstone', Nodular Typic Oxidic, soils have developed on the weathered basalt lava, Pungaere gravelly friable clay on steeper slopes and the 'older', more leached Okaihau gravelly friable clay on easier slopes. These two soil types have an accumulation of iron and aluminium nodules in their subsoils, the topsoil of the Pungaere soil being browner in colour than Okaihau, the latter having a more greyish topsoil. The depth of topsoil varies considerably in both soil types, being deeper on easier slopes and where it has not eroded, erosion which occurred both under natural vegetation and during development for pastoral farming. There will have been patches where the topsoil had been completely eroded, exposing the iron and aluminium nodule surface.

Iron and aluminium nodules in Pungaere soil

The broad-topped ridges and the upper slopes, which have a complex of Okaihau and Pungaere soils, are planted to kiwifruit. These are marginal horticultural soils, suited to a narrow range of crops and not suited to avocado and tamarillo, deeper-rooting species, as iron and aluminium nodule layer in the subsoil discourage root penetration to depth. Irrigation and careful and nutrient pH management keep the plants growing and producing in this shallow topsoil.

Careful soil management is essential, and consideration should be given to using low-impact tyres or tracks on vehicles to minimise soil compaction when wet and a breakdown of soil structure when dry. Shallow scarifying to aerate the topsoil and occasional deeper ripping should be undertaken to improve internal soil drainage, aid aeration and prevent anoxia (plant roots dying because of anaerobic conditions in waterlogged soils) and reduce the risk of fungal and bacterial diseases. An application of agricultural lime prior to ripping or scarifying will help to raise the soil pH to greater depth, so reducing the incidence of 'free' iron and aluminium ions and prevent nutrients being 'fixed' by these two elements, and to encourage roots to penetrate deeper into the soil.

Gaps from dead vines in Kiwifruit Block 3, terrace area

Kiwifruit have also been planted on a high river terrace on the eastern-most part of the property, which blends into the gentle slope of an alluvial fan at the foot of the hill. The terrace, no

longer subject to flooding, is formed from alluvium sediment from mainly old volcanic soils and an alluvial fan formed of similar material washed from the adjacent gully running from the basalt plateau. The mainly basaltic sediment has been weathered and leached to form Waipapa clay, a mature, gleyed clay soil. In places, iron nodules have formed in the subsoil to form a soil profile more akin to Otaha gravelly clay, a soil most commonly found in swampy basins within wider expanses of Okaihau soils.

These two soil types, Otaha gravelly clay and Waipapa clay, both have poor internal drainage and are seasonally wet, with a fluctuating watertable that causes the plant rooting zone to be anaerobic during winter and spring, and for most of the year during periods of persistent rainfall like 2022-23. There may also be groundwater seeping out of the foot of the adjoining hillside, adding to the soil wetness. There are patches of dead kiwifruit vines on part of this terrace and the owners report a 40% lower level of fruit production when compared with vines on the hillside, even prior to the vines dying. Subsurface drainage has proven ineffective on these soils.

9.0 LAND RESOURCE INVENTORY (SEE LRI MAP)

The land was assessed following the procedures set out in the 3rd Edition, New Zealand Land Use Capability Survey Handbook. The following land resource inventory data was assembled:

polygon	landform	soil type	slope	LUC	land use/vegetation
1	NE-facing ridge top	PG to OK	BC	4e2	kiwifruit
2	NE-facing	PG to OK	AB	4e2	kiwifruit
3	North-facing hillside	PG	CD	5e7*	rank grass
4	NE-facing gentle slope	OK + PG	AB	4e2	kiwifruit
5	NE-facing Slope	OK+PG	B	4e2	kiwifruit
6	excavated & fill	non-soil	A	not assessed	sheds & yard
7	gully & gully bottom wetland	PG + non-soil	DE + AB	5e7* + 7w5*	trees + wetland vegetation
8	valley bottom Wetland plus workshop area	non-soil fill + + wetland	AB	7w5* plus plus 7w5*	bare ground
9	terrace	OGd + YF	AB	4s2	kiwifruit
10	terrace edge	OGd + YF	BC	4s2	kiwifruit
11	terrace + alluvial fan	YF + ODg	AB	4s2	kiwifruit

Soil Type Symbols	ODg	Otaha gravelly clay
	PG	Pungaere gravelly friable clay
	OK	Okaihau gravelly friable clay

Slope Groups	A	0 to 3º	flat to gently sloping
	B	4 to 7º	undulating
	C	8 to 15º	rolling
	D	16 to 20º	strongly rolling
	E	21 to 25º	moderately steep
	F	26 to 35º	steep
	G	> 35º	very steep

10.0 LAND USE CAPABILITY UNITS

*Land Use Capability Units followed by * are units first used and described by Cathcart[7], otherwise, LUC Units are those used by Harmsworth and described in his Extended Legend for Northland.*

Class 4e2 On this farm, mature 'ironstone soils' on sloping ground, prone to sheet rill and gully erosion when under cultivation, exposing an ironstone and aluminium nodule surface which is very difficult to revegetate. The ironstone nodule subsoil layer is toxic to plant roots so only shallow-rooted crops, vines and orchard trees can be grown. That is, it is not a very versatile soils, only able to grow a limited range of crops and requires careful management to prevent further soil loss. On this property, there is a reasonable but highly variable depth of topsoil. [***See note**s on assessing Land Use Capability*. This older group of soils unit should be separated from the less leached soils on more recent basalt volcanic lava flows, ash and scoria deposits, and assigned a different LUC Unit. They are not as versatile nor are they capable of such sustained high production.]

Class 4s2 These are old basalt soils on flat to gently rolling slopes with inherent soil limitations (strongly leached, eroded or having some soil limitation which cannot be practically removed or overcome). In this case, the soils are waterlogged for a significant part of the year, becoming anaerobic, which causes plant roots to die and eventually killing the whole plant, vine or tree. Within a pastoral farming system, they may be suited to an occasional fodder crop, for example maize, in a good year, often part of a pasture renewal rotation. Only short-season crops can be grown as the soils are not dry enough to cultivate until early summer and become wet again in autumn. Fodder crops appear very 'patchy' due to areas of wetter and areas of drier soils.

Class 5e7* A 'new' LUC Unit used and described by Cathcart after the publication of the 3rd Edition Land Use Capability Survey Handbook in 2009, which introduced Class 5e Units, not one used or described by Harmsworth. These are older basalt soils on steeper slopes, too steep for cultivation but some may be able to be direct drilled (non-cultivation) to establish fodder crops as part of a pastoral farming system. On this property, nut and amenity trees may be grown, taking care to avoid species which may harbour pests or diseases of kiwifruit. Tall growing trees which would cast a shadow across kiwifruit blocks should also be avoided.

Class 7w5* This is another unit, not used by Harmsworth but introduced by Cathcart to identify swampy valley bottoms, areas receiving runoff from a catchment above and seepage from springs or groundwater generally. It is too wet year-round to be of any productive value, but the rank grass and reeds effectively trap sediment washed off the tracks and kiwifruit orchards, so protecting water quality downstream. If this unit occurs on a pastoral farm, it would be fenced to exclude stock and its wetland vegetation would trap sediment and nutrient runoff from the farmland. There are wetland trees, both native and exotic which could be grown on this unit, some having timber value. Again, care is required with tree planting to avoid shading the kiwifruit and avoiding species which may be a co-host for insect pests which attack kiwifruit.

11.0 CURRENT LAND USE

The following is an approximate breakdown of land use within Lot 3 (based on interpretation of Google imagery), including the access road from Pungaere Road. The areas of kiwifruit are areas of productive vines, excluding headlands, roads and tracks, and shelterbelts.

Land Use	**area(ha)**	**% of Total**
Kiwifruit orchard	6.10	56.2
Gully	2.54	23.4
Sheds, internal roads, driveways, headlands, shelterbelts	2.21	20.4
Total	10.85	100.0

12.0 EXPLANATION/DESCRIPTION OF LAND RESOURCE INVENTORY AND LAND USES

'**Kiwifruit orchard**' is just the area covered by vines; it does not include headlands, roads/access tracks, shelterbelts, sheds, etc. There are three blocks of kiwifruit, two on north-east-facing slopes and one on an old river terrace. While the 1.5ha terrace land is currently in kiwifruit, the soils are too 'heavy, they are waterlogged and anaerobic for at least part of the year, causing vines to die (of anoxia) and/or fungal or bacterial disease. It is unsuited to most orchard crops and, should the 2023 wet season be an indication of a changing climate and its effect on soil moisture levels, the block should be abandoned as a kiwifruit orchard. At best, it is suited to an occasional vegetable crop, in a good year but not every year.

The floodplain land adjoining this block and covering part of it on the nzlri-luc database is assessed as land use capability Class 3w2 (nz3w-15). This is a very broad LUC unit in Harmsworth's extended legend for Northland and, by definition, can be improved by land drainage. This definition does not 'fit' this soil as is too heavy, it has such a high clay content, that it cannot be effectively drained with subsurface drains. Even with the best of drainage, it will be waterlogged for part of every year and so unsuited to tree or vine crops. It has been re-assessed as Class 4s2 (nz4s-1); a Unit described by Harmsworth which specifically includes Otaha soils.

The balance of the kiwifruit orchard land, the sloping land extending to the top edge of the ridge/plateau, is assessed as Class 4e2, an LUC Unit described by Harmsworth and including the mature Pungaere and Okaihau 'ironstone' soils. Soil profiles checked across these 3-to-10-

degree slopes, show topsoil depths vary from 20 to 40cm before encountering iron nodules. These soils are prone to erosion when under cultivation and any loss of topsoil brings the toxic iron and aluminium nodules closer to the surface. Unfortunately, while Harmsworth describes Class 4s2, which perfectly describes these soils when on flat or gently sloping land, he has no equivalent for land with 4 to 15^{o} slopes, instead including it in a Class 4e2 unit with younger and more productive and soils. (Cathcart has described new LUC Units for similar ironstone soils elsewhere in the wider Kerikeri district.) These 'old' volcanic soils are not as versatile as the younger soils, being restricted to a very narrow range of crops and to a short growing season. This land is mapped as Class 4e2 on the nzlri-luc database and is, therefore, not considered 'Highly Productive Land' under the NPS-HPL.

The kiwifruit orchards on areas 1 and 2 on this property have been well established and are well managed. The slope of the land reduces the risk of soil waterlogging and the death of vines like those on area 3. As noted, production from these hillslope vines was 40% higher than Areas 1 and 2 prior to the death of vines in Area 1. Kiwifruit crops with a groundcover of grass is an ideal land use for this land, greatly reducing the risk of soil erosion. In short, while the soils on the hillside are suited to growing kiwifruit, the soils on the terrace are not.
'**Gully**' is, as the name implies, a steeper valley running down the middle of the block, the sides being too steep for orcharding and the valley bottom too wet for pastoral, arable or orchard use. This area is, in effect, 'wasteland' in respect of the orchard but raises several management issues. While it can be managed to provide orchard shelter, produce timber or tree crop products (nuts?), care must be taken to prevent infestation by weed species and plants which may be a co-host to diseases or pest species which also affect kiwifruit or other orchard crops. (Woolly nightshade/tobacco weed is a co-host to fungal diseases which infest tamarillo, tomatoes potatoes, e.g. potato psyllid. Any wild fruit trees or vines will provide additional habitat for guava moth, and so on.)

This area, too, is recorded as Class 4s2 on the nzlri-luc but it is too steep to fit in this class or unit. Instead, in this survey, the gully sides, with 15 to 25^{o}, or steeper, slopes have been assessed as Class 5e7*, a unit previously mapped and described by Cathcart. This land is suited to some tree crops (nuts), orchard shelter trees or regeneration to native bush, subject to the provisos raised above relating to alternative hosts for pests and diseases and the risk of trees growing too tall and shading the kiwifruit crop.

The narrow swampy valley bottom is assessed as Class 7w5*, another unit described by Cathcart in previous Mid-North reports, land too wet to have any productive value but capable of growing some potential timber trees and a worthy of re-establishing as wetlands to trap any sediment or nutrient runoff from the orchards, roads and pavement areas.

'**Sheds, internal roads, driveways, headways, shelterbelts**' is land and land uses, essential to the orchard but not growing fruit. There is a network of well-maintained gravel tracks around the outer, western, northern and north-eastern side of the property, giving safe, all-weather access for orchard machinery and conventional wheeled vehicles. Maintenance, weed control, and other orchard good practice on this support land is essential to the biosecurity and productivity of the kiwifruit orchard, regardless of what crops are grown.

The two kiwifruit blocks on the western three-quarters of the property are on steeper slopes, ranging from 2 to 10^{o} slopes, all land easily accessible and safe for conventional vehicles and equipment. Being sloping and better drained, this land has healthier and higher producing kiwifruit. Careful soil and crop management is, however, essential to prevent the clay soils becoming compacted and soil drainage and aeration reduced.

As noted, these are complexes of Okaihau and slightly younger and slightly less weathered Pungaere soils, with accumulations of gravelly iron nodules in the subsoil. At low pH (acid soils), iron and aluminium are soluble, there are 'free ions', which bind soil nutrients, particularly phosphorus, rendering it unavailable to plants. Aluminium is also toxic to plant roots, so management of soil pH is very important, both to reduce the incidence of free iron and aluminium and to ensure applied plant nutrients are available to the plants. Soil pH reduces when the soils are anaerobic, waterlogged, hence the advice to encourage soil drainage.

13.0 Conclusions

1. This detailed-scale survey of the property has been necessary because of the limitations of the nzlri-luc digital database, which is used to identify 'highly productive land' in terms of the National Policy Statement for Highly Productive Land, when dealing with small parcels of Land. The smallest area that can be separately identified on a map of 1:50,000 scale, like the nzlri-luc national database, is 10 hectares.

2. The boundaries of the various polygons or land types/land use capability units displayed on the nzlri-luc digital database are database are very diagrammatic in this locality, not representing the true landform, and the land is much more complex than the database indicates.

3. Of the little over 6 hectares in kiwifruit vines, 24% is on terrace soils, land unsuited to kiwifruit and to most forms of orcharding or commercial gardening. This block of kiwifruit in the back, north-east corner of the property, are sited on a much wetter old volcanic alluvial soils, which becomes waterlogged in most winters and are not suited to growing kiwifruit. Constructing a deep drain across the top, upstream, edge of this third kiwifruit block may intercept water running over land on the alluvial fan and some of the seepage coming though the soil but would not relieve the winter wetness and fluctuating soil mosture levels in polygons 9, 10 and 11. Kiwifruit vines are dying in this block due most probably to anoxia, a fluctuating watertable which not only displaces all air from the soil, it is creating soil conditions conducive to a rapidly inreasing poulation of soil bacteria and to fungal diseases. Waterlogging also lowers soil pH, releasing more 'free' iron and aluminium and depriving the vines of nutrients

4. The nzlri-luc polygon boundaries are very diagrammatic in this area but by extrapolation, this wet terrace land and the floodplain and terrace soils beyond the property are shown as Class 3w2, (nz3w-15) on the nzlri-luc database. The wet soils, with very patchy field crops and pasture on the neighbouring dairy farm and dying kiwifruit on the subject property confirm that the national database assessment is incorrect. It is not Class 3w2, as shown on the databse, and **should be Class 4s2**, an LUC unit described by Harmsworth and listing Otaha soils. These old, in this case wet soils cannot be remediated by drainage, they are inherently wet and of low fertility. They are not 'Highly Productive Soils' and are certainly not versatile, being limited to pastoral farming with an opportunity for an ocassional short-season fodder crop when soil conditions permit, and then usually part of a pasture renewal rotation.

5. The remaining 76% of kiwifruit vines are on mature 'ironstone' soils with an accumulation of ironstone nodules in the subsoil. These hill blocks have sufficient topsoil depth to successfully grow kiwifruit but are, otherwise, only suited to shallow-

rooted tree crops/orchards like citrus. The land would be subject to sheet, rill and gully erosion if used for market gardening or arable farming.

The **nzlri-luc Class 4e2 is** confirmed for this land, although there is a need to separate these old, mature ironstone soils from the younger, less leached and more versatile and productive soils on recent basaltic ash, scoria and lava flows. Good orchard management ensures that this land produces kiwifruit, but the soils are only marginally suited to this crop. That is, they are not versatile soils and would be suited to only a few alternative tree or vine crops. ***According to both the nzlri-luc database and this more detailed luc assessment, this is not 'highly productive land' in terms of the National Policy Statement for Highly Productive Land.***

6. Steeper land between the two easy-topped ridges, proportionally too small an area to be separately identified on the national database has been assessed as Class 5e7*, an LUC unit previously mapped and described in the Mid-North by Cathcart. It is too steep to cultivate, and would erode if it was, but is suited to grazing on livestock farms. On this property, it is a hillside in grass on one side of a valley and in trees on the other, south-facing side. This unit would be suited to grazing or forestry, perhaps tree crops, providing trees planted were not alternative hosts for diseases or pests affecting the kiwifruit vines.

7. Running down the valley bottom, and far too narrow to separately map, even at the scale of this re-assessment, is a swampy valley bottom. This has been assessed as class7w5*, another Cathcart LUC Unit. It is a wetland, too wet for productive use but capable of growing some tree species for shelter or even timber, but again species likely to be co-host for pests and diseases of kiwifruit should be avoided and tree hights managed to avoid shading the vines. The wetland also acts as a filter to trap runoff from the orchard land.

8. That is, there is no land on the orchard property of Jatt Farmers Ltd that is assessed as Classes 1, 2 or 3 despite the nzlri-luc digital database and maps accompanying the Northland Regional Council Soil Fact Sheets recording 42% of the property having Waipapa soils, which on adjoining land are recorded as Class 3w2 on the nzlri-luc database. In fact, the Waipapa and accompanying Otaha soils referred to occupy less than 14% of the total area of Lot 3. As explained, these soils are inherently too wet to be assessed as Class 3 as they become waterlogged during most winters and springs. They have been reassessed as Class Class4s2 as this wetness cannot be mitigated by drainage and the kiwifruit vines are dying.

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9. Pers. Comms. - Ian Hanmore, Hanmore land Management (ian@hlm.co.nz Mobile: 021 201 3441)

Property of Jatt Farmers Ltd
Lot 3 DP505563,
682 Pungaere Road

Land Resource Inventory Map
drafted by Bob Cathcart
AgFirst Northland
25 April 2024

Contact

Bob Cathcart

Land and Environment Consultant
Phone 027 435 2761
Email bob.cathcart@agfirst.co.nz

AgFirst Northland Ltd
1a Douglas Street, PO Box 1345
Whangarei 0140, New Zealand
09 430 2410
northland@agfirst.co.nz
www.agfirst.co.nz

NORTHLAND WIDE

KERIKERI DRAINAGE LTD

51C ORANGEWOOD LANE
KERIKERI
NORTHLAND
PHONE 094078062 A/HRS
MOBILE 0274931597
FAX 094078062
E mail wood123@xtra.co.nz

SITE SUITABILITY WASTE WATER REPORT

CLIENT

JATT FARMERS

SITE LOCATION

682 PUNGAERE RD, KERIKERI

NORTHLAND WIDE

KERIKERI DRAINAGE LTD

51C ORANGEWOOD LANE
KERIKERI
NORTHLAND
PHONE 094078062 A/HRS
MOBILE 0274931597
FAX 094078062
E mail wood123@xtra.co.nz

01/11/24
Resource Consents Department
Far North District Council
Private Bag 752
Kaikohe

RE : SITE SUITABILITY REPORT FOR WASTE WATER FOR A PROPOSED SUBDIVISION OF LOT 3, DP 505563, 682 PUNGAERE RD, KERIKERI

On the 30th of October a site inspection was carried out to assess the soil types and soakage of proposed lots 1, 2, 3, 4 and 5 for effluent treatment and waste water disposal.
The soil is classed as Pungaere gravelly friable clay on lots 1, 2 and 3 and Waipapa Clay on lots 4 and 5 with moderate to poor soakage. The soakage tests showed the soakage was not that great on all proposed lots therefore an aerated secondary waste water treatment system with effluent disposal by dripperlines would better suit these lots.
There is a good depth of topsoil on all lots. Lots 4 and 5 had the worst soakage but had extra topsoil depth so with the aid of cut off drains would still have reasonable soakage for effluent disposal.
Cut off drains must be constructed on all lots for stormwater diversion.
I have classed these lots as category 5 with the soakage rate as 2.86mm per sq M per day.
The dripperlines may be buried in the topsoil or laid on the surface and mulched over.
Being category 5 soil a 100 percent reserve area will be required on all lots.
An example of a three bedroom house is attached and a 30M by 30M example for build sites shown on the plans
Lot 1 has a natural drain running through it so council set backs must be adhered to.
There are plenty of good favourable land applications areas on this lot.
Lot 2 has an overland flowpath on its eastern boundary which must have the required set backs.
There is alot of good favourable land application areas on this lot.
Lot 3 has an open natural drain on its NE boundary that must have the required setbacks.
There are plenty of good building sites.
Lot 4 has an open natural drain running through it on its Western boundary and just over the boundary that must have the required setbacks. There are plenty of favourable land application areas on this lot.
Lot 5 has a open natural drain on its southern and eastern boundaries that must have the required setbacks for effluent disposal. There are plenty of good land application areas on this lot.
There are other types of secondary waste water treatment systems that may be used such as secondary treated ETS beds.

Yours Faithfully Steve Wood.


EXISTING EASEMENTS
Purpose | Shown | Burdened | Benefited
Right of way Right to convey water, electricity, telecommunications & computer media | A | Lot 2 | EI 10835340.3
PROPOSED EASEMENT
Purpose | Shown | Burdened | Benefited
Right of way | J | Lot 1 | Sec 75 SO 49029 Lot 2 DP 209487
CONDITIONAL EASEMENTS
Purpose | Shown | Burdened | Benefited
Right of way Right to convey water, electricity, telecommunications. Right to drain water | A | Lot 1 | Lots 2 - 4
B | Lot 2 | Lots 1, 3, 4, 5.
C | Lot 1 | Lots 3, 4, 5.
D | Lot 1 | Lot 3
E | Lot 1 | Lots 4, 5.
F | Lot 5 | Lot 4
Right to convey water | G | Lot 4 | Lots 1, 2, 3, 5
H | Lot 3 | Lots 1, 2, 4, 5
I | Lot 3 | Lots 1, 2.
LOT 1 2.08 ha
LOT 2 2.71 ha (2.00 net)
LOT 3 2.00 ha
LOT 4 2.04 ha
LOT 5 2.00 ha
Proposed R.o.W 8.0 wide
Proposed R.o.W
Proposed Water supply easement
Proposed water supply easement (5 wide)
Existing Water Supply easement GN C021731.1 (SO 62842) Kerikeri Irrig Co
Existing R.o.W.
Sec 75 SO 49029 NA58D/549 KM & SC Lupi
2 DP 209487
2 DP 505563
1 DP 505563
2 DP 153221
2 DP 201264
DP 201264
ENTRY 1
ENTRY 2
ENTRY 3
Pungaere Road
fence
Applicant - Jatt Farmers Limited
Title Record - 763512
Total Area - 10.8250 ha
0 25 50 75 100 125 250
Scale @ A3 - 1 : 2500
DONALDSONS
REGISTERED LAND SURVEYORS
LOTS 1 - 5 BEING A PROPOSED SUBDIVISION OF LOT 3 DP 505563
Contour interval : 10m
28 October 2024
Ref 8462
file 8462b Scheme 5 lots w image.mjo

1. **Has a Slope Stability Assessment been carried out on the property?**

Yes		No	tick	Please tick

If No, why not?

Gently sloping with no signs of slipping.

If Yes, please give details of report (and if possible, please attach report):

Author	
Company/Agency	
Date of Report	
Brief Description of Report Findings:-	

2. Site Characteristics (See Table 1 attached):

Provide descriptive details below:
Performance of Adjacent Systems:
No known problems
Estimated Rainfall and Seasonal Variation:
Information available from **N.I.W.A MET RESEARCH**
1700mm per year / 1000mm winter / 700mm summer
Vegetation / Tree Cover:
Grass and kiwi fruit
Slope Shape: (Please provide diagrams)
Gently sloping to north east
Slope Angle:
3-15 degrees
Surface Water Drainage Characteristics:
Sheet flow
Flooding Potential: YES/NO
No
If yes, specify relevant flood levels on appended site plan, I.e. one in 5 years and/or 20 year and/or 100 year return period flood level, relative to disposal area.
Surface Water Separation:
Greater than 15M
Site Characteristics: or any other limitation influencing factors

3. Site Geology — Check Rock Maps

Pungaere Gravelly Friable clay that is moderately drained and Waipapa Clay that is poorly drained on lots 4 & 5

Geological Map Reference Number	NZMS 290 SHEET P06/07

4. What Aspect(s) does the proposed disposal system face? (please tick)

North		West	
North-West		South-West	
North-East	tick	South-East	
East		South	

5. Site clearances,(Indicate on site plan where relevant)

Separation Distance from	Treatment Separation Distance (m)	Disposal Field Separation Distance (m)
Boundaries	Greater than 1.5 M	Check Council requirements
Surface water, rivers Creeks drains etc	Greater than 15 M	Greater than 15 M
Groundwater	Greater than 0.6 M	Greater than 0.6 M
Stands of Trees/Shrubs	NA	
Wells, water bores	NA	NA
Embankments/retaining walls		
Buildings	Greater than 3M	Greater than 3M
Other (specify):		

PART D: Site Assessment - Subsoil Investigation

(Refer TP58 - Sn 5.1 General Purpose of Site Evaluation, and Sn 5.2.2(a) Site Surface Evaluation and Sn 5.3 Subsurface Investigations)
Note: Underlined terms defined in Table 2, attached

1. Please identify the soil profile determination method:

Test Pit		(Depth_____m	No of Test Pits	
Bore Hole		(Depth 1.3 m	No of Bore Holes	5
Other (specify):				

Soil Report attached?

Yes	tick	No		Please tick

2. Was fill material intercepted during the subsoil investigation?

Yes		No	tick	Please tick

If yes, please specify the effect of the fill on wastewater disposal

3. percolation testing (mandatory and site specific for trenches in soil type 4 to 7)

Please specify the method
Constant Head Permeameter

Test Report Attached?	Yes	tick	No		Please tick

4. Are surface water interception/diversion drains required?

Yes	tick	No		Please tick

If yes, please show on site plan

4a Are subsurface drains required

If yes enter details

5. Please state the depth of the seasonal water table:

Winter	4 M	m	Measured		Estimated tick
Summer	Greater than 4 M	m	Measured		Estimated tick

6. Are there any potential storm water short circuit paths?

Yes		No	tick	Please tick

If the answer is yes, please explain how these have been addressed

7. Based on results of subsoil investigation above, please indicate the disposal field soil category *(Refer TP58 Table 5.1)*

Is Topsoil Present? Yes	If so, Topsoil Depth? 0.25-0.4 (m)

Soil Category	Description	Drainage	Tick One
1	Gravel, coarse sand	Rapid draining	
2	Coarse to medium sand	Free draining	
3	Medium-fine & loamy sand	Good drainage	
4	Sandy loam, loam & silt loam	Moderate drainage	
5	Sandy clay-loam, clay loam & silty clay-loam	Moderate to slow drainage	tick
6	Sandy clay, non-swelling clay & silty clay	Slow draining	
7	Swelling clay, grey clay, hardpan	Poorly or non-draining	

Reasons for placing in stated category

Assessment of soil texture
Observation of soakage test
Checking of soil maps

PART E: Discharge Details

1. Water supply source for the property (please tick):

Rainwater (roof collection)	tick
Bore/well	
Public supply	

2. Calculate the maximum daily volume of wastewater to be discharged, unless accurate water meter readings are available

(Refer TP58 Table 6.1 and 6.2)

Number of Bedrooms	~~2~~/ 3 ~~/4~~	Three
Design Occupancy	Five	(Number of People)
Per capita Wastewater Production	~~140~~/ ~~180~~/ / 180	(tick) (Litres per person per day)
Other - specify	~~200~~/ ~~220~~/ //////	
Total Daily Wastewater Production	900	(litres per day)

3. Do any special conditions apply regarding water saving devices

a) Full Water Conservation Devices?	Yes		No	tick	(Please tick)
b) Water Recycling - what %?	%			tick	(Please tick)

If you have answered yes, please state what conditions apply and include the estimated reduction in water usage

DUAL FLUSH TOILET
NO GARBAGE GRINDER
LOW FLOW DISHWASHER

4. Is Daily Wastewater Discharge Volume more than 2000 litres:

Yes		(Please tick)
No	tick	(Please tick)

Note if answer to the above is yes, an N.R.C wastewater discharge permit may be required

5. Gross Lot Area to Discharge Ratio:

Gross Lot Area	20000	M
Total Daily Wastewater Production	900	(Litres per day)(from above)
Lot Area to Discharge Ratio	22.22	

7. Does this proposal comply with the Northland Regional Council Gross Lot Area to Discharge Ratio of greater than 3?

Yes	tick	No		Please tick

8. Is a Northland Regional Council Discharge Consent Required?

Yes		No	tick	(Please tick)

PART F: Primary Treatment *(Refer TP58 Section 7.2)*

1. Please indicate below the no. and capacity (litres) of all septic tanks including type (single/dual chamber grease traps) to be installed or currently existing: If not 4500 litre, duel chamber explain why not

Number of Tanks	Type of Tank	Capacity of Tank (Litres)
	Total Capacity	

2. Type of Septic Tank Outlet Filter to be installed?

PART G: Secondary and Tertiary Treatment

(Refer TP58 Section 7.3, 7.4, 7.5 and 7.6)

1. Please indicate the type of additional treatment, if any, proposed to be installed in the system: (please tick)

Secondary Treatment	Tick		
Home aeration plant	tick		
Commercial aeration plant			
Intermediate sand filter			
Recirculating sand filter			
Recirculating textile filter			
Clarification tank			
Tertiary Treatment			
Ultraviolet disinfection			
Chlorination			
Other		Specify	

PART H: Land Disposal Method

(Refer TP58 Section 8)

1. Please indicate the proposed loading method: (please tick)

Gravity	
Dosing Siphon	
Pump	tick

2.High water level alarm to be installed in pump chambers

Yes	~~no~~

If not to be installed, explain why

3. If a pump is being used, please provide the following information:

Total Design Head	To manufacturers recommendation	(m)
Pump Chamber Volume	160	(Litres)
Emergency Storage Volume	1000	(Litres)

4. Please identify the type(s) of land disposal method proposed for this site: (please tick)
(Refer TP58 Sections 9 and 10)

Surface Dripper Irrigation	tick		
Sub-surface Dripper irrigation	tick		
Standard Trench			
Deep Trench			
Mound			
Evapo-transpiration Beds			
Other		Specify	

5. Please identify the loading rate you propose for the option selected in Part H, Section 4 above, stating the reasons for selecting this loading rate:

Loading Rate	2.85		(Litres/m2/day)
Disposal Area	Design	315	(m2)
	reserve	315	(m2)

Explanation *(Refer TP58 Sections 9 and 10)*

Loading rate adopted for secondary treated effluent for category 5 soil.

6. What is the available reserve wastewater disposal area *(Refer TP58 Table 5.3)*

Reserve Disposal Area (m²)	315 sq M
Percentage of Primary Disposal Area (%)	100 percent

7. Please provide a detailed description of the design and dimensions of the disposal field and attach a detailed plan of the field relative to the property site:

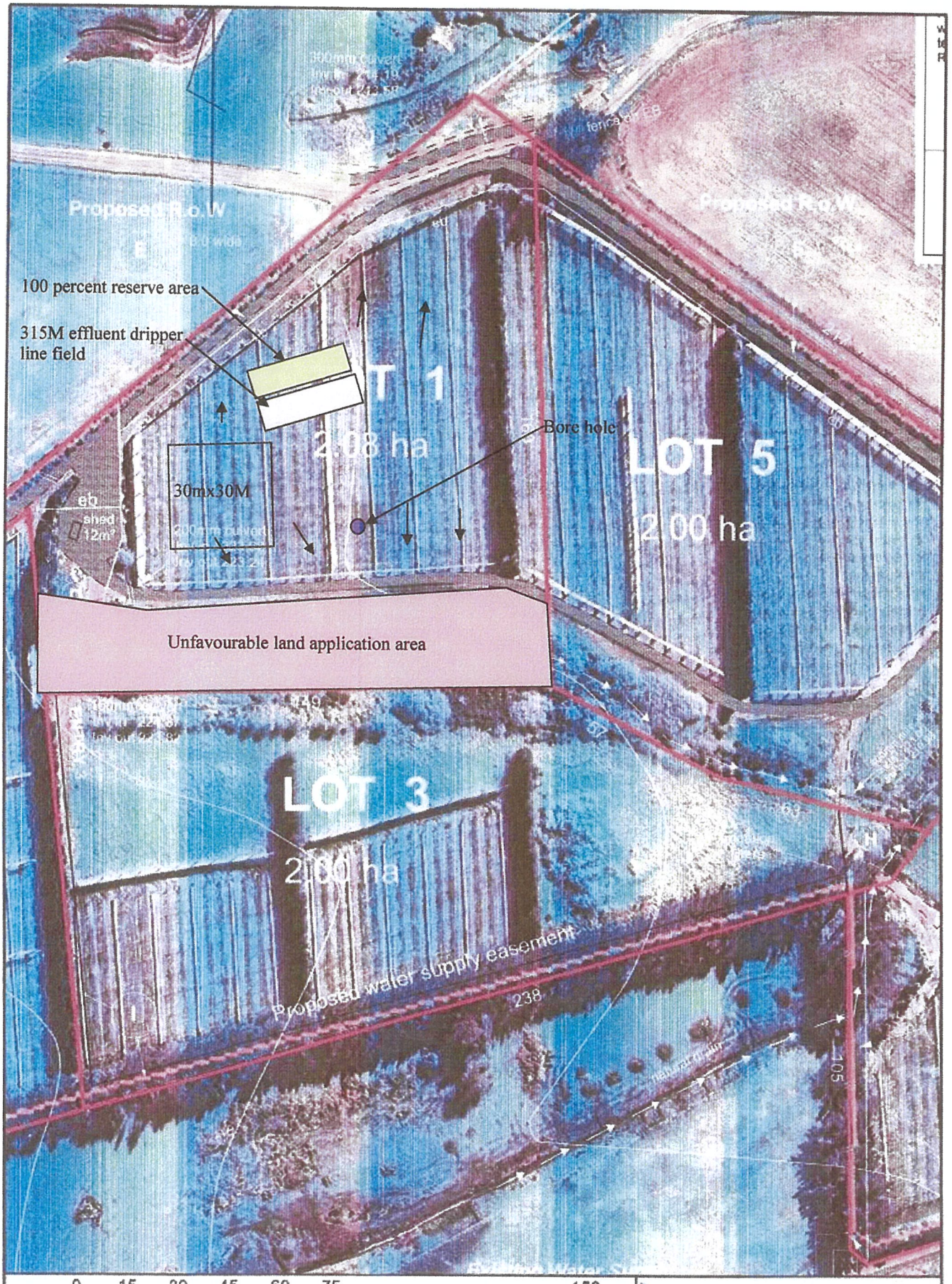
Description and Dimensions of Disposal Field:

A minimum of 315 M of RAMM dripline with 3.5 L/HR emitters at 1 M spacing and 1 M line separation spacing.
Dripperline to be mole ploughed in topsoil or laid on top of ground, pinned and mulched over.

Plan Attached?	Yes	tick	No		(Please tick)

If not, explain why not

LOT 1


100 percent reserve area
315M effluent dripper line field
LOT 1
2.08 ha
Bore hole
30mx30M
LOT 5
2.00 ha
Unfavourable land application area
LOT 3
2.00 ha
Proposed water supply easement
0 15 30 45 60 75 150
1 : 1500 @ A4
DONALDSONS
REGISTERED LAND SURVEYORS
LOTS 1 & 3
REF: 8462

LOT 1

Client:
Job:
Location:
Augerhole No.:
Drilling Method:

REF:
Logger:
Date:
Page:
Checked:

PERCOLATION TEST -GRAPH SHEET

Client: Jatt Farmers
Job:
Location: Pungaere Rd, Kerikeri

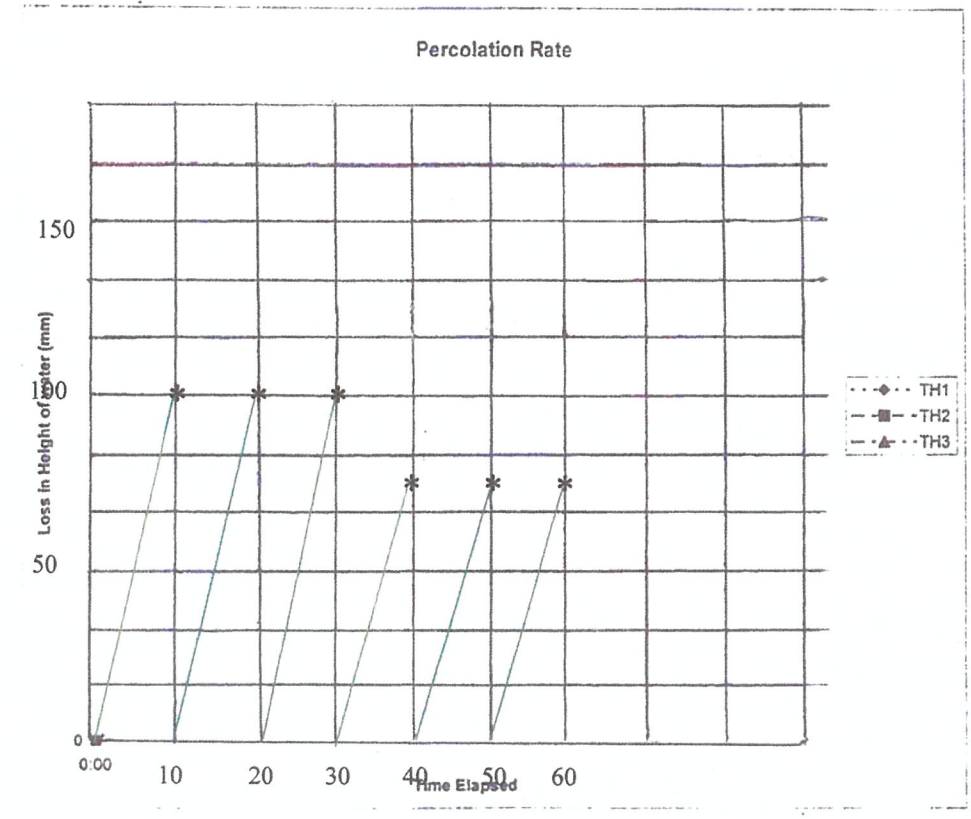
Ref.:
Report No.:
Page:

Tested by: STEVE WOOD
Date:

Presoaking conditions: 30 MIN
Weather conditions prior: WET

		Loss in height of water					Percolation Rate (mm/hr)			
Time	Time elapsed	TH1	TH2	TH3	TH4		TH1	TH2	TH3	TH4
	10 MIN	100					600			
	10 MIN	100					600			
	10MIN	100					600			
	10 MIN	75					450			
	10 MIN	75					450			
	10 MIN	75					450			

Depth of hole
Depth of topsoil
Diameter of hole



LOT 1

Depth (m)	Legend	Soil Symbol	Soil Description	Water Level	Vane Shear Strength maximum/residual corrected kPa	Soil Sensitivity	Sample Number	Other Tests
0 - -0.2			TOPSOIL					
- - -0.5			LIGHT BROWN SILT CLAY					
- - - -1 - -1.2 -			ORANGE CLAY LOAM					
- -1.5 - - -1.8 - -2 - - - - -2.5 - - - - -3 - - -3.3								

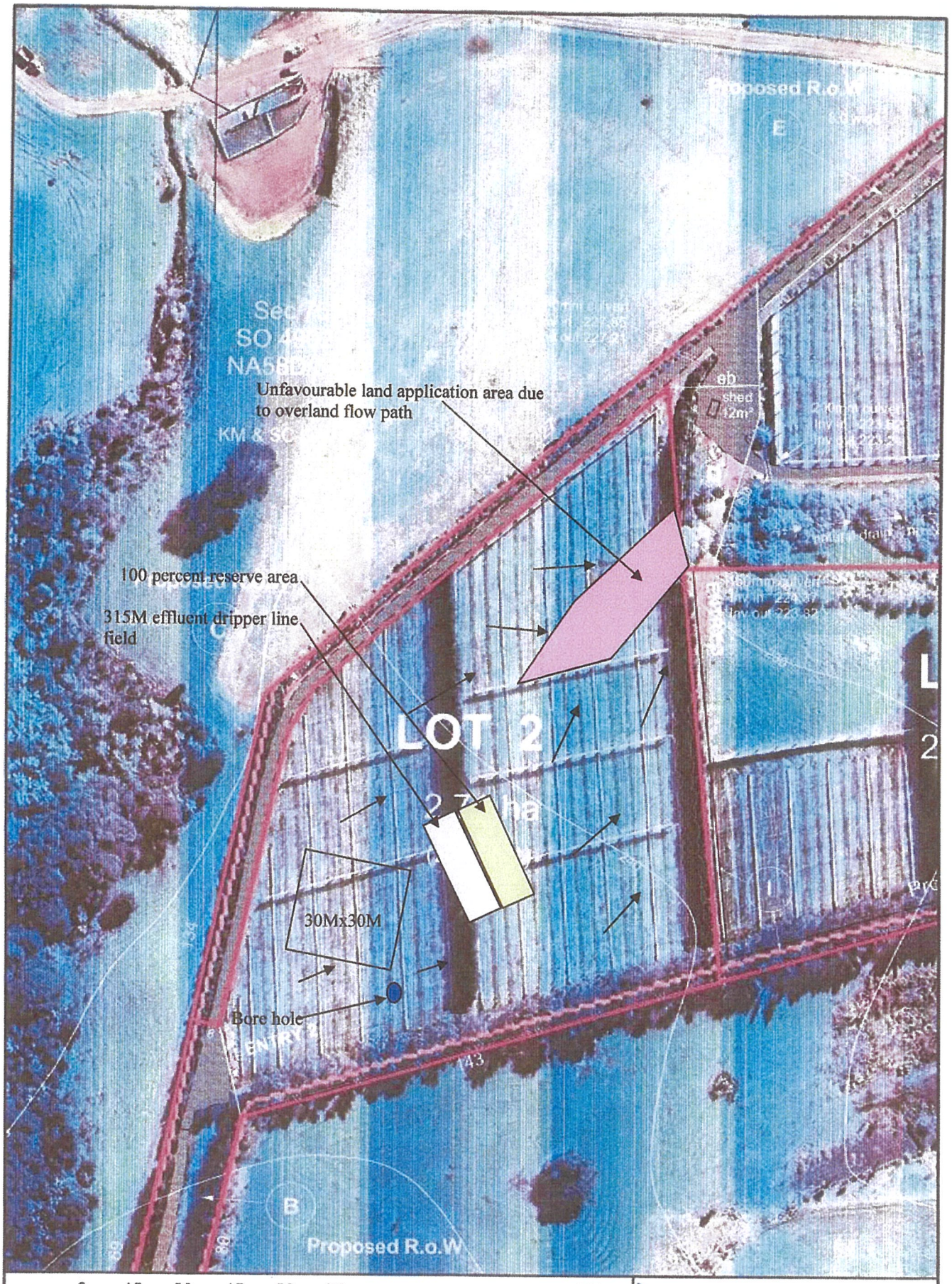
Remarks:

Plenty of topsoil

Topsoil		Sand	
Fill		Gravel	
Clay		Peat	
Silt		Rock	


LOT 1

LOT 2


Unfavourable land application area due to overland flow path
100 percent reserve area
315M effluent dripper line field
LOT 2
30Mx30M
Bore hole
Proposed R.o.W
shed 12m²
0 15 30 45 60 75 150
1 : 1500 @ A4
DONALDSONS
REGISTERED LAND SURVEYORS
LOT 2
REF: 8462

LOT 2

Client:
Job:
Location:
Augerhole No.:
Drilling Method:

REF:
Logger:
Date:
Page:
Checked:

PERCOLATION TEST -GRAPH SHEET

Client: Jatt Farmers
Job:
Location: Pungaere Rd, Kerikeri

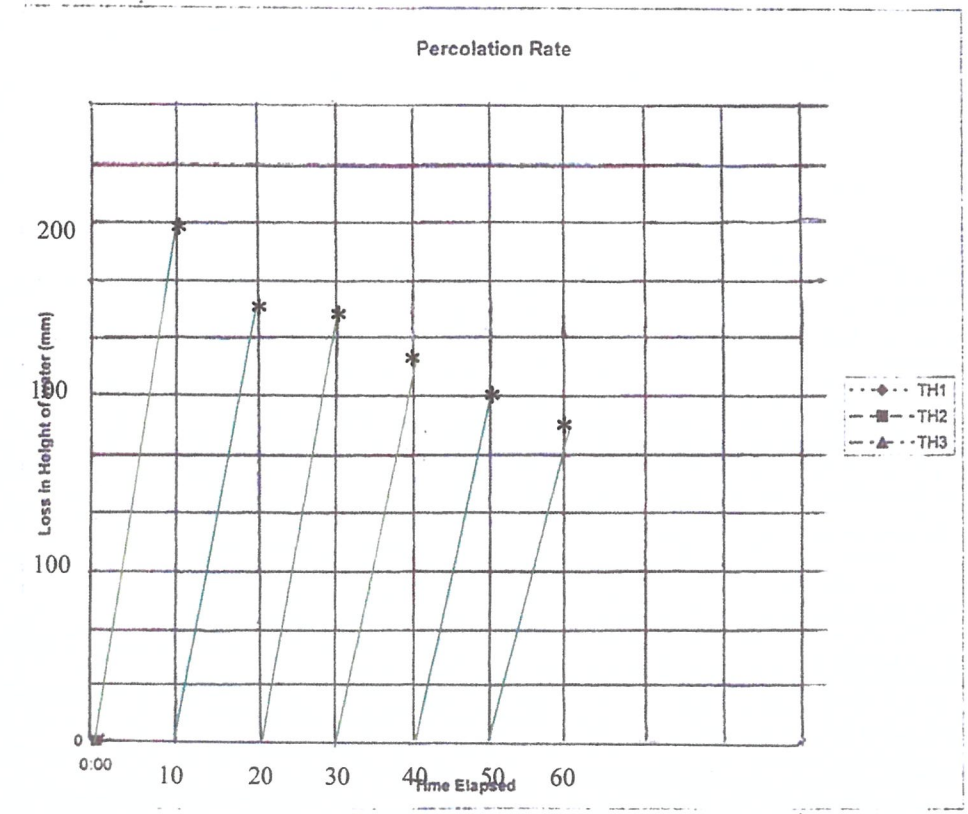
Ref.:
Report No.:
Page:

Tested by: STEVE WOOD
Date:

Presoaking conditions: 30 MIN
Weather conditions prior: WET

		Loss in height of water					Percolation Rate (mm/hr)			
Time	Time elapsed	TH1	TH2	TH3	TH4		TH1	TH2	TH3	TH4
	10 MIN	200					1200			
	10 MIN	150					900			
	10MIN	150					900			
	10 MIN	125					750			
	10 MIN	100					600			
	10 MIN	75					450			

Depth of hole
Depth of topsoil
Diameter of hole



LOT 2

Depth (m)	Legend	Soil Symbol	Soil Description	Water Level	Vane Shear Strength maximum/residual corrected kPa	Soil Sensitivity	Sample Number	Other Tests
0 - -0.2			TOPSOIL					
- - -0.5 -			LIGHT BROWN SILT CLAY					
- -1 - -1.2			ORANGE CLAY LOAM					
- -1.5 - - -1.8 - -2 - - - - -2.5 - - - - -3 - - -3.3								

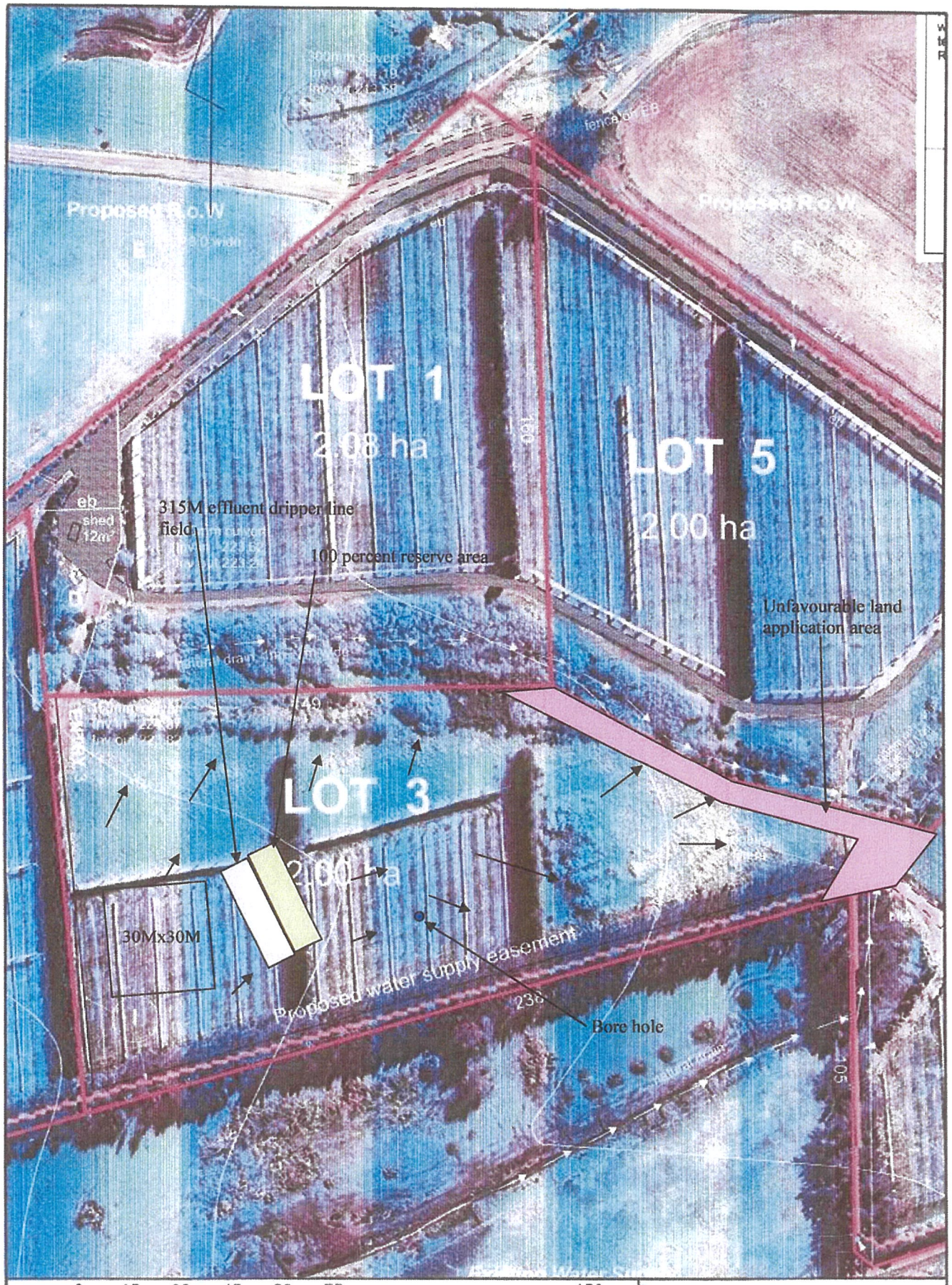
Remarks:

Plenty of topsoil

Topsoil		Sand	
Fill		Gravel	
Clay		Peat	
Silt		Rock	


LOT 2

LOT 3


LOT 1
2.08 ha
LOT 5
2.00 ha
LOT 3
2.00 ha
315M effluent dripper line field
100 percent reserve area
Unfavourable land application area
30Mx30M
Proposed water supply easement
Bore hole
eb
shed 12m²
0 15 30 45 60 75 150
1 : 1500 @ A4
DONALDSONS
REGISTERED LAND SURVEYORS
LOTS 1 & 3
REF: 8462

LOT 3

Client:
Job:
Location:
Augerhole No.:
Drilling Method:

REF:
Logger:
Date:
Page:
Checked:

PERCOLATION TEST -GRAPH SHEET

Client: Jatt Farmers
Job:
Location: Pungaere Rd, Kerikeri

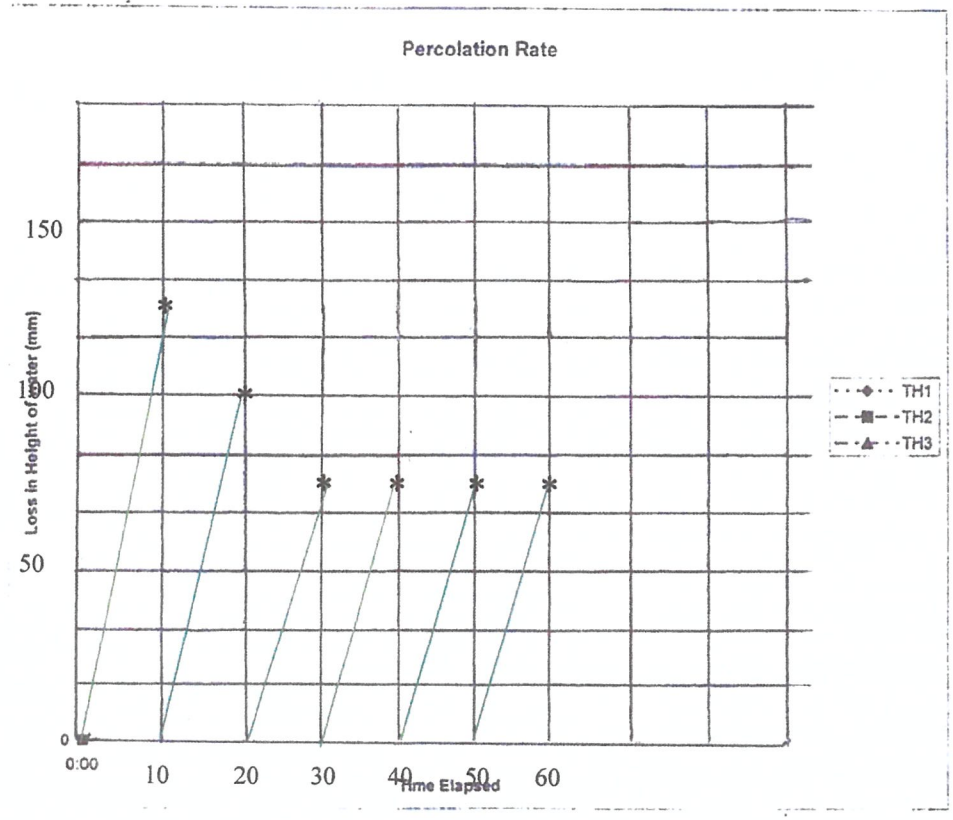
Ref.:
Report No.:
Page:

Tested by: STEVE WOOD
Date:

Presoaking conditions: 30 MIN
Weather conditions prior: WET

Time	Time elapsed	Loss in height of water TH1	TH2	TH3	TH4		Percolation Rate (mm/hr) TH1	TH2	TH3	TH4
	10 MIN	125					750			
	10 MIN	100					600			
	10MIN	75					450			
	10 MIN	75					450			
	10 MIN	75					450			
	10 MIN	75					450			

Depth of hole
Depth of topsoil
Diameter of hole



LOT 3

Depth (m)	Legend	Soil Symbol	Soil Description	Water Level	Vane Shear Strength maximum/residual corrected kPa	Soil Sensitivity	Sample Number	Other Tests
0 - -0.2			TOPSOIL					
- -			LIGHT BROWN SILT CLAY					
-0.5 - - - -1 - -1.2 -			ORANGE CLAY LOAM					
- -1.5 - - -1.8 - -2 - - - - -2.5 - - - - -3 - - -3.3								

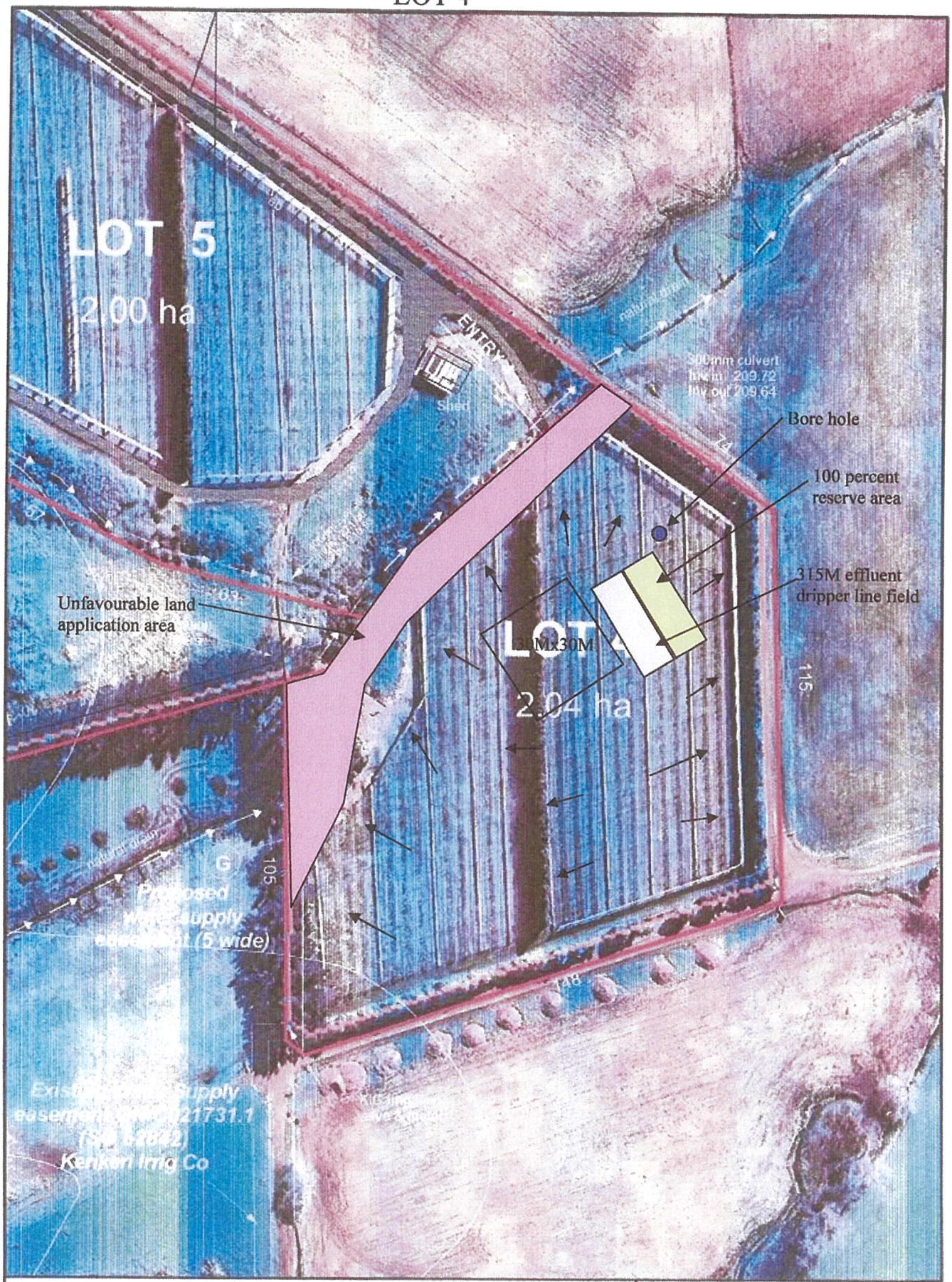
Remarks:

Plenty of topsoil

Topsoil		Sand	
Fill		Gravel	
Clay		Peat	
Silt		Rock	


Lot 3

LOT 4



0 15 30 45 60 75 150

1 : 1500 @ A4

DONALDSONS
REGISTERED LAND SURVEYORS

LOT 4

REF: 8462

LOT 4

Client:
Job:
Location:
Augerhole No.:
Drilling Method:

REF:
Logger:
Date:
Page:
Checked:

PERCOLATION TEST -GRAPH SHEET

Client: Jatt Farmers
Job:
Location: Pungaere Rd, Kerikeri

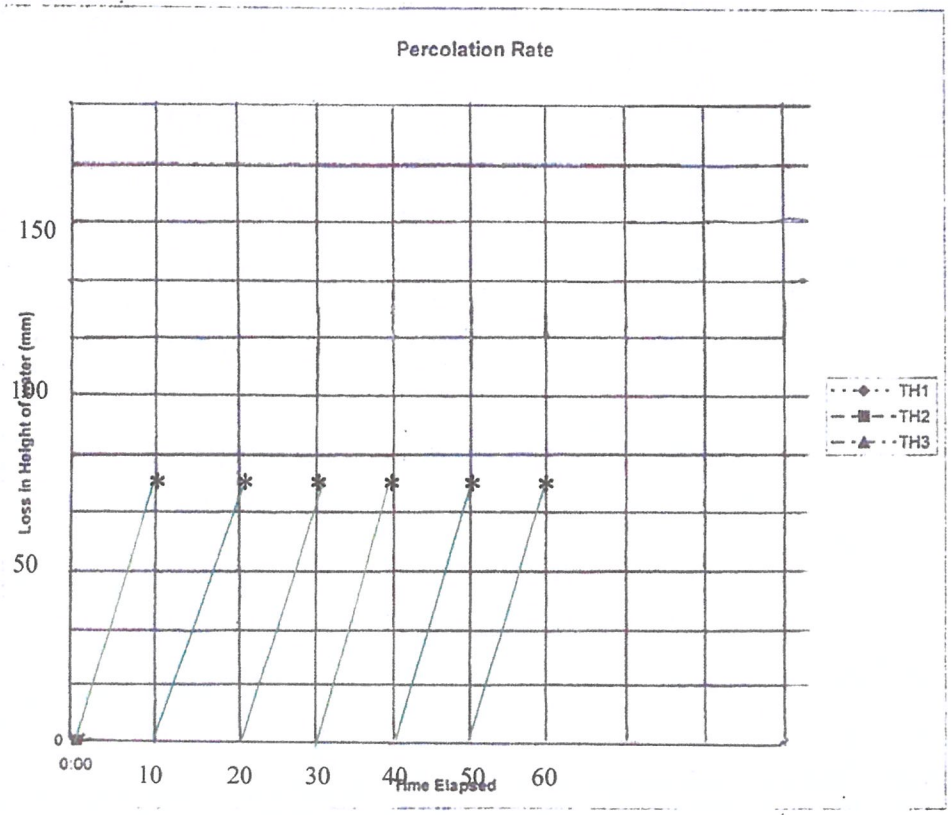
Ref.:
Report No.:
Page:

Tested by: STEVE WOOD
Date:

Presoaking conditions: 30 MIN
Weather conditions prior: WET

Time	Time elapsed	Loss in height of water TH1	TH2	TH3	TH4		Percolation Rate (mm/hr) TH1	TH2	TH3	TH4
	10 MIN	75					450			
	10 MIN	75					450			
	10MIN	75					450			
	10 MIN	75					450			
	10 MIN	75					450			
	10 MIN	75					450			

Depth of hole
Depth of topsoil
Diameter of hole



LOT 4

Depth (m)	Legend	Soil Symbol	Soil Description	Water Level	Vane Shear Strength maximum/residual corrected kPa	Soil Sensitivity	Sample Number	Other Tests
0 - -0.2 -			TOPSOIL					
-0.5 - -			LIGHT BROWN SILT CLAY					
- -1 - -1.2 -			ORANGE CLAY LOAM					
-1.5 - - -1.8 - -2 - - - - -2.5 - - - -								
-3 - - -3.3								

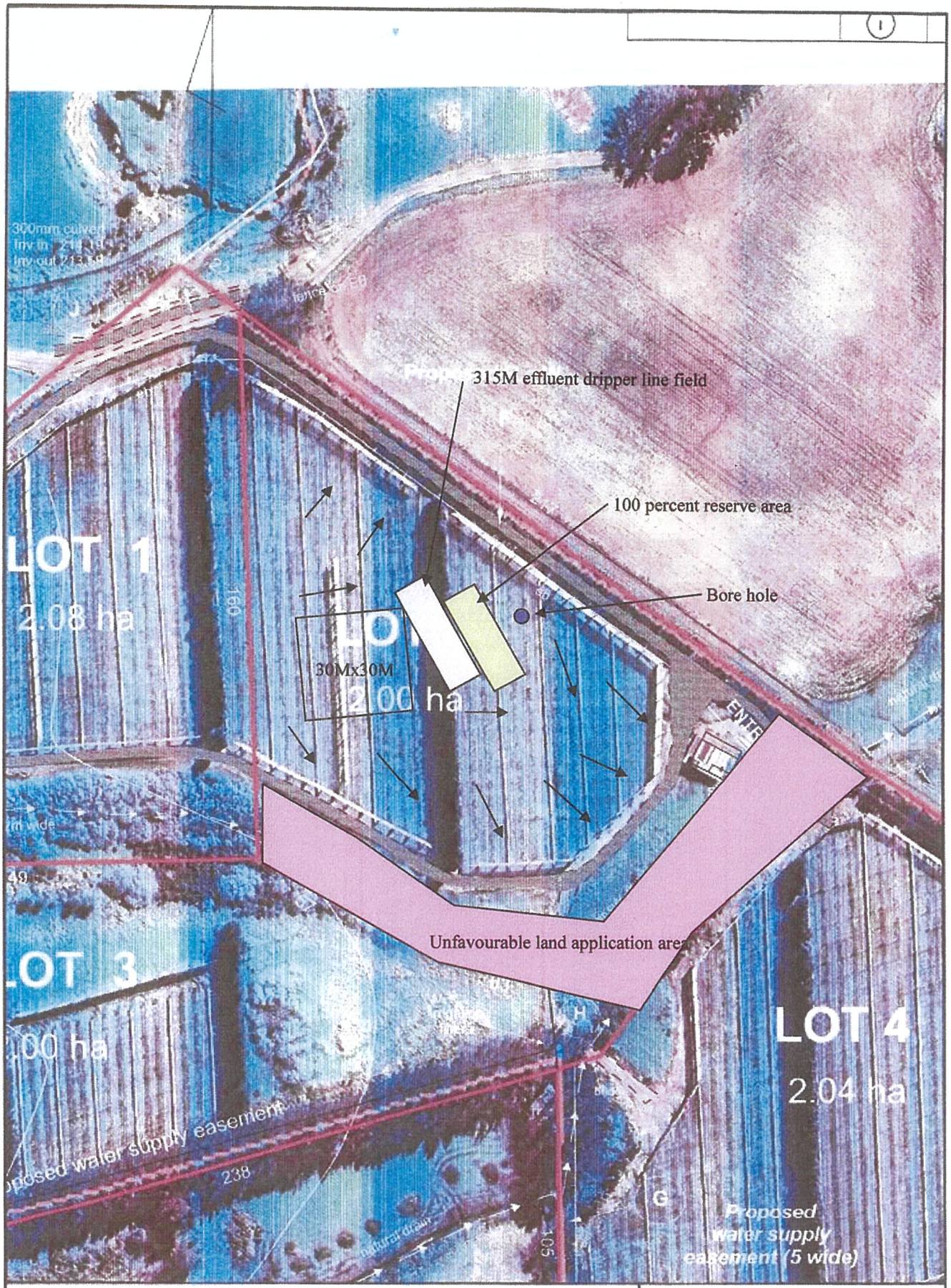
Remarks:

Plenty of topsoil

Topsoil		Sand	
Fill		Gravel	
Clay		Peat	
Silt		Rock	

Lot 4

LOT 5


315M effluent dripper line field
100 percent reserve area
Bore hole
30Mx30M
2.00 ha
LOT 1
2.08 ha
Unfavourable land application area
LOT 4
2.04 ha
Proposed water supply easement (5 wide)
0 15 30 45 60 75 150
1 : 1500 @ A4
DONALDSONS
REGISTERED LAND SURVEYORS
LOT 5
REF: 8462

LOT 5

Client:
Job:
Location:
Augerhole No.:
Drilling Method:

REF:
Logger:
Date:
Page:
Checked:

PERCOLATION TEST -GRAPH SHEET

Client: Jatt Farmers
Job:
Location: Pungaere Rd, Kerikeri

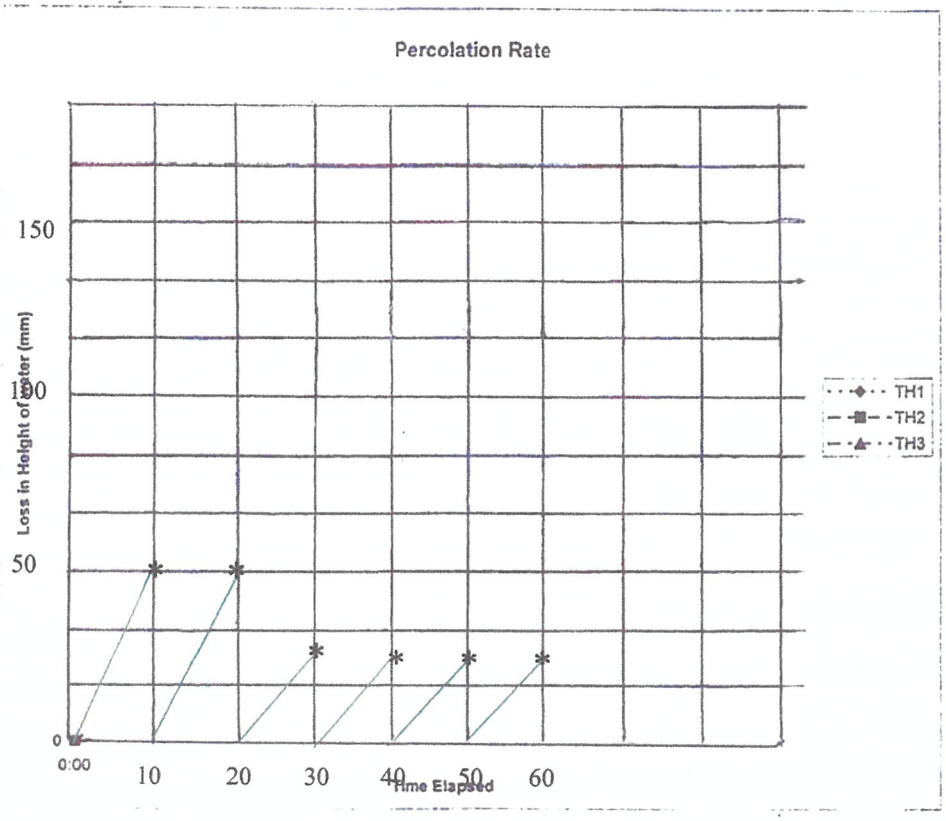
Ref.:
Report No.:
Page:

Tested by: STEVE WOOD
Date:

Presoaking conditions: 30 MIN
Weather conditions prior: WET

Time	Time elapsed	Loss in height of water TH1	TH2	TH3	TH4		Percolation Rate (mm/hr) TH1	TH2	TH3	TH4
	10 MIN	50					300			
	10 MIN	50					300			
	10MIN	25					150			
	10 MIN	25					150			
	10 MIN	25					150			
	10 MIN	25					150			

Depth of hole
Depth of topsoil
Diameter of hole



LOT 5

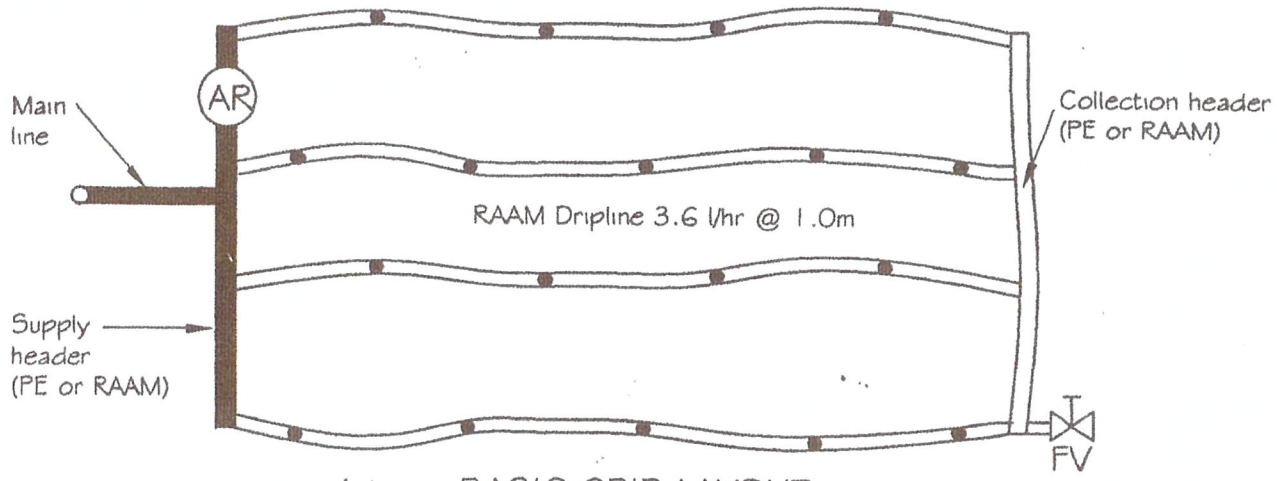
Depth (m)	Legend	Soil Symbol	Soil Description	Water Level	Vane Shear Strength maximum/residual corrected kPa	Soil Sensitivity	Sample Number	Other Tests
0 - -0.2 -			TOPSOIL					
-0.5 - - -			LIGHT BROWN SILT CLAY					
-1 - -1.2 -			YELLOW CLAY LOAM					
- -1.5 - - -1.8 - -2 - - - - -2.5 - - - - -3 - - -3.3								

Remarks:

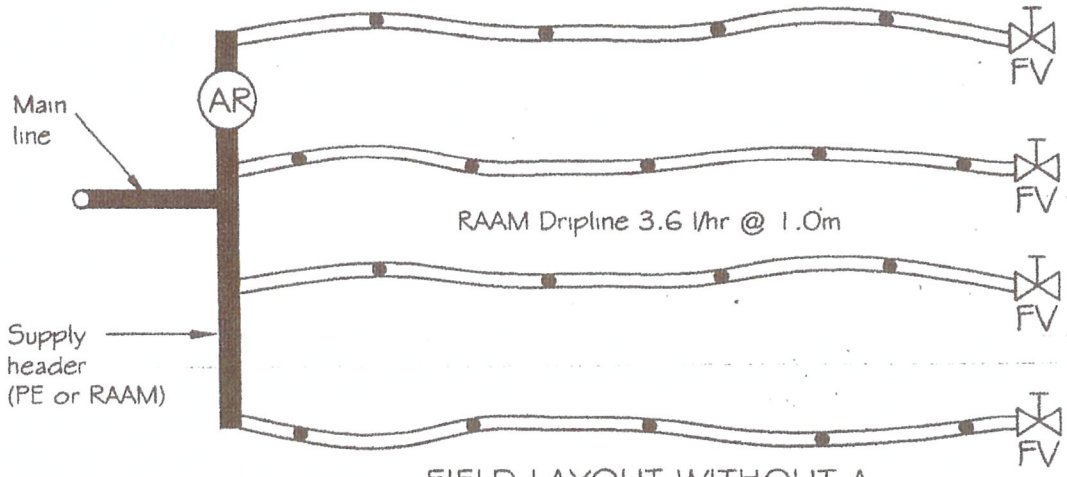
Plenty of topsoil

Topsoil		Sand	
Fill		Gravel	
Clay		Peat	
Silt		Rock	


Lot 5



BASIC GRID LAYOUT



FIELD LAYOUT WITHOUT A COLLECTION HEADER PIPE

AR — Air / Vacuum Release Valve

FV — Flushing Valve

	ON-SITE EFFLUENT DISPOSAL TYPICAL FIELD LAYOUTS Trickle Irrigation	Ref:	Sheet:
		Scale: NTS	Draw
		Date	Check

Lot 1
DP 538112

Lot 3
DP 505563

Lot 2
DP 209487

Lot 2
DP 168103

existing accessway to be upgraded as required

5.50

existing concrete entranceway

14.10

new concrete widening 15.0 radius

existing power and chorus to be relocated or undergrounded consult with chorus and top energy prior to works

new concrete widening 9.0 radius

existing PW-66 chevron to remain

existing overhead chorus

Pungaere Road (sealed)

existing overhead power

widen road, seal existing entrance to bdy

reallign water table as required

reallign water table as required

remove vegetation as required to meet required sight distance Ref: FNDC engineering standards 2023 Sheet 4

Section 47 Blk XII Kaeo SD

0 3 6 9 12 15 30

Plan for Resource Consent Purposes only
Southern Widening in accordance with
FNDC Engineering Standards 2023 - Sheet 21

Area of concrete (northern side): 76m²
Area of seal (southern side): 153m²

DONALDSONS
REGISTERED LAND SURVEYORS

Lot 3 DP 505563 - Proposed Vehicle Crossing Upgrade and Local Widening

Contour interval : 0.50
Scale @ A3 : 1:300
Date : 02/09/2024

REF : 8462

Top Energy Limited
Level 2, John Butler Centre
60 Kerikeri Road
P O Box 43
Kerikeri 0245
New Zealand
PH +64 (0)9 401 5440
FAX +64 (0)9 407 0611

4 September 2024

Bob Donaldson
Donaldsons Surveyors Limited
PO Box 211
KERIKERI

Email: bob@donaldsons.net.nz

To Whom It May Concern:

RE: PROPOSED SUBDIVISION
Jatt Farmers Limited. 682 Pungaere Road, Kerikeri Lot 3 DP 505563.

Thank you for your recent correspondence with attached scheme plans.

Top Energy's requirements for this subdivision are ni. Costs to make power available to could be provided after application and an on-site survey have been completed.
Link to application: Top Energy | Top Energy.

In order to get a letter from Top Energy upon completion of your subdivision, a copy of the resource consent decision must be provided.

If you have any further queries, please do not hesitate to contact the writer.

Yours sincerely

Aaron Birt
Planning and Design
T: 09 407 0685
E: aaron.birt@topenergy.co.nz

EXISTING EASEMENTS

Purpose	Shown	Burdened	Benefited
Right of way Right to convey water, electricity, telecommunications & computer media	Ⓐ	Lot 2	Lots 1 & 2 DP 505563 EI 10835340.3

PROPOSED EASEMENT

Purpose	Shown	Burdened	Benefited
Right of way	Ⓙ	Lot 1	Sec 75 SO 49029 Lot 2 DP 209487

CONDITIONAL EASEMENTS

Purpose	Shown	Burdened	Benefited
Right of way Right to convey water, electricity, telecommunications. Right to drain water	Ⓐ	Lot 2	Lots 1, 3, 4, 5.
	Ⓑ	Lot 2	Lots 1, 3, 4, 5.
	Ⓒ	Lot 1	Lots 3, 4, 5.
	Ⓓ	Lot 1	Lots 4, 5.
	Ⓔ	Lot 5	Lot 4
	Ⓕ	Lot 1	Lot 3
Right to convey water	Ⓖ	Lot 4	Lots 1, 2, 3. 5
	Ⓗ	Lot 3	Lots 1, 2, 4. 5
	Ⓘ	Lot 3	Lots 1, 2.

Sec 75
SO 49029
NA58D/549
KM & SC Lupi

LOT 1
2.08 ha

LOT 2
2.71 ha
(2.00 net)

LOT 3
2.00 ha

LOT 4
2.04 ha

LOT 5
2.00 ha

Proposed R.o.W
8.0 wide
Ⓒ

Proposed R.o.W
Ⓓ 8.0 wide

Proposed R.o.W
Ⓔ

Proposed R.o.W
Ⓑ

Existing R.o.W.
Ⓐ

ENTRY 2
ENTRY 3
ENTRY 4

300mm culvert
Inv in 214.19
Inv out 213.58

300mm culvert
Inv in 227.55
Inv out 227.21

shed
12m²

200mm culvert
Inv in 223.62
Inv out 223.24

150mm culvert
Inv in 224.37
Inv out 223.82

natural drain 1m - 2m wide

400mm culv. xing
Inv in 211.00
Inv out 210.98

300mm culvert
Inv in 209.72
Inv out 209.64

natural drain

Shed

Irrigation filters
Ⓗ

bridge

Proposed water supply easement

Ⓘ

Ⓖ ***Proposed water supply easement (5 wide)***

Existing Water Supply easement GN C021731.1 (SO 62842) Kerikeri Irrig Co

KIC Irrigation valve & meter

200mm culvert
Inv in 264.93
Inv out 264.12

2
DP 209487

2
DP 505563

1
DP 505563

2
DP 153221

2
DP 201264

1
DP 201264

2
DP 168103

Existing crossing

refer to DP 95258 & DP 209487

Water supply easements in gross

Ⓔ

natural drain

SW gully

SW gully

fence

fence on bdy

gate

pp entry

Pungaere Road

sealed

eb

22 fence on EB

327 160 217 74 115 148 149 57 63 230 220 238 105 143 134 240 69 80 250 240 230

0 25 50 75 100 125 250

Scale @ A3 - 1 : 2500

Applicant - Jatt Farmers Limited
Title Record - 763512
Total Area - 10.8250 ha

DONALDSONS
REGISTERED LAND SURVEYORS

LOTS 1 - 5 BEING A PROPOSED SUBDIVISION OF LOT 3 DP 505563

Contour interval : 10m
28 October 2024
Ref 8462
file 8462b Scheme 5 lots rjd B&W.mjo

EXISTING EASEMENTS

Purpose	Shown	Burdened	Benefited
Right of way Right to convey water, electricity, telecommunications & computer media	Ⓐ	Lot 2	Lots 1 & 2 DP 505563 EI 10835340.3

PROPOSED EASEMENT

Purpose	Shown	Burdened	Benefited
Right of way	Ⓙ	Lot 1	Sec 75 SO 49029 Lot 2 DP 209487

CONDITIONAL EASEMENTS

Purpose	Shown	Burdened	Benefited
Right of way Right to convey water, electricity, telecommunications. Right to drain water	Ⓐ	Lot 2	Lots 1, 3, 4, 5.
	Ⓑ	Lot 2	Lots 1, 3, 4, 5.
	Ⓒ	Lot 1	Lots 3, 4, 5.
	Ⓓ	Lot 1	Lots 4, 5.
	Ⓔ	Lot 5	Lot 4
	Ⓕ	Lot 1	Lot 3
Right to convey water	Ⓖ	Lot 4	Lots 1, 2, 3. 5
	Ⓗ	Lot 3	Lots 1, 2, 4. 5
	Ⓘ	Lot 3	Lots 1, 2.

300mm culvert
Inv in 214.19
Inv out 213.58

Proposed R.o.W
8.0 wide
D

Proposed R.o.W
E

fence on EB

LOT 1
2.08 ha

LOT 5
2.00 ha

Sec 75
SO 49029
NA58D/549
KM & SC Lupi

300mm culvert
Inv in 227.55
Inv out 227.21

shed
12m²

200mm culvert
Inv in 223.62
Inv out 223.24

Shed

ENTRY 4

natural drain

300mm culvert
Inv in 209.72
Inv out 209.64

150mm culvert
Inv in 224.37
Inv out 223.82

F

natural drain 1m - 2m wide

400mm culv xing
Inv in 211.00
Inv out 210.88

Proposed R.o.W
8.0 wide
C

ENTRY 3

LOT 3
2.00 ha

LOT 2
2.71 ha
(2.00 net)

Irrigation filters

H

bridge

LOT 4
2.04 ha

I Proposed water supply easement

G *Proposed water supply easement (5 wide)*

ENTRY 2

gate

Existing Water Supply easement GN C021731.1 (SO 62842) Kerikeri Irrig Co

KIC Irrigation valve & meter

B
Proposed R.o.W

2
DP 209487

2
DP 505563

1
DP 505563

Existing crossing

refer to DP 95258 & DP 209487

Water supply easements in gross

2
DP 153221

A
xisting R.o.W.

SW gully

SW gully

200mm culvert
Inv in 264.93
Inv out 264.12

fence

fence on bdy

2
DP 168103

pp entry

Pungaere Road

sealed

2
DP 201264

DP 201264

Applicant - Jatt Farmers Limited
Title Record - 763512
Total Area - 10.8250 ha

0 25 50 75 100 125 250

Scale @ A3 - 1 : 2500

DONALDSONS
REGISTERED LAND SURVEYORS

LOTS 1 - 5 BEING A PROPOSED SUBDIVISION OF LOT 3 DP 505563

Contour interval : 10m
28 October 2024
Ref 8462
file 8462b Scheme 5 lots w image.mjo