

**Technical memorandum for an application for subdivision consent
under the Resource Management Act 1991 in respect of 25 Punawaitai
Road, Pourerere Beach**

Ruataniwha Street,
PO Box 127, Waipawa 4240
New Zealand

Phone: 06 857 8060
Fax: 06 857 7179

info@chbdc.govt.nz
www.chbdc.govt.nz

To: Ryan O'Leary, Planning Manager, The Property Group

From: Iain Lachlan Grant, Director, Landvision Limited

1. Application details

Applicant's name: Paonui Point Limited (**Applicant**)

Application number: RM220003

Activity type: 55 lot subdivision (described in more detail below)

Site address: 25 Punawaitai Road, Pourerere Beach, legally described as Lot 1 DP 571994 & Lot 7 DP 571994; Lot 22 DP 571994 & Lot 2 DP 564721 (**Property**)

2. Introduction

Qualifications and relevant experience

3. I have the following qualifications and experience relevant to this assessment:

- a. I hold a Masters of Agricultural Science with honours (specialising in pedology, land resources, erosion processes and soil mechanics) from Massey University, Palmerston North. I also hold a Bachelor of Agricultural Science (specialising in soils, nutrient management, agricultural engineering and farm management) from Massey University.
- b. From 2005 to present I have worked as the director of the land management consultancy company LandVision Ltd specialising in soil, land resources and LUC mapping, whole farm planning, effluent and nutrient management, productive yield gap assessments, and sustainable land resource management. I am also conversant in farm systems. To date LandVision Ltd has soil and LUC mapped more than 1.2 million hectares of farmland for farm and environmental planning on dairying, sheep and beef, horticulture, gardening, and forestry properties throughout New Zealand.
- c. As part of LandVision Ltd I have been involved in land resource mapping and farm planning at the paddock scale for some 60 properties covering around 39,000 ha in the Central Hawkes Bay district of which about half the properties are in the vicinity of the proposed subdivision.

- d. In 2018 I was commissioned by the CHBDC to determine the areas of highly productive and highly versatile land that should be included in their proposed District Plan.
- e. I have been involved in the preparation of a dozen land productivity reports as part of the NPS for highly productive land within the Tasman, Manawatu, and Hawkes Bay regions.

4. Overview and scope of technical memorandum

- 4.1. The Applicant has applied for a resource consent to subdivide the property into:
 - a. 48 allotments suitable for residential development plus balance lot;
 - b. 3 lots for shared open space;
 - c. 1 lot for stormwater detention and treatment; and
 - d. 2 lots for shared access.
- 4.2. My technical memorandum assesses the effects of the Application on the productive capacity of the land and its soils to assist the preparation of the Central Hawkes Bay District Council's (**Council**) reporting planner's report under s 42A of the RMA and will cover the following matters:
 - a. The application assessment relative to the NPS for Highly Productive Land.
- 4.3. In preparing this technical memorandum, I have reviewed the following documents relevant to the Application:
 - a. Applicant's resource consent application (**Application**), and in particular:
 - i. The Goodman Rural report titled Pourere Development Residential Beach Sites, and dated 20 October 2022 (**Goodman Report**);
 - ii. The Applicant's Planning Assessment of the Application against the National Policy Statement for Highly Productive Land (**NPS-HPL**) received by Council 27 March 2003 (**Planning Assessment**);
 - b. the National Policy Statement for Highly Productive Land (**NPS-HPL**).

5. Executive summary

- 5.1. The proposed subdivision area is all classified as class 3 land (LUC unit 3w1) and consequently is subject to the NPS-HPL. The Applicant's Planning Assessment states that the proposed subdivision satisfies the criteria in clause 3.8(1) of the NPS-HPL and is therefore enabled, however the Goodman Report states there will be a loss of 4.5% in production (carrying capacity) because of the subdivision. I calculate the loss of carrying capacity to be higher at 5.9%. Clause 3.8(1)(a) of the NPS-HPL requires t the overall productive capacity of the site to be retained. A loss does not achieve this.
- 5.2. In my view the information submitted as part of the application is not sufficiently comprehensive to demonstrate that the proposal will retain the overall productive capacity of the site. To do this, I consider that the Applicant would need to :

- a) Show that the productive potential of the 17.87 ha that will be lost as a result of the subdivision can be absorbed into the remaining land.
- b) Detail any management changes required to achieve this.
- c) outline how the conclusion that the reduction in both carrying capacity and economic farm surplus is not significant.

5.3. Based on the information that I have reviewed and my own observations of the Property, I consider that the proposal is unlikely to satisfy all the relevant criteria in clauses 3.8 and 3.10 of the NPS-HPL.

6. Overview of Application

6.1. The Application describes the subdivision proposal in detail, however what I consider relevant to my area of expertise is the extent of the subdivision rather than the individual allotment sizes or scheme plan details. The proposed area of development is 17.87 ha and I consider this to be the relevant area of highly productive land as assessed by the applicant.

7. Reasons for subdivision consent: impact on highly productive land

7.1. I understand that the subdivision proposal requires consent as a discretionary activity pursuant to rule 9.9.4 of the Operative Plan as it is unable to comply with all relevant subdivision performance standards in standards 9.10(1)(a)-(i) of the Operative Plan.

8. Statutory considerations

Operative Plan

8.1. The Operative Plan for subdivision in the Rural Zone refers to lot size, lot division, subdivision design, property access, natural hazards, water supply, storm water disposal, sanitary disposal, trade waste disposal, vegetation and landscape, easements and building locations. These are all outside my area of expertise.

Proposed Plan

8.2. With respect to my area of expertise, the Strategic Direction - Rural Land Resource section of the Proposed District Plan contains objectives and policies pertaining to highly productive land, which is identified by reference to the definition of highly productive land in the NPS-HPL.

NPS-HPL

8.3. The purpose of the NPS-HPL is to protect highly productive land from inappropriate land use and subdivision. Because the proposed subdivision contains class 3 land the Applicant must demonstrate that the proposal is enabled by the NPS-HPL, and this question is the primary focus of my technical assessment.

9. Site locality and description of the environment relevant to highly productive land

9.1. The Application records that the 376.7 ha property is located at 25 Punawaitai Road, Pourerere Beach and the proposed subdivision area is 17.87 ha.

Field inspection

- 9.2. I undertook a field inspection at the proposed subdivision site on the afternoon of the 22 May 2023. As part of this visit one soil pit on the 3w1 flats was dug to confirm the soil type present.

LUC mapping and classification of the Property and its surrounds

- 9.3. New Zealand adopted the Landuse Capability Classification (**LUC**) system in the mid-1950s for the purpose of soil conservation. Since this time the whole of New Zealand has been mapped between 1:63,000 and 1:50,000 scale and the system are commonly used for both regulatory planning by councils and farm planning throughout the country, including the NPS-HPL.
- 9.4. The LUC of the Southern Hawkes Bay – Wairarapa Region was completed in 1985 (Noble 1985) at a 1:50,000 scale. At a 1:50,000 scale one observation point is taken every 25 ha. The Central Hawkes Bay District Council region has about 83,000 ha of LUC classes 1 to 3 land as mapped by the NZLRI at the regional scale.
- 9.5. At the paddock scale mapping (i.e., 1:7,000 scale) there is one observation point every 0.6 ha.
- 9.6. Figure 1 in Appendix 1 to this memorandum shows the LUC distribution of the proposed subdivision area, the whole property, and the surrounding land. This shows that the New Zealand Land Resource Inventory (**NZLRI**) has mapped the proposed subdivision area as 3w1 land, which is relatively flat land formed from alluvium. I consider that the entirety of the proposed subdivision area appears to fall into the 3w1 LUC unit.
- 9.7. The Goodman Report has used the regional scale NZLRI map (1:50,000 scale). However, on closer examination of the LUC unit boundaries on the regional LUC map I have identified that there are discrepancies between the map boundaries and the actual boundaries, as shown in Figure 2 in Appendix 1. Mapping at a paddock scale (1:7,000) would most likely show up different LUC units or their extents. This may seem irrelevant to the proposed subdivision area as it is all 3w1 land, but it is more accurate when calculating the ‘yield gap’ of the property and whether the productivity of the removal of 17.87 ha of class 3 land can be offset over the remaining area.
- 9.8. The remaining areas of the property are made up of a combination of 6e3 and 6e8 land (both mudstone LUC units that are prone to soil slip and earthflow erosion and the difference between the two is the slope angle and length are greater on the 6e8 land). Along the coastal belt there are areas of 7e8 land that are prone to severe deep seated earth flow erosion. The remaining property also contains large areas of 3w1 land.
- 9.9. The neighbouring properties have similar landforms with the hill country being formed from mudstone and dominated by earthflow or soil slip erosion. The wet flats are formed from alluvium. There may be areas of heavy downlands where the contour allows for cultivation. Typically, this country is described as strong hill country that is most suited to sheep and beef farming.

Property’s soil characteristics

- 9.10. The NZLRI has classified the dominant soil type at the property as Hastings silt loam. This soil has a wetness limitation even after drainage due to finer material in the subsoil restricting drainage. This is accentuated from the narrow valley system and runoff from the surrounding hill country. The Goodman Report describes the type of soil and properties using generic information obtained from the NZLRI or S-Map. It outlines that the soil is poorly drained with moderate vulnerability of water logging in non-irrigated conditions and has high soil water

holding capacity. Inherently these soils have a high structural vulnerability and a very low N leaching potential, which should be accounted for when making land management decisions.

- 9.11. Following analysis of the soil pit dug during my field inspection, I agree with the description of the type of soil and its properties as described by NZLRI and in the Goodman Report. The topsoil that I observed on site was a silty clay loam, and with no gravels in the subsoil. Typically rooting depth is only down to the fluctuating water table depth and in this case, it is about 35-40 cm as shown by the low chroma mottles. The Goodman Report references roots down to 1m or greater however, based on my observations I consider that this is highly unlikely with a poorly drained soil.
- 9.12. The Goodman Report discusses evidence of water logging, mud and pugging and indicate that this is a consequence of general pastoral farming practices which are constrained around the shoulders of and during the winter because of the soil's poor drainage capacity. In my opinion this reflects the current stocking policy of having 25:75 sheep to cattle ratio, where typically a more sustainable mix on this landscape to avoid pugging and treading damage is more likely 70:30 sheep to cattle and with younger and lighter cattle.
- 9.13. I agree that the property does not have access to water for irrigation and this is important when considering any alternative land uses that require water during the drier summer months.

10. The National Policy Statement for Highly Productive Land 2022

- 10.1. The NPS-HPL came into force on 17 October 2022 and aims to protect highly productive land for use in land-based primary production, both now and for future generations by requiring councils to map and zone highly productive land and manage subdivision, use and development of that land.

Definition of highly productive land

- 10.2. From the date that the NPS-HPL comes into force, and until the mapping of highly productive land in the Hawke's Bay Region becomes operative, I understand that the NPS-HPL applies to all consent applications involving land that meets the "transitional definition" of HPL ie land that as at 17 October 2022:¹
- a. is:
 - i. zoned general rural or rural production; and
 - ii. identified as land use capability class (**LUC**) 1, 2, or 3 land; but
 - b. is not:
 - i. identified for future urban development; or
 - ii. subject to a council initiated, or an adopted, notified plan change to rezone it from general rural or rural production to urban or rural lifestyle.
- 10.3. As noted above, the proposed subdivision area is all classified as class 3 land (LUC unit 3w1), is zoned Rural in the Operative Plan and General Rural in the Proposed Plan, and I am advised that it is not identified for future urban development or subject to a rezoning proposal. Consequently, I understand that the proposal is subject to the NPS-HPL.

¹ Clause 3.5(7).

Relevant clauses within the NPS-HPL

10.4. I have considered the Applicant's Planning Assessment in relation to the NPS-HPL, and understand that Applicant considers that the proposed subdivision meets clause 3.8(1)(a) of the NPS-HPL. However, I understand that the entirety of clauses 3.8 and 3.10 of the NPS-HPL need to be considered, and my technical assessment therefore considers the proposal against the criteria in both clauses.

11. Technical assessment of effects having regard to the criteria in the NPS-HPL

11.1. For the reasons outlined below, I consider that the proposal, based on the information provided, does not satisfy all the relevant criteria in clauses 3.8 or 3.10 of the NPS-HPL.

NPS-HPL Clause 3.8

Clause 3.8(1)(a): whether the overall productive capacity of the site will be retained

- 11.2. The Applicant's Planning Assessment has identified, and I agree, that 3.8(1)(b) and (c) are not applicable. This leaves clause 3.8(1)(a), which requires that the overall productive capacity of the site is retained (i.e., that there is no reduction in productivity).
- 11.3. The Applicant's Planning Assessment states that the proposal meets clause 3.8(1)(a) of the NPS-HPL as it will retain production (productive capacity) of the Property. I disagree, based on the information that the Applicant has supplied, and note that the Planning Assessment's conclusion is not supported by the Goodman Report.
- 11.4. Goodman has assessed the current farm system with and without the proposed subdivision land using the Farmax™ model to determine the production differences for before and after development. There is a stated loss (financial) in production of 4.5%, as represented by the reduction in carrying capacity.
- 11.5. Simple calculations using the economic farm surplus (as this should use the effective area rather than total area) from the tables on Page 11 and 12 of the Goodman Report show that the pre subdivision stocking rate was 3,402 su (9.2 su/ha) and the post subdivision stocking rate: 3,227 su (9.1 su/ha). This shows that the 17 ha that is being removed for the proposed subdivision loses about 175 su (10.3 su/ha). In my opinion these overall stock numbers are realistic for the type of land but possibly at the low end of the spectrum. From a stock carrying capacity this is a reduction in stock units of about 5.1%.
- 11.6. Further, the NZLRI legend indicates that the 'average' carrying capacity of LUC unit 3w1 is 12 su/ha and the potential is about 26 su/ha (to achieve the potential requires drainage, soil fertility, more cropping and improved genetics). In my opinion the potential of 26 su/ha is too high for 3w1 land considering the drainage limitations. About 18 su/ha is more realistic. At 12su/ha, the proposed subdivision would lose about 200 su (5.9% of the current carrying capacity) and at 18 su/ha the property would lose about 320 su.
- 11.7. To demonstrate that the overall productive capacity of the Property will be retained, I consider that the Applicant would need to firstly prove that the loss of modelled stock units can be mitigated on the remaining area of the farm. The Applicant would then need to repeat this analysis using a potential stocking rate for the affected area and whether this can be mitigated against on the remaining area. In addition, the Applicant would need to explain any management changes undertaken to achieve this. If the Applicant cannot demonstrate these matters, then in my view it cannot meet clause 3.8(1)(a) of the NPS-HPL.

11.8. As I do not consider that clause 3.8(1) is satisfied there is technically no need to consider the application against the sub-clauses in clause 3.8(2) (which are only engaged if one or more of the criteria in sub-clause 3.8(1) are met), but for completeness, I comment on the criteria in these clauses below.

Clause 3.8(2)(a): whether the proposal will avoid or mitigate any potential cumulative loss of the availability and productive capacity of the district's highly productive land

11.9. On a district level there is about 83,000 ha of LUC classes 1-3 land of which about 67,000 ha is class 3 land.

11.10. This proposal would result in a loss of availability of 17.82 ha of LUC class 3 land or about 320 su if the potential of the land was realised. My experience from farm planning indicates that most farms have a yield gap of between 5 and 25 percent so the potential cumulative loss across the district should be considered negligible.

Clause 3.8(2)(b): whether the proposal will avoid reverse sensitivity effects on primary production activities.

11.11. The Application briefly discusses reverse sensitivity and proposes to deal with this through covenants on the titles and buffers around the proposed subdivision to separate it from the surrounding farming activities. I do not see reverse sensitivity being an issue based on what is proposed given the adjacent farm systems and residential sites.

Conclusion in relation to clause 3(8)

11.12. For these reasons, based on the information that I have reviewed and my own observations of the Property I do not consider that any of the criteria in clause 3.8(1) are met by the Applicant's proposal. In particular, the Applicant has not demonstrated that the overall productive capacity of the site is retained. Without having done this, the Application is unable to pass through the gateway for further consideration under subclause 3.8(2). I would expect that the loss in productivity from the proposed subdivision could be mitigated against through realising the yield gap on the remaining area of the farm. The applicant needs to demonstrate this. If the applicant can demonstrate this then there will be no cumulative loss to the district.

NPS-HPL Clause 3.10

11.13. I understand that where a subdivision is not enabled by clause 3.8, clause 3.10 prohibits the Council from allowing the highly productive land to be subdivided unless it is satisfied that all three of the tests in clause 3.10 (1)(a)-(c) are met.

11.14. I comment on each of these tests below.

Clause 3.10(1)(a) whether there are permanent or long-term constraints on the highly productive land that mean its use for land-based primary production is not able to be economically viable for at least 30 years

11.15. The Goodman Report states that the land is not suitable for horticulture, and that trees and vines will not grow well and die if they exposed to wet soils for an extended period. It also notes that avocados failed in the district due to wet soils. This is well understood, and it is noted that there are horticultural tree crops that can grow in wet soils, however there are other criteria such as climatic requirements, salt laden winds, water availability, labour, access to market etc that need to be met. For this site the opportunities for horticulture are considered limited.

11.16. The Applicant does not consider forestry as a viable alternative option. From my experience there are many forestry tree species that are suited to wet soils, and it is about matching tree type to the soil conditions. The Goodman Report was also concerned about 'pine' having a detrimental effect on the community from pollen. I am not aware of any rules restricting forestry due to pollen. Further to this there is nothing to stop the Applicant from planting up the remaining land in Pinus radiata for carbon.

11.17. I am therefore not satisfied that the Applicant has demonstrated that there are permanent or long-term constraints on the land that mean its use for land-based primary production is not able to be economically viable for at least 30 years.

Clause 3.10(2)(i) the proposed use avoids significant loss (either individually or cumulatively) of productive capacity of highly productive land in the district

11.18. On a district level there is about 83,000 ha of LUC classes 1-3 land. This proposal would result in a loss of availability of 17.82 ha of LUC class 3 land, or around 0.002 per cent of the total amount of highly productive land in the district. My experience from farm planning indicates that most farms have a yield gap of between 5 and 25 percent so the potential cumulative loss across both the farm and the district levels may be considered negligible, if demonstrated by the Applicant.

Clause 3.10(b)(ii) the proposed use avoids the fragmentation of large geographically cohesive areas of highly productive land

11.19. It is considered that the proposed subdivision layout will avoid fragmentation on the remaining land and potentially the neighbouring property.

Clause 3.10(2)(iii) the proposed use avoids or mitigates, any potential reverse sensitivity effects on surrounding land-based primary production

11.20. Please see my comments above in relation to reverse sensitivity.

Clause 3.10(3) the benefits of the use or development outweigh the long-term costs associated with the loss of highly productive land

11.21. The Goodman Report indicates that the area is severely pugged and is contributing to detrimental water quality effects downstream. It indicates that subdividing the area will remove these effects. It is noted that there are other areas of similar land on the property that will not be subdivided, and current land uses and management will continue with supposedly the same effects.

11.22. In my view the Applicant has not demonstrated that the long term costs (being the lost production potential of the site) have been adequately mitigated or offset, or that the benefits of the use or development of the land for a residential purpose outweigh those costs.

Conclusion

11.23. For the reasons above I consider that the information submitted as part of the application is not sufficiently comprehensive to demonstrate that the proposal will retain the overall productive capacity on the remaining land. To do this, I consider that the Applicant would need to:

- d) Show that the productive potential of the 17.82 ha can be absorbed into the remaining land.

- e) Detail any management changes required to achieve this.
- f) outline how the conclusion that the reduction in both carrying capacity and economic farm surplus is not significant.

11.24. Based on the information that I have reviewed and my own observations of the Property, I consider that the proposal in its current form does not satisfy all the relevant criteria in clauses 3.8 or 3.10 of the NPS-HPL.

Appendix 1

Figure 1. NZLRI LUC classification beyond the property boundary.

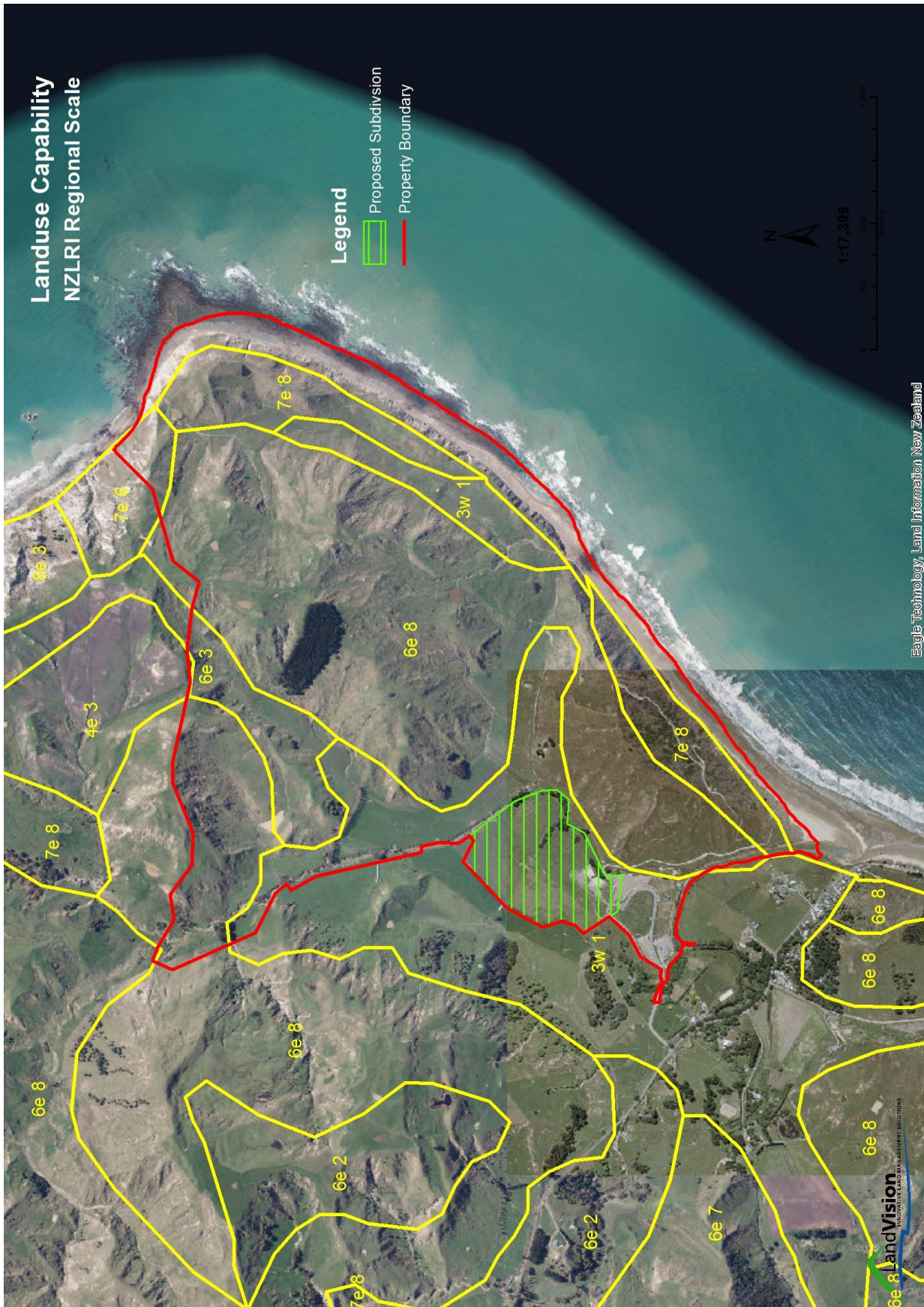


Figure 2. An example of the NZLRI polygon discrepancies from 1:50,000 scale information being used for paddock scale analysis.

