

**BEFORE THE HEARING COMMISSIONERS
AT HAMILTON**

IN THE MATTER of the Resource Management Act 1991
("the Act")

AND

IN THE MATTER of the hearing of submissions on The Proposed
Waikato District Plan - Hearing 25: Tuakau
Zoning

**STATEMENT OF REBUTTAL EVIDENCE BY LUCY CLARKE DEVERALL
FOR HORTICULTURE NEW ZEALAND**

3 MAY 2021

QUALIFICATIONS AND EXPERIENCE

1. My full name is Lucy Clarke Deverall. My qualifications and experience are set out in my statement of evidence to the Hearing 18 Rural Zone.

PURPOSE AND SCOPE OF REBUTTAL EVIDENCE

2. I have read the section 42a report Hearing 25: Zone Extents Tuakau by Chloe Trenouth for Waikato District Council (WDC). The report rejects Horticulture New Zealand's (HortNZ's) submission to retain the Rural zoning at Buckland Road and rezone land at Dominion Road from Rural to Residential zone.
3. In discussing whether an alternative land area is suitable for urban development Ms Trenouth states that topography, landscape and geotechnical constraints make development "more difficult and therefore more expensive" (para 304).
4. Further on in the s42a report, the author acknowledges the concerns raised by HortNZ but concludes that the growth areas have already been identified within the Tuakau Structure Plan (TSP), "and therefore a trade-off has been made in this location that the need for growth has priority" (para 421).
5. Ms Trenouth then recommends that the land at Buckland Road (the subject land) be rezoned proposed Residential to Future Urban Zone. Ms Trenouth states that this addresses HortNZ's submission point.
6. The purpose of this rebuttal evidence is to highlight that in rezoning the Buckland Road land for urban development, the "trade-off" being made is the loss of a finite soil resource that is critical to food supply. It is the position of HortNZ, and my opinion, that this trade off and the true value of the highly productive land, has not been adequately considered by technical experts and decision-makers to-date.
7. To assist this understanding, I provide a high level overview of the productive capability of the subject land and highlight the values that HortNZ believe should be considered when considering the rezoning of high class soils for urban development. This assessment is supported in the statement provided by Mr Bharat Bhana of Hira Bhana (Attachment A).

COMMENTARY

8. High class soil is typically flat and free of hazards. High class soil in proximity to urban centres is essential for horticultural activities to ensure freshness and quality. However, due to topography, lack of hazards and proximity, this land is also identified as cheaper and easier to develop for urban activities.
9. The s42a report references the geotechnical, landscape and Three Waters technical reports for the TSP. Neither the geotechnical or the

Three Waters reports identify alternative land areas as being impossible or dangerous to develop. Simply, that detailed engineering assessment and additional mitigations would be required.

10. I acknowledge that not all high class soils are suitable for productive activities. There are a number of factors that contribute to highly productive land and these should be taken into account when considering rezoning of high class soils to an urban use. These factors are summarised in Paragraph 22 of my Industry Statement to Hearing 18¹ and align the detailed discussion in Dr Hill's evidence for WDC to Hearing 18².

What is the value of high class soil/highly productive land?

11. It is HortNZ's position that the value of high class soils sits in the productive capability to produce quality fresh food. Additionally, it is also recognised that high class soils are unique ecosystems that are of high environmental value. Land that is identified as LUC 1 – 3 is known to be highly productive³ ⁴. The natural capital of these soil types contributes to supporting rural character (in sustaining production), reducing carbon emissions, and managing water quality⁵.
12. When applying validated good management practices (such as cultivation techniques, minimizing periods of bare soil, rotating crops and often using engineered soil conservation structures such as sediment ponds) agriculture can occur in a way that supports and maintains the natural capital of these soils⁶.
13. Conversely, once this soil is developed for urban activities, it is irreversibly lost to the ecosystem.⁷

Is the subject land highly productive?

14. The subject land around Buckland Road is identified on NZGAP GIS layers as LUC 2. LUC 2 is recognised as being a high quality soil which is most productive for agriculture⁸.

¹ https://wdcsitefinity.blob.core.windows.net/sitefinity-storage/docs/default-source/your-council/plans-policies-and-bylaws/plans/district-plan-review/hearings/hearing-18/submitter-evidence/hearing-18---rural---lucy-deverall-for-hortnz.pdf?sfvrsn=80b38dc9_2

² https://wdcsitefinity.blob.core.windows.net/sitefinity-storage/docs/default-source/your-council/plans-policies-and-bylaws/plans/district-plan-review/hearings/hearing-18/section-42a/sub-hearing-18---rural-appendix-6---a-review-of-high-class-soils-in-the-waikato-district.pdf?sfvrsn=fc5f8ac9_2

³ Ministry for the Environment & Stats NZ (2021). New Zealand's Environmental Reporting Series: Our land 2021. Available from environment.govt.nz and www.stats.govt.nz

⁴ Fiona Curran-Cournane, Melanie Vaughan, Ali Memon, Craig Fredrickson. Trade-offs between high class land and development: Recent and future pressures on Auckland's valuable soil resources. July 2014

⁵ MfE & Stats NZ 2021; Fiona Curran-Cournane et al, 2014

⁶ MfE & StatsNZ, 2021.

⁷ MfE & Stats NZ 2021; Fiona Curran-Cournane et al, 2014

⁸ Ibid.

15. The land is located in an area with a temperate climate (frost-free, with the right amount of sunshine, rainfall and wind) that supports year round production of fresh vegetables⁹.
16. The land is irrigated providing reliable access to quality water. Being in Tuakau, there is good access to transport routes, labour and local markets.
17. The productivity of the land is also evident in the volumes of produce. For example, over an area of 23ha, Hira Bhana alone took to market over 100 tons of onions per hectare and the same for potatoes in 2020 (Attachment A). This number only reflects what was sold and not the volume harvested, so the actual volume of production is likely to be higher.
18. The local regulatory regime is generally supportive. The Waikato Regional Plan provides a consented pathway for water take and for the discharges to land and water associated with commercial vegetable production. Under the Operative Waikato District Plan and PWDP, horticulture is a permitted activity within the Rural zone.
19. Despite this regime and the proportionally high volume of high class soils in the district, it is not guaranteed that these horticultural operations would be able to relocate and/or still provide the same contribution to local food security.
20. Waikato Regional Council's Plan Change 1 only provides for limited expansion within defined area thresholds in specified sub-catchments. The thresholds are calculated on available LUC 1 and 2 (that is not already used for vegetable production or in urban development) and water quality in each sub-catchment. However, there is no guarantee that the land is accessible for conversion (requiring landowner willingness to sell or lease) or that it is otherwise suitable (being subject to the same temperate climate or having access to suitable infrastructure such as water, transport routes, labour or markets).

Environmental Value

21. LUC 1-2 are identified as being the highest quality soils and constitute only 5% of New Zealand's land mass making it a finite resource¹⁰. As discussed in paragraphs 11 and 12, this land is of a unique soil ecology and is identified as being critical to managing local and national environmental footprints.
22. Given the limited supply of these soils and limited ability to relocate, it is critical to retain this land to enable effective rotation. Rotating different crops on a parcel of land is critical to soil and plant health. Failure to do this properly increases the risk of disease and reduces the quality and yield produced.

⁹ Deloitte. New Zealand's Food Story, The Pukekohe Hub. August 2018

¹⁰ Fiona Curran-Cournane et al, 2014

23. Taking this land out of rotation while maintaining current levels of supply will increase intensity of production on remaining land and reduce the ability to rotate as required.
24. Cropping on land of lesser quality reduces the ability of managing the environmental effects of production, such as filtering nutrients and supporting plant uptake of nutrients. Additionally, lesser quality soil reduces the ability to produce the same quality and yield, thereby generating higher application of fertilisers or requiring a greater land area¹¹.

Food security

25. The subject land is located within the Pukekohe Hub. As discussed in the HortNZ submission and the evidence of Jordyn Landers to Hearing 3¹², this hub is critical to New Zealand's food supply. At 4,359ha, it contains some of New Zealand's most fertile and productive land. It contributes to 26% of New Zealand's value of vegetable production and 90% of vegetables grown in the area are retained for domestic supply.
26. To meet future demand for Auckland's projected 2043 population growth (2.3million projected in 2018), the Hub would have to grow 1.2%, every year, for 25 years¹³. This equates to an additional 52ha every year. This does not account for land to support year-round supply to other parts of New Zealand which are also facing growing populations.
27. As already outlined in paragraphs 19 and 20 above, relocation is not a simple or guaranteed solution. The further south production goes in Waikato, the less temperate the climate which impacts yield and the ability to supply year-round. Relocation to other regions, generates issues relating to ease of access to key transport routes and markets (impacting freshness and quality of produce). There is also the potential increase of carbon footprints from increasing transportation. Relocation to lesser quality soil, as discussed, has other environmental implications.
28. The reduction in yield from lesser soils also has implications for food supply. Previous studies in China indicated that shifting intensive cropping to land areas with less productive capacity, could jeopardise self-sufficiency in food supply¹⁴.
29. I believe that food security is a valid consideration when managing natural resources in a way that enables people and communities to provide for their social, cultural and economic wellbeing.

¹¹ MfE and StatsNZ, 2021

¹² https://wcds.sitefinity.blob.core.windows.net/sitefinity-storage/docs/default-source/your-council/plans-policies-and-bylaws/plans/district-plan-review/hearings/hearing-3/submitter-evidence/proposed-district-plan-hearing-3---hortnz_industry-statement_jordyn-landers.pdf?sfvrsn=469e84c9_2

¹³ Deloitte 2018.

¹⁴ Fiona Curran-Cournane et al, 2014

Future Urban Zone

30. The s42a report recommends the land at Buckland Road be rezoned to Future Urban Zone. This does not address our submission point as it does not resolve the issues relating to loss of highly productive land that is critical to food supply. While modelling suggests that this land will not be developed until 2050, there is nothing stopping a plan change or private plan change from initiating development sooner. I note that the Waikato District Long-term Plan is seeking to reallocate funds in order to realise Blueprints which are based on the PWDP zoning.
31. The Future Urban Zone is a clear signal that this land is tagged for development and will encourage growers to stop growing earlier than anticipated. It is also possible for Council to apply urban rates, which would also encourage growers to stop cropping.

Medium Density Residential Zone

32. I support the application of the MDRZ within the district and within Tuakau.
33. The s42a report rightly recommends retaining the proposed zoning of Tuakau Primary School as this cannot be developed for residential purposes. However, in light of clarification around the trade-off's relating to rezoning Buckland Road, I believe consideration needs to be given to whether that potential growth area could be replaced elsewhere in the town.

Lucy Deverall
3 May 2021

**ATTACHMENT A:
Grower Statement – Bharat Bhana, Hira Bhana & Co Ltd**

23 April 2021

Hira Bhana & Co Ltd has been growing vegetables for over 60 years.

Our parents started the business and we four brothers have continued. Today our children are also in the business and are passionate about growing healthy nutritional produce.

We produce vegetables for the domestic and export market. Our portfolio include potatoes, onions, carrots, lettuce, brassica, pumpkin and watermelon.

We crop land in Pukekohe, Tuakau, Harrisville, Buckland and Onewhero.

Land for growing vegetables has been taken for granted over many years. To grow good vegetables, you need elite soils that can sustain over 60 years of production and still produce healthy and nutritious vegetables year in and year out.

Today with pressure coming from housing there seems to be no value put on the land that is essential for food security now and into the future.

Auckland Council and now, Waikato Council are rezoning land that has been rural and used successfully for horticulture successfully over decades.

Our property on Buckland Road, Tuakau is currently proposed to be rezoned residential and now recommended by Council to be future residential. We have been cropping this land for 35 years and it was cropped for vegetables for 40-50 years prior to us.

This land in Tuakau is an integral part of our operation. Last year, across 25ha, we took to market over 100 tons per/ha of onions and about the same for potatoes. More importantly, these high class soils are critical for crop rotation. Crop rotation helps with nitrogen leaching and reduction of diseases. Our next rotation will include lettuce and brassica plants and part of our future rotation is to put in a green crop such as mustard which returns organic matter back into the soil.

This soil is healthy and produces high quality produce. We have invested in irrigation, it is close to key transport routes and with good farming practice (like rotation) this land could continue to be cropped for another 60 -70 years. Hira Bhana is also preparing a Farm Environment Plan which will help maintain the environment and production for future generations.

Once high class soils are lost to housing, they will never be able to produce commercially grown vegetables in the future.

We cannot replace these types of soils as other areas are not suitable for long term cropping.

We produce vegetables especially carrots and potatoes for the whole of New Zealand from late September to January when other production regions are out of season. Our high class soils and areas of frost-free land allow us to plant earlier crops.

We are extremely concerned that once this land is no longer available for cropping, food security, for future generations will be a real threat.

Bharat Bhana