

Before the Independent Hearing Commissioner
Appointed by the Christchurch City Council

Under the Resource Management Act 1991

In the matter of Plan Change 18 (Hendersons Residential Rezoning) to the
Christchurch District Plan

Cashmere Fields

Applicant

Evidence of Stuart John Ford

14 August 2026

Applicant's solicitors:

Sarah Eveleigh | Sarah Schulte
Anderson Lloyd
Floor 2, The Regent Building, 33 Cathedral Square, Christchurch 8011
PO Box 13831, Christchurch 8141; or
DX Box WX10009 Christchurch
p + 64 3 379 0037
sarah.eveleigh@al.nz | sarah.schulte@al.nz

**anderson
lloyd.**

Introduction

- 1 My name is Stuart John Ford.
- 2 I have a Diploma in Agriculture and a Bachelor of Agricultural Commerce from Lincoln University and have undertaken post graduate studies in Agricultural and Resource Economics at Massey University.
- 3 I am a Senior Consultant at The AgriBusiness Group and work as an agricultural and resource economist based in Christchurch. I am a member of the New Zealand Agriculture and Resource Economics Society and the Australia Agriculture and Resource Economics Society. I am also a member of the New Zealand Institute of Primary Industry Management.
- 4 I have spent over forty years as a consultant in the primary industries, with the last twenty five years specialising in agricultural and resource economics and business analysis.
- 5 I have given evidence to District and Regional Council hearings, Special Tribunals to consider Conservation Orders and the Environment Court in my capacity as an agricultural and resources economist.
- 6 My specific experience which relates to the capacity of soils and their value for productive uses relates to the National Policy Statement on Highly Productive Land (**NPS-HPL**) includes my working for both applicants and Councils. I have experience in relation to the productive capacity of elite / highly productive soils in the Auckland District which was gained from my role as a consultant resource economist for HortNZ.
- 7 My extensive experience which relates to the task required in this instance includes:
 - (a) Evidence to the Auckland Council on their Proposed Auckland Unitary Plan for a number of parties.
 - (b) Evidence given on behalf of Auckland Council to the Environment Court in relation to the appeal of the Self Family Trust in regard to a land zoning decision on elite soils.
 - (c) Evidence given to an Auckland Council hearing as to the appropriate zoning of land at Clevedon.
 - (d) Initial report on the productive potential of land owned by Strategic Land Holdings at Waiau Pa.

- (e) Support for Auckland Council in preparing a Section 42A report on a development proposal at Patumahoe South in relation to the productivity of the land.
 - (f) Support for Auckland Council in preparing a Section 42A report on a development proposal at O'Hara Waiuku in relation to the productivity of the land. This case has been appealed to the Environment Court and I have prepared and presented evidence to the Court (Gardon Trust V Auckland Council [2025] NZ EnvC 058).
 - (g) Provision of evidence to the Environment Court on the productive potential of the land known as Sticky Forest adjacent to Wanaka (Breresford v Queenstown Lakes District Council [2024] NZ EnvC 182).
 - (h) Provision of a report on the commercial viability of Rangitane River Park - Kerikeri to be used in a re zoning application.
 - (i) Provision of a report on the agricultural productivity and commercial viability of land at Kairua Road, Tauranga.
 - (j) Provision of a report on the agricultural productivity and commercial viability of land at Maungatautari Road Cambridge for the Arvida Group.
 - (k) Reports on the agricultural productivity and commercial viability of land and their status under the NPS-HPL for many different submitters to the Selwyn District Council.
 - (l) Support for the Waimakariri District Council in preparing a Section 42A report on a development proposal at Ohoka in relation to the productivity and the commercial viability of land.
 - (m) Support for the Ashburton, Timaru, Rangitikei, Hastings, New Plymouth, Western Bay of Plenty and the Waikato Councils as a peer reviewer of NPS-HPL applications.
 - (n) Preparation of reports for various applicants in Northland, Auckland, Waikato, Bay of Plenty, Wellington, Waimakariri, Christchurch City, Selwyn, Timaru, Central Otago, Queenstown Lakes and Dunedin Councils.
- 8 I have prepared a National Policy Statement on Highly Productive Land (NPS-HPL) assessment to a private plan change request (PC18) by Cashmere Fields, seeking to rezone the below sites (the **Site**) from Residential New Neighbourhood (**RNN**) and Rural Urban Fringe (**RUUF**) zones to RNN, excluding the stormwater management areas which will remain RUUF (**the Proposal**):
- (a) 126 Sparks Road (Lot 1 DP 412488)

- (b) 17 Northaw Street (Lot 2 DP 412488)
 - (c) 36 Leistrella Road (Lot 3 DP 412488)
 - (d) 240 Cashmere Road (Lot 23 DP 3217)
 - (e) 236 Cashmere Road (RS 41613)
 - (f) 200 Cashmere Road (Lot 1 DP 547021)
 - (g) 60 Leistrella Road, Part of Lot 406 DP 561520 (Balance Lot 349 as per RMA20213829)
- 9 My full NPS-HPL assessment is attached as Appendix 1. This report supersedes my previous report, submitted as Appendix S to the PC18 request, correcting minor errors in the earlier version.
- 10 In preparing this evidence I have considered the following documents:
- (a) Plan Change Request and Section 32 Planning Assessment. Final Request Cashmere Fields, Private Plan Change Prepared for Cashmere Fields Ltd 511270; and
 - (b) The Officer's Section 42A report

Code of Conduct for Expert Witnesses

- 11 While this is not a hearing before the Environment Court, I confirm that I have read the Code of Conduct for expert witnesses contained in the Environment Court of New Zealand Practice Note 2023 and that I have complied with it when preparing my evidence. Other than when I state I am relying on the advice of another person, this evidence is within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

Scope of evidence

- 12 This evidence provides a summary of my NPS-HPL assessment, addressing:
- (a) The background to the NPS-HPL assessment
 - (b) Land use constraints
 - (c) The proposed Land Use and
 - (d) Assessment of the benefits of the Proposal and the Cost of the loss of HPL.

- 13 The Proposal is described at paragraphs 21 - 42 of the evidence of Jade McFarlane. I rely on that description and only provide further detail where this is necessary for the purposes of my evidence.

Background

- 14 I have assessed whether the rezoning of the Site meets the requirements of NPS-HPL¹ Clause 3.6: Restricting urban rezoning of highly productive land, in response to a request for further information from Christchurch City Council, dated 12 May 2025.

- 15 Clause 3.6 (1) of the NPS-HPL states:

Tier 1 and 2 territorial authorities may allow urban rezoning of highly productive land only if:.....

(c) “the environmental, social, cultural and economic benefits of rezoning outweigh the long-term environmental, social, cultural and economic costs associated with the loss of highly productive land for land-based primary production, taking into account both tangible and intangible values.

- 16 The Site (approximately 25.1 ha) could best be described as being isolated in a small oasis of productive land which is surrounded by a city. There are no productive farming units in close proximity to the land.



Figure 1: LUC Class of the Site (Dark Green is LUC 2, Light Green is LUC 3 and white is unclassified)

¹ MFE (2022): National Policy Statement for Highly Productive land

- 17 The Site, as shown in Figure 1, consists of 16 ha of LUC 2, 6 ha of LUC 3, and 3 ha of unclassified land and therefore 22 ha has an LUC class that meets the interim definition of HPL. For the purposes of this assessment, I have assumed that the Rural Urban Fringe zone is equivalent to the Rural General or Rural Productive zone, and LUC 2 & 3 land within this zone has been assessed as meeting the interim definition of HPL. However, a portion of the 22ha will not be classified as HPL due to its current residential zoning.
- 18 The soils on the site are theoretically suitable for vegetable, arable and a wide range of pastoral land uses. The only constraint that these soils face is poor drainage.

Land Use Constraints

- 19 There are a number of significant constraints which have a bearing on the highest and best land use possible on the site.
- 20 These constraints include:
- (a) the lack of irrigation capability and there being no opportunity to gain that capability, since the Site is situated within the Christchurch West-Melton Groundwater Allocation Zone, which is currently overallocated.
 - (b) exclusion of horticultural land use because of the poorly drained soils and the lack of irrigation water.
 - (c) the limitations on arable use due to the lack of scale, potential reverse sensitivity concerns around the use of machinery on the Site, the lack of irrigation and the transportation of machinery required makes the Site unappealing to existing arable operators.
 - (d) the Site would not be an appealing option for a farmer looking to expand their pastoral productive land due to the lack of scale of the Site which make the costs associated with intensifying too expensive to be justified, reverse sensitivity effects associated with stock, poorly drained soils are unsuitable for large stock over winter and the absence of irrigation.
- 21 Assuming the titles of the seven individual lots could be operated in conjunction, the highest and best use of the land would be for dryland dairy support. However, this would require agreement from all landowners. Without such consensus, the highest and best use of the individual lots would be small-scale lifestyle grazing.

Proposed Land Use

- 22 The Proposal aims to rezone the Site to Residential New Neighbourhood Zone as shown in the Outline Development Plan, which is anticipated to allow for the creation of 246-328 dwellings. Other aspects of the proposed development include a significant area of land to be set aside for stormwater management infrastructure such as stormwater management basins, recreational spaces, and transportation networks.

Assessment of the benefits of the Proposed Rezoned Land and the Cost of the loss of HPL

- 23 As detailed in my report, the benefits of rezoning the Site outweigh the costs of the loss of HPL. In summary:

(a) Environmental:

- (i) Benefits of rezoning include areas outlined for conservation use and curtilage vegetation which should add to the site potential to contribute to carbon sequestration; significant amount of area outlined for conservation use and stormwater basins, which creates open space that will allow for habitat development; water filtration will be enhanced by the development, through the creation of sediment traps within drainage systems; diversion of runoff water from the sections into appropriately sized water stormwater basins will act as a flood mitigation method; change from rural to urban will have the benefit of a reduction in N loss; removal of livestock and fertiliser use on the site will reduce agricultural greenhouse gas emissions; Water quality will benefit from the proposed urban development by the diversion of runoff of water from the sections into stormwater basins; Biodiversity and conservation will benefit from the plantings.
- (ii) Costs of loss of HPL include: potential removal of shelter belts that exist on the site currently would act as a small loss to carbon sequestration; potential removal of the existing shelter belt could result in a loss to habitat support; air quality will be slightly diminished by the conversion from rural land uses to urban development because there will be more urban activity.

(b) Social cultural:

- (i) There are no cultural heritage sites on or near the Site.
- (ii) Benefits of rezoning include increase in the sense of belonging and place on the site with the conversion from rural use to residential. This will house multiple people per household, therefore having a positive

influence on the sense of belonging and place. Walk/cycle routes within the development will also create a pathway for the community to get together and interact; The social fabric of the urban development will be enhanced additional population that this site will provide housing for.

- (iii) Costs of loss of HPL include slight reduction in food production caused by the 25 ha being developed from rural to urban. This will be insignificant given the scale and constraints of the site.

(c) Economic:

- (i) Benefits of rezoning include increased income from multiple sources, including sales, construction, roading and ongoing maintenance; increased employment both from the construction and ongoing maintenance, which will be required on the site. Eliot Sinclair's original plan change request refers to this development supporting around 1,000 full-time equivalent (FTE) years of employment; There will be considerable flow on impacts to the wider community because the proposed development will result in increased expenditure within the local economy.
- (ii) Costs of loss of HPL include the loss of income over a 30 year period would equate to \$393,674 on the basis of consensus between landholders and the site being operated as one or \$160,819 if 11 operated individually; The loss of employment from this area of land, based on the B+LNZ representative farm model, equates to 0.2 employees; While the decrease in inputs sent to processors could potentially impact the district, the volume is so small that any effect on processing companies or their employees is likely to be less than minor.

Response to matters raised in submissions

- 24 I note that in the s42A Officer's report where they respond to the Submissions received – Loss of Rural Land and urban growth (starting at 5.5.14) that while some submissions consider that the broader community benefits of urban expansion outweigh the loss of underutilised rural land whereas others raise concerns regarding the loss of rural land and subsequent limiting of future primary production.
- 25 I agree with the Officer's conclusions that "*The proposal area's constraints mean that its potential to support meaningful or sustained primary production is already significantly limited.*" and that "*I recommend that submissions regarding the loss of rural land and subsequent limiting of future primary production be rejected.*"

Response to matters raised in the s42A report

- 26 I note that in the Section s42A Officers report (from 6.3.37 to 6.3.46) the Officer concludes that *“However, while the land contains soils that are theoretically capable of supporting a range of productive land uses, its productive potential is significantly constrained by the inability to obtain irrigation water, poor drainage characteristics, reverse sensitivity effects arising from the surrounding urban environment, and its limited suitability for integration into larger-scale farming operations.”* and accordingly the economic, social, cultural and environmental benefits of rezoning outweigh the economic, social, cultural and environmental costs of the loss of Highly Productive Land.
- 27 I agree with the statement made at 6.3.46 that *“Overall, the request satisfies the criteria outlined in 3.6(1) and in this circumstance, the urban rezoning of highly productive land may be allowed.”*

Conclusion

- 28 It is my opinion that the environmental, social, cultural and economic benefits of rezoning of the 25 ha along Cashmere and Sparks Road outweigh the long-term environmental, social, cultural and economic costs associated with the loss of highly productive land for land-based primary production and meets the requirements of Clause 3.6 (1) (c) of the NPS-HPL and therefore allows the rezoning.

Dated 14th August 2026

Stuart John Ford

Appendix 1

Assessment of land owned by Cashmere Fields located adjacent to Cashmere and Sparks Road, for its potential to be rezoned under Clause 3.6 of the NPS-HPL

1 Background

Cashmere Fields has requested The AgriBusiness Group to prepare an assessment of whether the rezoning of land adjacent to Cashmere and Sparks Road, Christchurch meets the requirements of Clause 3.6 (1) (c) of the National Policy Statement on Highly Productive Land (NPS-HPL). Note that Clause 3.6 (1) (a) and (b) are addressed in the evidence of Mr Yeoman.

This proposed rezoning is of the following properties which make up the site in total.

- 126 Sparks Road (Lot 1 DP 412488)
- 17 Northaw Street (Lot 2 DP 412488)
- 36 Leistrella Road (Lot 3 DP 412488)
- 240 Cashmere Road (Lot 23 DP 3217)
- 236 Cashmere Road (RS 41613)
- 200 Cashmere Road (Lot 1 DP 547021)
- 60 Leistrella Road, Part of Lot 406 DP 561520 (Balance Lot 349 as per RMA20213829)

This assessment has looked into the productive capability of the site as a whole.

This assessment is under the NPS-HPL² Clause 3.6: Restricting urban rezoning of highly productive land.

Clause 3.6 (1) states “Tier 1 and 2 territorial authorities may allow urban rezoning of highly productive land only if:.....

(c) “the environmental, social, cultural and economic benefits of rezoning outweigh the long-term environmental, social, cultural and economic costs associated with the loss of highly productive land for land-based primary production, taking into account both tangible and intangible values.”

In the Guide to implementation³ it states that “*Clause 3.6(1)(c) requires an assessment of the benefits and costs of rezoning. It is intended to ensure a more robust assessment of benefits and costs across the four wellbeing’s (environment, economic, social, cultural) is undertaken for all urban rezoning proposals on HPL and that this specifically considers long-term benefits and*

² MFE (2022): National Policy Statement for Highly Productive land

³ MFE (2023): National Policy Statement for Highly Productive Land: Guide to implementation.

costs and tangible and intangible values.” And that “Intangible values of HPL should be considered as part of this assessment include:

- *its value to future generations*
- *its finite characteristics and limited supply*
- *its ability to support community resilience*
- *the limited ability of other land to produce certain products.”*

While I understand that the Guide to implementation does not have any legal or legislative standing I am of the opinion that it is able to give me an understanding of the required best practice in addressing the issues.

It is my opinion that this requires that the site should be evaluated to provide the full range of benefits of the proposed subdivision of land that can be weighed up against the full range of costs of the loss of HPL.

The range of both tangible and non-tangible costs and benefits that have been used in this assessment have been taken from the Cost Benefit Analysis⁴ carried out on the NPS-HPL. They are listed in **Table 1**.

Table 1: Costs and Benefits both tangible and non-tangible assessed in this exercise.

Category
Environmental
Carbon sequestration
Support habitat
Water filtration
Flood mitigation
Nutrient
Climate regulation
Air and water quality
Biodiversity conservation
Social / Cultural
Sense of belonging and place
Social fabric
Food security
Spiritual value
Economic
Income

⁴ Market Economics (2020): National Policy Statement – Highly Productive Land. Cost-Benefit Analysis

I am of the opinion that I have the expertise to carry out a qualitative assessment of the benefits of the proposed development as well as the costs of the loss of HPL land as these are assessment techniques which are used in economic assessment. In doing so, I have drawn on my professional experience, and that of my colleagues who are environmental consultants.

1.1 Description of the Site

Figure 1 shows that the site is surrounded by residential housing and small scale blocks. The site is made up of 8 different titles that account for 25.1 ha. Existing residential dwellings are located on Lot 23 DP 3217 and Lot RS 41613.

Residential housing borders the site immediately to the North and East. Immediately to the West there are a range of sized lifestyle blocks and then the Sparks Road Wetland then a small scale vegetable production unit and then intensive housing development which continues to the South as well.

The site could best be described as being isolated in a small oasis of productive land which is surrounded by a city. There are no productive farming units in close proximity to the land.

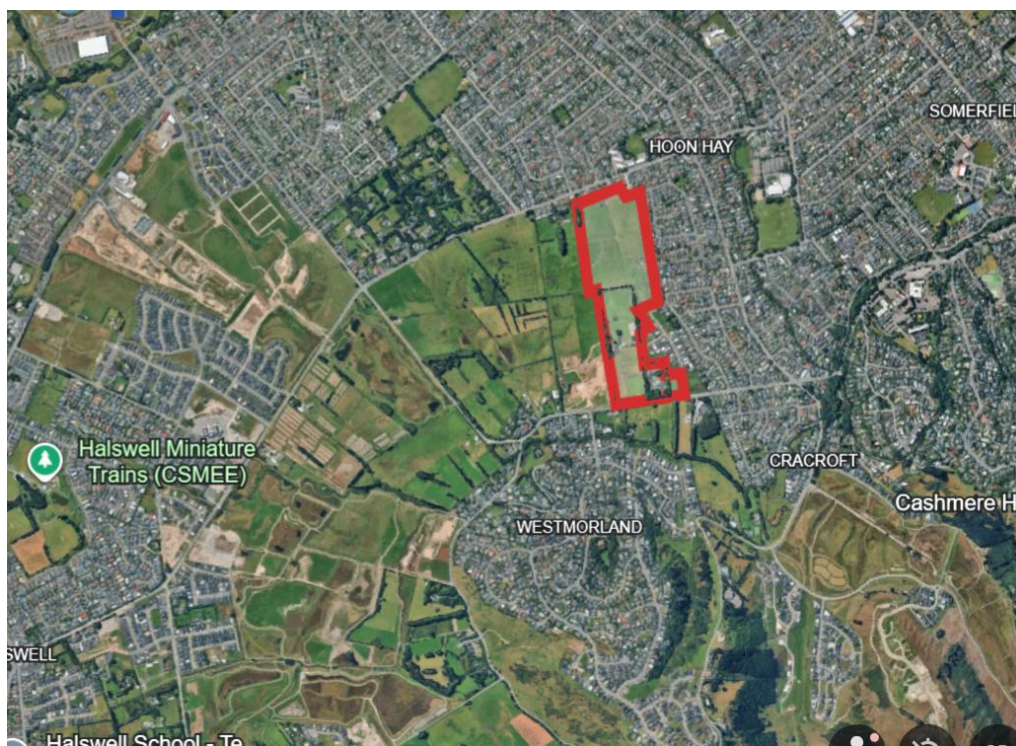


Figure 1: The Site and Its Surrounding Land Uses. (Google Maps 22/12/2026)

1.2 Land Use Capability

Figure 2 is a screenshot from the New Zealand Land Resources Inventory Series (LRIS) Land Use Capability Portal⁵. The site consists of 16 ha of LUC 2, 6 ha of LUC 3, and 3 ha of unclassified land.



Figure 2: LUC Class of the Site (Dark Green is LUC 2, Light Green is LUC 3 and white is unclassified)

In the NPS-HPL, under the default position, all land designated as LUC1, 2, and 3 in the LRIS mapping is deemed to be highly productive land until it is remapped at a finer scale by the Regional Council and the maps are included in the Regional Policy Statement. To date the Regional Council have not remapped the area so we are using the default mapping to classify the land.

However, a portion of the site outlined above is not classified as HPL due to its current residential zoning. This area is represented as the yellow RNN zone within the red-bordered section shown in Figure 3

⁵ https://oureenvironment.scinfo.org.nz/maps-and-tools/app/Land%20Capability/Iri_luc_hpl

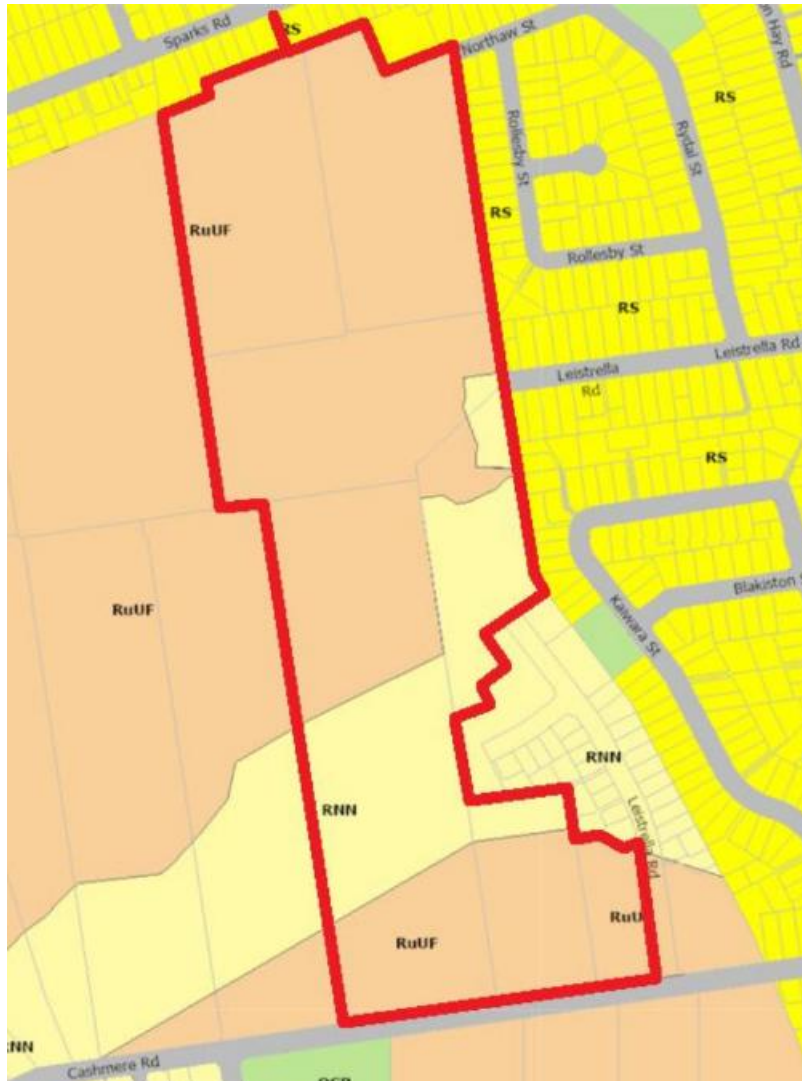


Figure 3: The sites existing zoning

1.3 Productive Capacity as HPL

The productivity of the site is determined by a number of factors including the nature of the soils, climate and scale of the operation.

1.3.1 Soils

In Figure 3 I have included a screenshot of the data held in Manaaki Whenua Landcare Research's SMap online portal of the soils of New Zealand⁶ of the site.

⁶ <https://smap.landcareresearch.co.nz/maps-and-tools/app/St>

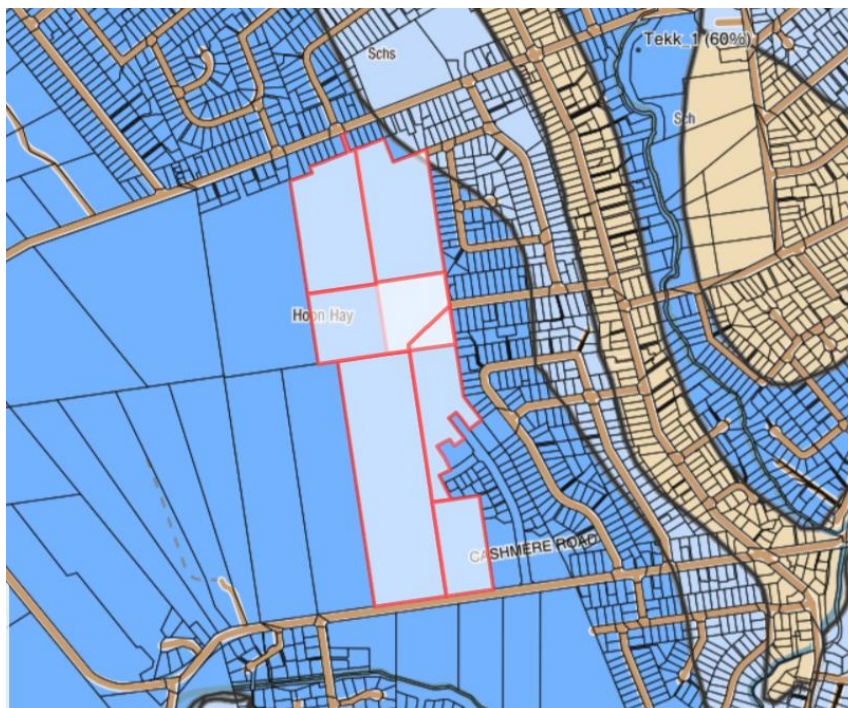


Figure 4: SMAP record of soils on site

Table 2 lists the soils on the site by sibling description, area and proportion

Table 2: Soils on site by sibling description, area and proportion

Sibling	Area (ha)	Proportion (%)
Tait_21a.1	25	100

Definitions of the key soils physical properties that are listed in the SMAP fact sheets⁷ for the soils that are present on the site are shown in Table 3.

Table 3: Description of soils on site

Soil Name	Tai Tapu
SMap Name	Tait_21a.1
Depth Class	Deep (>1m)
Rooting Depth	Unlimited
Depth to stony layer	No significant stony layer within
Texture Profile	Silt
Topsoil Stoniness	Stoneless
Drainage Class	Poorly drained
Profile Available Water (0 to 100cm)	Very High (277mm)

Tai Tapu soils are deep silt soils that are stoneless, poorly drained and have a very high profile available water (PAW).

⁷ <https://smap.landcareresearch.co.nz/maps-and-tools/factsheets>

These soils are theoretically suitable for vegetable, arable and a wide range of pastoral land uses. The only constraint that these soils face is poor drainage.

2 Land Use Constraints

There are a number of significant constraints which have a bearing on the highest and best land use possible on the site.

2.1 Lack of Irrigation Capability

The site does not have an existing well or the consents required for irrigation capability. It is situated within the Christchurch West-Melton Groundwater Allocation Zone, which is currently overallocated. Consequently, obtaining irrigation water for this site is not feasible.

According to Rule 9.6.2 of the Canterbury Land and Water Regional Plan (CLWRP), *"In general, no additional water is to be allocated from the Christchurch West-Melton Groundwater Allocation Zone shown on the Planning Maps except for group or community water supply as set out in Rule 5.115 or for non-consumptive taking and use as set out in Rules 5.131 and 5.132."* This exhibits how, within this district, it is not possible to gain a new consent for irrigation purposes.

The only reference within the CLWRP to transfers of water permits within the Christchurch West-Melton Groundwater Allocation Zone pertains to gravel extraction and associated purposes. Section 9.5.6 states, *"The temporary or permanent site-to-site transfer, in whole or in part, of a water permit to take or use water for gravel extraction (and associated purposes) is a discretionary activity provided the water will be used for the same purpose."*

Consequently, under the current provisions of the CLWRP, this site cannot obtain a water permit for irrigation purposes, as it does not meet the specified criteria for transfers of existing water rights.

2.2 Reverse Sensitivity

Due to the site being surrounded by residential properties, intensive farming could lead to reverse sensitivity complaints. This occurs when residents raise concerns or complaints about typical farming activities such as noise, odour, or dust.

- Farming activities can generate significant noise, which can be disruptive to residents especially during early morning or late evening hours. Activities such as loading or unloading stock trucks or harvesting crops may cause disruption to nearby properties.
- Intensive farming practices can produce strong odour's from animal waste and stored supplementary feeds. Residents in nearby areas can find these smells offensive, leading to complaints.

- Activities like ploughing, harvesting, and the movement of machinery can generate dust. This can temporarily affect air quality and be a nuisance to residents.

The potential for reverse sensitivity complaints in an area that is surrounded by residential development is high and this may make the site unappealing for many potential farmers.

2.3 Exclusion of Horticulture

The potential for intensive horticultural land use has been considered and it has been rejected for several important reasons including:

- The fact that the soils are poorly drained would mean that the range of crops that could be potentially grown is severely limited because the vast majority of horticultural crops require that the soils are free draining.
- The very high cost of establishing an intensive horticultural operation on a relatively small site.
- The lack of irrigation capability, which is essential for horticultural crops.
- The cold winters limit the potential range of horticultural crops.

2.4 Limitations of Arable

The ability to maximize the productivity of any of the potential arable land uses would require that the land was farmed as part of a larger farming entity and that irrigation capability was available.

The block of land would have to be incorporated into a bigger growing operation in order to achieve sufficient scale to enable the landowner to maximise productivity. There are no large-scale arable operations in close proximity, meaning that machinery and equipment would need to be transported along urban roads.

The lack of scale, potential reverse sensitivity concerns around the use of machinery on the site, the lack of irrigation and the transportation of machinery required makes the site unappealing to existing arable operators.

2.5 Pastoral Land Use

It would be theoretically possible for the land to be used for pastoral grazing (sheep and beef and dairy support) however there are several significant constraints on that land use being achieved. The constraints include:

- The costs associated with intensifying the productivity of the site e.g. providing for winter crops, and providing additional supplementary feed from off site, are all too expensive to be justified on such a small scale.
- The poorly drained soils make it unsuitable for large stock over winter periods.
- The potential reverse sensitivity considerations around having stock on the property, with noise of shifting stock, working with stock and transporting stock need to be considered.
- The close proximity of the site to intensive urban development raises the substantial risk of attacks on animals by wandering dogs.

In my opinion, the site would not be an appealing option for a farmer looking to expand their pastoral productive land due to the lack of scale, reverse sensitivity effects , poorly drained soils and the absence of irrigation.

2.6 Conclusion

Assuming the titles of the seven individual lots could be operated in conjunction, the highest and best use of the land would be for dryland dairy support. However, this would require agreement from all landowners. Without such consensus, the highest and best use of the individual lots would be small-scale lifestyle grazing.

3 Proposed Land Use

The proposal aims to rezone the site from Residential New Neighbourhood (**RNN**) and Rural Urban Fringe (**RUUF**) zones to RNN, excluding the stormwater management areas which will remain RUUF, as illustrated in the site plan in Figure 4.

This site plan outlines the intended development, which is anticipated to allow for the creation of 284-320 dwellings. Other aspects of the proposed development include the inclusion of a significant area of land to be set aside for stormwater management and recreational and conservation uses, stormwater management basins, and a designated reserve.

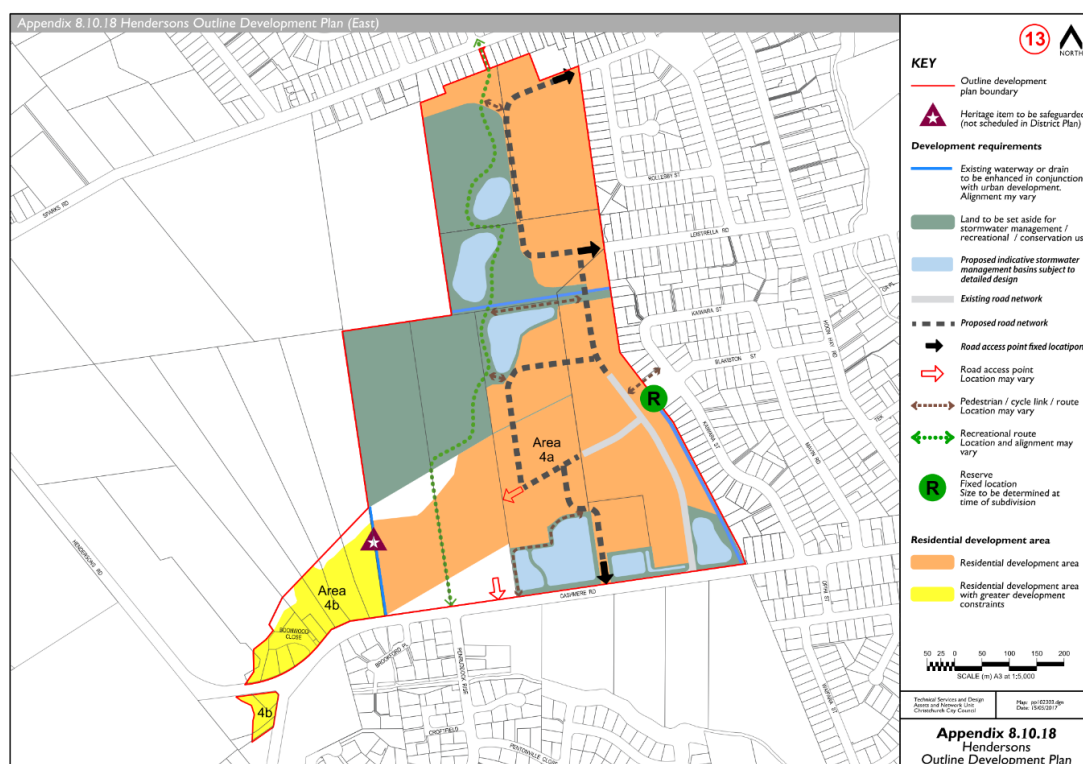


Figure 5: Site Plan of the proposed land use.

4 Assessment of the benefits of the Proposed Rezoned Land and the Cost of the loss of HPL.

4.1 Environmental

My assessment of the benefits of the rezoning and the costs of the loss of HPL from an environmental perspective is shown in **Table 4**.

Table 4: Assessment of the benefits of rezoning and the costs of the loss of HPL from an environmental perspective.

Assessment Category	Benefits of rezoning	Costs of the loss of HPL
Carbon Sequestration	The proposal includes areas outlined for reserves, recreation and conservation use. Also there will be curtilage vegetation in the residential area which should add to the sites potential to contribute to carbon sequestration	The potential removal of shelter belts that exist on the site currently would act as a small loss to carbon sequestration. These are however primarily fully grown trees which sequester carbon at a lower rate than younger growing trees.
Support habitat	The individual curtilages of the urban sections will all have a degree of permanent habitat development. There is also a significant amount of area outlined for reserves, recreation and conservation use and stormwater basins, which creates open space that will allow for habitat development	The potential removal of the existing shelter belt could result in a small loss of habitat.
Water filtration	Water filtration will be enhanced by the development, through the creation of sediment traps within drainage systems and the creation of stormwater ponds. This will benefit the environment by filtering sediment and nutrients before they enter waterways.	
Flood mitigation	The diversion of runoff water from the sections into appropriately sized water stormwater basins will act as a flood mitigation method.	
Nutrient	The change from rural to urban will have the benefit of a reduction in N	

	loss. This comes from the removal of livestock and fertiliser use.	
Climate regulation	The removal of livestock and fertiliser use on the site will reduce agricultural greenhouse gas emissions. The conservation space within the development will enhance the site's ability to assist in climate regulation by sequestering carbon and offering some protection against severe flooding and wind impacts.	
Air and water quality	Water quality will benefit from the proposed urban development by the diversion of runoff water from the sections into stormwater basins.	Air quality will be slightly diminished by the conversion from rural land uses to urban development because there will be more urban activity which has the potential to negatively impact on air quality.
Biodiversity conservation	Biodiversity and conservation will benefit from the plantings that will occur in the curtilages of the sections and within the reserve, recreation and conservation space.	

4.2 Social / Cultural

My assessment of the benefits of the rezoning and the costs of the loss of HPL from a social and cultural perspective is shown in **Table 5**.

Table 5: Assessment of the benefits of rezoning and the costs of the loss of HPL from a social and cultural perspective.

Assessment Category	Benefits of Rezoning	Costs of the loss of HPL
Sense of belonging and place	There will be an increase in the sense of belonging and place on the site with the conversion from rural use to residential. This will house multiple people per household, therefore having a positive influence on the sense of belonging and place. Walk/cycle routes within the development will also create a pathway for the community to get together and interact.	
Social fabric	The social fabric of the urban development will be enhanced on the site and within the wider Christchurch	

	District by the additional population that this site will provide housing for.	
Food security		There will be a slight reduction in food production caused by the 25 ha being developed from rural to urban. This will be insignificant given the scale and constraints the site is faced by.
Spiritual value	As far as we are aware there are no cultural heritage sites on or near the site therefore this category is judged as having no impact on either of the considerations.	

4.3 Economic

My assessment of the benefits of the proposed rezoning development and the costs of the loss of HPL from an economic perspective are shown in **Table 6**.

Table 6: Assessment of the benefits of rezoning and the costs of the loss of HPL from an economic perspective

Assessment Category	Benefits of Rezoning	Costs of the loss of HPL
Income	There will be increased income from multiple sources, including sales, construction, roading and ongoing maintenance.	The loss of income over a 30 year period would equate to \$393,674 on the basis of the site being operated as one or \$160,819 if operated individually (workings in appendix A).
Employment (FTE)	There will be increased employment both from the construction and ongoing maintenance, which will be required on the site. Eliot Sinclair's original plan change request refers to this development supporting around 1,000 full-time equivalent (FTE) years of employment.	The loss of employment from this area of land, based on the B+LNZ representative farm model, equates to 0.2 employees
Flow on impacts to the wider community	There will be considerable flow on impacts to the wider community because the proposed development will result in increased expenditure within the local economy.	While the decrease in inputs sent to processors could potentially impact the district, the volume is so small that any effect on processing companies or their employees is likely to be less than minor.

4.4 Summary

It is my opinion that the environmental, social, cultural and economic benefits of rezoning of the 25 ha along Cashmere and Sparks Road outweigh the long-term environmental, social, cultural and economic costs associated with the loss of highly productive land for land-based primary production and meets the requirements of Clause 3.6 (1) (c) of the NPS-HPL to allow the rezoning.

5 Appendix A

5.1 Economic

I have evaluated the economic cost of losing 25 hectares of the site by calculating the discounted cash flow of the Earnings Before Interest and Tax (EBIT) generated from the site over a 30-year period, with a 6% discount rate applied.

If the site was able to be run as a collective the highest and best land use would be for dryland dairy support. The financial parameters are from The AgriBusiness Groups Dryland Dairy Support Model. The per ha figures and the total are shown in Table 7.

Table 7: TAG Dryland Dairy Support Economic return

	\$/ha	Total from 25 ha
Gross Revenue	2,637	65,925
Operating Expenses	1,493	37,325
Earnings Before Interest and Tax	1,144	28,600

The opportunity cost of the loss of income from the site over a 30 year period is \$393,674.

In the case that the titles were run individually the highest and best land use would be small scale lifestyle grazing. The financial parameters are from The AgriBusiness Groups small scale lifestyle model. The per ha figures and the total are shown in Table 8.

Table 8: TAG Small Scale Lifestyle Grazing Economic Return

	\$/ha	Total from 25 ha
Gross Revenue	1,184	29,589
Operating Expenses	716	17,907
Earnings Before Interest and Tax	467	11,683

The opportunity cost of the loss of income from the site over a 30 year period is \$160,819.