

**BEFORE THE WAIMAKARIRI DISTRICT
COUNCIL HEARINGS PANEL**

IN THE MATTER of the Resource Management
Act 1991

AND

IN THE MATTER of submissions by Andrew
McAllister (submission 8) and Survus
(submission 250)

BRIEF OF EVIDENCE OF STUART FORD

Date 5 March 2024

QUALIFICATIONS AND EXPERIENCE

1. My full name is Stuart John Ford.
2. I am a Director of The AgriBusiness Group and work as an agricultural and resource economist based in Christchurch. 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 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 and as 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:
 - Evidence to the Auckland Council on their Proposed Auckland Unitary Plan for a number of parties.
 - 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.
 - Evidence given to an Auckland Council hearing as to the appropriate zoning of land at Clevedon.
 - Initial report on the productive potential of land owned by Strategic Land Holdings at Waiau Pa.

- 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.
- 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 subsequently been appealed to the Environment Court.
- Provision of evidence to the Environment Court on the productive potential of the land known as Sticky Forest adjacent to Wanaka.
- Provision of a report on the commercial viability of Rangitane River Park - Kerikeri to be used in a re zoning application, subsequently prepared evidence to be used in an Environment Court hearing.
- Provision of a report on the agricultural productivity and commercial viability of land at Kairua Road Tauranga.
- Provision of a report on the agricultural productivity and commercial viability of land at Maungatautari Road Cambridge for the Arvida Group.
- Reports on the agricultural productivity and commercial viability of land and their status under the NPS-HPL for five different submitters to the Selwyn District Council.
- 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.
- Provision of a brief of evidence for submission to the Environment Court in support of an appeal for the re zoning of land in Pokeno.
- Support for the Ashburton, Timaru and the Waikato Councils as a peer reviewer of NPS-HPL applications.
- Preparation of reports for various applicants in Auckland, Waikato, Bay of Plenty, Wellington, Waimakariri, Christchurch City, Selwyn, Timaru, Dunedin and Queenstown Lakes Councils.

8. I confirm that I have prepared this evidence in accordance with the Code of Conduct for Expert Witnesses Code of Conduct for Expert Witnesses contained in Part 7 of the Environment Court Practice Note 2014. The issues addressed in this statement of evidence are within my area of expertise except where I state that I am relying on the evidence or advice of another person. The data, information, facts and assumptions I have considered in forming my opinions are set out in the part of the evidence in which I express my opinions. I have not omitted to consider material facts known to me that might alter or detract from the opinions I have expressed.

EVIDENCE

9. I have prepared the attached report (**Appendix A**) dated 5th March 2024.

10. This analysis is under the National Policy Statement on Highly Productive Land (NPS-HPL) under Clause 3.6 Restricting urban rezoning of highly productive land under sub clause 1(c) which requires that *“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.”*
11. In summary the report states that the site which is 21.21 ha currently has a resource consent to subdivide it into 4 x 4 ha blocks and 1 x 5.8 ha block. What is applicant’s proposed is to rezone the land as LLRZ and then to subdivide the site into approximately 36 lots averaging a lot size of 5,000m².
12. The site is completely surrounded by lifestyle and semi urban development. To the North and East this intensive subdivision continues beyond the immediate vicinity. To the West and South there is more rural land uses beyond the immediate vicinity of the site. Nevertheless, the site can be considered as completely separated from rural land uses.
13. In the absence of more detailed mapping, I am forced to accept that all of the site is LUC 2. In the NPS-HPL all land which is classified as LUC 1, 2 and 3 is automatically considered to be highly productive land (HPL).
14. It is my opinion that on 48% of the site (10ha) is theoretically suitable for horticulture, vegetable production, arable and pastoral land uses while on the remaining 52% of the site pastoral land uses are theoretically possible.
15. The constraints that are on the potential land uses mainly revolve around the scale of the block which make it too small to develop for Horticulture and arable land uses and limit the range of pastoral land use options and the fact that the site is separated from rural land uses means that it is not possible to amalgamate it with a larger piece of land and that the potential for reverse sensitivity from neighbours of the site is high to any more intensive land uses than those being practiced than that of the current lifestyle block practice.
16. It is my opinion that, because of the significant constraints to the land being used for production of primary produce, the highest and best land use would be for small scale lifestyle grazing.

17. It is my assessment that the transition from the current 21.21 ha which has consent for four 4 ha blocks and 1 x 5.8 ha block to the proposed use which is for approximately 36 LLR blocks with an average size of 5000m² mean that costs of the loss of HPL land will be minimal while the benefits of the proposal will be relatively large in terms of their impact on the environmental, social / cultural and economic factors which are required to be assessed.

18. It is my conclusion that the proposal to rezone the site for a non-rural use meets the tests that the environmental, social, cultural and economic benefits of rezoning the site at 1275 Tram Road Swannanoa 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.

Appendix A: Productivity Assessment and comment on the impact of Clause 3.6 (c) of the NPS-HPL on land at 1275 Tram Road Swannanoa.

Productivity Assessment and comment on the impact of Clause 3.6 (c) of the NPS-HPL on land at 1275 Tram Road Swannanoa.

1 Background

We have been requested by Aston Consultants to assess whether the plan change for large lot residential of approximately 22 hectares of land at 1275 Tram Road meets the limbs of the NPS-HPL (National Policy Statement- Highly Productive Land).

The site currently has a resource consent to subdivide it into 4 x 4 ha blocks and 1 x 5.8 ha block. However, the owner's intention is to subdivide the site into approximately 36 x 5000m², if his Proposed Waimakariri District Plan submission seeking this is accepted.

This analysis is under the National Policy Statement on Highly Productive Land (NPS-HPL) under Clause 3.6 Restricting urban rezoning of highly productive land under sub clause 1(c) requires that “*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 implementation¹ 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 wellbeings (environment, economic, social, cultural) is undertaken for all urban rezoning proposals on HPL and that this specifically considers long-term benefits and costs and tangible and intangible values.*” And that “*Intangible values of HPL that 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.*”

This requires that the site should be evaluated to provide the full range of benefits of the proposed rezoned land (PRL) 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 Analysis² carried out on the NPS-HPL. They are as displayed in **Error! Reference source not found.**

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. In doing so I have drawn on my professional experience, that of my colleagues who are environmental consultants and of the developer.

1.1 Description of the site.

Figure 1 shows the location and surrounding land uses of the site which is marked in red. The site is completely surrounded by lifestyle and semi urban development. To the North and East this intensive

¹ MFE (2023): National Policy Statement for Highly Productive Land: Guide to implementation.

² Market Economics (2020): National Policy Statement – Highly Productive Land. Cost-Benefit Analysis

subdivision continues beyond the immediate vicinity. To the West and South there is more rural land uses beyond the immediate vicinity of the site. Nevertheless, the site can be considered as completely separated from rural land uses.



Figure 1: Map of the site showing the neighboring land uses (Google Earth)

We understand that irrigation is available on the block

1.2 Productivity

The productivity of the site is determined by a number of factors including the nature of the soils, the climate and the scale of the operation. The viability³ of the site is determined by the ability of the site to return profits from the farming of the site to offer the owners a sufficient return.

1.2.1 Soils

The soils have been identified off the Landcare SMap online portal⁴ and are shown in Figure 2: Soils on the site as shown in SMap..

³ We use the definition for viability that is used in the Cambridge dictionary which is “the ability of a business, product, or service to compete effectively and to make a profit”.

⁴ <https://smap.landcareresearch.co.nz/maps-and-tools/app/>

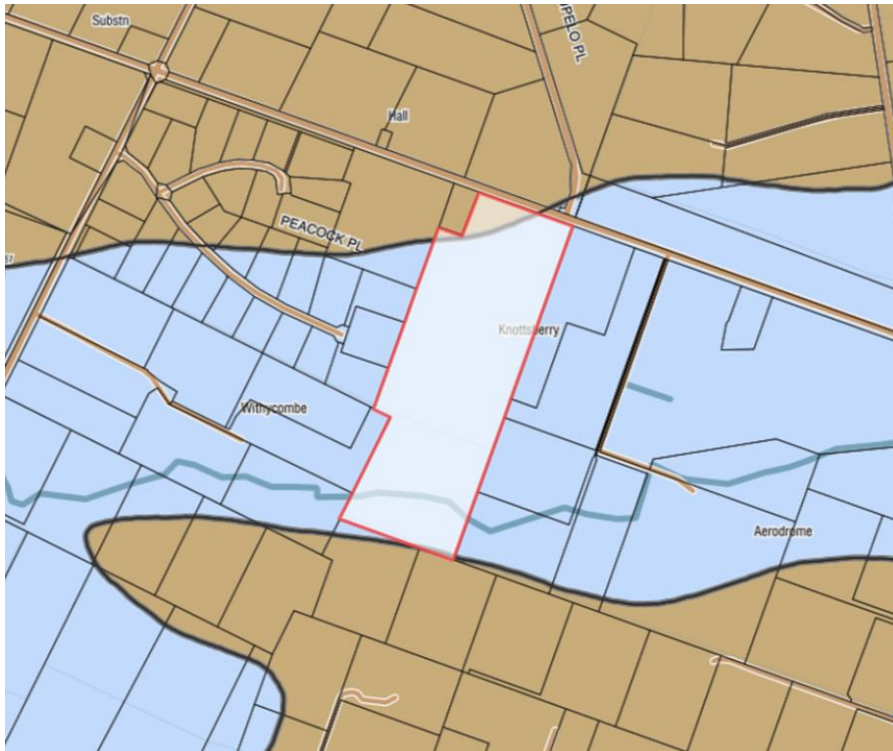


Figure 2: Soils on the site as shown in SMap.

The areas and percentages of those soils are shown in Table 1.

Table 1: Soil types presented by area and proportion of the site.

	Area (ha)	Proportion (%)
Paha_2a.1	10	48
Darn_1a.1	7	31
Darn_7a.1	2	11
Darn_6a.1*	3	10
Total	22	100

*The Darnley_6a.1 is also representative of the soils which constitute less than 1 ha of the site.

Definitions of the key soil physical properties that are listed in the SMap fact sheets reports⁵ for the soils present on the site are shown in **Error! Reference source not found.Error! Reference source not found.**

⁵ <https://smap.landcareresearch.co.nz/maps-and-tools/factsheets/>

Table 2: Physical properties of the soil types as listed in SMap.

Soil Name	Pahau	Darnley	Darnley	Darnley
SMap Name	Pahau_2a.1	Darnley_1a.1	Darnley_7a.1	Darnley_6a.1
Depth Class	Moderately deep (70 - 90 cm)	Shallow (25 - 60 cm)	Shallow (15 - 35 cm)	Very shallow (0 - 20 cm)
Rooting Depth	Unlimited	80 - 90 (cm)	60 - 90 (cm)	Unlimited
Depth to stony layer	Moderately deep	Shallow	Shallow	Shallow
Texture profile	Silt	Silt	Silt	Silt
Topsoil stoniness	Stoneless	Slightly stony	Moderately stony	Very stony
Drainage class	Imperfectly drained	Moderately well drained	Moderately well drained	Moderately well drained
Profile Available Water (0 to 100 cm)	Moderate (116 mm)	Moderate (104 mm)	Moderate to low (78 mm)	Moderate to low (82 mm)

The Pahau soils are moderately deep silts which are stoneless, imperfectly drained with a moderate Plant Available Water (PAW). The Pahau soils which make up 48% of the site are theoretically suitable for horticulture, vegetable production, arable and pastoral land uses. The Darnley soils are shallow to very shallow silts that are slightly to very stony that are moderately well drained with a moderate to low PAW. The Darnley soils which make up 52% of the site are theoretically suitable for pastoral land uses.

1.2.2 Land Use Capability (LUC)

The data which is available on LUC in the New Zealand Land Resources Inventory Series (LRIS) Our environment⁶ portal is mapped at the 1:50,000 level and it is shown in Figure 3. The accuracy of an assessment of the LUC which is displayed at this level is likely to change when it is mapped at a finer scale. I am of the opinion that the information on the LUC as shown in Figure 3 doesn't match the scale or distribution of the soil types as represented in SMap. This is a particular concern when we see that the SMap data indicates that there is a considerable amount of Darnley soils within the site which we are aware have been classified as LUC 4 in more detailed mapping of the LUC status of those soil types.

In the absence of more detailed mapping, I am forced to accept that all of the site is LUC 2. In the NPS-HPL all land which is classified as LUC 1, 2 and 3 is automatically considered to be highly productive land (HPL).

⁶ https://ourenvironment.scinfo.org.nz/maps-and-tools/app/Land%20Capability/lri_luc_hpl

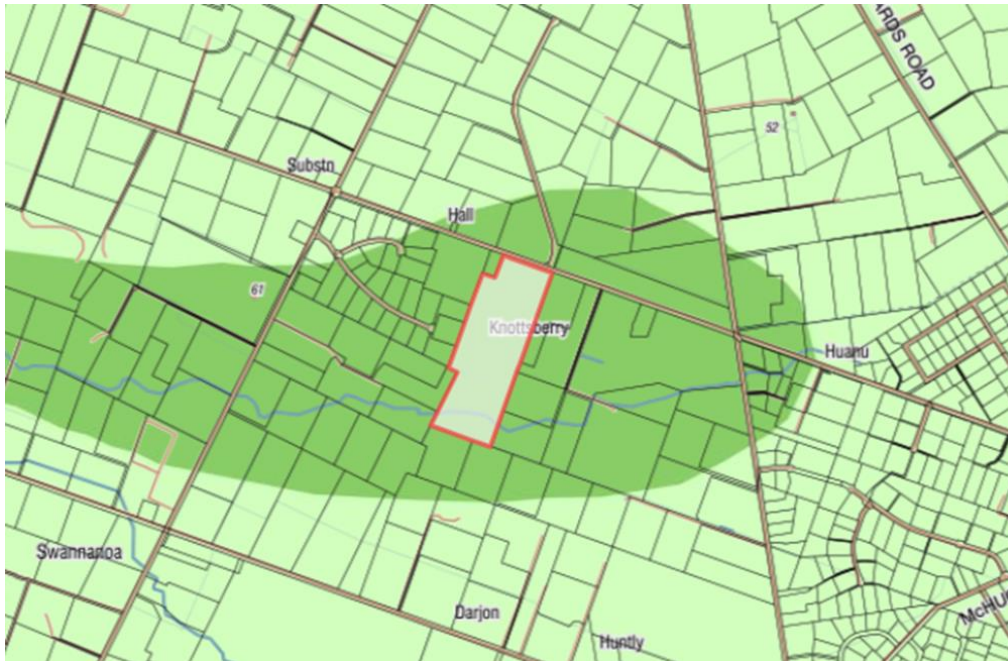


Figure 3: LUC classes of the subject land. Light green area is LUC 3 the darker green is LUC 2.

2 Constraints on Land Use

It is my opinion that on 48% of the site (10ha) is theoretically suitable for horticulture, vegetable production, arable and pastoral land uses while on the remaining 52% of the site pastoral land uses are theoretically possible.

2.1 Horticulture

While intensive horticulture and vegetable production are possible on approximately 10 ha of the site they have both been rejected for a number of important reasons including:

- The very high cost of establishment of a horticultural operation on a relatively small site would mean that this land use would be unlikely to be economic because of lack of economies of scale.
- The cold winters limit the potential range of horticultural crops.
- The site is remote from any post harvest packaging and processing facilities which would add large additional growing costs.
- The potential for reverse sensitivity from neighbours that are situated in a lifestyle area would mean that investors in horticultural activities are most likely to seek alternative production areas where there isn't the threat of reverse sensitivity becoming a production issue.

2.2 Limitation of Arable Land Use

The ability to maximise the productivity of any of the potential arable land uses would require that the land was farmed as part of a larger farming entity. There is also the necessary consideration of the potential for reverse sensitivity to any more intensive land uses than lifestyle farming from the neighbouring landowners.

The allowance of the area available would negate the ability to carry out a crop rotation for

an arable growing operation. 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. As the site is land locked by lifestyle and urban development and the fact that there aren't any arable cropping farms in close proximity it would be unattractive for an arable farmer to incorporate the site into their larger farming operation because of the difficulty and inconvenience of transporting the necessary large machinery through a built up area which is made up of large lot residential lots with large traffic flows to farm what is an insignificant area of land.

2.3 Pastoral land uses are limited in their scope.

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

- the scale of the site being too small to offer a prospective farmer any real advantage in farming the site,
- the costs associated with intensifying the productivity of the site e.g. providing for winter crops, providing additional supplementary feed from off site are all too expensive to be justified on such a small scale,

The property is surrounded by lifestyle blocks and is essentially blocked from being incorporated into a larger pastoral farming operation because of its situation. It is my opinion that the site would not be an attractive option for a farmer to take it up to add to other productive land because of its size and location.

The surrounding road network is busy because it is the network for travel for a large area of lifestyle dwellers and as such any movement of stock along this route, would be impractical and dangerous. I have not factored in the additional considerations of transporting stock to and from the site because of the high expense nor from the transport of winter feed to and from the site or providing winter grazing elsewhere.

The potential for reverse sensitivity from neighbours of the site is high to any more intensive land uses than those being practiced than that of the current lifestyle block practice which is pastoral and an annual crop of pine Christmas trees.

It is my opinion that, because of the significant constraints to the land being used for production of primary produce, the highest and best land use would be for small scale lifestyle grazing.

3 Proposed Development

It is my understanding that the applicant's proposal is to rezone the land as LLRZ and then to subdivide the site into approximately 36 lots averaging a lot size of 5,000m². A possible layout of the applicants proposal is shown in Figure 4.

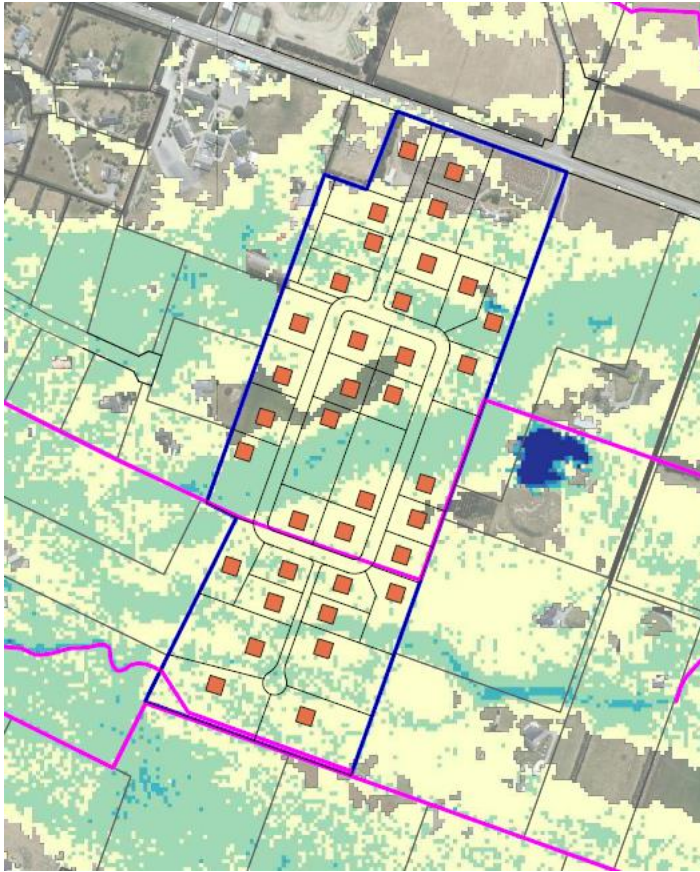


Figure 4: A possible layout of the applicants proposal.

4 Assessment of the benefits of the Proposed Rezoning Land (PRL) and the Cost of the loss of HPL.

In all cases where it is necessary to calculate the area of the site the total area (21.21 ha) has been used

4.1 Environmental

Our assessment of the benefits of the PRL and the costs of the loss of HPL from an environmental perspective are shown in Table 3.

Table 3: Assessment of the benefits of PRL and the costs of the loss of HPL from an environmental perspective.

Assessment Category	Benefits of PRL	Costs of the loss of HPL
Carbon sequestration	<p>The planting that will occur will add considerably to the potential for the site to contribute to carbon sequestration.</p> <p>The conversion from HPL land to urban will remove the carbon emitted from any animals present.</p>	

Support habitat	The planting will considerably enhance the site's ability to support habitat as will the individual curtilages of the urban sections which will all have some degree of permanent habitat development.	
Water filtration		
Flood mitigation	The provision of drainage from the roads and from the individual lots will have the benefit of contributing to flood mitigation as will the diversion of run off water from the sections into appropriate sized water will be a significant benefit for flood mitigation.	
Nutrient	The change from rural to urban will have the benefit of the removal of animals from the site which will mean that there will be the reduction of Nitrogen leaching into waterways and the complete reduction of the runoff of Phosphate applied as fertiliser into waterways.	
Climate regulation	The plantings which will occur in the urban development will enhance the site's ability to assist climate regulation by both carbon sequestration and providing a degree of mitigating the impacts of severe flooding and wind shear.	
Air and water quality	Water quality will benefit from the proposed urban development by the planting and the diversion of runoff of water from the sections.	Air quality will be diminished by the conversion from rural land uses to large lot urban development slightly because there will be more urban activity which has the potential to diminish air quality.
Biodiversity conservation.	Biodiversity and conservation will benefit from the plantings that will occur in the curtilages of the sections.	

4.2 Social / Cultural

Our assessment of the benefits of the PRL and the costs of the loss of HPL from a social and cultural perspective are shown in Table 4.

Table 4: Assessment of the benefits of PRL and the costs of the loss of HPL from a social and cultural perspective.

Assessment Category	Benefits of PRL	Costs of the loss of HPL
Sense of belonging and place	There will be an increase in the positive effect of the sense of belonging and place on the site with the conversion from the rural use which just has one household to that of multiple house holds which will house multiple people per household which will all have a positive sense of belonging and place.	
Social fabric	The social fabric of the site and the wider Swananoa district will be enhanced by the additional population that this site will provide which will provide a wider range of social aspects to the community.	
Food security		There will be a very small loss of food security from the loss of HPL land but as the site is assessed as only being suitable for dairy support activities the loss of this capacity is considered to be minimal.
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

Our assessment of the benefits of the proposed LLR development enabled by LLR rezoning and the costs of the loss of HPL from an economic perspective are shown in Table 5.

Table 5: Assessment of the benefits of LLRZ and the costs of the loss of HPL from an economic perspective.

Assessment Category	Benefits of LLRZ	Costs of the loss of HPL
Income	There will be the benefits of increased income in the District both from the development and construction activities and from the increased household spending which will result.	The loss of income from the HPL will be minor because the revenue from the highest and best land use is minor.
Employment	There will be the benefits of increased employment in the District both from the development and construction activities and	The 21.21 ha site has very little employment

from the increased household spending which will result.

opportunities so the loss of them will be minor.

Flow on impacts to the wider community

Because the Income generated is much higher from the LLRZ than from the HPL the resultant flow on impacts will be the same order of magnitude, higher for the District, Regional and National economies which is a significant benefit for the LLRZ.

5 Conclusion

It is my conclusion that the proposal to rezone the site for a non-rural use meets the tests that the environmental, social, cultural and economic benefits of rezoning the site at 1275 Tram Road Swannanoa 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.