PROPERTY ECONOMICS

TAUPŌ RURAL LIFESTYLE

PLAN CHANGE 42

ECONOMIC OVERVIEW

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SCHEDULE

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1. INTRODUCTION

Property Economics have been engaged by Taupō District Council (**TDC**) to undertake a high-level economic assessment of Plan Change 42 (**PC42**)[1] proposed in relation to the Rural Lifestyle Environment (**RLE**) areas in Taupō. TDC has advanced PC42 and the proposed RLE areas to primarily match the existing use on the ground.

Note that PC42 was notified prior to NPS-HPL becoming operative. As such, this economic assessment has been undertaken for completeness.

The primary purpose of this report is to assess the potential economic impacts of the proposed RLE on the productive land resource in the Taupō District, in the context of the National Policy Statement for Highly Productive Land 2022 (**NPS-HPL**).

Specifically, this report quantifies (where appropriate) and qualifies the significance of (potentially) losing land categorised as highly productive land in the context of NPS-HPL and specific characteristics of the identified RLE areas. This includes the economic costs and benefits of retaining the productive land against the provision of enabling its development for rural residential activity taking a longer-term (15-year) perspective.

These outputs are structured to provide economic market intel that is designed to better inform TDC of the economic costs and benefits associated with the rezoning of the highly productive land to RLE activity.

1.1. KEY RESEARCH OBJECTIVES

The main objectives of the research and analysis include:

- Identify the proposed RLE areas in terms of location, quantum, and land area.
- Identify the Land Use Capability (**LUC**) classification of the proposed areas in accordance with the NPS-HPL.

[1] *Plan Change 42 – General Rural and Rural Lifestyle Environments*

- Assess the current level of productive value for each proposed area, including estimated annualised and total primary production value.
- Assess the potential production under the Operative District Plan baseline if there exists variance from the current land use and subsequent lowest site breakdown.
- Quantify the potential economic cost (i.e., net present value) in terms of production loss over a 15-year period.
- Determine the high-level potential economics costs and benefits resulting from the two alternative activities (primary production or residential development) against the baseline position.

1.2. INFORMATION SOURCES

Information have been obtained from a variety of credible data sources and publications available to Property Economics, including:

- Building Outline 2023 - LINZ
- Land Use Capability Classifications – NZLRIS
- National Policy Statement for Highly Productive Land – MfE
- Operative District Plan Zonings and Provisions - TDC
- Plan Change 42 – General Rural and Rural Lifestyle Environments - TDC
- Primary Parcels 2023 – LINZ
- Productive Value Forecasts – Property Economics
- Proposed National Policy Statement – Highly Productive Land Indicative Cost – Benefit Analysis 2019 – Ministry for Primary Industries
- Subject Site Maps –LINZ, Google Maps, TDC, Property Economics
- Taupō Rural Lifestyle Economic Assessment July 2019 – Property Economics

2. BACKGROUND CONTEXT

PC42 is a full review of the existing Rural Chapters within the ODP. Some of the key changes to the Rural Chapters under PC42 include:

- Creating a new Rural Lifestyle Environment from the General Rural Environment.
- A new set of objectives, policies and rules for the Rural lifestyle Environment including relaxation of subdivision rules.
- Allowance for minor dwellings.
- Providing for primary production and rural industry.
- More flexible papakāinga provisions.
- Removal of the Mapara Valley Structure Plan, Mapara Valley Environments, and associated provisions.

However, under the NPS-HPL, areas with high class soils (Land Use Classification (LUC) Class 1, 2 & 3) are defined as soils that need protection. These soils need protecting from an economic point of view as they are a meaningful representation of a scarce land resource that is invaluable and contributes substantially to the regional and national economy through its productive capacity.

Clause 3.7 of the NPS-HPL states that:

"*Territorial authorities must avoid rezoning of highly productive land as rural lifestyle, except as provided in clause 3.10*".

Clause 3.10 outlines exemption for highly productive land subject to permanent or long-term constraints:

(1) Territorial authorities may only allow highly productive land to be subdivided, used, or developed for activities not otherwise enabled under clauses 3.7, 3.8, or 3.9 if satisfied that:

> *(a) there are permanent or long-term constraints on the land that mean the use of the highly productive land for land-based primary production is not able to be economically viable for at least 30 years; and*
>
> *(b) the subdivision, use, or development:*
>
> > *(i) avoids any significant loss (either individually or cumulatively) of productive capacity of highly productive land in the district; and*
> >
> > *(ii) avoids the fragmentation of large and geographically cohesive areas of highly productive land; and*

(iii) avoids if possible, or otherwise mitigates, any potential reverse sensitivity effects on surrounding land-based primary production from the subdivision, use, or development; and

(c) the environmental, social, cultural and economic benefits of the subdivision, use, or development 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.

(2) In order to satisfy a territorial authority as required by subclause (1)(a), an applicant must demonstrate that the permanent or long-term constraints on economic viability cannot be addressed through any reasonably practicable options that would retain the productive capacity of the highly productive land, by evaluating options such as (without limitation):

(a) alternate forms of land-based primary production:

(b) improved land-management strategies:

(c) alternative production strategies:

(d) water efficiency or storage methods:

(e) reallocation or transfer of water and nutrient allocations:

(f) boundary adjustments (including amalgamations):

(g) lease arrangements.

(3) Any evaluation under subclause (2) of reasonably practicable options:

(a) must not take into account the potential economic benefit of using the highly productive land for purposes other than land-based primary production; and

(b) must consider the impact that the loss of the highly productive land would have on the landholding in which the highly productive land occurs; and

(c) must consider the future productive potential of land-based primary production on the highly productive land, not limited by its past or present uses.

(4) The size of a landholding in which the highly productive land occurs is not of itself a determinant of a permanent or long-term constraint.

(5) In this clause:

***landholding** has the meaning in the Resource Management (National Environmental Standards for Freshwater) Regulations 2020*

long-term constraint means a constraint that is likely to last for at least 30 years.

Of the RLE areas proposed by TDC, six areas are currently zoned Rural Environment and contain highly productive land due to their LUC classification status. This report therefore assesses the potential economic impact of these areas under the aforementioned NPS-HPL policy context.

3. PROPOSED RURAL LIFESTYLE ENVIRONMENT OVERVIEW

Under the LUC system, land is categorised into eight classes according to its long-term capability to sustain one or more productive uses, with Class 1, 2, and 3 soils being the most productive soils that are anticipated to be protected under the NPS-HPL framework.

Taupō District has no productive land registered as Class 1 and 2. The highest productive soil class within the wider district is Class 3 - Land with moderate limitations for arable use, but suitable for cultivated crops, pasture, or forestry.

The distribution of the district's productive land is presented in Appendix 1.

However, according to the New Zealand Soil Classification (NZSC) system, Taupō and its surrounding areas are characterised by extensive pumice soils (see Appendix 2). Pumice soils consist mainly of sandy or gravelly textures dominated by pumice, which contains a high proportion of natural glass. These soils have rapid drainage capabilities, which significantly affects soil fertility in the district and reduces the likelihood of intensive agricultural production.

Additionally, there are existing limitations on stocking and fertility rates within the Lake Taupō catchment (refer Appendix 3), as identified in the Waikato Regional Plans. These plans specify the maximum number of animals allowed per ha and per 10ha within the Lake Taupō catchment area.

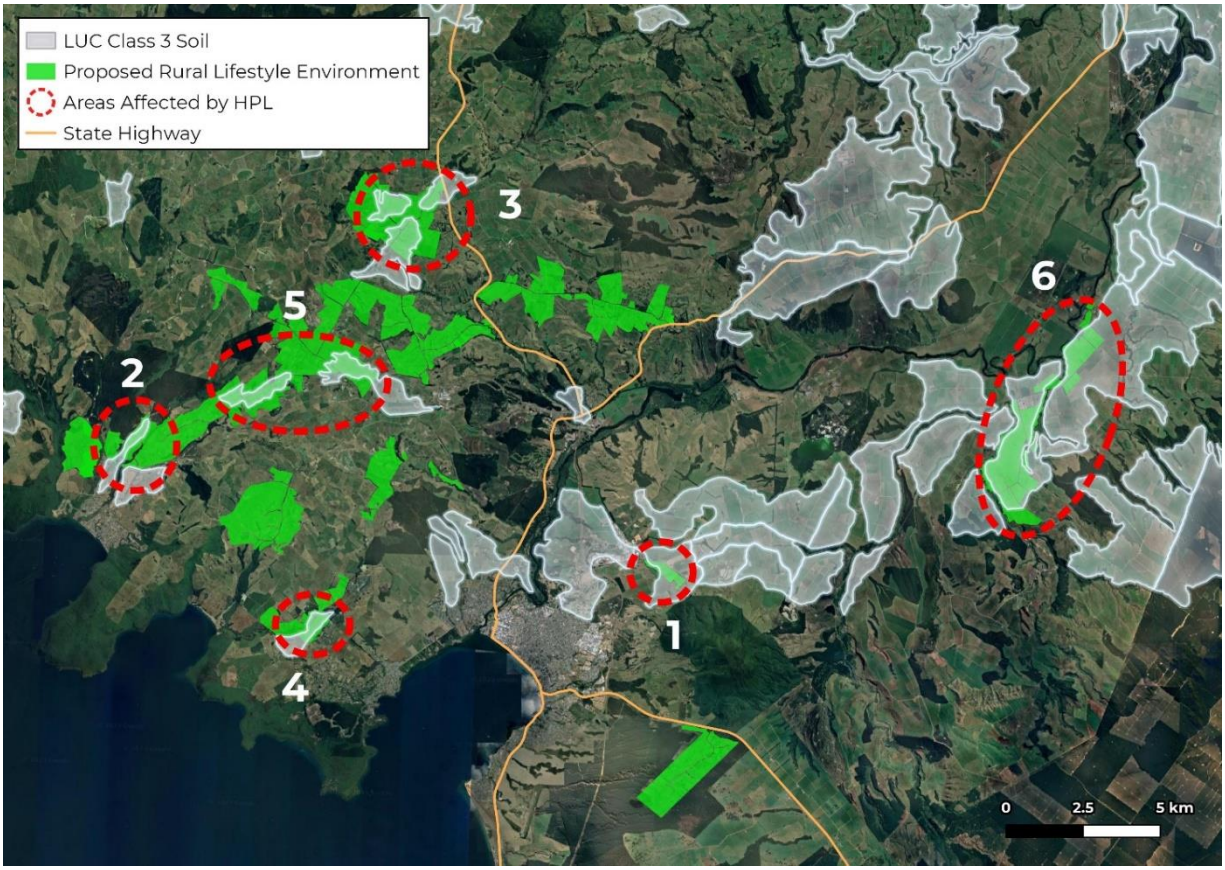
Consequently, if the land is used for grazing livestock, the number of animals must not exceed the prescribed stock threshold outlined in the Waikato Regional Plans. These limitations indicate that the proposed areas for RLE within the Lake Taupō catchment would face greater constraints on fertility and productivity compared to areas outside the catchment, such as the White Road and Ōruanui Road area.

The following figures identify the proposed RLE areas in relation to the underlying and surrounding soils classes.

Given the HPL overlay, six of the proposed RLE areas encompass a tranche of the Class 3 soil and therefore are subject to the Clause 3.10 of the NPS-HPL. The highlighted areas in red in the figure above correspond to the following locations:

1) Centennial Drive
2) Holyoakes Road
3) Ōruanui and Forest Rd
4) Tūkairangi Road
5) Whangamatā / Poihipi Road
6) White and River Road

FIGURE 1: PROPOSED RLE AREAS IN THE HPL CONTEXT



Source: TDC, NZLRIS, LINZ, Property Economics

According to the NZLRIS LUC overlay and Property Economics desktop assessment, the estimated total HPL land area spanned by the affected RLE areas is approximately 910ha (rounded). This represents around 2.8% of the district's total HPL land area, which is 32,114ha.

Although this is a high-level estimate, the loss of productive land due to the proposed RLE is not considered significant in nominal or proportional terms.

However, it is important to identify and quantify the associated productive value loss of these affected areas to better understand the economic costs and benefits of PC42, specifically the RLE part. This will be assessed in later sections.

The subsections following provide an overview of the affected RLE areas in terms of their land area, receiving environment (including surrounding zonings and existing activities in and around the area), and HPL coverage / proportion.

3.1. CENTENNIAL DRIVE

The proposed RLE area on Centennial Drive is situated on the southern side of Centennial Drive and the northern side of Broadlands Road, covering approximately 41ha of land zoned as Rural Environment.

Of this area, roughly 84% is classified as Class 3 productive soil, according to NZLRIS. The soil in this area consists of "*flat terraces with yellow-brown pumice soils developed on coarse-textured Taupō flow tephra or water-sorted Taupō tephra. These soils are prone to periods of moisture deficiency and are of low natural fertility*".

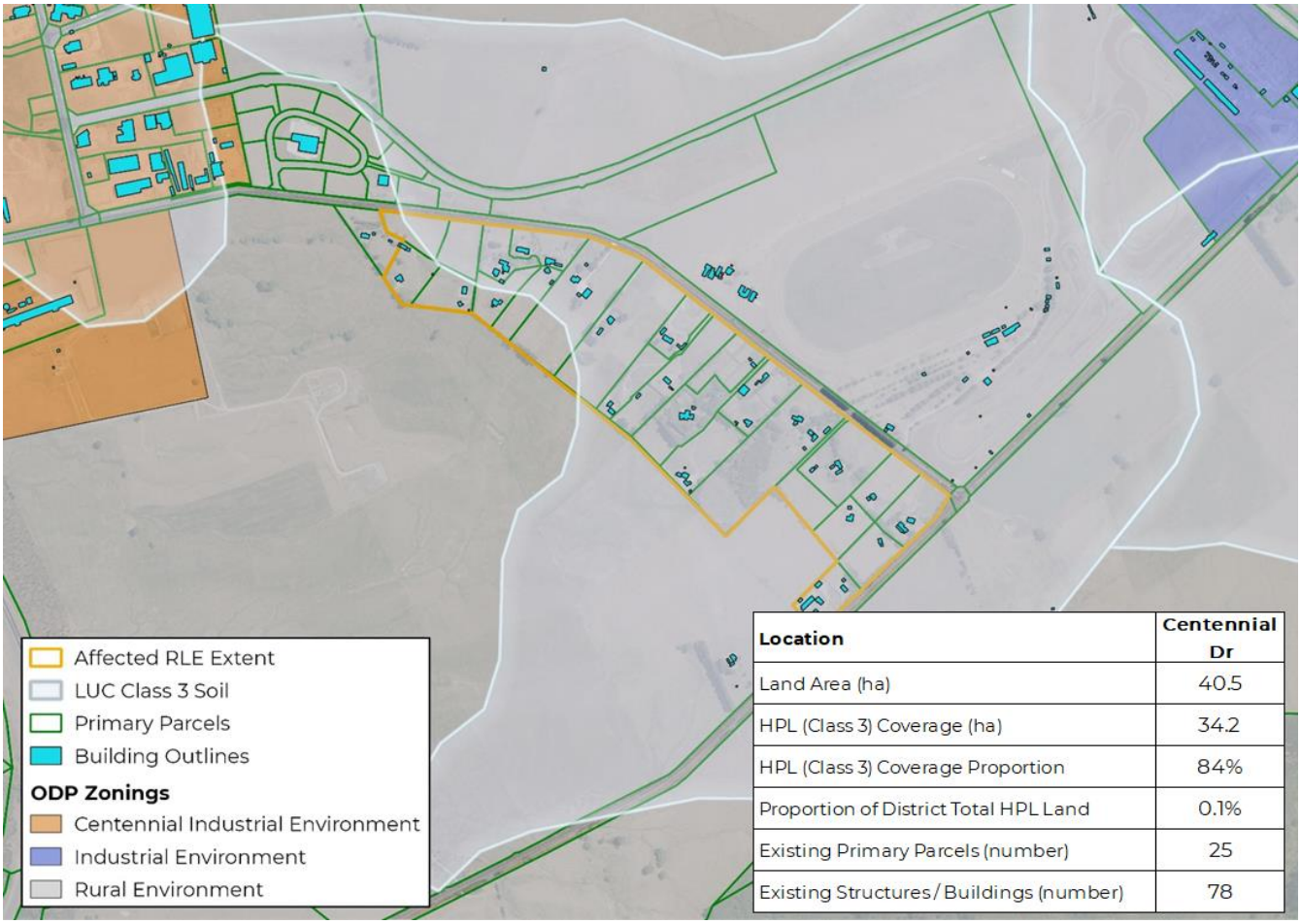
The Centennial Drive RLE area is situated within a 4-minute drive or 3.5km of the eastern edge of the Taupō Residential Environment. The area is partially developed and occupied by a range of rural residential and commercial activities within the fragmented 25 parcels, including accommodation, a cattery, and predator control services.

These activities reflect the existing use of the area and its response to increasing local and tourist demand. The area is also close to existing (zoned and out-of-zone) industrial activities to the northwest and east.

Furthermore, there is an existing overlay on this area which prevents further subdivision due to reverse sensitivity issues with contact, motorsport park, etc.

Given its current non-agricultural land uses and proximity to surrounding business activities and the urban environment, the Centennial Drive RLE area is considered appropriate to reflect the current consented rural residential activities in the area.

FIGURE 2: PROPOSED CENTENNIAL DRIVE RLE



Location	Centennial Dr
Land Area (ha)	40.5
HPL (Class 3) Coverage (ha)	34.2
HPL (Class 3) Coverage Proportion	84%
Proportion of District Total HPL Land	0.1%
Existing Primary Parcels (number)	25
Existing Structures / Buildings (number)	78

Source: TDC, NZLRIS, LINZ, Property Economics

3.2. HOLYOAKES ROAD

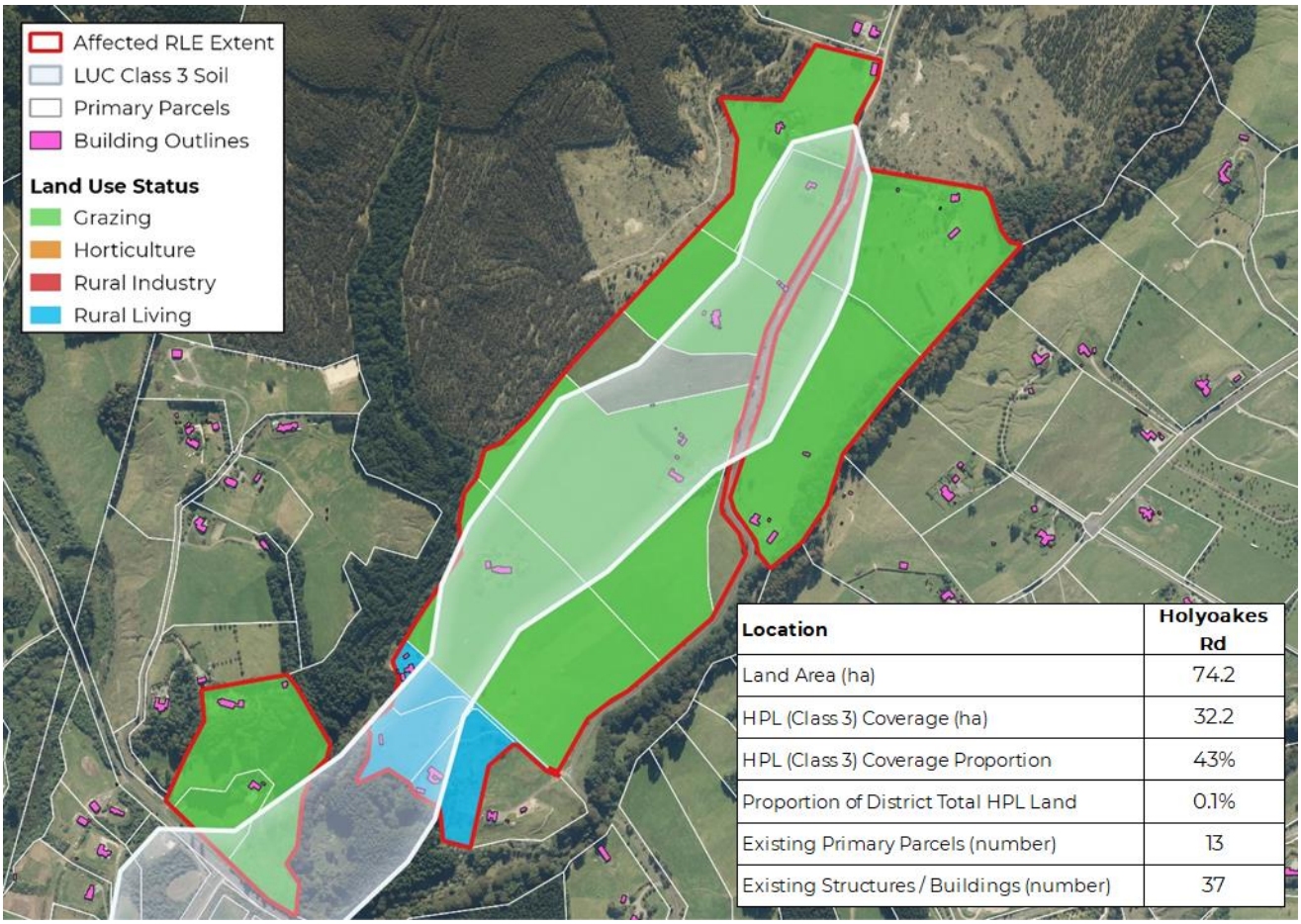
The Holyoakes Road RLE covers a large area of Rural Environment zoned land (approximately 74ha) situated north of the Kinloch township. It is adjacent to the Kinloch Rural Residential zone in the south and is currently predominantly used for rural lifestyle purposes.

The Class 3 productive soil is primarily located on the western side of Holyoakes Road, covering about 32ha, which represents around 43% of the total land area. However, this Class 3 extent is relatively isolated and surrounded by hills and lower-class soils that are less productive, indicating that future rural production uses in the area are less likely.

As per the NZLRIS, the Class 3 extent in this area is characterized by slightly dissected slopes with yellow-brown pumice soils developed on coarse Taupō flow tephra. These soils are of low fertility and are susceptible to severe moisture deficiency. There is also potential for moderate erosion through sheet, rill, and gully processes.

The land in the area is currently divided into 13 separate parcels and includes 37 existing structures[2].

FIGURE 3: PROPOSED HOLYOAKES ROAD RLE



Location	Holyoakes Rd
Land Area (ha)	74.2
HPL (Class 3) Coverage (ha)	32.2
HPL (Class 3) Coverage Proportion	43%
Proportion of District Total HPL Land	0.1%
Existing Primary Parcels (number)	13
Existing Structures / Buildings (number)	37

Source: TDC, NZLRIS, LINZ, Property Economics

3.3. ŌRUANUI AND FOREST ROAD

The Ōruanui and Forest Road RLE area, covering approximately 540ha of land adjacent to State Highway 1, has an estimated Class 3 soil extent that makes up around 36% of the total land area.

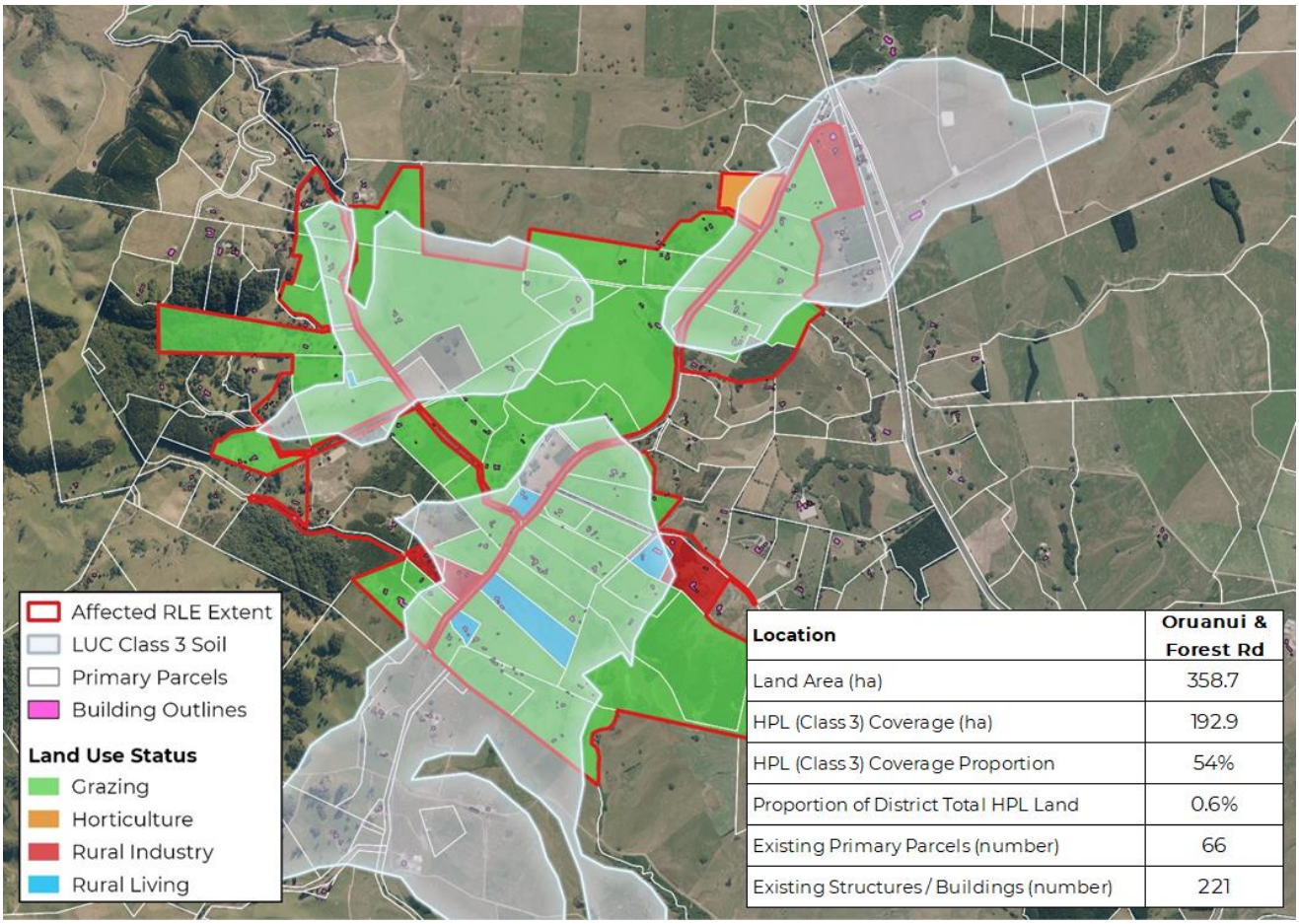
The NZLRIS description notes that this Class 3 extent consists of undulating slightly dissected slopes with yellow-brown pumice soils developed on coarse Taupō flow tephra, which are of low fertility and subject to periods of severe moisture deficiency, with a potential for moderate sheet, rill, and gully erosion.

The area is currently fragmented into 66 lots and includes 221 existing structures.

[2] *According to LINZ, building outlines observed in aerial imagery larger than or equal to 10 square meters are captured in this dataset, and may include structures such as garages and large sheds.*

Compared to other proposed RLE areas, the location of this area is relatively distant from existing urban environments in the district, with primarily rural lifestyle use in the area. Therefore, the proposed RLE aligns with the current demand for and usage of the area.

FIGURE 4: PROPOSED ŌRUANUI AND FOREST ROAD RLE



Location	Oruanui & Forest Rd
Land Area (ha)	358.7
HPL (Class 3) Coverage (ha)	192.9
HPL (Class 3) Coverage Proportion	54%
Proportion of District Total HPL Land	0.6%
Existing Primary Parcels (number)	66
Existing Structures / Buildings (number)	221

Source: TDC, NZLRIS, LINZ, Property Economics

3.4. TŪKAIRANGI ROAD

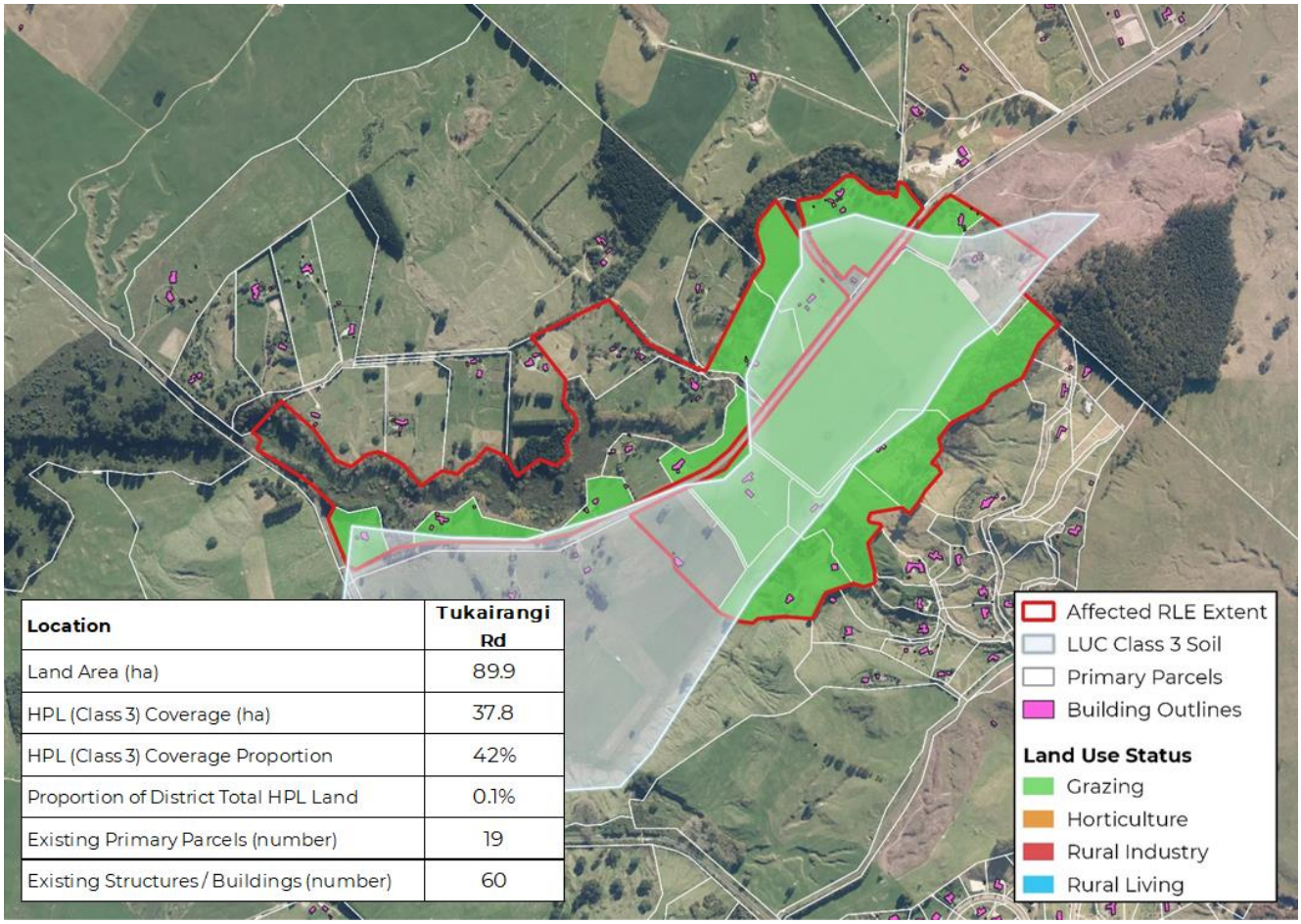
The Tūkairangi Road RLE is situated in the Mapara Valley – Valley Cluster and Rural Environment zone and covers an area of approximately 90ha.

Of this area, around 42% or 38ha is occupied by Class 3 productive soil, which is characterised by flat terraces with yellow-brown pumice soils that have low natural fertility and are prone to periods of moisture deficiency.

This area is in close proximity to the Low Density Residential and New Residential Environment to the south and the Mapara Valley Urban Neighbourhood and Modified Rural Environment to the north. As such, the proposed RLE aligns with the surrounding rural living residential environment.

The area is currently fragmented into 19 larger lots and includes 60 existing structures.

FIGURE 5: PROPOSED TŪKAIRANGI ROAD RLE



Source: TDC, NZLRIS, LINZ, Property Economics

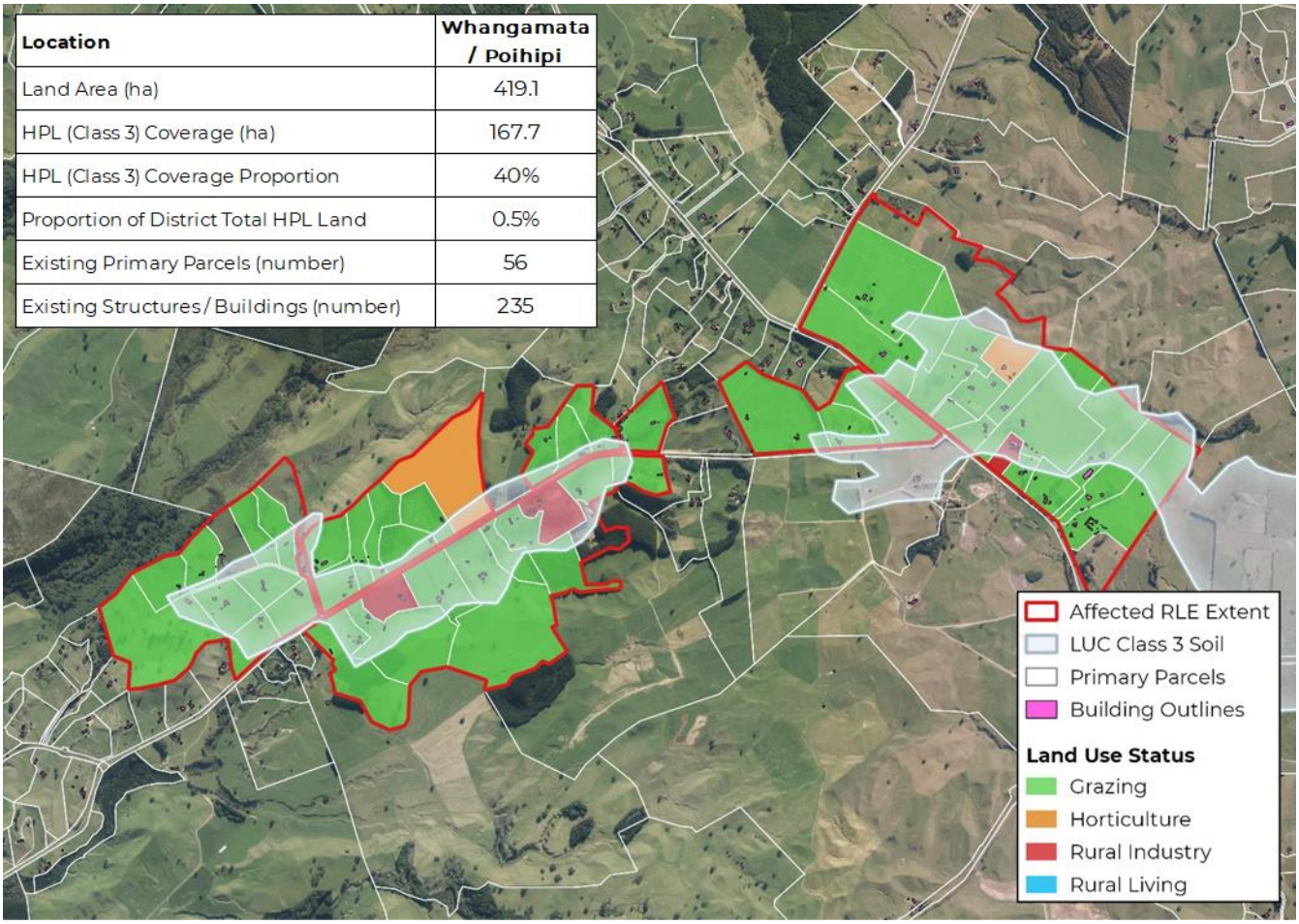
3.5. WHANGAMATĀ / POIHIPI

The proposed Whangamatā /Poihipi RLE area is located to the northeast of the Kinloch township and is within an 8 minutes' drive to the Kinloch Residential zoned area. This area spans approximately 168ha of Class 3 soil covering around 23% of the total land area and 0.5% of the district's HPL soil.

According to the NZLRIS, this Class 3 soil is characterised by "flat terraces with yellow-brown pumice soils developed on coarse-textured Taupō flow tephra or water-sorted Taupō tephra. Soils are subject to periods of moisture deficiency and are of low natural fertility. There is a potential for slight wind and gully erosion."

The area is predominantly rural living residential, with around 56 sites and 235 existing structures present, based on the latest (March 2023 updated) LINZ building outlines.

FIGURE 6: PROPOSED WHANGAMATĀ / POIHIPI RLE



Source: TDC, NZLRIS, LINZ, Property Economics

3.6. WHITE AND RIVER ROAD

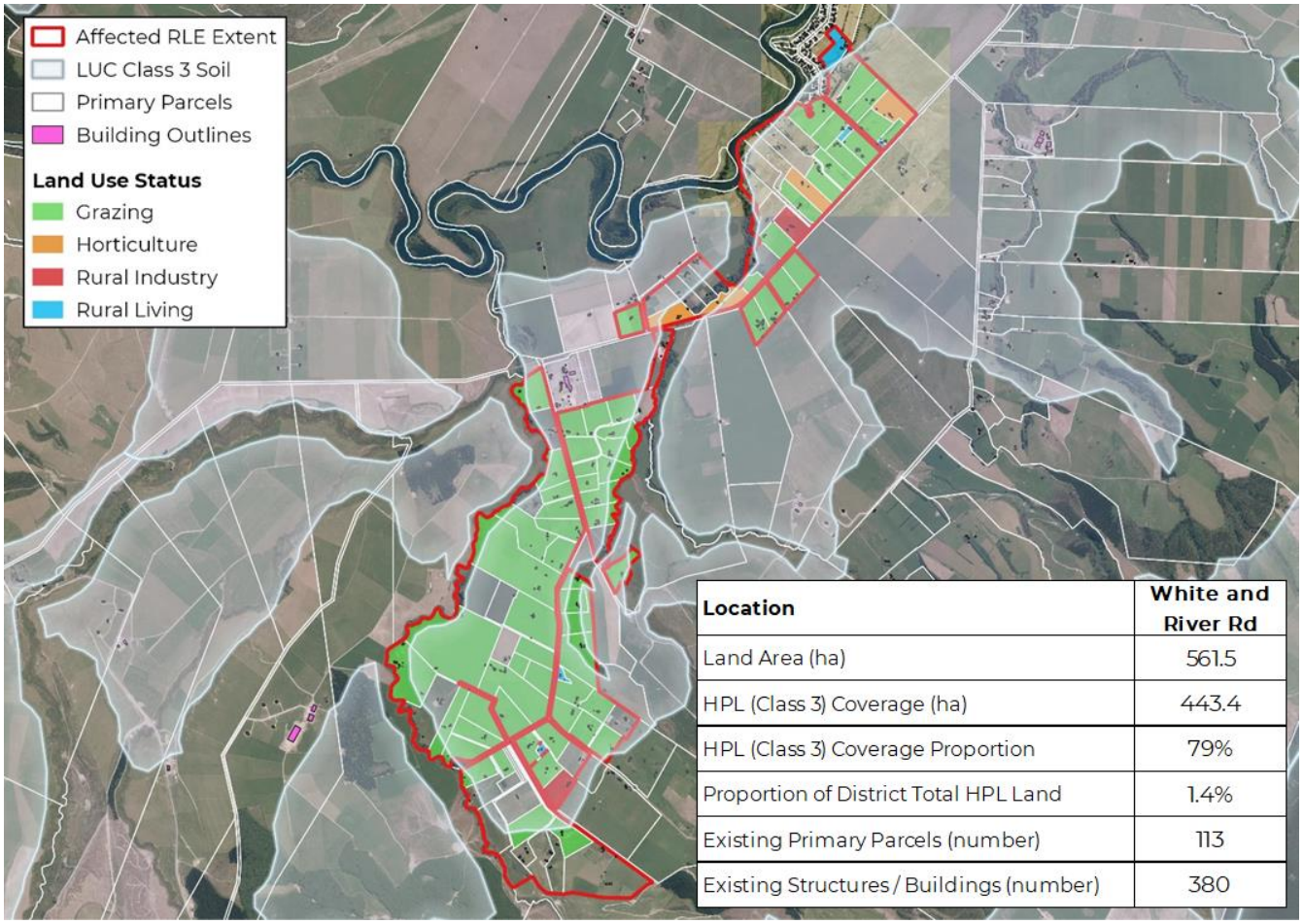
The proposed Tūkairangi Road RLE covers an extensive 562ha of land, with the majority of the area, approximately 79% or 443ha, being classified as Class 3 productive soil.

A portion of the area is adjacent to a Rural Environment to the north, which means that it could serve as a natural expansion of the riverside residential activities as demand increases in the future.

This area is fragmented into 113 lots and currently contains 380 existing structures.

Furthermore, this area is the furthest from the existing urban environment in the district compared to other proposed areas. It is worth noting that a large manufacturing business, Permapine Ltd, is already present on White Road, directly adjoining the proposed RLE to the south.

FIGURE 7: PROPOSED WHITE AND RIVER ROAD RLE



Location	White and River Rd
Land Area (ha)	561.5
HPL (Class 3) Coverage (ha)	443.4
HPL (Class 3) Coverage Proportion	79%
Proportion of District Total HPL Land	1.4%
Existing Primary Parcels (number)	113
Existing Structures / Buildings (number)	380

Source: TDC, NZLRIS, LINZ, Property Economics

4. LOSS OF PRODCUTIVE VALUE

4.1. METHODOLOGIES

The Ministry for Primary Industries (MPI) undertook an assessment[3] of the potential costs and benefits associated with a requirement for territorial authorities to assess the impacts of enabling changes in land use on HPL either through activity changes or subdivision.

While the release of this guiding document has been delayed, due to in part insufficient information, the assessment utilised in the initial process is a useful guide to understanding the potential economic, social, and cultural impacts associated with the uptake of HPL for residential activity. As such Property Economics considers this an appropriate approach to assessing the potential costs and benefits related to the changes proposed in the Taupō District.

Overall, the approach seeks to quantify the loss in primary output as a result of the rezoning of HPL for residential activity. Alternatively, the identification and quantification of benefits relate to the relative location of these sites as well as the potential changes to the district economy as a result of the residential provision.

HPL LAND AND PRIMARY PRODUCTION

The development of HPL away from primary production has become an important economic issue with the expansion of urban areas and the trended development of rural lifestyle residential sites. HPL currently makes up 15% of the national land area with primary production making up 5% of the national economic composition.

According to the MPI cost benefit assessment, Dunedin City has approximately 5% of its land area in HPL with primary production contributing 8% (based on employment) to district economy. In terms of the national 'significance' Taupō District contributes 0.6% to the country's primary produce. The 'Town Area' defined by the same assessment represented 0.2% of the district's total land area.

METHODOLOGY FOR PRODUCTION

The methodology followed for the purpose of this report follows the cost benefit assessment undertaken for the assessment of the economic requirement for NPS on HPL. This calculates the net contribution to GDP (value added), per hectare, of HPL land (by category LUC 1-3) and attributes a discounted loss over a 15-year period (i.e., 2023 – 2038).

[3] *Proposed National Policy Statement – Highly Productive Land Indicative Cost-Benefit Analysis (MPI Technical Report No: 2019/10)*

There are several further assumptions including:

- Only sites with single ownership over 4ha[4] are expected to have any significant productive value, unless specifically recognised.
- The productive potential value of sites increases as the overall size increases (thus loss of partial blocks may impact the remaining sites).
- The discount rate applied is 6%.
- It is assumed that any indirect or induced economic impacts are proportional to the type of land and subsequent production value rather than specific sites or land areas.
- It has been assumed that, under the ODP, subdivision of the site to below 4ha is not permitted.

For the purposes of this report, and in keeping with the NPS review process, the individual areas have firstly been assessed for their productive land areas, with sites that are below 4ha significantly discounted for long term production. A further consideration is the impact on the potential productivity of any remaining sites (land areas) that have been reduced through residential zone changes.

Productive values are based on national averages and factored for the levels associated with the Taupō market by land type (HPL category) and the presence of high valued soils. Production value is based on potential activity rather than existing activity to understand the potential loss over time (for a highest and best use based on agricultural activity). In order to assess a Net Present Value (NPV) for comparison of any other costs or benefits over time, a 6%[5] discount rate has been applied.

The assessment applied to each area in relation to the level of potential economic costs and benefits are then based on four key factors:

1. The level of capacity provision and ability to meet future residential growth needs.
2. The level of reverse sensitivity associated with residential activity (at the level proposed) in each area.
3. The overall loss of agricultural production resulting from the land use change.
4. The level of land use efficiency

[4] *It is assumed that the potential for aggregation of sites over time is unlikely.*

[5] *While NZTA have more recently utilised 4% discount rates from the standard 6%, it is considered appropriate to assess with the 6% rate given the timeframe of this assessment.*

4.2. LOSS OF PRODUCTIVE VALUE ANALYSIS

The table following outlines the summary economic metrics resulting from the assessment process identified previously.

A key economic cost identified through this report is, specifically, the value-added cost resulting as a potential loss of productive agricultural land for rural living development. This value-added loss is a representative proxy for losses in food production as well as potential impacts on flow-on benefits to the community through increased productive operations and employment provision.

Essentially this table represents the relative impact of each identified area on the Taupō economy providing for a scenario where each area has the potential to achieve the highest value (based on localised averages) per ha activity.

It is therefore considered pertinent to utilise the lost value by site provided for each area as an indicator of the relative economic costs of residential rezoning. Rows 8 - 9 (namely "Average Production per Site" and "Average Production per ha") of the following table outline the representative cost ranging from sites that are unlikely to result in lost production (due to factors such as current activities, current site sizes, and HPL coverage).

It is important to note when considering these relative costs that their significance in terms of the wider economy is likely to be less material. As outlined above the total identified HPL land area (for all six areas) equates to around 908ha in comparison to a district wide HPL land area of 32,114ha.

TABLE 1: AREA ECONOMIC POSITIONS SUMMARY

Metrics	(1) Centennial Drive	(2) Holyoakes Rd	(3) Oruanui and Forest Rd	(4) Tukairangi Rd	(5) Whangamata Poihipi	(6) White and River Rd	TOTAL AREAS
Total Land Area (ha)	40.5	74.2	358.7	89.9	419.1	561.5	1543.9
Total Number of Existing Sites	25	13	66	19	56	113	292
Number of +4ha Sites	3	8	41	11	50	90	203
Land Area of +4ha Sites (ha)	12.6	64.6	305.0	75.6	406.6	519.1	1383.5
LUC Extent of +4ha Sites (ha)	11.1	25.6	151.9	35.0	159.7	403.8	787.0
Value Added Per Year ($)	$11,100	$25,600	$151,900	$35,000	$159,700	$403,800	$787,100
Value Added (15 Years Total NPV) ($)	$108,000	$249,000	$1,475,000	$340,000	$1,551,000	$3,922,000	$7,645,000
Average Production per site ($)	$36,000	$31,100	$36,000	$30,900	$31,000	$43,600	$37,700
Average Production per ha ($)	$8,500	$3,900	$4,800	$4,500	$3,800	$7,600	$5,500
Reverse Sensitivity	High	Medium	Medium	Low	Medium	Medium	n.a
Urban Connectivity	High	Medium	Low	Medium	Low	Low	n.a

Source: Property Economics.

In terms of relative economic benefits associated with the residential rezoning of these areas, three key factors (two of which are interrelated) have been considered.

The first relates to existing urban connectivity and the ability for the identified area to access amenity and facilities that would amplify the economic value attributable to residential activity in each area. Economic values (beyond such considerations as wealth, affordability, and choice) generally relate to associated amenities that contribution to quality of life and accessibility (to employment, public transport, community facilities etc). In terms of the identified areas these have been summarised as connectivity, each area is therefore rated as low to high.

Additionally, reverse sensitivity has the potential to impact upon existing activities and their productivities, due to this usually coinciding with urban form individually it contributes to a lesser degree than connectivity.

Finally, the general extent to land use efficiency is considered in terms of sites per ha. While there is value in the provision of larger lots (e.g., for 'rural lifestyle' choice) the uptake of more land, on average, for residential use typically reduces land use efficiencies and relates to a lower economic value (and typically a lower value per sqm).

The table below summarises the relative economic impacts associated with each site by categorising the sites into three classifications – Lowest Relative Economic Impact, Medium / Middle Relative Economic Impact, and Highest Relative Economic Impact. These classifications are relative to each other.

TABLE 2:RELATIVE NET ECONOMIC IMPACT COMPARISON

Lower Impact	Medium Impact	Highest Impact
Holyoakes Rd	Centennial Drive	White and River Rd
Tūkairangi Rd	Ōruanui and Forest Rd	
	Whangamatā / Poihipi	

Source: Property Economics

As outlined the economic costs assessed include primarily land-based production value (based on a potential average for the land type classification) as well as considering any reverse sensitivity issues. The economic benefits include the extent and location of potential residential capacity and its ability to meet future demand projections in a managed environment.

Essentially the table above outlines the potential production cost associated with each dwelling provided through the potential rezoning. This is 'tempered' through a ratio for reverse sensitivity (7.5% at the upper limit).

While not a full economic cost assessment (not considering such factors as infrastructure constraints and provision), this provides for a relative economic value between the identified growth locations indicating areas that display lower relative (to the full spectrum of areas) direct land costs and those which indicate higher relative costs.

The table following presents an additional scenario as per the Council's request, considering a 10ha productive land threshold.

It is important to note that according to the current provisions of the ODP (Subdivision Rules 4b.3.1), any subdivision of land in the Rural Environment resulting in allotments of 10ha or larger is identified a Controlled Activity.

While the Waikato Regional Plans have identified permitted stocking rates in the Taupō catchment, land productivity is not solely determined by the number of animals allowed on the sites. Other factors such as the physical characteristics of the land, soil quality, and environmental conditions (e.g., erosion susceptibility, slope steepness, climate, flooding risk, wetness or drought vulnerability, salinity, soil depth, texture, structure, and nutrient supply) play a crucial role in determining productive capacity. Therefore, in Property Economics view, using stock limits as a proxy for the land productivity threshold is not necessarily appropriate.

There are no sites within the proposed RLE areas that have a land area larger than 30ha. This suggests that there would be no loss of production value if a 30ha threshold is used to define productive land.

Overall, Property Economics considers the use of a 4ha productive land threshold appropriate for assessing the potential loss of production value due to the proposed RLE.

TABLE 3: AREA ECONOMIC POSITIONS SUMMARY - 10HA SCENARIO

Metrics	(1) Centennial Drive	(2) Holyoakes Rd	(3) Oruanui and Forest Rd	(4) Tukairangi Rd	(5) Whangamata Poihipi	(6) White and River Rd	TOTAL AREAS
Total Land Area (ha)	40.5	74.2	358.7	89.9	419.1	561.5	1,544
Total Number of Existing Sites	25	13	66	19	56	113	292
Number of +10ha Sites	0	2	7	2	13	7	31
Land Area of +10ha Sites (ha)	0	27.1	127.5	38.0	225.7	121.3	540
LUC Extent of +10ha Sites (ha)	0	15.2	49.3	16.0	64.4	81.5	226
Value Added Per Year ($)	$0	$15,200	$49,300	$16,000	$64,400	$81,500	$226,400
Value Added (15 Years Total NPV) ($)	$0	$147,000	$478,000	$155,000	$626,000	$792,000	$2,198,000
Average Production per site ($)	$0	$73,500	$68,300	$77,500	$48,200	$113,100	$70,900
Average Production per ha ($)	$0	$5,400	$3,700	$4,100	$2,800	$6,500	$1,400
Reverse Sensitivity	High	Medium	Medium	Low	Medium	Medium	n.a
Urban Connectivity	High	Medium	Low	Medium	Low	Low	n.a

Source: Property Economics.

5. ECONOMIC COSTS AND BENEFITS

PC42 to create new RLE in the areas with HPL coverage would generate a range of economic costs and benefits. This section outlines some of the high-level economic costs and benefits of rezoning the identified areas in contrast to the counterfactual of retention of current Rural Environment provision.

ECONOMIC COSTS

Loss of Productive Land: Rural lifestyle subdivision and development on existing rural land generates economic costs associated with lost productivity. Rural land often accommodates economically productive uses including agricultural and horticultural production, pasturing and forestry. Such uses are dependent on open space, soil quality and access to fresh water and transport.

Currently, a limited 5% proportion of Taupō District's land remains available for high value agricultural and horticultural production. As uptake of productive rural land continues for non-productive uses, productive land becomes more valuable and greater pressure is placed on remaining land to maintain its productive use.

However, as per PC42, REL continues to provide for primary production and rural industries within the proposed areas. This means that rural production activities are still enabled within the area with the potential depending on future market demand and conditions.

Furthermore, based on the prior analysis, the existing uses and activities on the identified areas have a strong rural lifestyle / living character, meaning that the rural production loss due to the proposed RLE would be considerably less than if it was rural.

Decreased Residential Intensity Impetus: As with the provision of any residential locational choice that provides for new urban areas, the development of greenfield land is likely to impact upon the impetus for the more efficient (re)development within existing urban areas. It is important to note, however, that Property Economics previous assessment[6] indicated that there would be a demand for additional 200 rural lifestyle blocks within the wider district by 2033. It is difficult to provide additional supply in a coordinated way without a zoning.

Additional Infrastructure Upgrade and Investment: One cost associated with rural lifestyle activity are the costs associated building and maintaining the infrastructure network. Dispersed residential activity is generally associated with a greater social marginal cost of infrastructure development and maintenance.

Rural lifestyle activity is low density in character with dwellings being more dispersed and isolated than their higher density urban counterpart. However, rural lifestyle dwellings still

[6] *Taupō Rural Lifestyle Economic Assessment, Property Economics Limited, June 2019*

require service from infrastructure in the form of power, roading, internet connection, wastewater and water supply (albeit noting in Taupō rural lifestyle blocks are currently, and PC42 sets out that they continue to be, self-sufficient for water supply and wastewater).

A characteristic of rural lifestyle living is a lower density of residents per square metre. As the cost of installing and maintaining infrastructure is relatively fixed, this results in higher infrastructure costs per household. This concept applies to both infrastructure development and maintenance.

ECONOMIC BENEFITS

Increased Land / Dwelling Supply: The proposed RLE areas would supply the market with a meaningful increase in net housing capacity for the market and contribute to reducing the expected rural lifestyle blocks shortfall in the wider district.

Additionally, this provides clear direction to the market regarding both its ability to meet future demand pressures and its provision through an efficient site location and size. It is also important to note that unlike some of the assessed feasible capacity, in the wider district, the propensity for this 'greenfield' development to occur is markedly higher than infill redevelopment.

In an economic environment where the market identifies a diverse range of circumstances, expanding the residential typologies or choices available to consumers enables them to make decisions that better suit their personal needs and preferences. In this regard, the provision of any additional residential product provides more options that, putting aside the costs element, will improve the community wellbeing. However, what is important is the extent of this benefit or demand for the product in comparison to the costs.

More Affordable (Rural Lifestyle) Housing: The provision of additional residential-enabled capacity within the broader area may help improve housing affordability within the market. A significant contributor to residential property values is the underlying land values impacted by growth expectations and supply. The identification of suitable future rural lifestyle land has the potential to temper price pressure in the local and surrounding markets and hem in price growth.

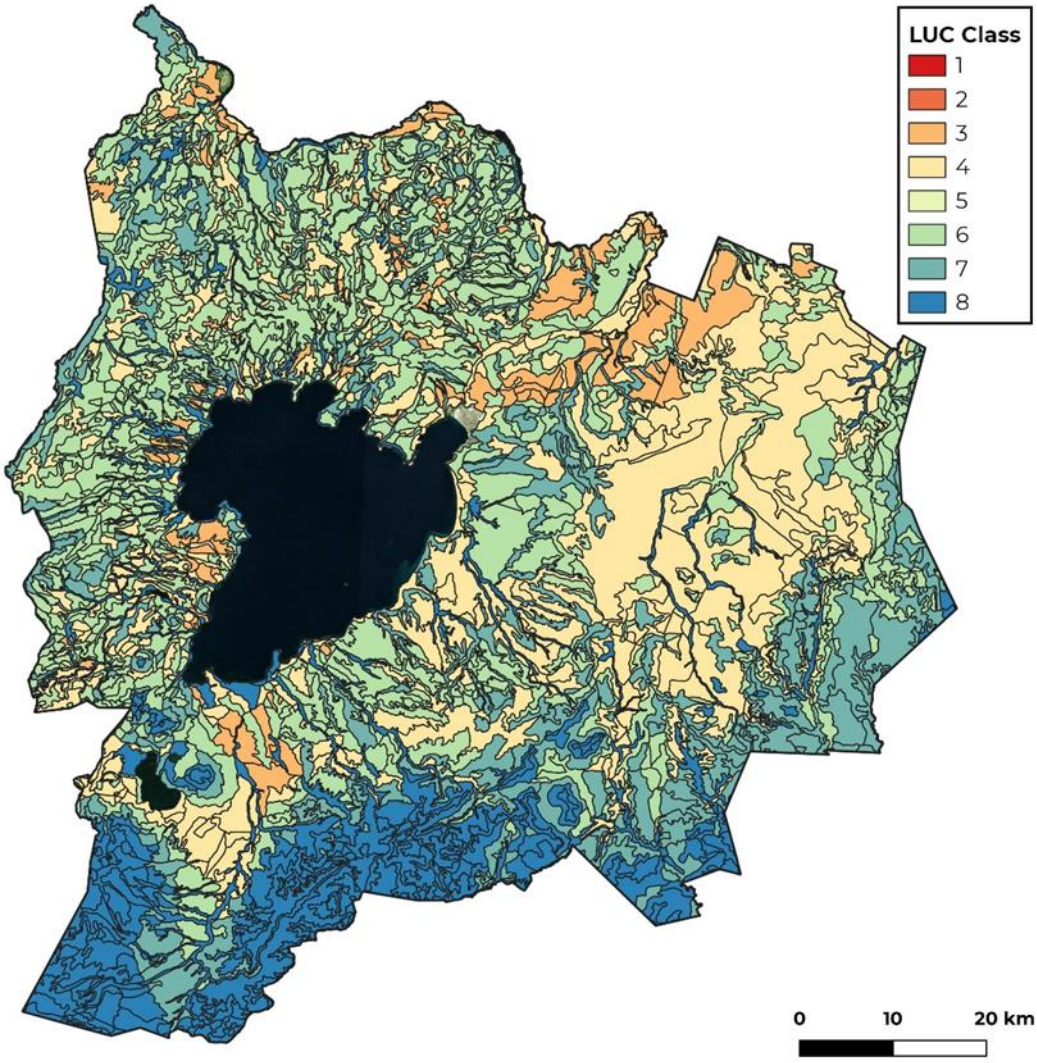
Protection of the General Rural Environment from Rural Lifestyle Subdivision: The proposed RLE covers areas that are already being utilised for rural living purpose. As per PC42, there would more difficulty to subdivide and build a second dwelling in rural lifestyle if it shares a boundary with the General Rural Environment. As such, the proposed RLE areas can be expected to provide additional rural lifestyle capacity while protecting the General Rural Environment from further subdivision.

Increased Choice of Location: The proposed areas offer residents additional choices in their living environment in respect of location and typology. It also opens up downsized, low maintenance housing stock for those on fixed incomes and the opportunity to on sell an existing property that is too difficult to maintain.

Increased Diversity of Buyer Pool: While the development of rural lifestyle blocks in the identified areas would appeal to a specific buyer group (rural living options preferred group), the proposed RLE therefore would free up existing housing stock for downsizers and increase the number of family homes for younger buyers – couples and families – to move in. Greater Levels of Growth: Growth from residential developments can often work as a catalyst that spurs further growth in the area. The proposed additional rural residential provisions could increase interest for additional residential development within the local market and provide significant impetus for growing the local economy.

In Property Economics' view, balancing all the economic considerations, the proposed RLE would generate significantly more economic benefits for Taupō's local economy and residents than economic costs.

APPENDIX 1: TAUPŌ DISTRICT HPL DISTRIBUTION OVERVIEW



LUC Class	Estimated Land Area (ha)	Proportion
Class 1	0	0%
Class 2	0	0%
Class 3	32,114	5%
Class 4	168,155	27%
Class 5	0	0%
Class 6	209,466	33%
Class 7	117,428	19%
Class 8	104,599	17%
Total Land Area (ha)	**631,762**	**100%**
Total HPL (Class 1 - 3) (ha)	**32,114**	**5%**

Source: NZLRIS, LINZ, Property Economics

APPENDIX 2: DISTRIBUTION OF PUMICE SOIL IN TAUPŌ DISTRICT

Source: Landcare Research

APPENDIX 3: LAKE TAUPŌ CATCHMENT