

**Tararua District Urban Growth Strategy
Highly Productive Land Assessment
Dannevirke, Woodville and Pahiatua**

prepared for

Tararua District Council

July 2025



ECOAGRILOGIC

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Contents

Table of Contents

1	Introduction.....	5
2	Current and Surrounding Land Use	5
2.1	Tararua District	5
2.2	Dannevirke	7
2.3	Woodville	9
2.4	Pahiatua	11
3	Land Use Capability Classification and Soil Types	14
3.1	Tararua District	14
3.2	Dannevirke	15
3.3	Woodville	20
3.4	Pahiatua	23
4	NPS-HPL Analysis.....	28
4.1	Highly Productive Land Assessment.....	28
4.2	Clause 3.10(1) of the NPS-HPL analysis	29
4.3	Clause 3.10(2) of the NPS-HPL analysis	30
5	Conclusions	32
6	Limitations	34
7	Certification	35
8	References	36
	Appendix A: Summary of NZLRI Land Unit Characteristics within the Rezoning Areas ..	37
	Appendix B: Site Photos.....	39

Figure 1: Proposed residential and rural residential rezoning areas in Dannevirke, showing parcel size distribution and the extent of existing land fragmentation.....	9
Figure 2: Proposed residential rezoning area in Woodville, showing parcel size distribution and the extent of existing land fragmentation.	11
Figure 3: Proposed residential and rural residential rezoning areas in Pahiatua, showing parcel size distribution and the extent of existing land fragmentation.....	13
Figure 4: NZSC soil orders within and surrounding the proposed residential and rural residential rezoning areas (outlined in red) in Dannevirke.	18
Figure 5: Land Use Capability classifications for the proposed residential and rural residential rezoning areas (outlined in red) in Dannevirke, showing the predominance of LUC Class 3 land within the rezoning areas.	19
Figure 6: NZSC soil orders within and surrounding the proposed residential rezoning areas (outlined in red) in Woodville.	22
Figure 7: Land Use Capability classifications for the proposed residential and rural residential rezoning areas (outlined in red) in Woodville, showing the predominance of LUC Class 2 land, with smaller areas of LUC Class 3 and LUC Class 4 land.	23
Figure 8: NZSC soil orders within and surrounding the proposed residential and rural residential rezoning areas (outlined in red) in Pahiatua.	26
Figure 9: Land Use Capability classifications within the proposed residential and rural residential rezoning areas in Pahiatua (outlined in red) showing the predominance of LUC Class 2 land in the residential area and LUC Class 6 land in the rural residential area.....	27
 Table 1: Parcel size distribution within the residential and rural residential rezoning areas in Dannevirke	8
Table 2: Parcel size distribution within the residential and rural residential rezoning areas in Woodville	10
Table 3: Parcel size distribution within the residential and rural residential rezoning areas in Pahiatua	12
Table 4: LUC classifications in the Tararua District.....	14
Table 5: LUC Classes and Dominant Soil Orders in the Dannevirke Rezoning Areas ..	17
Table 6: LUC Classes and Soils within the Woodville Residential Rezoning Area	21
Table 7: LUC Classes and Dominant Soil Orders in the Pahiatua Rezoning Areas	24
Table 8: Assessment of Reasonably Practicable Options under Clause 3.10(2).....	31

Abbreviations

HPL	Highly Productive Land
LUC	Land Use Capability
NPS	National Policy Statement
NZLRI	New Zealand Land Resource Inventory
GIS	Geographic Information System
S-map	New Zealand Digital Soil Mapping System (S-map Online)
MfE	Ministry for the Environment
asl	Above Sea Level
ha	Hectare(s)

1 Introduction

The Tararua District Urban Growth Strategy was notified in May 2024. A key component of the Strategy is the identification of rezoning recommendations focused on the district's four main townships: Dannevirke, Woodville, Pahiatua, and Eketāhuna.

The Strategy proposes areas for residential, rural residential (lifestyle), and industrial development, some of which are located or partly located within areas mapped as Highly Productive Land (HPL). As such, any rezoning decisions must give effect to the National Policy Statement for Highly Productive Land (NPS-HPL; MfE, 2022). The purpose of the NPS-HPL is to ensure the long-term availability of New Zealand's most productive land for food and fibre production, both now and for future generations.

EcoAgriLogic Ltd. has been commissioned to evaluate whether the proposed residential and rural residential rezonings identified in the Urban Growth Strategy are consistent with the relevant provisions of Clauses 3.6, 3.7 and 3.10 of the NPS-HPL.

This report assesses the distribution of Land Use Capability (LUC) classes and the overall productive capacity of land within the proposed residential and rural residential rezoning areas, with particular emphasis on areas mapped as Highly Productive Land (HPL). The assessment draws on existing data and literature, supplemented and verified through site visits.

The proposed rezoning areas in Eketāhuna are not assessed in this report.

2 Current and Surrounding Land Use

2.1 Tararua District

Historically, the Tararua District was cloaked in dense podocarp forest, traditionally known as *Tapere nui a Whatonga*, “the food basket of Whatonga”, by local iwi Ngāti Rangitāne and Ngāti Kahungunu. This forested area, also referred to as the Seventy Mile Bush, stretched between Wairarapa and Central Hawke's Bay.

In the 1870s, Scandinavian settlers were brought to New Zealand with the purpose of clearing the bush to enable the development of essential infrastructure, including roads and a railway linking Wellington and Hawke's Bay. This clearance paved the way for the development of key towns such as Norsewood, Dannevirke, Woodville,

Pahiatua, and Eketāhuna, now strung together by State Highway 2 and the main rail line.

Today, most of the land in the Tararua District (245,534 ha, or 56%) is used as high-producing exotic grassland, with only a small portion (2,947 ha) under irrigation. Horticulture plays a minor role in current land use, occupying just 67.3 ha (0.03%) of the district's land area, while 3,282 ha (1.3%) is used for grain, seed, or fodder crop production (Figure.NZ, 2025).

For the purposes of this report, the proposed rezoning areas were sourced from the Tararua District Council's GIS dataset (Tararua Potential Growth Areas Rev 4, 9 December 2024). Property sizes were determined from the parcel information contained within the Council's GIS datasets.

To assess the practicality of land for agricultural, arable, or horticultural productivity, properties within the proposed rezoning areas have been categorized by size:

- < 2.5 ha – Primarily residential dwellings, with limited potential for productive use.
- 2.5–4 ha – Typically lifestyle blocks or mixed-use land with some potential for productive activity.
- > 4 ha – Large-scale holdings potentially viable for commercial horticultural operations.

To assess current and surrounding land use within the proposed rezoning areas, a combination of visual inspection and aerial imagery analysis was undertaken. Site visits were conducted to verify conditions on the ground and gather key observational data. Dr. Esther Dijkstra of EcoAgriLogic Ltd. carried out site visits at the following locations: Woodville and Pahiatua were visited on 15 June 2025, and Dannevirke was visited on 21 June 2025.

During these visits, basic field data was collected to confirm:

- Current and adjacent land use activities
- Landform characteristics
- Ground cover types
- Potential limitations or constraints to land productivity (e.g., slope, drainage, existing infrastructure)

This information was used to support the classification of sites and to evaluate their suitability for various productive land uses, including arable, horticultural, or pastoral activities.

2.2 Dannevirke

Dannevirke is located approximately 60 kilometres north of Palmerston North and 100 kilometres south of Hastings. The town is situated on a river terrace, flanked by two natural watercourses: the Makirikiri Stream to the north and the Mangatera Stream to the south.

Topography plays a key role in shaping future development. A steep escarpment defines the town's eastern boundary, beyond which the land slopes down toward the Makirikiri Stream. In contrast, the western side of Dannevirke features gently rising terrain that leads to an elevated terrace extending toward the foothills of the Ruahine Ranges. Given these natural features and constraints, proposed areas for residential and rural residential rezoning are located to the west of the town, where the topography is more favourable for development.

The proposed rezoning area lies between Smith Road to the north and Taradale Road to the south (Figure 1). Adelaide Road forms the western boundary, while the Tapuata Stream defines the eastern boundary. Cole Street serves as the internal boundary, separating the rural residential rezoning area to the north from the residential rezoning area to the south.

The residential rezoning area comprises 105 land parcels, of which 104 are smaller than 2.5 ha (Table 1). The land use in this area is predominantly lifestyle-oriented, with grazing animals. The terrain generally dips away to the east from Adelaide Road and to the south from Princess Street. Three smaller tributaries of the Tapuata Stream flow through the area between Cadman Street and Taradale Road, converging at the lowest point before crossing Taradale Road. These streams have shaped the land into a series of river terraces. The lower-lying areas are wetter, with vegetation dominated by rushes and rough vegetation, while the higher areas are in pasture. A small number of businesses are located within the residential rezoning area, including an earthmoving contractor on Adelaide Road and a building contractor on Cadman Road.

The rural residential rezoning area comprises predominantly lifestyle blocks with grazing animals. The terrain is largely flat in the north, becoming slightly more undulating near the point where a tributary of the Tapuata Stream crosses Adelaide Road and enters the rezoning area. Of the 23 land parcels in the rural residential area, 19 land parcels are less than 2.5 ha in size.

Land use in the surrounding areas is predominantly pastoral. To the north of Smith Road and south of Taradale Road, the land remains in agricultural use. The terrain becomes increasingly undulated along Adelaide Road as it extends from Smith Road to Taradale Road. West of Adelaide Road, land use is also generally

pastoral, interspersed with rural lifestyle development, such as that found along Blue Gum Lane.

Table 1: Parcel size distribution within the residential and rural residential rezoning areas in Dannevirke

Activity	Total Area (ha)	Total parcels	Parcel size (ha)	Parcels (n)	Area (ha)	% of Activity Area
Residential	86	105	<2.5	104	80.5	93
			2.5-4	0	0	0
			>4	1	5.5	7
Rural Residential	38	23	<2.5	19	22	58
			2.5-4	2	6.5	17
			>4	2	9.5	25

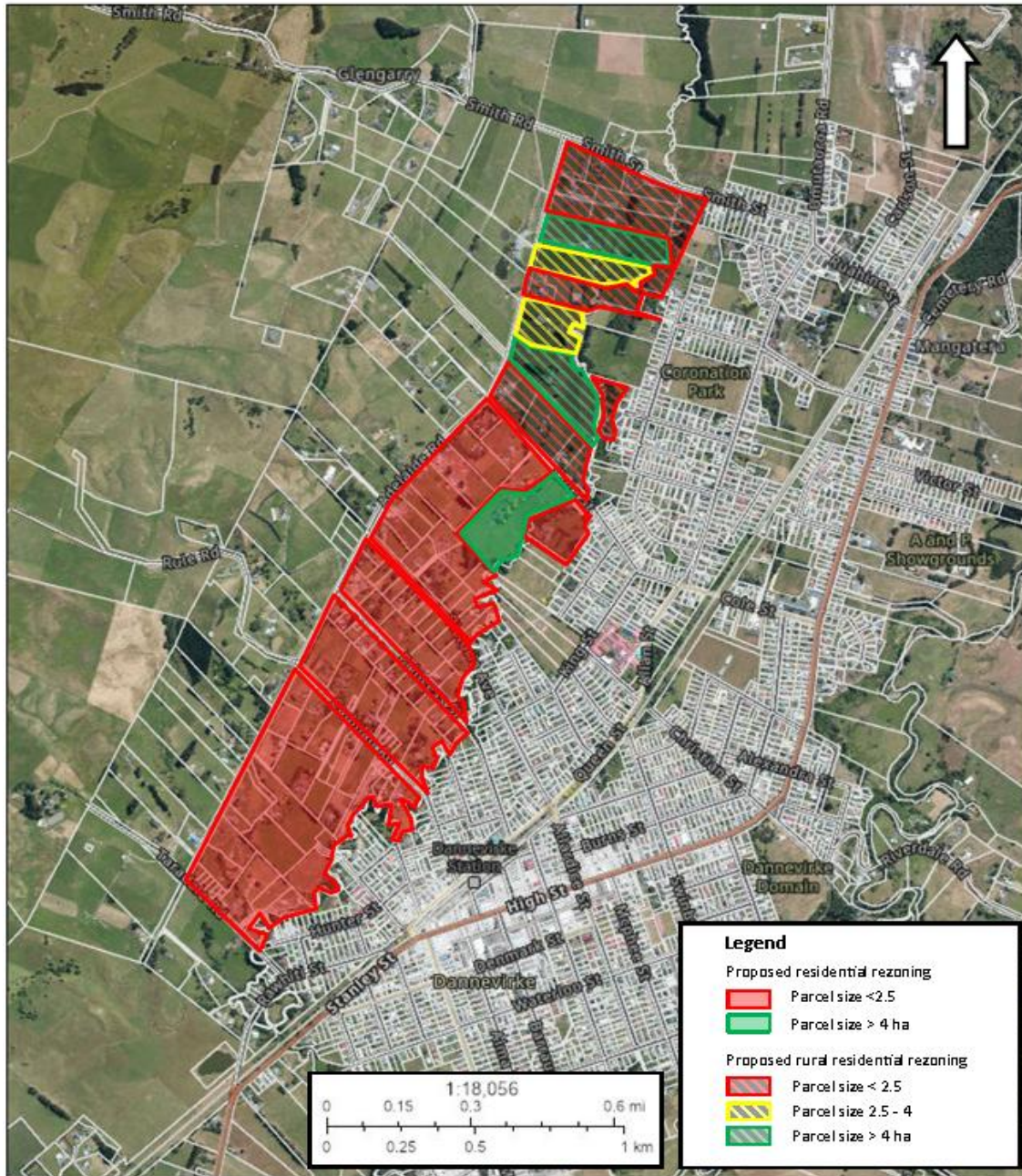


Figure 1: Proposed residential and rural residential rezoning areas in Dannevirke, showing parcel size distribution and the extent of existing land fragmentation.

2.3 Woodville

Woodville is located on a large, flat floodplain with several streams, including the Mangapapa Stream and the Mangaatua Stream, which drain towards the

southwest into the Manawatū River. The area around the confluence with the Manawatū River is identified as flood risk areas.

The town lies at the intersection of State Highway 2 and State Highway 3, with the Te Ahu a Turanga – Manawatū Tararua Highway providing a key connection to Palmerston North.

The proposed residential rezoning in Woodville is concentrated primarily to the north of the town, focusing on the flatter land between Sowry Road and Pinfold Road. Additional areas include a smaller rezoning site west of Fergusson Street, and an infill area located between SH3 and Grant Street. No rural residential rezoning is proposed for Woodville. The residential rezoning area comprises 111 parcels, all of which are less than 2.5 hectares in size (Table 2).

Table 2: Parcel size distribution within the residential and rural residential rezoning areas in Woodville

Activity	Total Area (ha)	Total parcels	Parcel size (ha)	Parcels (n)	Area (ha)	% of Activity Area
Residential	70	111	<2.5	111	70	100

The current land use west of Fergusson Street is grazing (cattle and sheep). A few lifestyle blocks are located towards the northern end of Fergusson Street. The surrounding land use of Fergusson Street is mostly residential to the east and south and pastoral to the north and west.

The area proposed for residential rezoning, situated between Sowry Road to the north and west of Pinfold Road, including Bevan Street and Gladstone Street, is mainly used for lifestyle grazing and horse breeding. A native plant nursery is located along Pinfold Road. The land is generally flat, although the presence of rushes at the corner of Sowry and Pinfold Roads suggests slow-draining soils. Historical aerial photographs from the 1950s show two streams flowing north to south through this area.

To the north of Sowry Road lies the local racecourse, while the land west of Pinfold Road is used for farming. A small hill is located to the west of Bevan Street and north of Richardson Street East.

The rezoning area between SH3, Nelson Street, and Grant Street is also generally flat and primarily used for lifestyle grazing. Two streams run through this area, with portions of the waterways channeled and planted with riparian vegetation. The surrounding land to the east of Nelson Street and south of Grant Street is used for

farming, while the land to the west lies within the existing residential zone of Woodville and features higher-density housing.

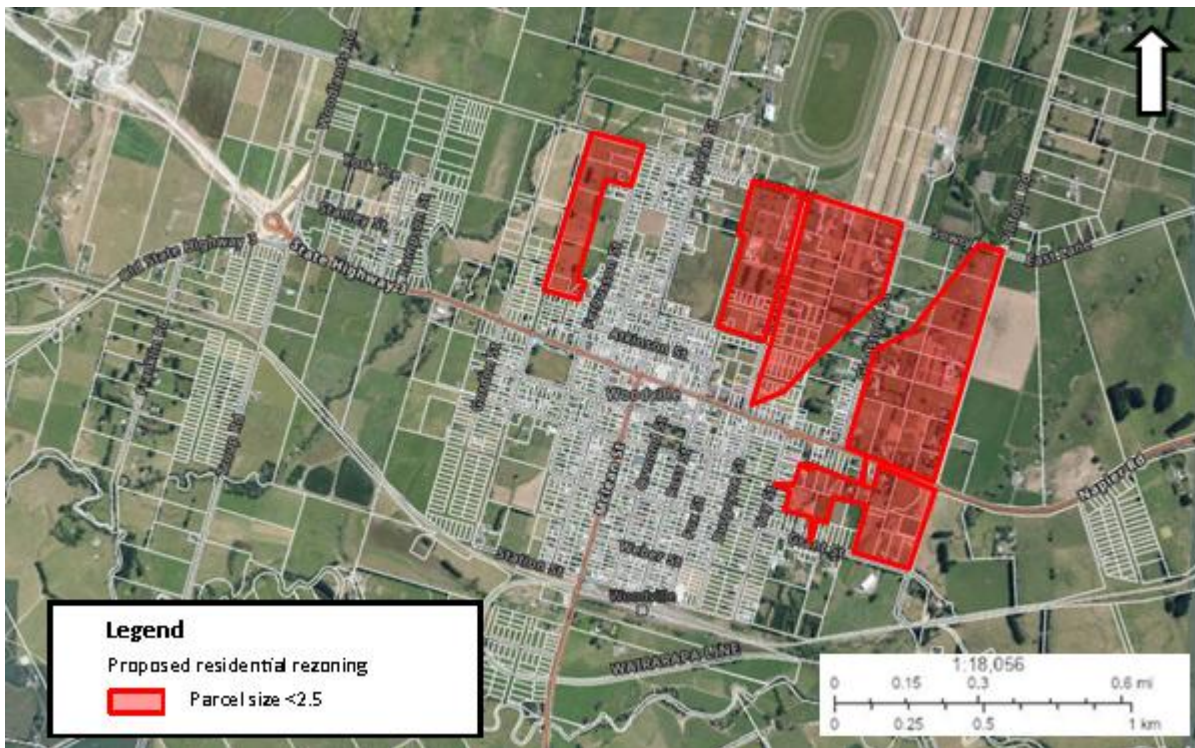


Figure 2: Proposed residential rezoning area in Woodville, showing parcel size distribution and the extent of existing land fragmentation.

2.4 Pahiatua

Pahiatua is situated on a flat river terrace, with the Mangatainoka River forming the town's western boundary. This river poses a significant constraint to development due to flood risk, which is greatest in the western and southern parts of the town, as indicated by flood modelling. Rolling hills along the western edge of the town also limit expansion opportunities in that direction.

The proposed residential rezoning area is primarily located to the north of the town. This land is generally flat and currently used for lifestyle purposes, particularly along Horseshoe Lane, with the remainder used for farming. A tributary of the Mangaramarama Stream flows through this area. The surrounding land to the north and east is predominantly used for farming, while the urban area of Pahiatua lies immediately to the south.

A second residential rezoning area is proposed between State Highway 2 (SH2) and Jervois Street. This area includes a petrol station on the corner of SH2 and Halls Road, with existing residential lots lining SH2 and paddocks to the south. Some of this land, particularly along Bowen Street, is already being developed for housing. Jervois Street is home to both residential properties and a transport business. West of Jervois Street, the land is used for lifestyle purposes.

Across the entire residential rezoning area, there are 64 parcels in total, 61 of which are less than 2.5 hectares in size—making up approximately 70% of the total area (Table 3).

Table 3: Parcel size distribution within the residential and rural residential rezoning areas in Pahiatua

Activity	Total Area (ha)	Total parcels	Parcel size (ha)	Parcels (n)	Area (ha)	% of Activity Area
Residential	46.5	64	<2.5	61	32.5	70
			2.5-4	1	3	6
			>4	2	11	24
Rural Residential	75	37	<2.5	30	16	21
			2.5-4	1	4	5
			>4	6	55	74

A rural residential rezoning area is proposed to the east of Pahiatua, and north of Tiraumea and Kaitawa Roads. This land is more undulating and is currently used predominantly for farming and already supports several lifestyle properties. The area borders the residential edge of Pahiatua to the west and includes a nearby sports park. Industrial activity, including a lumber processor and a recycling centre, is also present to the west of Tudor Road.

There are 37 parcels in the rural residential area, with 30 parcels measuring less than 2.5 hectares. However, six larger parcels, each over 4 hectares, make up approximately 74% of the total rural residential area by land area.

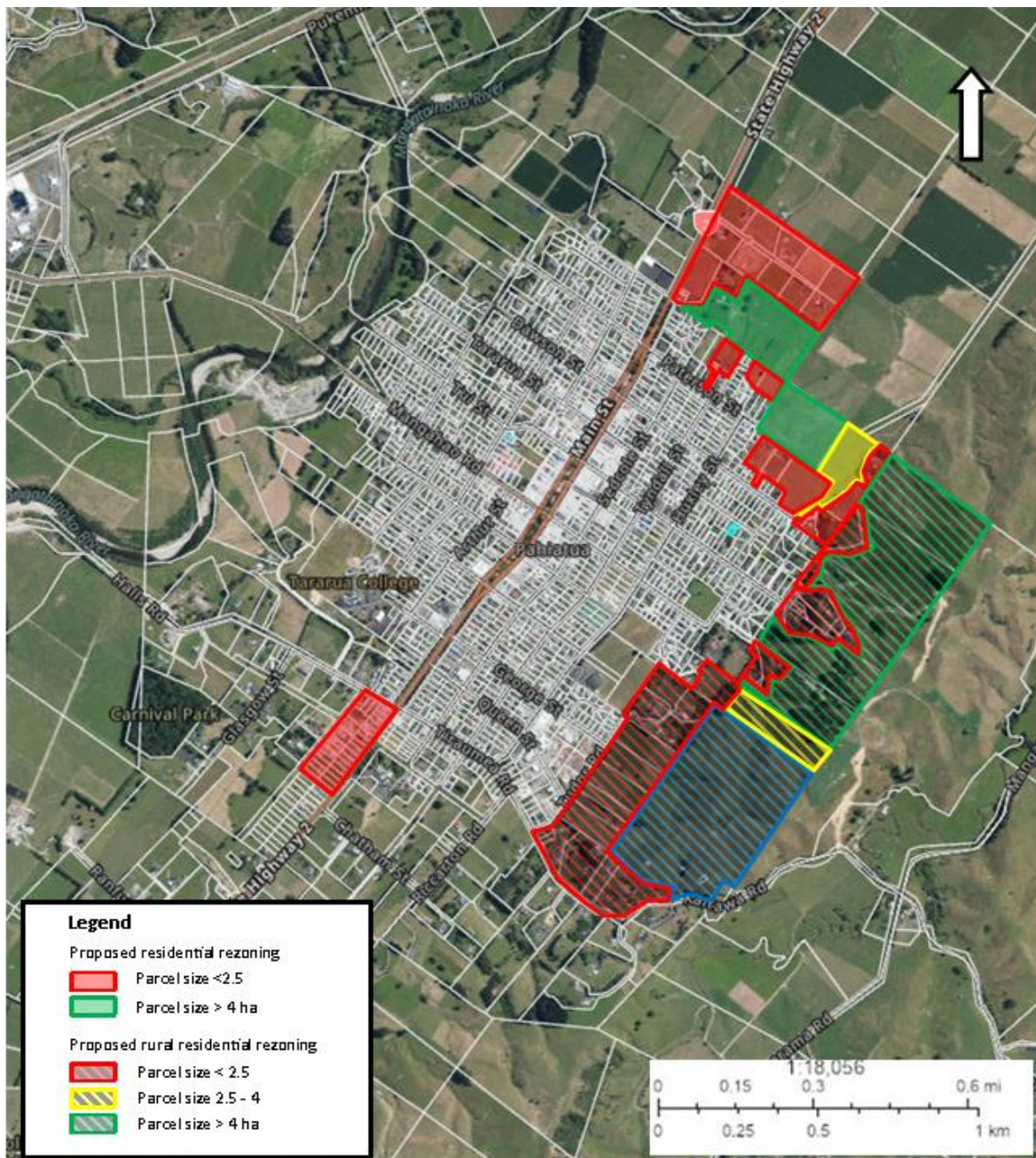


Figure 3: Proposed residential and rural residential rezoning areas in Pahiata, showing parcel size distribution and the extent of existing land fragmentation.

3 Land Use Capability Classification and Soil Types

3.1 Tararua District

The total land area of the Tararua District is 436,221 ha, of which 78,265 ha is classified as Highly Productive Land (HPL), representing 17.9% of the district area (Table 4). The district's HPL resource is concentrated within the broad valley east of the Tararua Ranges, where flat to rolling landforms, favourable drainage conditions, and versatile soils support a range of productive land uses. These valley environments are shaped by major river systems, including the Manawātū River, together with the Mangatainoka and Mangahao Rivers, which converge south of Woodville.

Table 4: LUC classifications in the Tararua District

LUC	Area (ha)	Percent of Total Area (%)
1	549	0.1
2	31,368	7.2
3	46,348	10.6
4	22,246	5.1
5	1,375	0.3
6	211,106	48.4
7	105,481	24.2
8	16,859	3.9
Town	889	0.2
Total	436,221	100%

This valley forms part of an inland trough extending approximately 260 km from Napier in the north-east to Palliser Bay in the south-west (Molloy, 1988). A series of smaller basins occur along the trough, supporting the towns of Dannevirke, Woodville, and Pahiatua. Most of the valley land lies within the rain shadow of the surrounding ranges and receives between 800 and 1,200 mm of rainfall annually. The soils within this inland trough are predominantly developed on alluvial deposits of mixed origin. These deposits comprise greywacke and argillite derived from the Kaweka, Ruahine, and Tararua Ranges to the west, together with siltstones, mudstones, and limestones derived from the eastern hill country. The resulting soils are generally deeper, more versatile, and less constrained than those occurring on the surrounding hill country.

In contrast, the landscape east of the valley is dominated by rolling to steep hill country developed on siltstone and mudstone. These soils are more susceptible to erosion and generally have lower productive versatility. Land use is predominantly sheep and beef farming and forestry, and much of this area is classified as LUC

Classes 4 to 8, which are not considered Highly Productive Land under the NPS-HPL.

The Land Use Capability distribution within the district reflects this strong contrast between the alluvial valley floors and the surrounding hill country (Table 4). LUC Class 1 land is very limited, comprising only 549 ha (0.1%) of the district. In contrast, LUC Classes 2 and 3 collectively comprise 78,265 ha (17.9%) of the district and form the primary Highly Productive Land resource protected under the NPS-HPL. The dominant land classes are LUC Class 6 and LUC Class 7, which together account for approximately 72.6% of the district area. These classes are associated with rolling to steep hill country where slope, erosion susceptibility, and other physical limitations constrain the range of productive land uses.

Consequently, the district's Highly Productive Land resource is concentrated within the relatively limited areas of valley floor, floodplain, and terrace land surrounding Dannevirke, Woodville, and Pahiatua. The proposed rezoning areas assessed in this report are located within, or adjacent to, these productive valley environments.

The proposed rezoning areas assessed in this report are located within the highly productive valley environments surrounding Dannevirke, Woodville, and Pahiatua. To determine the productive land values of these areas, a desktop assessment of Land Use Capability (LUC) and soil resources was undertaken, supplemented by site inspections.

The Land Use Capability (LUC) classification data for the towns of Woodville, Pahiatua, and Dannevirke was sourced from the Manaaki Whenua Landcare Research Land Resources Portal. Soil information for Pahiatua was obtained from the S-Map Online platform (Manaaki Whenua), which provides soil mapping at a 1:50,000 scale. For Dannevirke and Woodville, soil data was accessed via the Horizons Regional Council Geographic Information System (GIS). The New Zealand Land Resource Inventory (NZLRI) land units identified within the rezoning areas and their associated land resource characteristics, limitations, and management requirements are summarised in Appendix A.

Site visits were undertaken to ground-truth the LUC and soil information and identify any land limitations to productive land use. These visits were restricted to publicly accessible areas. Detailed soil investigations at property scale were not undertaken due to the large number of land parcels.

3.2 Dannevirke

The LUC classification for the residential and rural residential rezoning areas is LUC Class 3, being land with moderate limitations for arable use but suitable for

cultivated crops, pasture and forestry. The limitation to land use is erosion susceptibility, deposition, or the effects of past erosion damage, which are the first factors limiting production (Noble, 1985).

This LUC unit is described as flat to undulating loess-covered downlands below 250 m asl with fertile light-textured Pallic and Allophanic soils (intergrades between yellow-brown earths and yellow-brown loams) occurring in moderate rainfall areas (1,200-1,600 mm annually). These soils have a potential for moderate to severe wind erosion when cultivated, while frost frequency is considered a minor limitation to intensive land use.

Historic soil mapping identifies much of the rezoning area as Dannevirke silt loam, formed on loess-covered terraces and gently rolling landscapes. However, the more detailed S-map database indicates that both the residential and rural residential rezoning areas are dominated by a similar mix of Allophanic, Brown and Gley soils, with only a very minor occurrence of other soil orders. The broadly similar proportions of soil orders within each rezoning area (Table 5) indicate there is little distinction in soil resources or productive potential between the residential and rural residential areas at the rezoning scale.

S-map identifies a number of soil siblings within the rezoning areas; however, the soil resource is dominated by a relatively small number of siblings. The principal soil siblings are Levi_28a.1 and Levi_29a.1 (Allophanic soils), Busch_160a.1 and Orono_356a.1 (Brown soils), and Hast_102a.1 (Gley soils). Within the rural residential rezoning area, Levi_30a.1 (Allophanic) and Waipa_7a.1 (Brown) are also present. The dominance of a small number of soil siblings indicates that the soil resource is relatively consistent across the rezoning areas and comprises recurring patterns of Allophanic, Brown and Gley soils associated with distinct landscape positions.

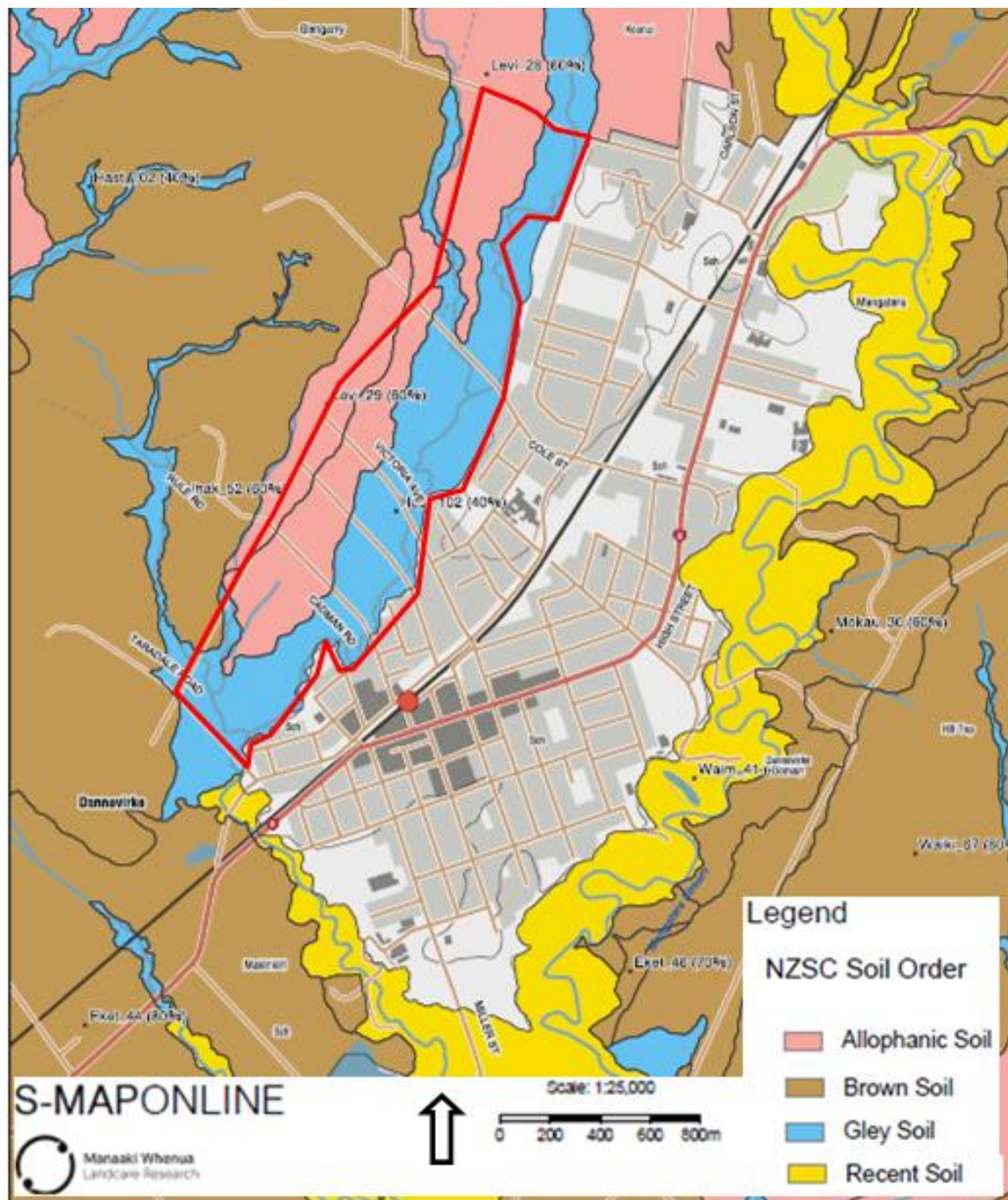
As shown in Figure 4, the distribution of soil orders follows a distinct spatial pattern across the rezoning areas. Allophanic soils occur predominantly on the western side of the rezoning areas, particularly along the Adelaide Road corridor, where the land occupies elevated and generally well-drained terraces. Brown soils occupy intermediate landscape positions throughout the area, while Gley soils are concentrated within the eastern portions of the rezoning areas adjacent to stream corridors and lower-lying land where seasonal saturation and elevated groundwater levels occur. This pattern broadly reflects the topography and drainage characteristics of the site and is consistent with the Land Use Capability pattern shown in Figure 5.

Table 5: LUC Classes and Dominant Soil Orders in the Dannevirke Rezoning Areas

Activity	Total Area (ha)	LUC Class (proportion %)	Proportion of Dominant Soil Orders
Residential	86	LUC Class 3 (100%)	Brown (39%), Allophanic (37%) Gley (23%)
Rural Residential	38	LUC Class 3 (100%)	Allophanic (42%) Brown (36%) Gley (21%)

Observations made during the site visit support the mapped soil pattern. The area south of Victoria Street is intersected by several small streams and, in some low-lying areas, the presence of rushes indicates seasonally wet soil conditions. These features correspond with the mapped occurrence of Gley soils within drainage corridors and lower landscape positions.

At the paddock or property scale, the dominant limitations to land use are likely to be soil wetness associated with poor drainage, elevated groundwater levels, periodic stream overflow, and localised streambank erosion. These factors are expected to constrain productive land use in parts of the rezoning areas, particularly within the eastern low-lying areas. In contrast, the Allophanic and Brown soils occupying the western and central portions of the rezoning areas are generally better drained and less constrained by seasonal wetness.



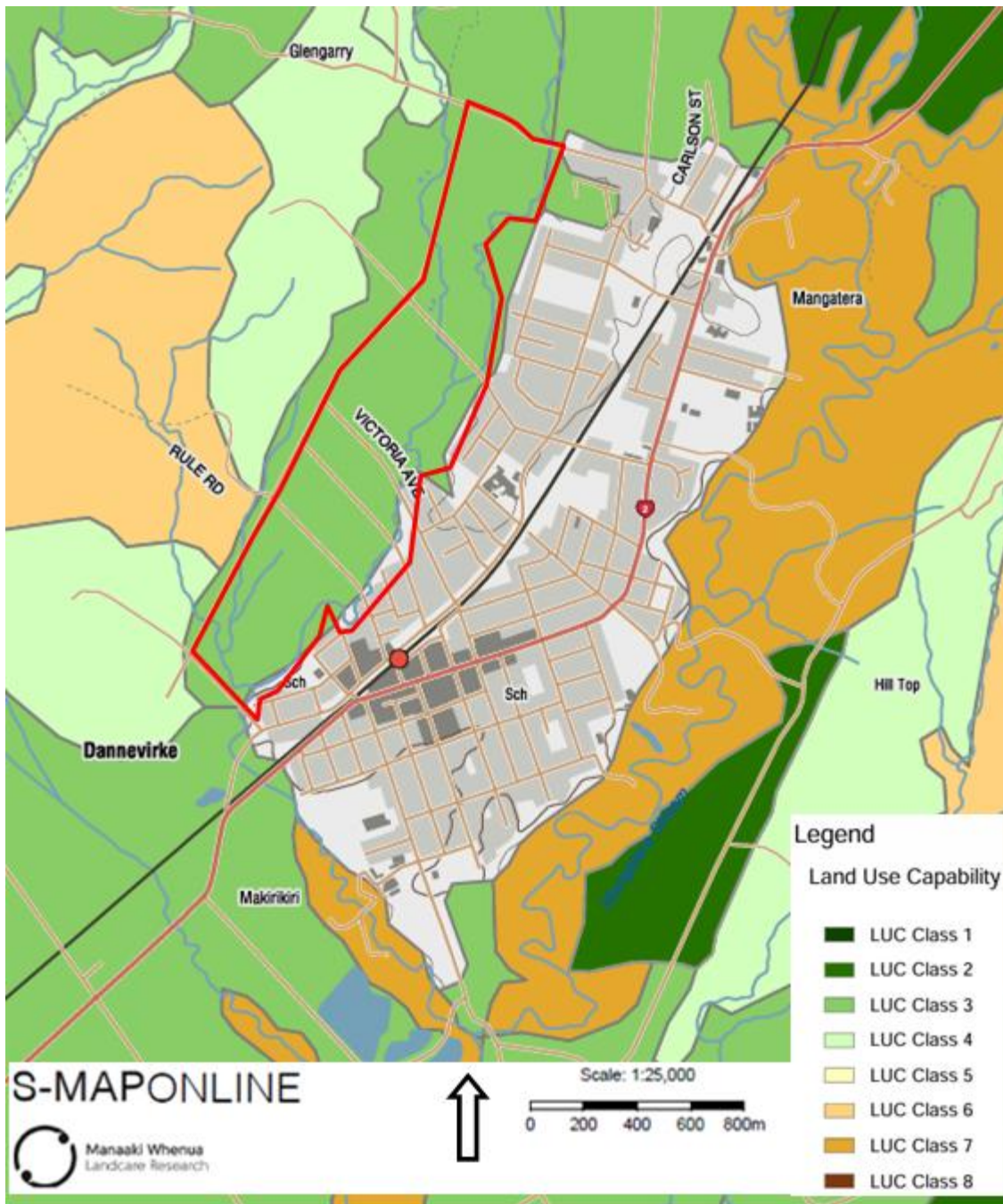


Figure 5: Land Use Capability classifications for the proposed residential and rural residential rezoning areas (outlined in red) in Dannevirke, showing the predominance of LUC Class 3 land within the rezoning areas.

3.3 Woodville

Historic soil mapping identifies two principal soil-landscape units within the proposed residential rezoning areas in Woodville. The elevated terrace land is dominated by Dannevirke silt loam and associated Allophanic soils, formed in loess on flat to undulating alluvial terraces, while lower-lying floodplain and drainage areas are dominated by Kairanga silt loam and clay loam, comprising gleyed recent alluvial soils developed on alluvial deposits.

Available S-map information provides only partial coverage of the rezoning areas, with substantial areas currently mapped as unclassified land. Consequently, S-map alone does not provide sufficient coverage to comprehensively characterise the soil resource across the proposed rezoning areas. For this reason, the assessment relies primarily on the established soil descriptions and mapping contained within the New Zealand Land Resource Inventory (NZLRI), Horizons Regional Council soil mapping, and the associated Land Use Capability classifications. Nevertheless, where S-map soil order mapping is available, the rezoning areas are mapped predominantly as Allophanic soils represented by the Levi_28a.1 and Levi_30a.1 soil siblings, with Brown soils represented by the Waipa_7a.1 sibling occurring as a minor component. This broadly supports the occurrence of Dannevirke silt loam and associated terrace soils identified by the historic soil mapping.

As shown in Figure 6, the distribution of soils reflects the landscape setting of the rezoning areas. The elevated terrace land is characterised by well-drained loess-derived soils with high productive potential, while lower-lying areas adjacent to drainage pathways and streams are characterised by poorer drainage and seasonal wetness. These lower-lying areas correspond with the mapped Kairanga soils and are associated with limitations arising from elevated groundwater levels, periodic saturation, and the need for artificial drainage.

The Land Use Capability classification reflects these underlying soil and drainage characteristics (Figure 7). Approximately half of the area proposed for residential rezoning in Woodville is classified as LUC Class 2 land, with smaller areas of LUC Class 3 and LUC Class 4 land also present (Table 6). LUC Class 2 land has slight limitations for arable use and is suitable for cultivated crops, pasture, and forestry. The principal limitation to land use within this unit is climate, particularly low temperatures and frequent frosts, which can constrain cropping potential.

The LUC Class 2 unit is characterised by flat to undulating loess-covered alluvial terraces between 120 and 400 m above sea level. These terraces are associated with deep, fertile, light-textured soils developed in loess under moderate rainfall conditions (1,200-1,600 mm annually). These soils correspond with the Dannevirke silt loam and associated Allophanic soils described above. While

generally productive, these soils have a slight susceptibility to wind erosion when cultivated.

Smaller areas of LUC Class 3 and LUC Class 4 land occur within the rezoning area. These land classes are associated with moderate limitations for arable use, with soil wetness being the principal constraint. The affected areas comprise flat to gently undulating floodplains and low terraces with imperfectly to poorly drained soils influenced by elevated groundwater levels, runoff from surrounding slopes, and occasional stream overflow.

The soils mapped within the LUC Class 3 and LUC Class 4 areas are predominantly Kairanga silt loam and clay loam. According to Molloy (1988), Kairanga soils are seldom flooded, possess relatively high fertility, but are poorly drained and generally require artificial drainage to support productive land uses. Consequently, productive land use is constrained more by drainage limitations than by soil fertility.

Table 6: LUC Classes and Soils within the Woodville Residential Rezoning Area

Activity	Total Area (ha)	LUC Class	Area (ha)	Proportion (%)	Dominant Soils
Residential	70	LUC Class 2	35	50	Dannevirke silt loam and associated Allophanic soils
		LUC Class 3	7	9.5	Kairanga silt loam and clay loam
		LUC Class 4	11.5	16.5	
		Existing urban area	17	24	N/A

Observations made during the site visit support the mapped drainage limitations. Areas west of Pinfold Road and Nelson Street exhibited signs of poor drainage, including rushes growing in low-lying areas adjacent to streams. These indicators suggest seasonal soil wetness, elevated groundwater levels, and localised drainage constraints.

At the paddock or property scale, soil wetness is likely to be the dominant limitation to productive land use within these locations. While some of these areas are currently mapped as LUC Class 2 land, field observations indicate that local drainage conditions may result in productive limitations more consistent with those associated with LUC Class 4 land. Consequently, productive land use within parts

of the rezoning area is likely to be constrained by poor drainage, periodic saturation, and the need for artificial drainage.

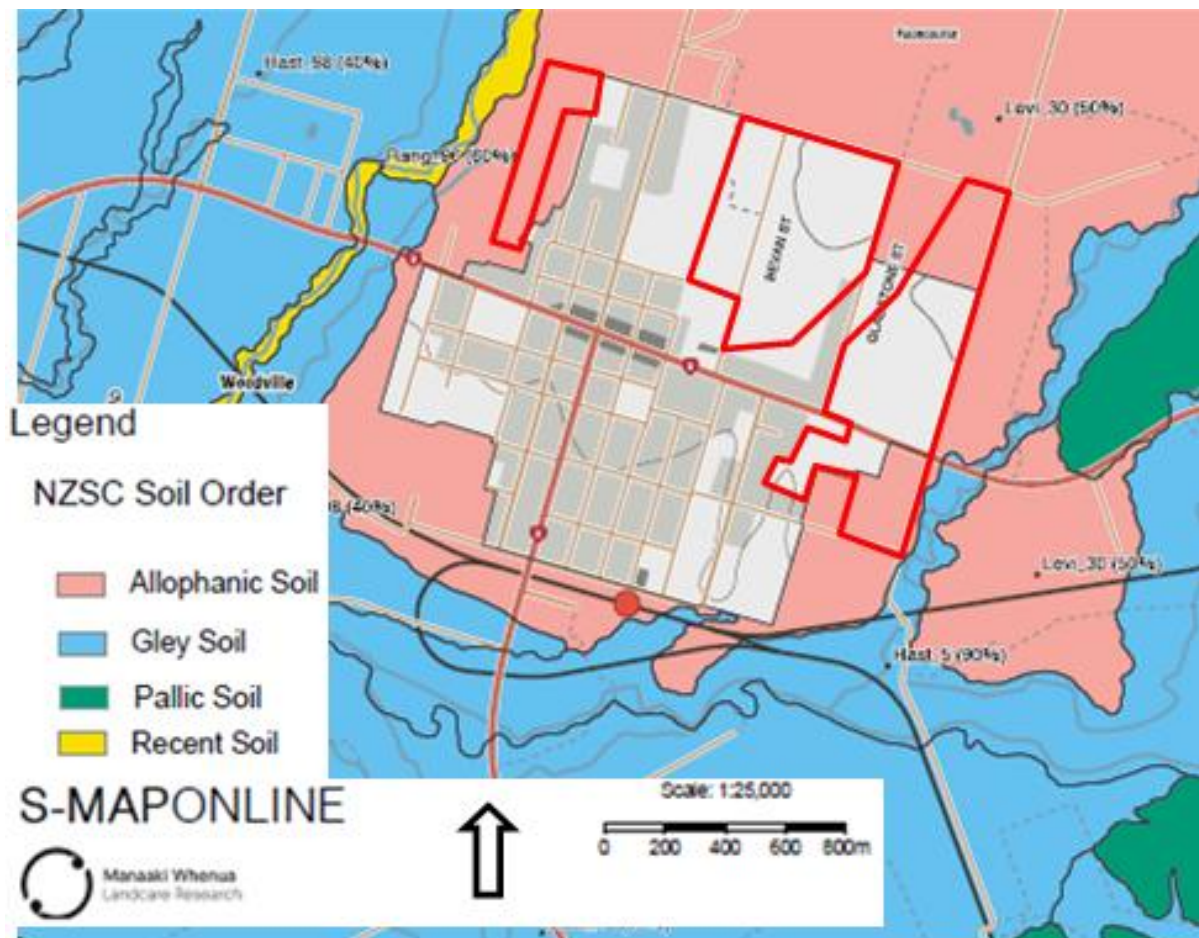


Figure 6: NZSC soil orders within and surrounding the proposed residential rezoning areas (outlined in red) in Woodville.

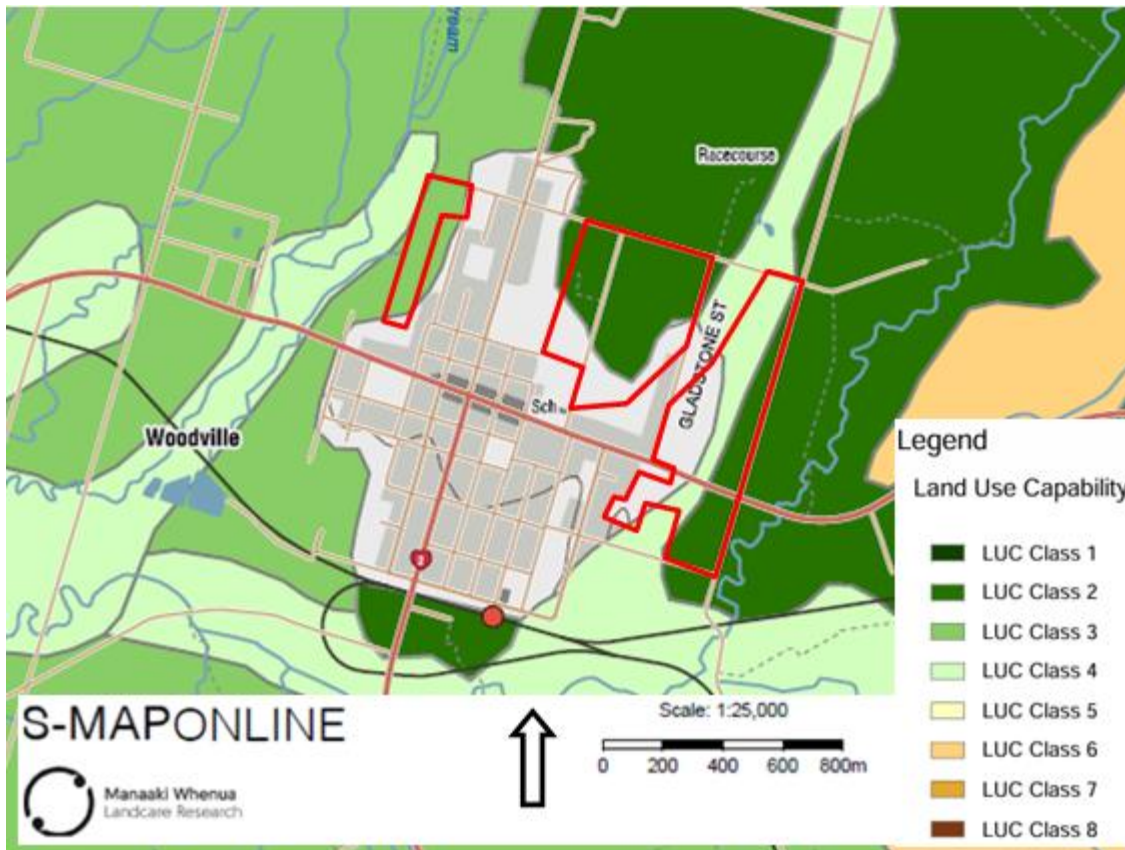


Figure 7: Land Use Capability classifications for the proposed residential and rural residential rezoning areas (outlined in red) in Woodville, showing the predominance of LUC Class 2 land, with smaller areas of LUC Class 3 and LUC Class 4 land.

3.4 Pahiatua

Historic soil mapping identifies two principal soil-landscape units within the proposed residential and rural residential rezoning areas in Pahiatua. The residential rezoning area is dominated by Manawatū sandy loam and silt loam, developed on alluvial floodplains and low river terraces, while the rural residential rezoning area is dominated by Matamau silt loam, developed on rolling to moderately steep loess-covered hill country.

S-map coverage of the rezoning areas is complete and provides additional information on the underlying soil orders. The residential rezoning area comprises a mixture of Recent, Brown, Pallic and minor Gley soils, reflecting the transition from alluvial floodplain environments to adjacent terraces. The dominant soil siblings are Waim_10a.1, Kaia_5a.1, Parah_1a.1, Orono_64a.1 and Bato_2a.1. In contrast, the rural residential rezoning area is dominated by Pallic soils, with smaller areas of Brown soils and only a minor occurrence of Gley soils. The

dominant soil siblings are Ugbr_1a.1, Parah_1a.1, Heret_7a.1 and Oakl_1a.1. This distinction is consistent with the historic soil mapping and reflects the fundamentally different floodplain and terrace landforms of the residential rezoning area and the rolling hill-country landforms of the rural residential rezoning area.

As shown in Figure 8, the residential rezoning area occupies relatively flat alluvial floodplain and terrace land. The occurrence of Recent soils supports the alluvial origin of the Manawatū soils and their recognised versatility and productive potential for agricultural use. Brown and Pallic soils occur on adjacent terraces and slightly elevated landforms, while minor areas of Gley soils reflect localised drainage limitations.

The rural residential rezoning area occupies rolling to moderately steep hill country and is dominated by Pallic soils, with smaller areas of Brown soils. This soil pattern is consistent with the mapped Matamau silt loam and reflects the increasing influence of slope, erosion susceptibility, and landscape stability on productive land use.

The Land Use Capability classification reflects these underlying soil and landscape characteristics (Figure 9). The distribution of LUC classes and dominant soil orders is summarised in Table 7. The residential rezoning area is classified as LUC Class 2 land, indicating slight limitations for arable use and suitability for cultivated crops, pasture, and forestry. The principal limitation is soil wetness associated with poor drainage, elevated groundwater levels, or periodic stream overflow, although these limitations can generally be mitigated through drainage.

Table 7: LUC Classes and Dominant Soil Orders in the Pahiatua Rezoning Areas

Activity	Total Area (Ha)	LUC Classes (proportion %)	Proportion of Dominant Soil Orders
Residential	46.5	LUC Class 2 (100%)	Brown (40%), Pallic (32%) Gley (16%) Recent soils (10%)
Rural Residential	75	LUC Class 6 (100%)	Pallic (78%) Brown (20%) Gley soils (1%)

This land unit comprises flat to undulating floodplains and low river terraces below 200 metres above sea level. The soils are described as deep, fertile soils developed on alluvial deposits in areas receiving moderate rainfall (800-1,400 mm annually). The dominant soils are Manawatū sandy loam and silt loam, which are formed in deep alluvium and are recognised for their friability, drainage characteristics, and versatility. These soils are regarded as among the most versatile and productive soils within the region.

The rural residential rezoning area is classified as LUC Class 6, being non-arable land with moderate limitations for use under perennial vegetation such as pasture or forestry. The dominant limitations relate to erosion susceptibility, deposition, and the effects of past erosion, which can reduce productive potential.

This land unit comprises strongly rolling to moderately steep hill country below 200 metres above sea level. The soils are described as fertile Pallic and Brown soils, comprising intergrades between yellow-grey earths and yellow-brown earths, occurring in moderate rainfall areas (1,200-2,000 mm annually). The dominant mapped soil is Matamau silt loam, and the land is subject to moderate soil slip risk and minor tunnel gully erosion.

Site observations confirmed that the physical characteristics of the land align with the mapped soil and Land Use Capability classifications within both the residential and rural residential rezoning areas. No significant discrepancies between field observations and the mapped information were identified.

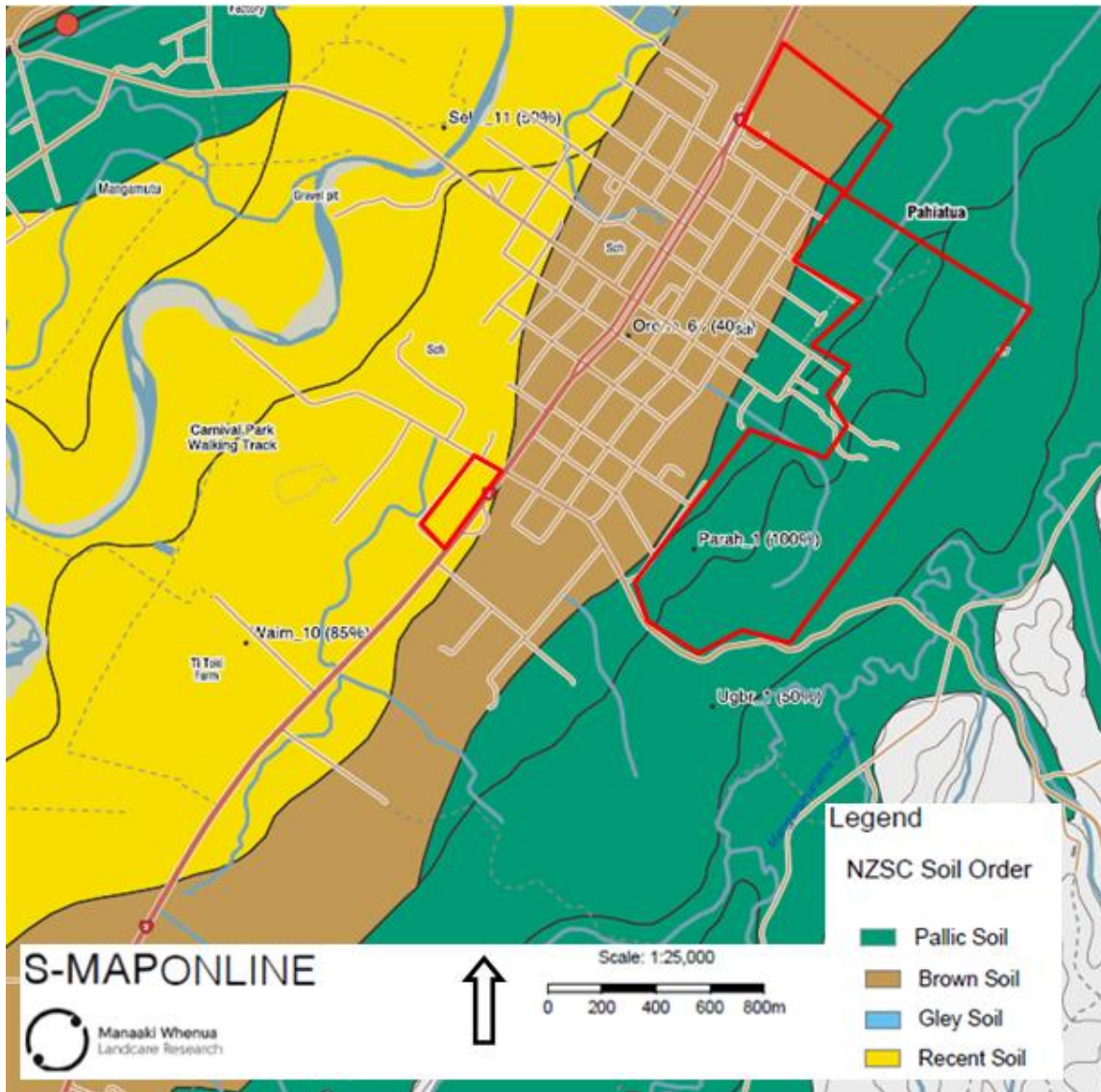


Figure 8: NZSC soil orders within and surrounding the proposed residential and rural residential rezoning areas (outlined in red) in Pahiatua.

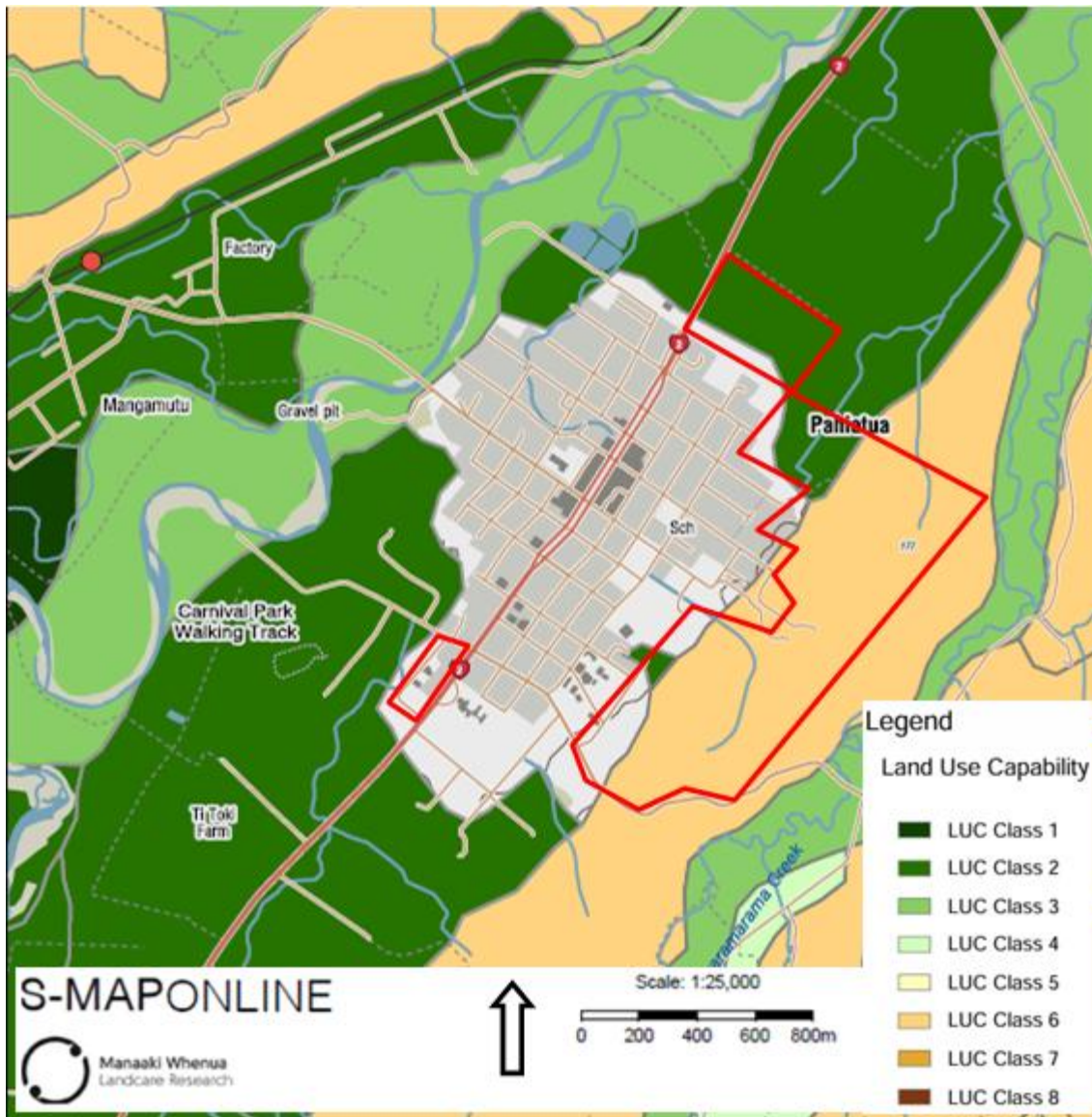


Figure 9: Land Use Capability classifications within the proposed residential and rural residential rezoning areas in Pahiatua (outlined in red) showing the predominance of LUC Class 2 land in the residential area and LUC Class 6 land in the rural residential area.

4 NPS-HPL Analysis

4.1 Highly Productive Land Assessment

Approximately 213 ha of the proposed rezoning areas in Dannevirke, Woodville and Pahiatua are classified as LUC Class 2 or 3 land. These areas are presently zoned General Rural or Rural Production and therefore meet the definition of Highly Productive Land (HPL) as set out in the NPS-HPL (MfE, 2022).

Clause 3.6 of the NPS-HPL restricts urban rezoning of highly productive land and only allows urban rezoning for territorial authorities that are not Tier 1 or 2 local authorities if:

- (a) the urban zoning is required to provide sufficient development capacity to meet expected demand for housing or business land in the district; and
- (b) there are no other reasonably practicable and feasible options for providing the required development capacity; and
- (c) the environmental, social, cultural and economic benefits of rezoning outweigh the 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.

The Tararua District Council is consulting on its Urban Growth Strategy (May 2024), addressing Clause 3.6 (a), and (b). The NPS HPL suggests that Clause 3.6 (c) could be addressed in a section 32 analysis. Such an analysis is outside the scope of this report.

HPL remains classified as HPL until it is rezoned through an operative plan change that is beyond challenge as set out in Clause 3.5 (6) of the NPS-HPL.

The Environment Court's decision in *Blue Grass Limited v Dunedin City Council* [2024] NZEnvC 83 clarifies the definition of Highly Productive Land (HPL) under the NPS-HPL. The Court ruled that applicants cannot challenge the Land Use Capability (LUC) mapping of their land as identified by the New Zealand Land Resource Inventory (NZLRI), even if more detailed site investigations suggest that the land is not LUC 1, 2, or 3. This means that rural land mapped as LUC 1, 2, or 3 remains classified as HPL until regional councils complete their mapping and update regional policy statements accordingly.

Approximately 38 ha of the proposed rezoning areas comprise rural residential land mapped as LUC Class 3 and therefore meet the definition of HPL. Clause 3.7 seeks to avoid the rezoning of HPL for rural lifestyle purposes except as provided for by Clause 3.10. Clause 3.10 sets out the exemption for HPL subject to

permanent or long-term constraints. It provides a series of specific and deliberately stringent tests to determine whether the permanent or long-term constraint on the land justifies the HPL being used for a purpose that is not land-based primary production.

Approximately 86.2 ha of the rezoning areas are mapped as LUC 4 land (Woodville) or LUC 6 land (Pahiatua) which does not meet the criteria for HPL.

4.2 Clause 3.10(1) of the NPS-HPL analysis

To assess whether the proposed rezonings are likely to result in a significant loss of productive capacity, it is first necessary to consider the existing productive capability of the rezoning areas. This provides a basis for understanding the contribution the land currently makes to land-based primary production and the extent to which productive capacity may be affected.

According to Noble (1985), a wide range of arable and horticultural crops can be grown on LUC Class 2 and 3 land. The NZ Land Atlas Crop Suitability layer (Our Environment, Manaaki Whenua) indicates that land surrounding Dannevirke, Woodville, and Pahiatua is well suited to crops such as apple, blueberry, cherry, and kiwifruit.

A 2020 study by AgFirst assessed sustainable horticultural land use opportunities within the Tararua District, focusing on four potential crop types: blueberry, cider apple, feijoa, and hazelnut. The study found that a minimum land area of approximately 5 hectares is generally required to support a viable blueberry operation, while cider apple, feijoa, and hazelnut orchards require substantially larger landholdings of approximately 30 hectares to justify investment in specialised harvesting equipment. However, the parcel sizes within the proposed rezoning areas are predominantly less than 4 hectares (see Tables 1, 2 and 3), with most parcels being less than 2.5 hectares in size. This is below the scale generally associated with commercially viable horticultural operations and indicates that extensive land fragmentation has already occurred across the rezoning areas.

The NPS-HPL considers economic feasibility over a 30-year timeframe (Clause 3.10(1)(a)). While some horticultural enterprises require significant upfront capital investment and may become financially feasible over a longer timeframe, the small parcel sizes and fragmented nature of the rezoning areas substantially constrain the ability to establish enterprises of sufficient scale to support economically viable primary production. The findings of AgFirst (2020) indicate that commercially viable horticultural enterprises generally require larger and more contiguous landholdings than those present within most of the rezoning areas.

As noted in Section 3.1, horticulture plays a minor role in current land use within the Tararua District, occupying just 67.3 hectares (0.02%) of the district's total land area. In contrast, 3,282 hectares (0.75%) are used for grain, seed, or fodder crop production (Figure.NZ, 2025). The dominant land use is high-producing exotic grassland, covering approximately 245,534 hectares (56%) of the district.

The HPL within the proposed rezoning areas across Dannevirke, Woodville, and Pahiatua has a combined area of approximately 213 ha. This represents approximately 0.27% of the 78,265 ha of Highly Productive Land identified within the Tararua District. While much of this land is capable of supporting agricultural production, current land use is predominantly grazing-based and characterised by small, fragmented landholdings and a loss of contiguous productive land. Consequently, the area of HPL potentially affected by the proposed rezonings represents a very small proportion of the district-wide HPL resource and is not considered likely to result in a significant loss of productive capacity at the district scale, thereby supporting the consideration under Clause 3.10(1)(b)(i) of the NPS-HPL.

Furthermore, most parcels within the proposed rezoning areas are less than 2.5 hectares in size. This indicates that substantial land fragmentation has already occurred, resulting in the loss of contiguous productive land and limiting opportunities to establish economically viable primary production enterprises. Given the existing pattern of subdivision and development, this fragmentation is effectively irreversible in practical terms and represents a permanent or long-term constraint on productive capacity, consistent with Clause 3.10(1)(b)(ii) of the NPS-HPL.

4.3 Clause 3.10(2) of the NPS-HPL analysis

Having identified land fragmentation as a permanent or long-term constraint under Clause 3.10(1), it is necessary to assess whether this constraint could be addressed through the reasonably practicable options set out in Clause 3.10(2). Each of these options is assessed in turn in Table 8.

The assessment undertaken under Clause 3.10(2) has been completed in accordance with Clause 3.10(3) of the NPS-HPL. The evaluation does not rely on the economic benefits of non-primary production land uses, considers the implications of the loss of Highly Productive Land for the productive capacity of the affected landholdings, and assesses the future productive potential of land-based primary production independent of past or present land use.

The assessment concludes that extensive and largely irreversible land fragmentation is the primary permanent or long-term constraint affecting the productive capacity of the subject land.

Table 8: Assessment of Reasonably Practicable Options under Clause 3.10(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:	Dairy, dairy support and sheep and beef farming would be considered the best alternative land-based production options. Arable or horticulture would not be financially viable.
b) improved land-management strategies:	Fragmentation and the loss of contiguous productive land is considered irreversible and cannot be overcome with improved land management strategies.
c) alternative production strategies:	Small improvements to productive capacity may be achievable, but these are insufficient to establish economically viable land-based primary production.
d) water efficiency or storage methods:	Not considered for this report.
e) reallocation or transfer of water and nutrient allocations:	Not considered for this report.
f) boundary adjustments (including amalgamations):	Amalgamation opportunities within these already fragmented properties are impractical and not economically viable due to the existing extensive land fragmentation, small-scale nature of these blocks, and the location of dwellings within individual land parcels.
g) lease arrangements:	Leasing arrangements are not considered a reasonable or practicable option because the affected parcels are generally small, fragmented, and already constrained by existing residential and lifestyle development. Leasing would not overcome the limitations associated with scale or fragmentation and is therefore unlikely to improve the economic viability of land-based primary production.

5 Conclusions

This report evaluated the proposed residential and rural residential rezoning areas in Dannevirke, Woodville, and Pahiatua against the relevant provisions of the National Policy Statement for Highly Productive Land (NPS-HPL), with a particular focus on Clauses 3.6, 3.7, and 3.10.

The proposed rezonings form part of the Tararua District Council Urban Growth Strategy and are intended to provide for future residential and rural residential growth within the district. This assessment has focused on the extent to which the rezoning areas contain Highly Productive Land (HPL), together with the permanent or long-term constraints relevant to the NPS-HPL.

The assessment draws on existing land resource information, soil mapping, Land Use Capability (LUC) classifications, published literature, and site inspections to assess the productive capacity of the rezoning areas and the extent to which they meet the definition of Highly Productive Land.

The key findings of the assessment are summarised below:

1. **Existing LUC mapping:** The proposed rezoning areas contain a mixture of LUC Classes 2, 3, 4 and 6. The residential rezoning areas in Dannevirke and Pahiatua, and parts of the residential rezoning area in Woodville, together with the rural residential rezoning area in Dannevirke, are mapped as LUC Class 2 or 3 land and therefore meet the definition of Highly Productive Land (HPL) under the NPS-HPL. The rural residential rezoning area in Pahiatua is mapped as LUC Class 6 land and is not classified as HPL.
2. **Area-Specific assessment of land resources:** Site observations and review of available soil mapping generally confirmed the existing LUC classifications and productive land characteristics of the rezoning areas. S-map and historic soil mapping indicate that the rezoning areas contain a range of productive soil resources, including Allophanic, Brown, Pallic, Recent and Gley soils. Localised drainage limitations were identified in parts of Dannevirke and Woodville; however, no significant discrepancies were identified between field observations and the mapped land resource information.
3. **Non-reversible land fragmentation:** The property sizes within the proposed rezoning areas are predominantly less than 4 hectares. This extensive land fragmentation has resulted in the loss of contiguous productive land and significantly limits the feasibility of land-based primary

production, as the small parcel sizes restrict the potential to scale up to viable agricultural or horticultural operations.

4. **The opportunity to effectively and economically farm:** Although much of the land is capable of supporting pastoral, arable and horticultural production, the permanent and long-term constraint of non-reversible land fragmentation has resulted in the loss of contiguous productive land and limits the economic viability of these activities. Assessment of alternative production options, land management strategies, amalgamation opportunities and lease arrangements indicate that there are no reasonable or practicable options available to re-establish economically viable landholdings or significantly improve the productive capacity of the affected land parcels.
5. **District-Scale effects:** Approximately 213 ha of the proposed rezoning areas are currently classified as Highly Productive Land. This represents approximately 0.27% of the 78,265 ha of Highly Productive Land identified within the Tararua District. While much of this land retains productive capability, the affected area represents a relatively small proportion of the district-wide HPL resource. Consequently, the area of Highly Productive Land affected by the proposed rezonings represents a relatively small proportion of the district-wide HPL resource and is not considered likely to result in a significant loss of productive capacity at the district scale.

The proposed rezonings form part of the Tararua District Council Urban Growth Strategy and are intended to provide for future residential and rural residential growth within the district. Based on the information reviewed, including Land Use Capability mapping, soil resources, property size analysis, and site inspections, extensive and largely irreversible land fragmentation, together with the resulting loss of contiguous productive land, represents the primary permanent or long-term constraint affecting the productive capacity of the proposed rezoning areas. The assessment indicates that this fragmentation significantly limits the economic viability of future land-based primary production and is a key consideration in the application of the NPS-HPL to the proposed rezoning areas.

6 Limitations

This report was prepared in July 2025 and should be read in the context of the legislative, planning, and policy framework that applied at that time. References to the Tararua District Council Urban Growth Strategy, the National Policy Statement for Highly Productive Land (NPS-HPL), and case law reflect the information available at the time of preparation. Any subsequent changes to legislation, national direction, planning documents, case law, datasets, or guidance material have not been considered and may affect the relevance of some conclusions contained in this report.

This report has been prepared for the use of the Client in relation to the brief outlined by EcoAgriLogic Ltd. The report is intended for use by the Client and its advisers and may be relied upon for the purposes of considering Highly Productive Land (HPL) matters associated with the proposed rezonings. The information and opinions contained within this report shall not be used in any other context or for any other purpose without the prior review and agreement of EcoAgriLogic Ltd.

If any of the assumptions outlined in this report are incorrect, amendments to the conclusions and opinions expressed in this report may be required. The findings and opinions presented are based on the available information reviewed, published datasets, site inspections, and conditions observed during site visits undertaken by EcoAgriLogic Ltd.

Site inspections were limited to publicly accessible locations and no detailed property-scale soil investigations were undertaken. Soil descriptions and Land Use Capability classifications rely primarily on information sourced from the New Zealand Land Resource Inventory (NZLRI), S-map, Horizons Regional Council GIS datasets, published literature, and site observations.

There may be localised variations in soil characteristics, drainage conditions, land use capability, or productive potential that have not been identified through the desktop assessment or site inspections. Responsibility cannot be accepted for conditions that were not reasonably apparent at the time of the assessment. Any interpretations presented in this report are intended to inform the assessment of productive land resources at the rezoning scale and should not be relied upon as a substitute for detailed site-specific investigations.

7 Certification

This report is certified by Dr. Esther F. Dijkstra of EcoAgriLogic Ltd., who has not less than 25 years of experience as a soil and contaminated site professional, whose highest qualification is PhD Environmental Sciences, University of Amsterdam (1997).



Dr. Esther Dijkstra, July 2025



Certified CEnvP General Practitioner.

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Appendix A: Summary of NZLRI Land Unit Characteristics within the Rezoning Areas

Location	Description	Area (Ha)	Landform	Parent material and soil	Slope °	Strengths	Weaknesses	Land use suitability	Conditions of use
Woodville	nz2c-3	35.1	Flat to undulating terraces	Loess Allophanic soils	0-7	Flat Deep, fertile soils	Rainfall and frosts Nil to slight wind erosion when cultivated	Intensive pastoral farming Arable	
Pahiatua	nz2w-9	46.5	Flat river terraces	Alluvium Recent and gley soils	0-3	Flat Deep, fertile soils	Slow drainage in the subsoil	Intensive grazing Horticulture Cropping Slight limitations for Arable	Drainage
Dannevirke	nz3e-10	124.7	Flat to undulating terraces	Loess yellow brown loam sand earths	0-7	Flat Well developed structure	Moderate to severe wind erosion when cultivated Frost	Pasture Cropping Horticulture Moderate limitations Arable	Shelterbelts

Woodville	nz4w-2	11.5	Flat slow draining depressions	Alluvium Peat Gley, Organic, Recent and Brown soils	0-3		High groundwater tables Poor drainage Occasional surface flooding	Grazing Cropping Moderate limitations Arable	Drainage
Pahiatua	nz6e -9	74.7	Strongly rolling to moderately steep hill country	Loess Pallic and Brown soils	16-25	Adequate summer rainfall	Moderate soil slip and slight tunnel gully erosion	Intensive grazing Forestry	Conservation trees

Appendix B: Site Photos

Dannevirke



Photo 1: Typical lifestyle block development within the residential rezoning area.



Photo 2: Gley soil drainage corridor and rushes south of Victoria Street.

Woodville



Photo 3: Typical grazing land within the rezoning area.

Pahiatua



Photo 4: Manawatū terrace soils within the residential rezoning area.



Photo 5: Rolling Matamau hill country within the rural residential rezoning area.