5 ASSESSMENT OF ENVIRONMENTAL EFFECTS

5.1 Introduction

Clause 22 of Schedule 1 of the RMA states in relation to private plan change requests that where environmental effects are anticipated, the request shall describe those effects, taking into account clauses 6 and 7 of Schedule 4, in such detail as corresponds with the scale and significance of the actual or potential environmental effects anticipated from the implementation of the change, policy statement, or plan.

The environmental effects that are relevant to this plan change request are:

- Transportation effects;
- Three waters Infrastructure effects;
- Ecological effects;
- Effects on Productive Land;
- Economic and Social effects;
- Landscape and Visual effects, including Natural Character and Amenity;
- Cultural effects;
- Reverse Sensitivity.

5.2 Transportation Effects

5.2.1 Assessment

The proposed T16 Growth Cell includes a structure plan setting out a new section of roading network and the realignment and addition of a roundabout on Ohaupo Road (SH3). The proposed roading layout is included in the Structure Plan attached as Appendix C.

An Integrated Transportation Assessment (ITA) has been prepared by CKL to assess the transportation effects associated with the proposed rezoning and Structure Plan. The ITA is attached as Appendix D.

The ITA considers the effects of the proposed Growth Cell and Structure Plan, and addresses the physical environment, traffic volumes, road safety, walking, cycling, public transport, traffic effects, connectivity, and relevant policy and plan provisions.

The conclusions of the report are as follows.

This assessment considers a potential residential development of the site up to 400 residential lots. As set out in the ITA, retirement living facilities typically produce one third of the number of traffic movements than that of residential rates. The modelling has been done on 400 residential lots, the proposed overall development will have less than 400 residential lot equivalents on the basis that retirement living facilities produce one third of traffic generation of residential lots.

Based on this assessment it is concluded and recommended that:

- The proposed plan change to Residential zoning is anticipated to yield some 400 households with associated traffic demands of 3,280 vehicle movements per day and 360 vehicle movements per hour.
- Access to the plan change area is provided via a new roundabout intersection on Ohaupo Road SH3 designed following consultation with Waka Kotahi. This will incorporate walking and cycling facilities, the provision for new public transport facilities and a new service lane for dwellings on the east side of Ohaupo Road SH3.This provides for multimodal connectivity and improves road safety for existing properties. It is recommended that full provision of this intersection be required prior to occupation of any future dwellings within the plan change area.
- No new direct property access to Ohaupo Road SH3 is considered appropriate as the plan change areas is developed. This is controlled by the existing limited access road status of Ohaupo Road SH3.
- A new pedestrian and cycle link along the west side of Ohaupo Road SH3 is required from the new site access intersection to Greenhill Drive as envisaged by the Waipa ITS. It is recommended that this be provided by developers of the plan change and that it should be in place before 10% of any future dwellings on site are occupied.
- All roads within the plan change area will be designed to an appropriate standard to meet the needs of the expected development.
- The plan change area provides for transport connectivity to adjacent sites. It is recommended that this be required within any zone rules or structure plan for the plan change area.

With the above recommendations in place, it is concluded that the proposed plan change area supports and aligns with national, regional and local transport objectives, policies and strategies and that there are no transportation reasons why the proposed plan change cannot be adopted.

5.2.2 Conclusion

Based on the conclusions and recommendations of the ITA, the transportation effects from the proposed plan change area are acceptable.

5.3 Effects on Three Waters Infrastructure

Land development creates additional demand on Council supplied infrastructure including wastewater, water supply and stormwater and has the potential to overload these services. The proposed T16 growth cell and structure plan will result in additional demand being put on these services. The effects of additional demand are addressed individually in the sections below.

5.3.1 Wastewater Assessment

The wastewater modelling for this assessment was completed by WSP consultants, with development flow information, preliminary reticulation layout, and a site Wastewater Pumpstation (WWPS) location provided by BTW to inform the modelling. The outcome of WSP's modelling assessment is attached as Appendix F, with the key outcomes and upgrades recommended from the modelling summarised below.

Modelling Conclusions and Recommendations:

WSP completed a wastewater modelling assessment, delivered through a two-stage modelling process in consultation with WDC and BTW. Overall, to service the wastewater flows for this development, there are two feasible options:

1. Option 1: Discharge all of the new site development flows to the existing gravity network that discharges into the Racecourse Road WWPS and upgrade an approximately 1 km length of existing 225 mm diameter wastewater gravity pipe to a 300 mm diameter pipe downstream of the Racecourse Road WWPS, as located in Figure 5.1 below.
2. Option 2: Discharge 80% of the development flows (from the proposed site WWPS) to the Christie Avenue WWPS conveyance route, with the remaining development flows gravity discharging to the Racecourse Road WWPS conveyance route. This would require the new site WWPS rising main to extend nominally 640 m along Ōhaupō road from the site to the existing wastewater manhole near the intersection of Ōhaupō Road and Racecourse Road (Manhole Asset ID 1090999).

Both options result in no predicted overflows or freeboard deficiencies (for both the existing and growth network models), therefore complying with WDC's assessment criteria and presenting as feasible options to service the development wastewater flows. The modelling also concludes that the Te Awamutu Wastewater Treatment Plant (WWTP) will be able to cater for the Ōhaupō Road development flows along with the planned growth cells in the 2050 network.

Selection of the preferred option will occur in subsequent design phases. Additionally, as part of the subsequent design phases, it is recommended to conduct a detailed pumpstation capacity assessment to confirm the capacity of the downstream pumpstations (Racecourse Road WWPS and/or the Christie Avenue WWPS) and their capacity to manage the proposed development flow.

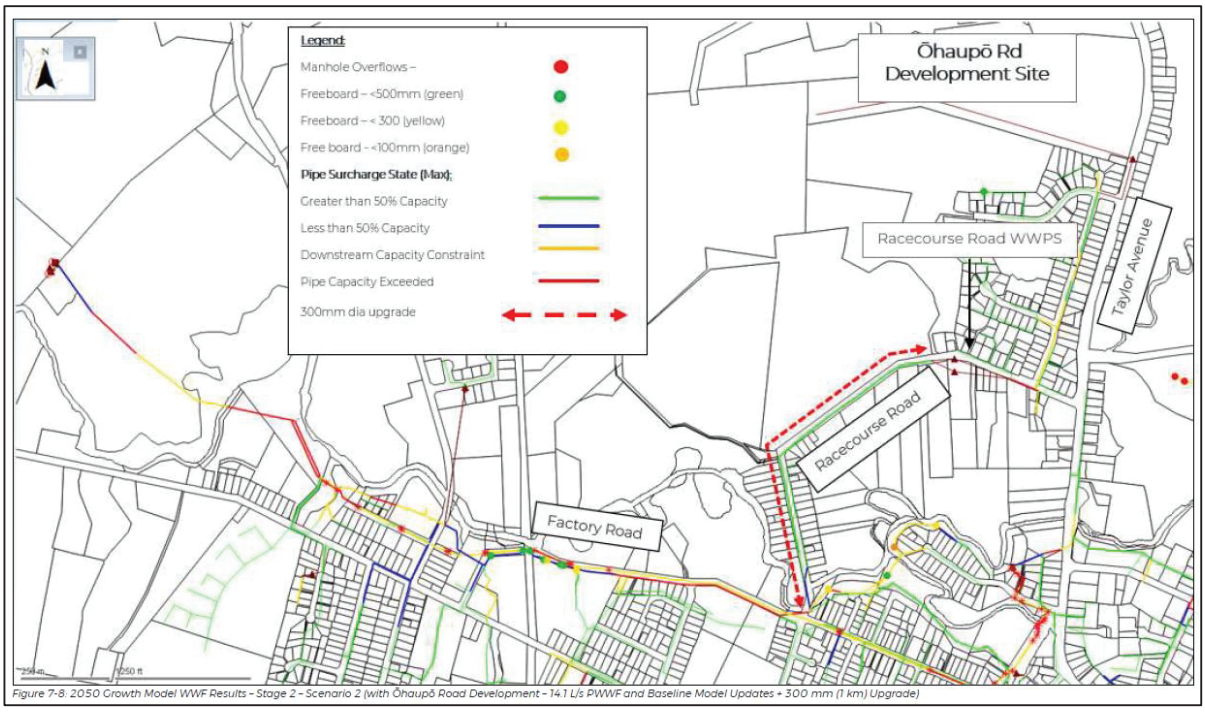

Figure 5.1: Te Awamutu wastewater modelling output showing the section of existing wastewater pipe to upgrade for Option 1 described above.

5.3.2 Water Supply Assessment

A water modelling assessment was completed by WSP consultants, with development demand information and preliminary reticulation layout provided by BTW. The outcome of this modelling assessment is attached as Appendix G, with the key outcomes and upgrades recommended from the modelling assessment summarised below.

Modelling Conclusions and Recommendations (Adopted from WSP's Report - Appendix F):

WSP completed water supply modelling, concluding that two applicable upgrade options are required to service the water supply for this proposed development:

- Upgrade 1: Close the two Non-Return Valves (NRVs) on Taylors Avenue.
- Upgrade 2: Replacing the current Greenhill booster pump.

Upgrade 1 was modelled by closing the two NRVs on Taylors Avenue, near George Melrose Drive. This was completed in order to make the Greenhill boosted zone a closed zone. Although no improvements in Level of Service (LoS) or fire flow occurred after closing the NRVs, this upgrade is recommended to increase the overall operating efficiency of Upgrade 2 – replacing the Greenhill booster pumps.

Upgrade 2 replaces the current Greenhill booster pump with a new pump that caters for the additional demands created by the proposed Ōhaupō Road development, the fire flow required, and improves

LoS to the wider Greenhill boosted zone area. It is recommended to replace the current pump with two separate pumps, as listed below:

- Pump 1 will be continuously operating to provide daily demands.
- Pump 2 will be a “standby” pump to supply flows in an emergency event.

The controls for both Pumps 1 and 2 are identified and listed in Section 4.2 of Appendix G. Implementing Upgrade 2 resolves LoS and fire flow issues within the Greenhill boosted zone (including supplying the Ōhaupō Road development) in both the 2022 and 2050 scenarios. A detailed design for this proposed pumpstation upgrade is recommended.

Overall, to service the water demands for this development, it is recommended to upgrade the existing booster pump (Upgrade 2), along with closing the NRVs (Upgrade 1) to improve the LoS and fire flow requirements within the Greenhill boosted zone. This provides an acceptable site water supply servicing solution. It was also concluded that based on the WSP modelling assessment (subject to assumptions), water demand from the development can be sufficiently catered for by the Water Treatment Plants servicing Te Awamutu.

5.3.3 Stormwater Assessment

A Stormwater Masterplanning Assessment has been undertaken and is attached as Appendix H.

The report outlines the stormwater management strategy for the proposed development.

This assessment has reviewed the site and catchment characteristics with the objective of consolidating and defining the site-specific design parameters and provided preliminary stormwater layout plans for the required stormwater management infrastructure to allow early consultation with stakeholders.

The following recommendations are provided:

- A stormwater management system for the site shall be developed that provides water quality treatment, extended detention (stream erosion protection) and hydraulic neutrality for the development during minor and major rainfall events. Preliminary layout plans are provided in Appendix A (of the stormwater management strategy) indicating the proposed catchments and the size and location of the required infrastructure.
- Further assessment should be undertaken to understand the sensitivity of the downstream reach to the proposed development, understand tailwater conditions and to confirm the design parameters which have been specified within this report. Should the downstream effects of the development be minor, or be mitigated (likely via stream daylighting, culvert upsizing, channel armouring), the onsite stormwater management system requirements could likely be reviewed and the resulting system optimised and decreased in footprint.
- The site is located adjacent to natural wetlands. The stormwater management system will be required to mitigate the effects of the development on the natural wetland. Key points identified include:

- The post development landform will need to maintain pre-development hydrology to ensure groundwater levels are maintained. An emphasis should be placed on soakage devices to maintain groundwater recharge.
- Further assessment needs to be undertaken to understand the hydrology of the existing natural wetlands to ensure their baseline conditions are maintained. Further detailed assessment will be required to determine the volumes achieved via onsite soakage are equivalent to the pre-development conditions.

- The site is located in the bottom of a basin and is subject to cross boundary flows from the upper catchments. The stormwater management plan and design landform shall be designed to ensure upstream flow paths are maintained with consideration for future development which may occur within the neighbouring catchment areas.
- The post development landform shall be designed with a network of secondary flow paths, designed to provide the level of protection requirements the proposed land use during for major stormwater events specified within the RITS. The road network and final landform design shall be designed to achieve the required overland flow paths specified within the stormwater management plan.
- The development proposes undertaking stream daylighting and enhancement works within the central waterway which will provide multiple engineering, ecological, landscape, cultural and social outcomes including:
  - Increased conveyance capacity within the stream controlling flood water levels and providing flood hazard management.
  - Stream naturalisation and improved floodplain connectivity.
  - Establishment of riparian buffers to achieve suitable ecological and habitat function enhancing water quality, erosion protection and shading.
  - Restoration of fish passage within the catchment, including retrofitting fish passage devices to identified fish barriers where removal is not feasible.
  - Improved provision of fish and macroinvertebrate habitat heterogeneity and in-stream fish spawning habitat, including establishing pools and riffles with suitable interstitial spaces.
- Early consultation should be undertaken with the Regional Council (Waikato Regional Council) and the Local Authority (Waipa District Council) in regard to developing a stormwater system that meets the appropriate regulatory requirements and is suitable to vest and be operated by Council Staff. A permit for the discharge of stormwater from the proposed plan change area will be required by the Waikato Regional Plan. This will be applied for following a decision on the private plan change and the stormwater assets associated with the development will likely be vested with WDC.
- Consultation should be undertaken with tangata whenua in regard to the requirements of the NPS-FW and giving effect to Te Mana o te Wai.
- The stormwater management plan should be developed jointly and with consideration for the proposed ecological restoration, landscape, transportation and infrastructure requirements.

- Further hydrological and hydraulic modelling should be undertaken to define flood hazard mapping within the catchment and refine the size and layout of the required infrastructure.

5.3.4 Conclusion

Through upgrades funded by the developer, the WDC wastewater and water supply networks have sufficient capacity to deal with the development created by the proposed growth cell. This will be subject to further processes as part of future development. The above assessments conclude that there are infrastructure solutions available ensuring that there is adequate capacity for the development enabled by the Growth Cell.

The Stormwater Masterplanning Assessment sets out that that stormwater can be managed appropriately on the site. This will be subject to a consent process through Waikato Regional Council. Pre-application meetings have been held with regional council and the approach to managing stormwater has been agreed in principle.

Based on the above assessment, overall, the effects on WDC infrastructure from the proposed Growth Cell are acceptable.

5.4 Effects on Ecology

5.4.1 Wetlands

A Wetland Delineation Assessment for the site has been undertaken to support the proposal. This assessment is attached as Appendix J. The summary and recommendations of this report are as follows:

Wetland assessment

The subject site was found to support nine natural inland wetland units within the identified area as the following criteria were met:

- Ten of the thirteen sites were assessed for hydrophytic vegetation using Wetland Delineation Protocols.
- One of the vegetation units Passed the Rapid Test and ten passed the Dominance Test, with plant species composition typical of wetlands.
- Four putative wetland sites Passed the Hydric Soils Test and Hydrology Test indicative of wetland hydrology.
- Three units were not considered natural inland wetlands (Ohaupo WL1,3 & 10) due to >50% exotic pasture species and failed the hydric soil and wetland hydrology tests.
- One of the thirteen sites (Ohaupo_WL13) was identified after the field-visit using aerial imagery, proving this to be a useful tool in wetland delineation assessments. However, further in-field assessment is required to fully characterise this potential wetland.
- These permanently and intermittently wet areas support plants that are adapted to wet conditions, which aligns with the RMA definition of a wetland.

- Evidence of hydric soils and wetland hydrology during the applicable hydrophytic vegetation growing season.
- The site has been subject to intensive drainage, as indicated by the fragmentation of wetland units, channelisation of streams including the site's central drain, visible drainage piping across the site, and the extent of unsaturated soil relative to the extent of the historic marshland. This has largely changed wetland hydrology and dominance of wetland species.

This Wetland Delineation Report will influence the structure planning design, so the following recommendations have been made with respect to the wetland areas:

- A site Groundwater assessment is recommended to be undertaken, to determine and monitor existing groundwater levels (considering seasonal fluctuation over a 12-month period), and also to assess existing groundwater quantity and quality aspects.
- On collection and assessment of the site groundwater, a water budget is recommended to be prepared for the site by a suitability qualified wetland hydrologist to determine present and future yield from site development and assess hydraulic neutrality. Maintaining water inputs through hydraulic neutrality should preserve existing wetland character.
- Ensure stock access is excluded from the identified wetland areas and undertake enhancement planting within the wetlands. With the proposed change in land use, ongoing plantings in close proximity should be compatible, indigenous species that are already present shall be used to ensure no invasion of prevailing pest species.
- Undergo an EcIA to determine if the site is host to significant indigenous flora and fauna (e.g., wetlands can provide important fish spawning habitats) and detail any specific impacts due to the private plan change. Additionally, undergo herpetofauna surveys as part of the EcIA to identify if the site is a possible habitat for bats and lizards. Furthermore, an EcIA would provide the opportunity to delineate and characterise wetlands (Ohaupo_WL13) captured by aerial imagery after the initial site investigations. (this recommendation has been implemented and an EcIA is included in this plan change request).
- Undertake ongoing weed and mammalian pest control within the wetlands, to enhance ecological values.
- Buffer the wetlands with a riparian margin of terrestrial species if practicable within spatial constraints, to provide refuge for biota (avifauna and potentially herpetofauna) and a naturalised vegetation sequence.
- Consider also treating the three wet areas that were not classified as natural inland wetlands (OhaupoWL1,3 & 10) in the same manner required for those with the classification (e.g., wetland planting, fencing and managing stock access, excluding from development area). This would allow for more ecological connectivity, create carbon sinks, and increase visual amenity of the site.
- This wetland delineation document is recommended to be a working document, which is subject to changes in wetland regulations (NPS-FM and NES-F changes) and shall be updated on the findings after the EcIA.

5.4.2 Ecological Impact Assessment

An Ecological Impact Assessment (EcIA) has been completed in support of the proposal. The EcIA was required to inform the planned design for the Growth Cell Structure Plan to identify key ecological attributes and values so they could been compassed as part of the applicant's revegetation and restoration goals for the site. A copy of the EcIA is included as Appendix L.

The EcIA report details the existing ecological values of the site and investigates the actual and potential effects, both adverse and positive of the proposed works on these values. This assessment was based on the Environment Institute of Australia and New Zealand Inc. (EIANZ) EcIA Guidelines, developed for assessment of terrestrial and freshwater ecosystems in New Zealand.

The existing ecological values can be summarised by the following main points:

- All the watercourses (and wetlands) traversing the site were degraded in terms of ecological health indicators and water quality and all have been modified by channelisation and straightening.
- Although largely fenced to exclude stock, the water courses are devoid of indigenous riparian vegetation and were assessed as having low ecological value.
- The highest ecological valued units on the site are the wetland habitats and the kahikatea forest remnent (identified as a significant natural area).
- Other than the wetland and kahikatea remnent, terrestrial vegetation ecological values were either low or very low as the land was dominated by introduced pasture grasses used for agriculture.

In summary, the positive ecological benefits from the project include:

- Restoration and revegetation of the riparian and stream habitats and improvements in water quality and stream health with the change in land use.
- Improved erosion control within the streams and on their margins, through fencing and biodiversity planting.
- Increases in riparian plant diversity and increased wetland extent and representation of guilds, through remediation planting and restoration.

The project does have the potential to cause adverse ecological effect in the Mangapiko Stream and the identified wetland areas. These effects include:

- Potential loss of stream bed habitat and stream length due to culverting associated with internal road access.
- Potential to impede fish passage into and through the culverts.
- Potential for injury and/or mortality of native fauna during construction and bank contouring.
- Potential for temporary sedimentation from any uncontrolled discharges to the downstream receiving environment during stream works and earthworks.

The following recommendations have been proposed to address any actual or potential adverse effects (note that some of these recommendations are related to future consents that will result from the growth cell):

- Preparation of an Erosion and Sediment Control Plan (ESCP) and Stormwater Management Plan (SMP).
- Minimisation and aquatic offsetting for the stream bed and bank loss by preparation and implementation of an Ecological Management Plan (EMP), as part of the resource consent condition process.
- Preparation and implementation of a Fish Management Plan to avoid or minimise the harm to freshwater fish during construction and stream restoration works.
- Enacting the recommendations in the draft Riparian and Waterways Restoration and Enhancement Plan.

Implementation of the proposed management plans, and other proposed mitigation measures recommended in this report, will appropriately avoid or minimise any actual and potential adverse effects of the project and help realise the ecological benefits.

The proposed works are not anticipated to have any significant residual adverse effects on the pre-development baseline condition. The change in land use, improvements in riparian planting, wetland restoration, as well as weed and pest management and erosion control are expected to result in net positive effects on freshwater and terrestrial ecological values in both the Mangapiko and Waipā Catchments.

5.4.3 Riparian and Waterways Protection and Enhancement Plan

A Riparian and Waterways Protection and Enhancement Plan has been completed in support of the proposal and is attached as Appendix N.

This report identifies specific opportunities and includes recommendations for riparian and waterways enhancement. These recommendations draw on the assessment of ecological values within the wider catchment, as well as site visits undertaken by environmental engineers and ecologists. The recommendations consider existing and potential ecological values within the site and wider Mangapiko Stream catchment, in a holistic, Waipā catchment-wide approach that seeks to maximise environmental outcomes for the area. It is proposed that the specific recommendations are adopted and implemented.

A broad set of overarching management recommendations has been developed for the site, with a view to achieving multiple benefits through the implementation of these recommendations. These benefits include the following:

- Improving aquatic and terrestrial environments, including wetland areas.
- Enhancing amenity and access for the community.
- Engaging and educating public about watercourse health.
- Maintaining or improving flood water conveyance.

The following management recommendations are proposed for the waterway's enhancement of the site:

- Establishment of riparian buffers (at a minimum 5 m on both banks (except adjacent stream crossing points), preferably 10-20 m where possible to achieve suitable ecological and habitat function) along the central water course and around each identified wetland to enhance water quality, erosion protection and provide shading.
- Stream naturalisation (including recontouring banks) and improved floodplain connectivity (with flatter bank angles and wider stream profiles), where feasible downstream of the two amenity ponds and along the central watercourse.
- Improved provision of fish and macroinvertebrate habitat heterogeneity and in-stream fish spawning habitat, including establishing pools and riffles with suitable interstitial spaces (this can be achieved by embedding boulders, cobbles and gravels of varying sizes). Increasing riparian cover will directly provide faunal habitat through overhanging vegetation and will indirectly provide habitat through litter and branch fall, as well as stream shading promoting submergent and emergent macrophyte growth.
- Establish and enhance riparian networks within the catchment, including planting indigenous amenity trees that provide environmental services and ecological connectivity
- Retain and enhance existing plantings of indigenous terrestrial vegetation.
- Enhance, and establish new, suitable lizard habitat and refuge within the catchment, such as coastal scrub and harakeke plantings for the gold striped gecko, and pair with pest animal control.
- Establishment of wetland habitat, such as within the stormwater basins and also consider creation of black mudfish habitat from the placement of scalloped troughs into areas of existing tree cover in the identified wetland areas.
- Implement weed and pest plant management, flora restoration and pest animal control programmes, with the latter targeting rats and mice in particular.

5.4.4 Conclusion

Based on the above assessments, there is a significant opportunity to protect, enhance and utilise the existing ecological features on the site. The ecological effects of the proposed Growth Cell can be managed so that they are mitigated and that overall, the proposal has a net positive ecological effect.

5.5 Effects on Productive Land

5.5.1 Assessment

A land use capability assessment has been undertaken for the site and this is attached as Appendix M.

The Growth Cell area contains some highly productive land. This report sets out that the WDP has a definition of 'high class soils' and the NPS-HPL has a definition for 'highly productive land'. The report includes the following findings:

Applying the WDP definition of high class soils:

- The areas classified as LUC 3e1,2e3, and 2w3 are high class soil.
- The areas classified as LUC 6e1, 4e1, 3e2, and 3w1 are not high class soil.
- The non-productive land areas are not high class soil.
- The area of high class soil on the site is 14.6 ha (56.7%), and 11.2 ha (43.4%) is not high class soil.

Applying the NPS-HPL:

- The areas classified as LUC 3e1, 3e2, 3w1, 2e3, and 2w3 are highly productive land.
- The areas classified as LUC 6e1 and 4e1 are not highly productive land.
- The non-productive land areas are not highly productive land.
- The area of highly productive land on the site is 17.8ha (68.8%), and 8.0ha (31.2%) is not highly productive land.

The development of the Growth Cell area will see the loss of 14.6 ha of high class soils and the loss of 17.8 ha of highly productive land. Existing land use, prior to the purchase of the land by Te Awamutu Developments Limited land has been pastoral grazing. The previous owners had owned the property for 33 years. Over this time the site has been used to graze dry stock, being mostly cattle and some sheep.

According to ME Consulting's NPS-HPL Cost-Benefit Analysis, Waipa District has approximately 77,560ha of highly productive land. Based on this number, there would be a loss of approximately 0.02% of the region's highly productive land as defined by the NPS-HPL. Further to this, an economic assessment has been undertaken that forms part of the policy assessment against the NPS-HPL and is attached as Appendix O. The policy assessment against the NPS-HPL in Section 7.2.2 sets out that the loss of highly productive land, in this instance can be allowed in accordance with section 3.6 of the NPS-HPL.

5.5.2 Conclusion

As set out in Section 7.2.2 of this report, the loss of highly productive land is acceptable in accordance with the NPS-HPL. Overall, the loss of 0.02% of the districts estimated highly productive land is an acceptable so that urban rezoning can be allowed based on the above assessment.

5.6 Economic and Social Effects

5.6.1 Assessment

An Economic Assessment has been undertaken to report the likely economic effects of the proposal and is attached as Appendix O. This report includes the following conclusions;

- The proposal acknowledges and directly responds to the need for more residential land to meet growth in demand over time, by enabling the development of approximately 500 new homes overtime.

- From an economic perspective, this represents a significant boost in supply. All other things being equal, this supply boost will help the market to be more responsive to growth in demand, thereby reducing the rate at which district house prices grow over time (relative to the status quo).
- Future households on the subject site will spend around $24 million per annum on a wide range of household goods and services. Accordingly, future development of the land will provide significant commercial support for local businesses.
- Constructing the 500-new homes and associated community facilities enabled by the proposal will generate significant one-off economic impacts. These include:
  - Future planning/design/consenting work will create full-time employment for about 30 people for six months, generating s 9(2)(b)(ii) in wages/salaries.
  - Land development (including infrastructure provision) will generate full-time work for approximately 90 people for 18 months (split across various stages), with s 9(2)(b)(ii) wages/salaries paid; and
  - Construction of dwellings and associated community facilities with provide full-time work for around 420 people for three years (again, split across various stages), with around s 9(2)(b)(ii) m paid in wages and salaries.
- In total, it is estimated that the lifestyle / retirement village is likely to sustain approximately 10 FTE jobs on an ongoing basis in a mix of full-and part-time work.
- There is significant market demand for the type of housing enabled by the proposal, which will also help the Council to meet its obligations under the NPS-UD.
- In addition, the proposal will generate a wide range of enduring economic benefits, while avoiding any material economic costs.
- The proposal is strongly supported on economic grounds.

5.6.2 Conclusion

Based on the findings of the Economic Assessment, the proposal will allow for positive economic effects and the flow on social effects associated. The proposal is considered to have overall positive economic and social effects.

5.7 Landscape and Visual Effects/Natural Character and Amenity

5.7.1 Assessment

The development associated with the Growth Cell will lead to a change to the outlook of the surrounding area.

Any future subdivisions within the Growth Cell area will be subject to a resource consent process and any future developments of the site will be subject to the rules of the Residential Zone. The effects of specific subdivisions and dwellings are therefore not subject to this assessment. This assessment takes into account the broader visual effects of the cumulative development of the area.

An Urban Design Statement has been completed in support of this application and is attached as Appendix D.

The Urban Design Statement includes the proposed structure plan for the Growth Cell. The following is included within the Urban Design Statement;

- Key physical and visual landscape attributes identified through the site analysis are proposed to be retained, enhanced and / or mitigated through the spatial arrangement and relationships imposed by the conceptual structure plan. Such physical and visual attributes include the Significant Ecological Area, other mature tree plantings that contribute to the rural heritage of the site, the drains, wetlands and existing ponds, the site's steep inaccessible slopes.
- A landscape buffer is proposed along SH 3, providing visual relief and setback of future development when viewed from the SH 3 corridor. The same is proposed along the southern boundary interface with adjacent horticultural land use in the form of a planted buffer and adjacent proposed roadway. This buffer may also provide a stormwater conveyance function.
- The high-quality provision of public open spaces are important elements of any successful neighbourhood. Public open spaces provide opportunities for recreation and social contact, act as visual relief within urban landscapes, and can express cultural and ecological values.
- Open spaces within the conceptual structure plan are a significant driver for the spatial arrangement of the movement network, land uses, and built form. The open spaces are organised and connected through the site's existing drains, wetlands, Significant Ecological Area and steep slopes, enhancing the sites sense of place and unique character. This provision of public open space also provides for the opportunity to enable a water sensitive urban design approach.
- A comprehensive analysis of the existing environment's qualities, features and characteristics informed the identification of appropriate opportunities and constraints. This, in turn has informed the development of the structure plan which indicates key structural elements of movement and land use as well as specific road cross sections, open space and other place making recommendations.

The site is not located within an identified Landscape Natural Character Area under the WDP. The structure plan for the Growth Cell area and supporting Waterways Protection and Enhancement Plan in Appendix N, seek to enhance and utilise the existing onsite amenity and character. This includes the utilisation of the existing Kahikatea Trees listed as an SNA as a feature.

5.7.2 Conclusion

Overall, the loss of rural character is mitigated by the enhancement and utilisation of existing features and the effects from the proposed Growth Cell are acceptable.

5.8 Cultural Effects

Iwi engagement that has occurred to date is set out below in Section 6.4.

As identified through case law only tangata whenua themselves are able to identify cultural effects on them. The applicant's approach to tangata whenua engagement is proceeding based on tikanga

principles. The approach to Iwi consultation is set out in correspondence with Te Huia Natural Resources Limited included as Appendix P. This sets out the way in which Iwi consultation has been and is continuing to be undertaken. This includes a commitment to working with mana whenua on the production of a Cultural Values Assessment (CVA). Preparation of the report, including picking up the from the initial consultation with mana whenua, is underway. The output of the initial consultation will be a document that will provide considerations for decision makers. This plan ensures that cultural effects will be adequately addressed in an ongoing manner through the processing of the plan change and prior to the section 42a report preparation, with a CVA expected to be completed and lodged with council in the first quarter of 2023.

5.9 Reverse Sensitivity

There is potential for the development enabled by the Growth Cell to be subject to reverse sensitivity effects from the surrounding land uses. The site is bounded by Kiwi Fruit orchards along the majority of the northern and southern boundaries and a dairy farm on the small section of western boundary. The Urban Design Plan and associated Structure Plan include design elements including screening. Further to this, the dairy farm and southern orchard already share boundaries with the existing urban boundary. Any reverse sensitivity effects are able to be avoided and remedied through urban design.

5.10 Effects Conclusion

As set out in the above assessment, the environmental effects that are considered in relation to this plan change request are as follows;

- Transportation effects;
- Three waters Infrastructure effects;
- Ecological effects;
- Effects on Productive Land;
- Economic and Social effects;
- Landscape and Visual effects, including Natural Character and Amenity;
- Cultural effects;
- Reverse Sensitivity.

Based on the above assessments, supporting documents and the related recommendations, the environmental effects from the proposal are able to be appropriately managed and will have effects that are acceptable.