

### **Open Meeting**

<b>To</b>	Waikato District Council
<b>From</b>	Clive Morgan General Manager Community Growth
<b>Date</b>	14 December 2020
<b>Prepared by</b>	Dr Mark Davey Analytics Manager
<b>Chief Executive Approved</b>	Y
<b>Reference #</b>	GOV1301 / 2962422
<b>Report Title</b>	Population, Household and Land Supply Capacity Report – December 2020

## **I. EXECUTIVE SUMMARY**

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The accompanying report provides a summary and analysis of the findings from population, household and capacity research and analysis that has been undertaken by Waikato District Council in the second half of 2020 for the District.

The purpose of this work has been to understand the latest forecast population and household growth demand for the district (Cameron, 2020) and how this correlates with current and planned land-use (zoning) capacity within the main towns and villages in the district to accommodate this growth over time.

The research has found a stepped increase in forecast household and population growth over the longer term in the Waikato District, beyond earlier 2015 (NIDEA) and 2016 (WISE) forecasts. COVID-19 impacts in respect to border closures have been found to increase the speed of growth in the district, as opposed to slowing it (Cameron, 2020). The total population of the District set to reach 100,000 between 2030-2032. Estimated demand for households in the next 10 years till 2031 is between 7,400-8,700. The forecast numerical and percentage growth over the next 10-year period is comparable to the actuals experienced over the last 10-year period.

Given the changes in land-use policy, supply side-constraints and market factors, a larger proportion of future growth (based on forecasts alone, approximately 75%) over this next period is likely to occur in the District's towns and villages as opposed to in rural and rural-residential areas (where a large proportion of growth has occurred in the past). This future growth, occurring predominantly in existing towns and villages, will have a more profound impact on and demand for network infrastructure, facilities and amenities than historic growth has had. This is likely to increase the true cost of growth to the Council over the coming decades.

When comparing the new forecast demand, over the short, medium and long-term, against planned increases in land supply, a potential shortfall in the supply of zoned, 'infrastructure ready' and market feasible land 20% above the demand level<sup>1</sup> has been identified. More detailed analysis will be required to establish where and when this additional land supply and provisioning of infrastructure will be required.

Forthcoming studies including the Housing and Business Capacity Assessment (a requirement of the National Policy Statement on Urban Development Capacity, 2016) and the Waikato Integrated Scenario Explorer (WISE), will support Council in understanding future land use demand and supply requirements. Both these reports are due in the first half 2021.

Through the proposed Waikato District Plan process some of the supply-side issues are likely to be addressed. Decision-making on the Long-Term Plan (2021-2031) will provide the opportunity to address the 'infrastructure ready' (provisioning, funding and timing of infrastructure) to service zoned and future zoned areas, and in doing so enabling growth to occur.

The forecasting and supply analysis work appended will be used to inform the Asset Management Plans, Long-Term Plan, Infrastructure Strategy and the proposed District Plan. For determining where and when new lead related infrastructure e.g. a new pump station is required, the growth cells and timing in Waikato 2070 will be used.<sup>2</sup> For determining the increase in usage of existing assets, the district-wide medium household and population forecast will be used (Cameron, 2020).

Going forward, more detailed monitoring and understanding of growth patterns, costs and the impacts of growth on the District and its infrastructure will be required so that growth can be efficiently managed. This work is planned for 2021 in conjunction with the 2021-2031 Long Term Plan development.

## **2. RECOMMENDATION**

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**THAT the report from the General Manager of Community Growth be received.**

## **3. BACKGROUND**

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The attached report draws on forecasting (population and households) work undertaken by Dr Michael Cameron (University of Waikato) for all Future Proof councils at a territorial authority level. This was presented to councillors, community boards and committees during a workshop on the 2<sup>nd</sup> September. Following this, in-house analysis of this data was undertaken using the Council's spatial distribution model to understand the impact of these district-wide forecasts on the District's main towns and villages.

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<sup>1</sup> As per the new legislative requirements under the National Policy Statement – Urban Development, 2020

<sup>2</sup> Waikato 2070 sets out the future land-use pattern for the district over the next 40 years whereby providing the most accurate summary of where growth is likely to occur on the ground and where infrastructure will be required.

The household projections at a town/village level were then compared against the possible land-use/zoning capacity in each town drawn from the land use patterns and zones in identified in the Operative District Plan, Proposed Waikato District Plan and Waikato 2070.

## **4. DISCUSSION AND ANALYSIS OF OPTIONS**

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### **4.1 DISCUSSION**

Previous Long-Term Plan's by the Waikato District Council have generally used population projections to determine future need and demand on infrastructure. At a district-wide level these are a good indicator regarding overall future demand across the district but do not take account of more granular growth at a town and village level which is highly sensitive to land use changes (zoning).

Within three months of the new Long-Term Plan being adopted (June, 2021) the Waikato District Council is due to have a new operative district plan (subject to appeals) (September, 2021) which (in its notified form) will open-up large areas of new zoning. This new zoning will have significant impacts on the spatial distribution of growth within the district. As such, the 2021-2031 Long Term Plan and Asset Management Plans will take a hybrid approach to understanding forecast demand on existing infrastructure and new assets by looking both at the overall increase in demand across the district, and at a more granular level, where new growth areas are likely to be enabled (therefore where growth is most likely to occur).

### **4.2 OPTIONS**

Not required as such as no decisions being made

## **5. CONSIDERATION**

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### **5.1 FINANCIAL**

By gaining an improved and more up-to-date understanding regarding the likely quantum of growth that the district will experience and the location of where this is likely to occur enables better informed financial decision-making. Specifically in terms of, a) understanding the cost and financial requirements to enable and service growth and b) a more accurate understanding of the type of infrastructure required and where, will support more efficient investment choices.

### **5.2 LEGAL**

Not required

### **5.3 STRATEGY, PLANS, POLICY AND PARTNERSHIP ALIGNMENT**

This work builds on and supports the work undertaken to inform the Proposed Waikato District Plan and Waikato 2070. This work will help inform the Long-Term Plan, Asset Management Plans, and Infrastructure Strategy.

## 5.4 ASSESSMENT OF SIGNIFICANCE AND ENGAGEMENT POLICY AND OF EXTERNAL STAKEHOLDERS

(Ascertain if the Significance & Engagement Policy is triggered or not and specify the level/s of engagement that will be required as per the table below (refer to the Policy for more detail and an explanation of each level of engagement):

Highest levels of engagement	Inform <input checked="" type="checkbox"/>	Consult <input type="checkbox"/>	Involve <input type="checkbox"/>	Collaborate <input type="checkbox"/>	Empower <input type="checkbox"/>
<i>Tick the appropriate box/boxes and specify what it involves by providing a brief explanation of the tools which will be used to engage (refer to the project engagement plan if applicable).</i>	Type here if applicable				

State below which external stakeholders have been or will be engaged with:

Planned	In Progress	Complete	
	X		Internal
	X	X	Community Boards/Community Committees
X			Waikato-Tainui/Local iwi (provide evidence / description of engagement and response)
X			Households
X			Business
	X		Other Please Specify

Comment (if any):

Several key stakeholders rely on this information to inform their planning and investment. For example, the New Zealand Transport Agency (Waka Kotahi) in respect to transport investment, Watercare in respect to waters infrastructure demand and investment, and the Waikato Regional Council in respect to spatial land-use change across the region.

## 6. CONCLUSION

Analysis of the population, household and capacity data indicates continued growth demand in future decades across the district and some potential shortfalls in planned land supply. An increasing proportion of this growth is likely to occur in our urban areas. Due to the increasing proportion of this growth occurring in urban areas, the level of investment in supporting infrastructure will likely disproportionality increase.

This data has been used to inform the Asset Management Plans, the 2021-2031 Long Term Plan and the Infrastructure Strategy.

Further research will be undertaken in 2021 to provide Council additional data to help understand the impacts of this growth on Councils infrastructure network and land capacity.

## **7. ATTACHMENTS**

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Population, Household and Land Capacity Report (December 2020)

# Population, Household and Land Capacity Report

December 2020 v1.1

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## 1.0 Purpose

The purpose of this report is to provide updated household and population projections, land capacity modelling and background to this data, its limitations, and how it should be interpreted.

## 2.0 Background

Over the past decade the Waikato District has experienced significant growth demand.

The National Institute of Demography and Economic Analysis (NIDEA) undertook population and household modelling for the sub-region comprising Hamilton City Council, Waikato District Council and Waipa District Council in 2015 based off the 2013 census data. In 2016 these projections were applied to the Waikato Integrated Scenario Explorer (WISE) to spatially allocate the growth based on a number of parameters such as zoning, densities, transport, economic and employment drivers and land-use constraints to determine where this growth is likely to be realised.

In 2020 the Waikato District, along with its Future Proof partner councils (noted above) commissioned the University of Waikato to re-forecast population and household growth at a territorial level. This work used the 2013 census and the new Statistics New Zealand Estimated Usual Resident Population (EURP) data. The modelling work factored in assumptions regarding the impacts of COVID-19 in respect to border closures and changes in international migration.

The Waikato District Council undertook further modelling using the district-wide projections and disaggregated these to statistical areas (SA2) and 'town/village' areas in the district to provide indicative demand at a more granular geographic level.<sup>1</sup> This provides an understanding of demand across the district.

The specific location of where growth will occur is subject to land-use supply (zoning, infrastructure provision and market feasibility). Waikato District Council has also built a capacity model which analyses existing and future land use (based on Waikato 2070, and the operative and proposed Waikato District Plans) to provide an indication of the potential 'plan enabled' quantum of supply and timing of when this might become available.

The findings of this work and analysis are contained within this report.

## 3.0 Citations

### Capacity Model

Waikato District Council. (2020). Waikato District Council Capacity Model.  
(*Waikato District Council, 2020*)

Note: this is a combination to the 2017 Land Capacity Model (version C) and the Waikato 2070 Growth cell model.

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<sup>1</sup> The WISE modelling is due to be re-run early 2021 and will provide a more accurate picture of demand at a more granular level taking account of zoning and land-use constraints.

## Household and Population Projections

District Wide Projections 2020 University of Waikato (med and high)

Cameron, M.P. (2020). *2020 Update of Population, and Family and Household, Projections for Waikato District, 2013-2063*. University of Waikato.

(Cameron, 2020)

SA2 and Town/Villages Projections Oct 2020 Waikato District Council (med and high)

Waikato District Council. (2020). *Waikato District Spatial Distribution Model*.

Note: this model is based off the Cameron, (2020) District Wide Projections 2020 University of Waikato.

### 4.0 Growth towns and villages

As per Waikato 2070, the towns and villages identified for residential growth over the next 40-years are:

1. Tuakau
2. Pokeno
3. Te Kauwhata
4. Huntly & Ohinewai
5. Taupiri
6. Ngaruawahia
7. Horotiu
8. Te Kowhai
9. Raglan

These are the areas where Council intends on zoning additional land to accommodate residential growth in the district and supply vs demand is shown in the below graphs. This does not preclude growth from occurring elsewhere, but this will be subject to the relevant planning provisions.

### 5.0 High level findings

1. The latest (Cameron, 2020) projections have found that the Waikato District has a population of approximately 81,000 people and 29,000 households
2. Growth in the Waikato District has consistently exceeded forecast demand
3. Over the next LTP cycle, 2021-2031 the districts population is forecast to grow between 19-23%<sup>2</sup>, or 15,500-19,000 additional people. By comparison, over the last 10-year LTP period (2011-2021) the districts population grew 18,647 from 65,000 to 83,000, 27% increase.
4. Over the next LTP cycle, (2021-2031) the districts households are forecast to grow between 24-28%<sup>3</sup>, or 7,400-8,700 additional dwellings based on demand.
5. Currently there approximately 13,000 dwellings in the growth towns and villages and approximately 15,000 dwellings in rural areas (plus approximately 2,000 rural-residential zones and smaller villages<sup>4</sup>)

<sup>2</sup> Based on UoW (2020) medium and high projections

<sup>3</sup> Based on UoW (2020) medium and high projections

<sup>4</sup> There are approximately 2,000 dwellings in rural-residential zones and the villages of Mercer, Meremere, Rotokauri, Whatawhata and Tamahere.

6. Given changes in land-use policy, supply side-constraints and market factors, a larger proportion of future growth is likely to occur in urban areas in the district. Forecasts alone show 75% of forecast growth demand over the next 30 years is to occur in growth towns and villages (identified in Waikato 2070). The actual proportion of growth that occurs into these areas is likely to be higher given the above noted factors, and land availability (where land is being zoned for development) and constraints to growth in other parts of the District.
7. The districts towns have been found to have significant in-fill and redevelopment capacity due to zoning controls and relatively large sites. But as found in the Housing and Business Capacity Assessment (2017) the likely quantum of in-fill and re-development that will occur will be a fraction of the total possible due to market factors. This same experience has been mirrored in Auckland, despite the market factors in Auckland being a lot more conducive to this type of development. The Waikato District model therefore conservatively assumes that only 10% of in-fill and redevelopment capacity will be realised.<sup>5</sup>
8. The land capacity<sup>6</sup> (theoretical zone capacity) in the identified growth towns and villages versus the demand +20% highlights a deficiency of supply in certain areas and time periods<sup>7</sup>. This finding is before the market feasibility and infrastructure 'readiness' has been assessed. Furthermore, a number of these areas, whilst identified in Waikato 2070, have not yet been zoned or are proposed to be zoned in the proposed District Plan. This will need to occur in order to enable growth.
9. Zoning land does not guarantee supply. Often there can be a significant reduction between the theoretical number of households zoning enables, versus the number of homes/dwellings that are constructed and come to market, the difference can be as great as 50%. The factors which lead to this include infrastructure servicing, site suitability (e.g. Stormwater or Geotech), market feasibility, land banking, and developer/land owner appetite.
10. At a town-ship level, the supply (zoning) of land has a significant impact on where growth will occur. Te Kauwhata is a good example of where historically projected demand has been low but developer-led demand, which has culminated in land-release (supply), has created an upward demand curve for Te Kauwhata. Given the scale of the towns in the district and the spill-over effects from Hamilton and Auckland this same outcome is possible in areas like Taupiri.

## 6.0 Interpretation

Market conditions and land supply will dictate where growth materialises at a granular level. Therefore, in areas where market supply is less than demand, this suggests that there are constraints to growth and the forecast demand is unlikely to be realised and will likely be displaced elsewhere (unless additional supply becomes available). In areas where supply exceeds forecast demand, this is where demand and supply might have been restricted or constrained historically. In these instances, because of the overall demand in the district, the provision of new supply is likely to generate localised demand which was not anticipated for/forecast.

On this basis, supply and demand at a granular level should always be viewed together to provide a more complete picture of what might happen in the future.

The lines in the graphs below illustrate demand. The columns in the graphs below illustrate plan-enabled supply (not all of which is currently zoned, infrastructure ready or market feasible).

<sup>5</sup> The forthcoming HBA (2020) assessment, due early 2021 will provide a more accurate assessment of this

<sup>6</sup> based on Waikato 2070, and the operative and proposed Waikato District Plan

<sup>7</sup> Short term (1-3 years), medium term (3-10), long term (10-30) and 30+ years

At each step in the planning and land development process: an area being identified for future zoning; zoning; infrastructure servicing; developer demand; subdivision planning/consenting; and building consenting and code of compliance occurring, the actual number of households (lots) realised often significantly reduces through this process. This necessitates a greater quantum of zoning to occur initially, above demand.

In the town/village graphs below, where demand lines are close or exceed supply columns, this indicates that intervention is likely required in respect to the zoning and servicing of more land to meet demand.

## 7.0 National Policy Statement: Urban Development

In August 2020, the New Zealand Parliament gazetted the new National Policy Statement on Urban Development (NPS-UD). This policy statement classifies the Waikato District as a 'tier 1' growth council. In accordance with its standards, it requires the Waikato District Council to have a minimum of +20% supply of zoned, market feasible and infrastructure ready land available in the district over the short and medium term and +15% supply in the long term.

The NPS-UD also places additional requirements on the Waikato District to ensure the district plan is responsive to growth demands and enables competitive land markets.

## 8.0 Limitations

Growth forecasts are only a prediction of possible future state. However, generally, given the drivers for population and household growth, these are generally reasonably accurate in the short-medium term. The forecasts enclosed, as with many, have a higher degree of accuracy in the earlier period of the forecasts with increasing variance in later years (as illustrated by the divergence between the medium and high population and household projection).

Similarly, the capacity modelling provides an indication (estimate) only of possible future plan-enabled land supply based on a range of assumptions. As modelling methods, techniques and assumptions are refined and up-take occurs, new land is planned for release, the estimates will change.<sup>8</sup>

Statistical area boundaries (SA2s) do not align to the future extent of urban areas, the SA2 boundaries generally only follow the existing urbanised area. To better understand the potential population and household demand within the broader catchment area of towns and villages, the bordering rural SA2s have been included to form the town/village demand lines. The rationale for this is that in later time periods (short-term, medium-term, long-term and 30+), where planned increases in supply are modelled, urban areas expand into the bordering rural SA2 areas to accommodate the additional forecast demand. As a result of this method, 'current demand' is reported to exceed supply: this is an anomaly in how the data is presented.

The Waikato District Council is now undertaking on-going improvement and refinement to the capacity model to better understand the availability and uptake of supply.

The numbers presented in this report are not static and are subject to change.

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<sup>8</sup> The extract date of the data presented in this report from the Waikato District's capacity model was 6/11/2020 11:21am

## 9.0 Summary

The findings of the research shows forecast on-going growth in the Waikato District over the short, medium, and long term. The short-term growth rates over the next 10-year period are forecast to be similar to those experienced in the past 10-year period.

A larger proportion of future growth in the district is likely to occur in urban areas. Based on the newly revised population and household forecasts, the new National Policy Statement Urban Development requirements and the capacity model supply findings highlight that further work is required to determine if the District still has sufficient, zoned, infrastructure ready and market feasible supply. The findings of this report point to a potential shortfall of supply.

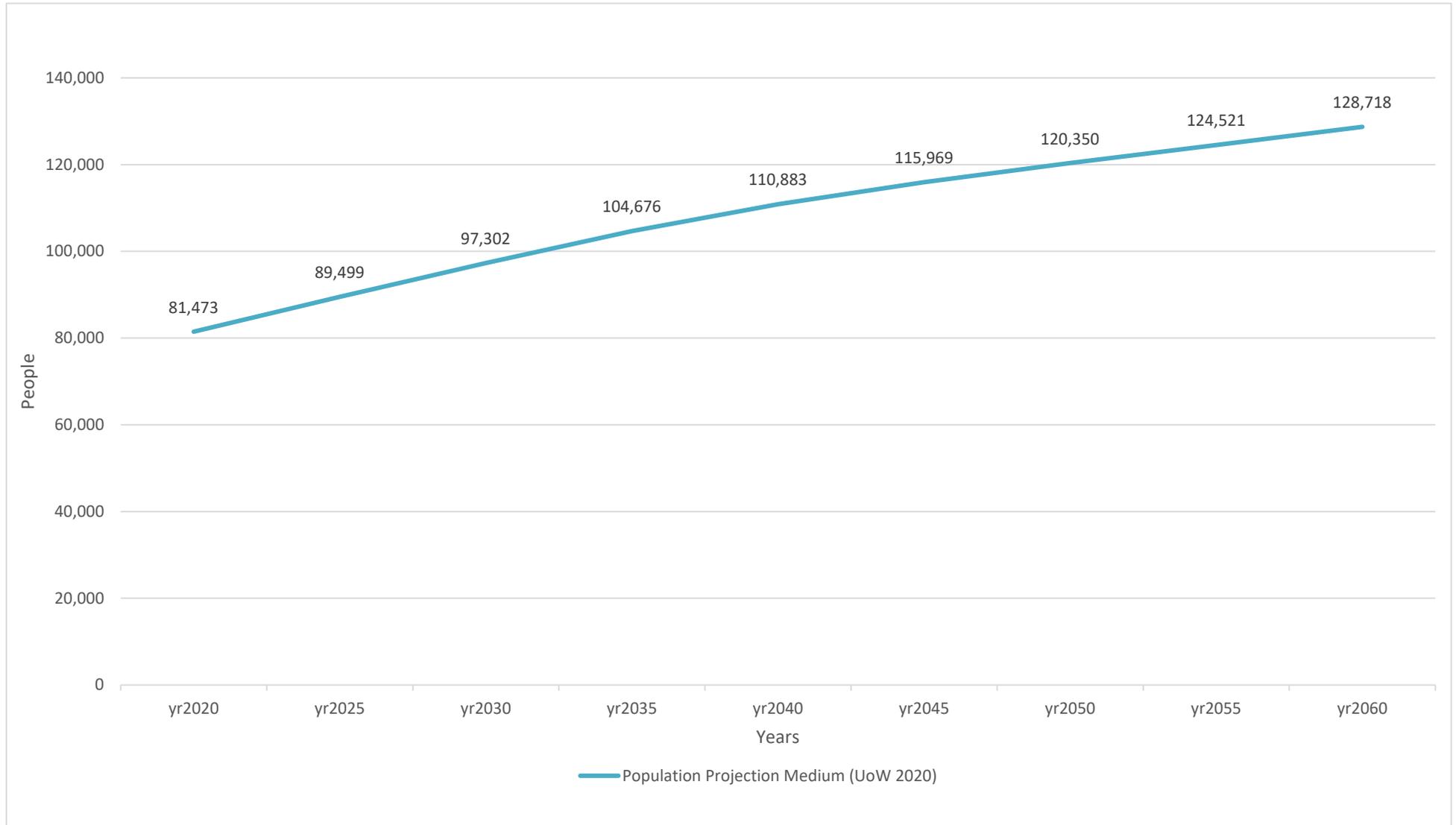


Figure. I. Waikato District population projection (medium) (Cameron, 2020)

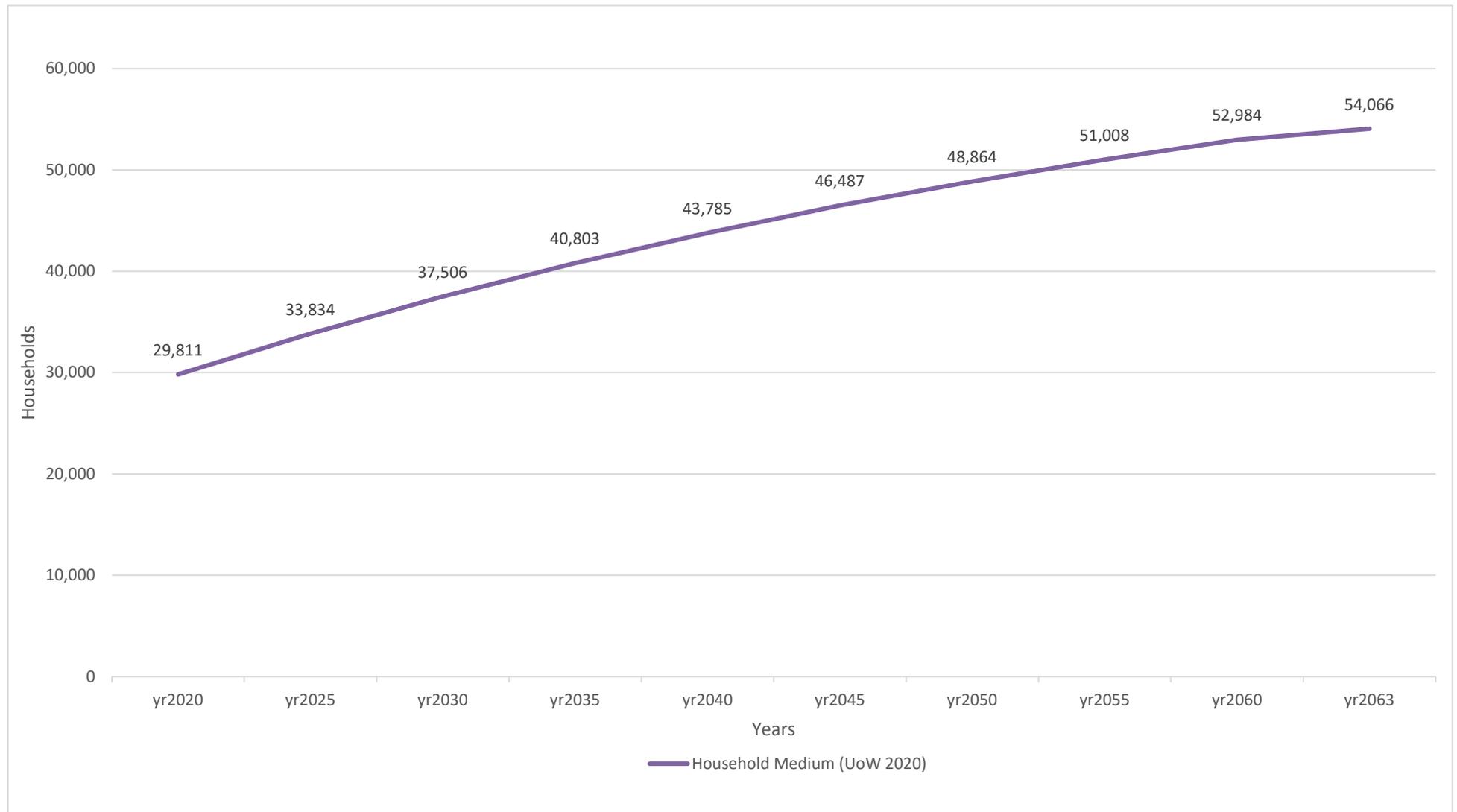


Figure. 2. Waikato District household projection (medium) (Cameron, 2020)

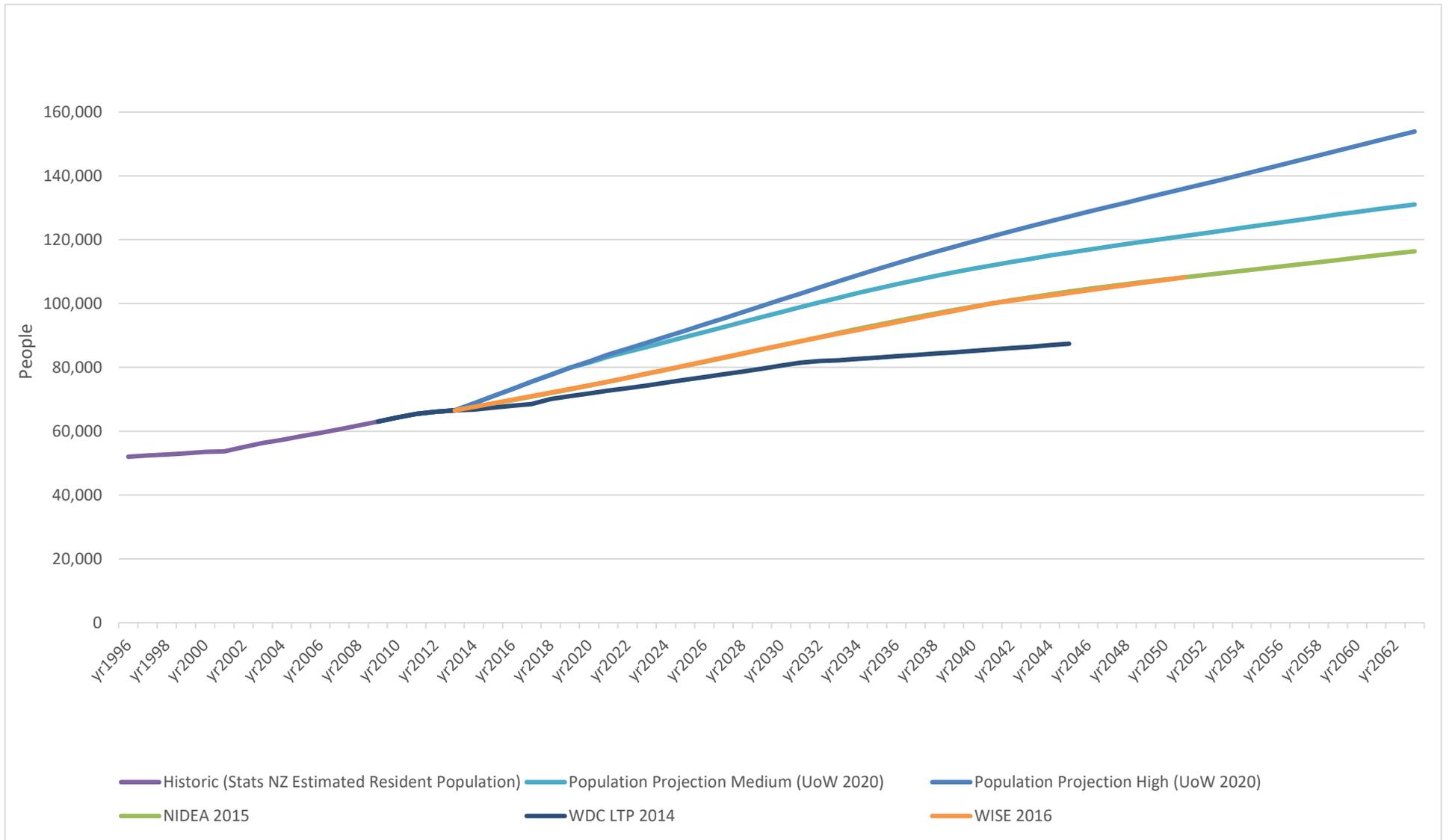


Figure. 3. District-wide population estimates and projections (1996-2063)

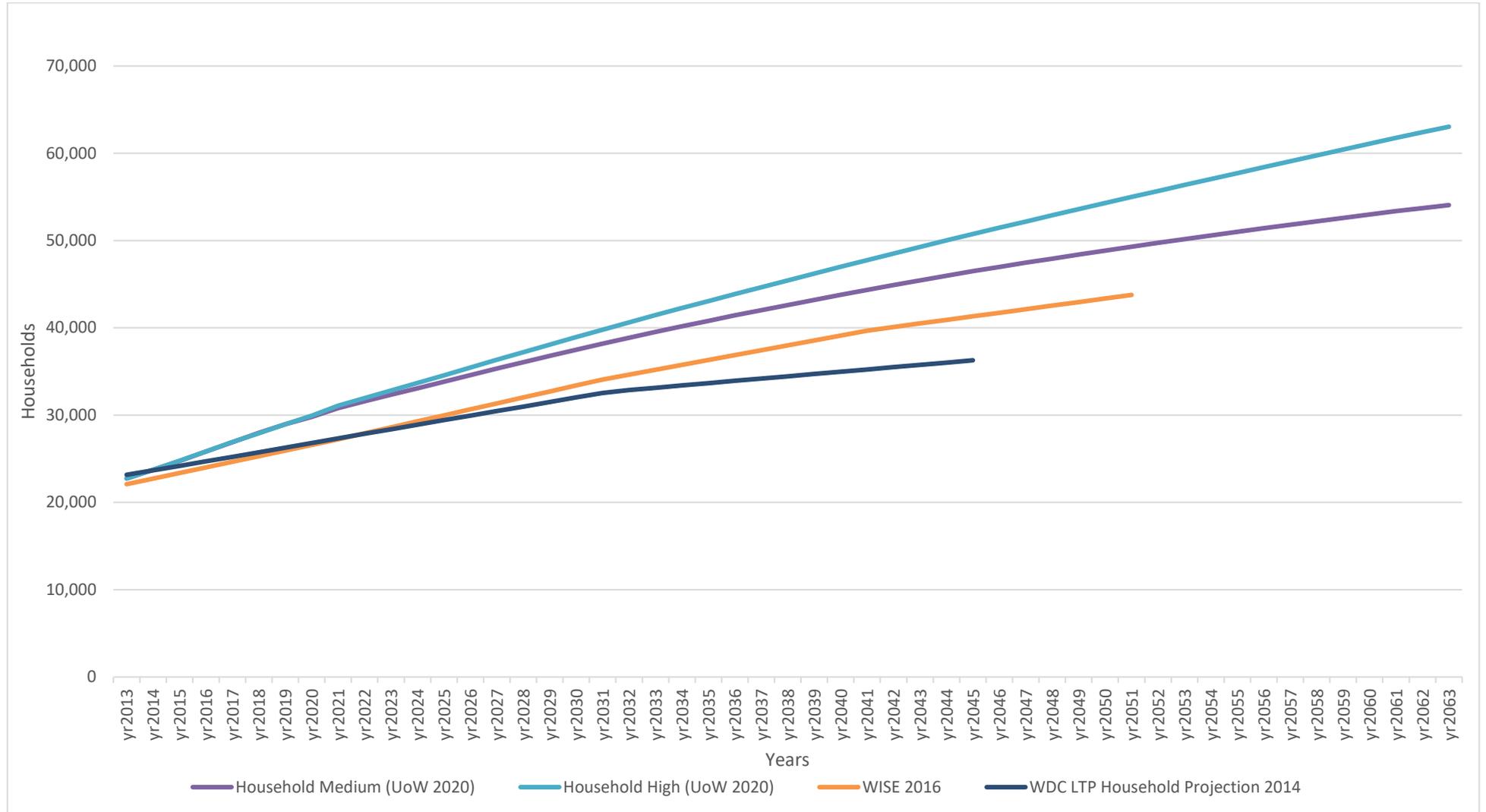


Figure. 4. District-wide household projections (2013-2063)

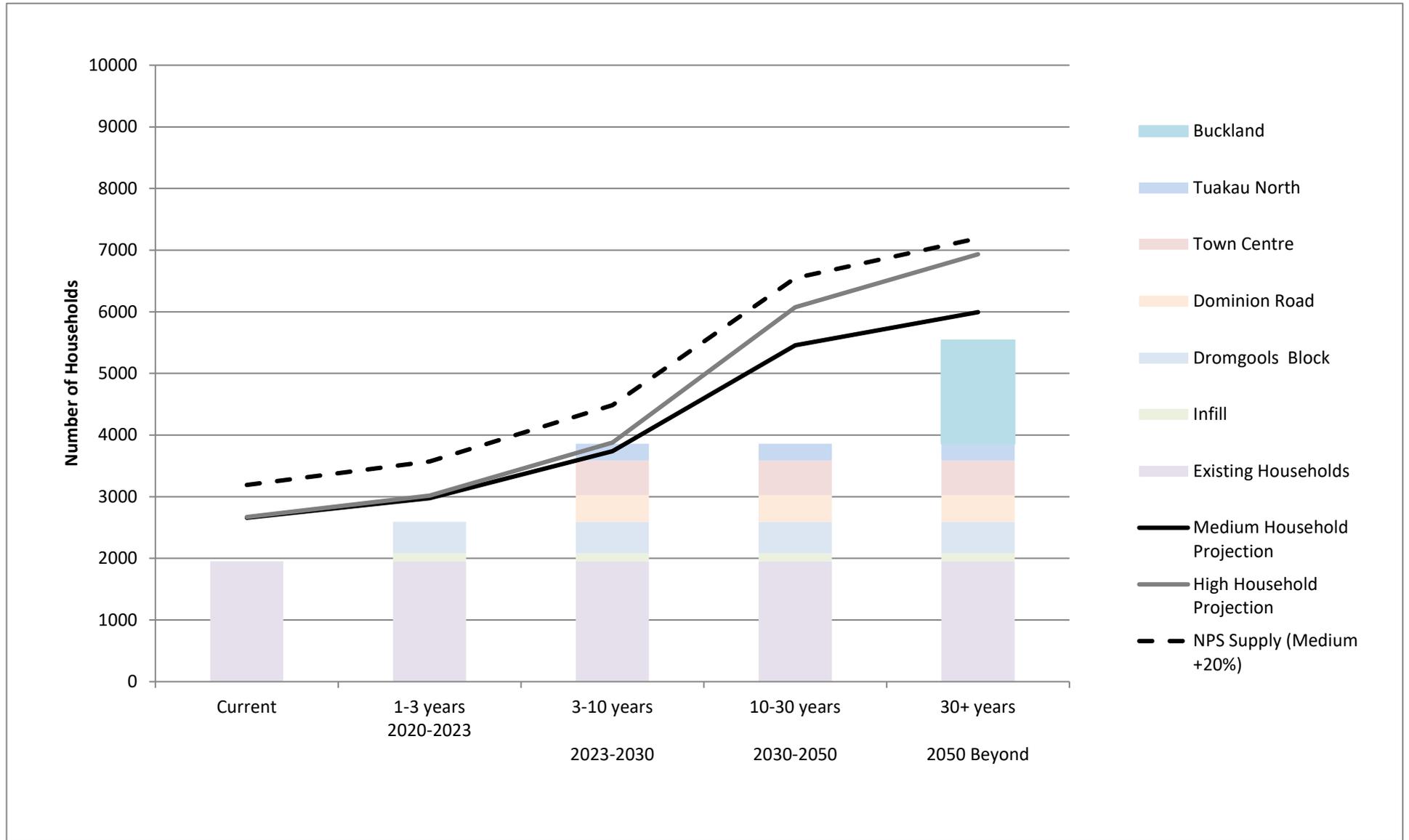


Figure. 5. Tuakau supply and demand analysis

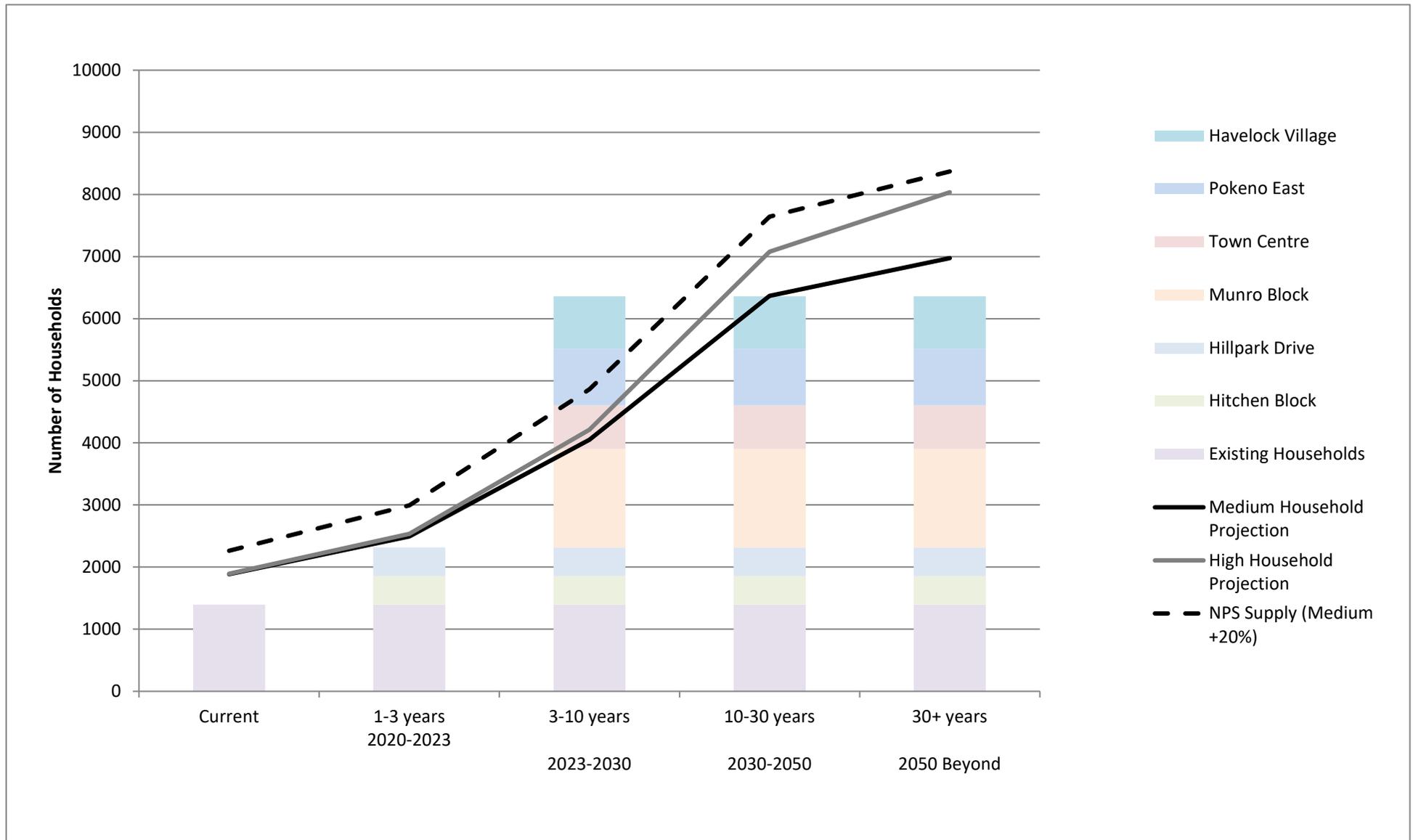


Figure. 6. Pokeno supply and demand analysis

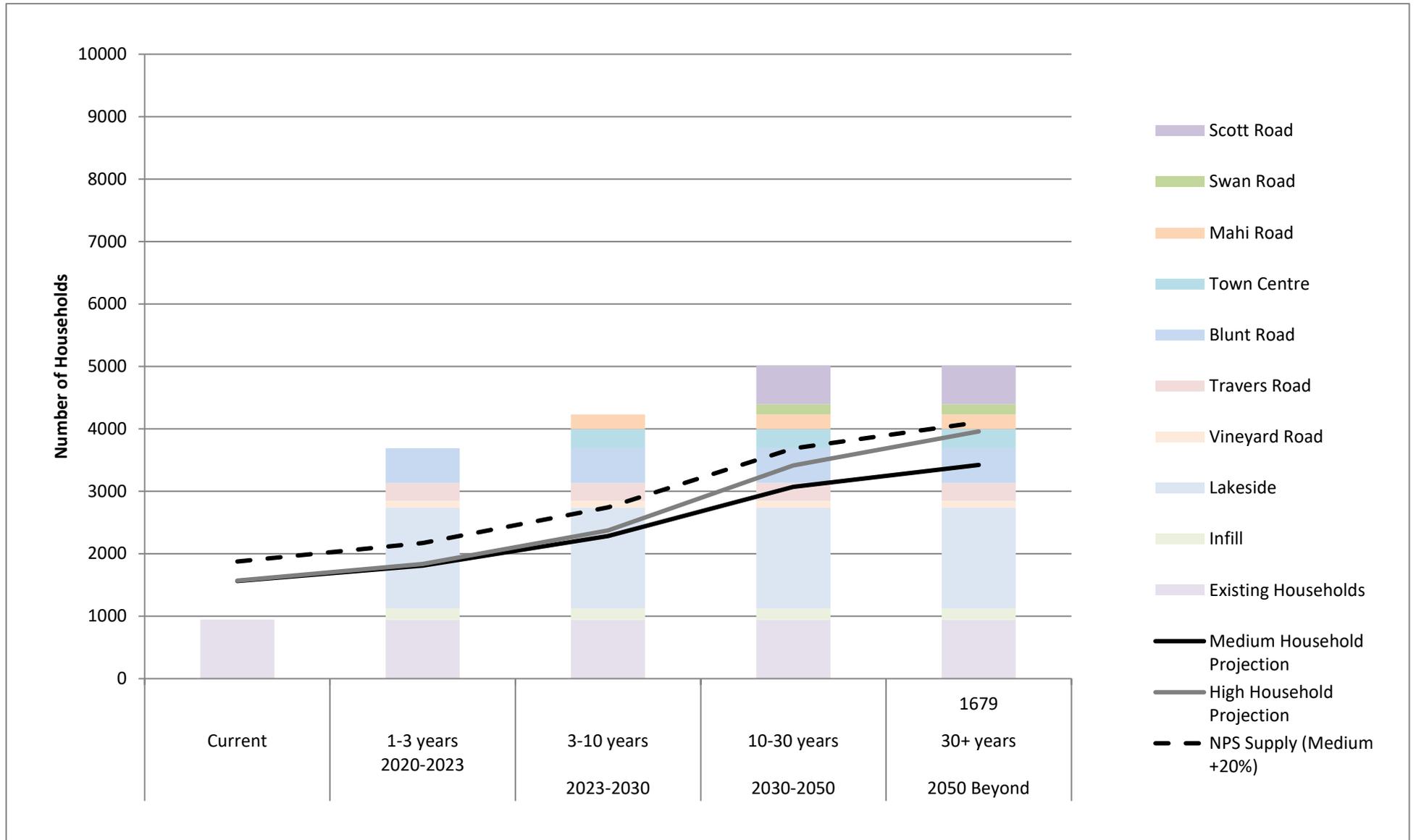


Figure. 7. Te Kauwhata supply and demand analysis

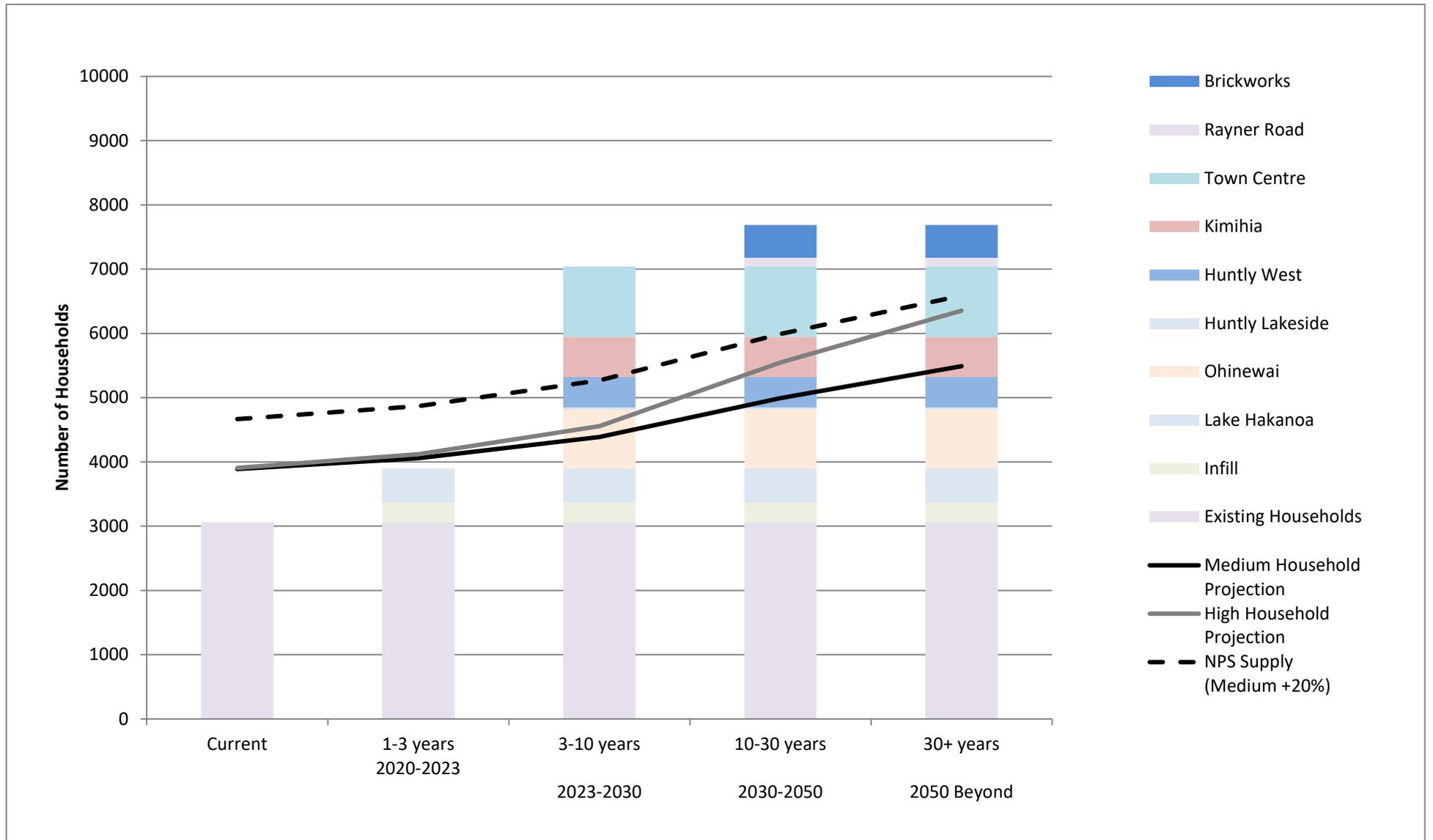


Figure. 8. Huntly & Ohinewai supply and demand analysis

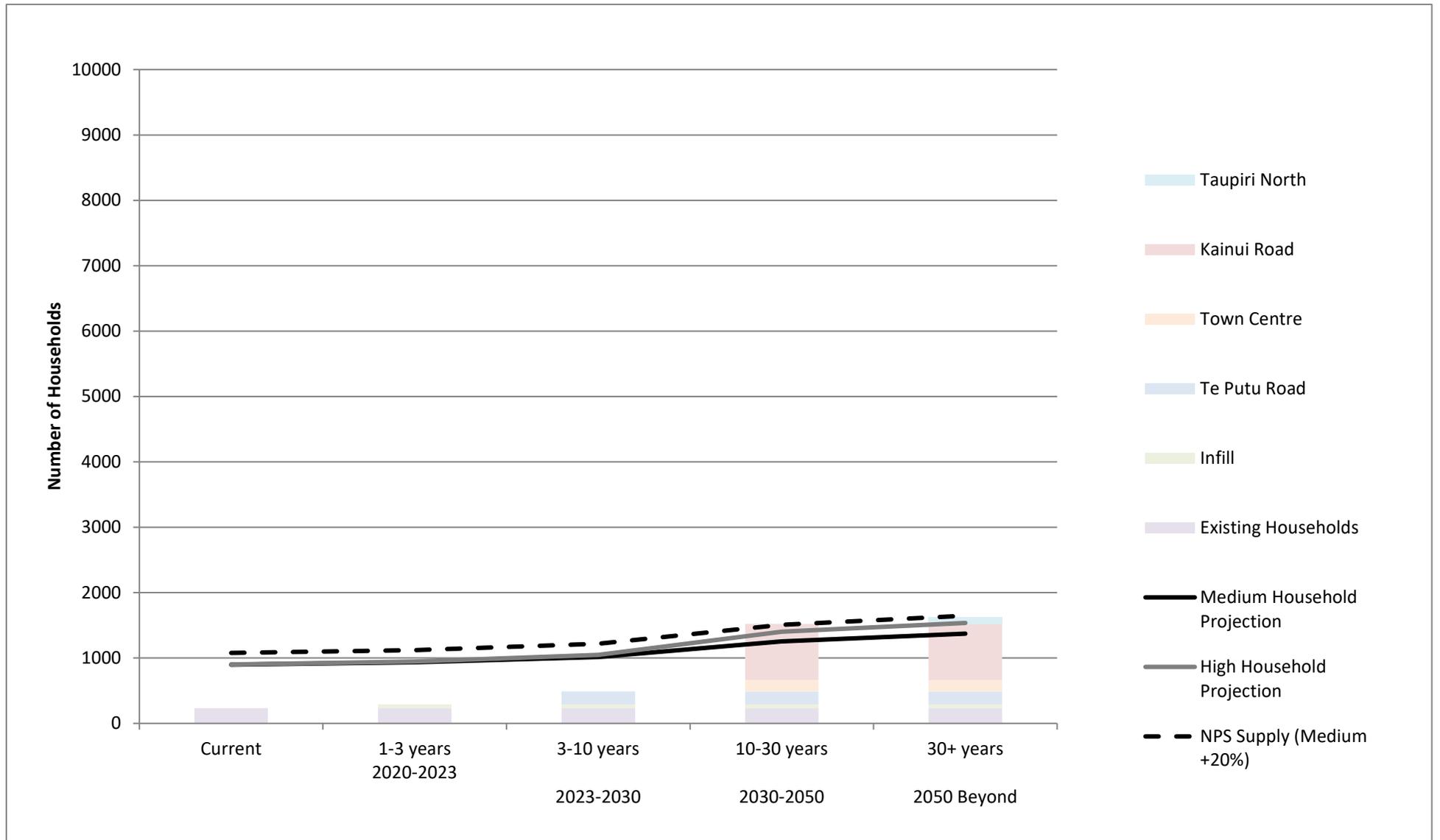


Figure. 9. Taupiri supply and demand analysis

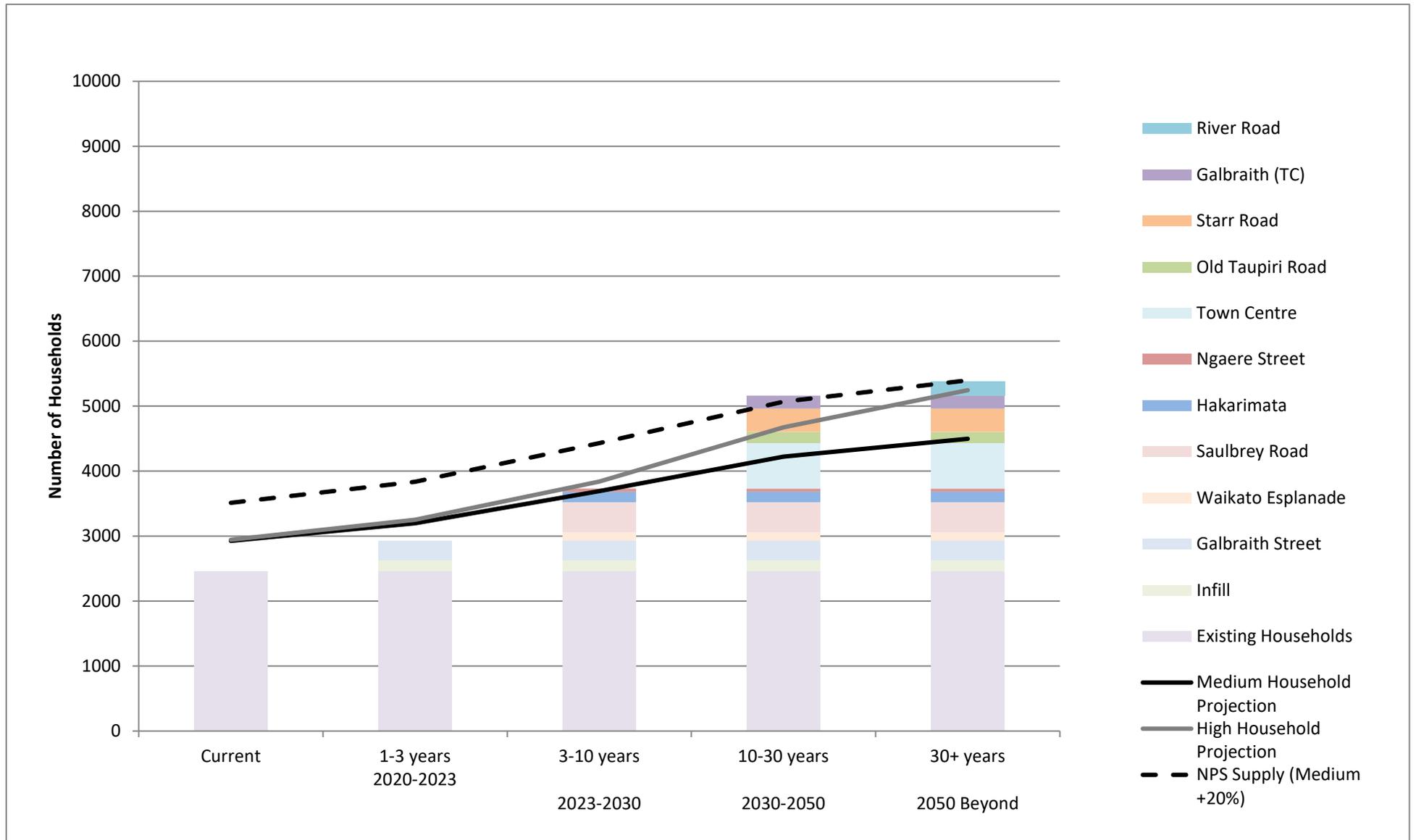


Figure. 10. Ngaruawahia supply and demand analysis

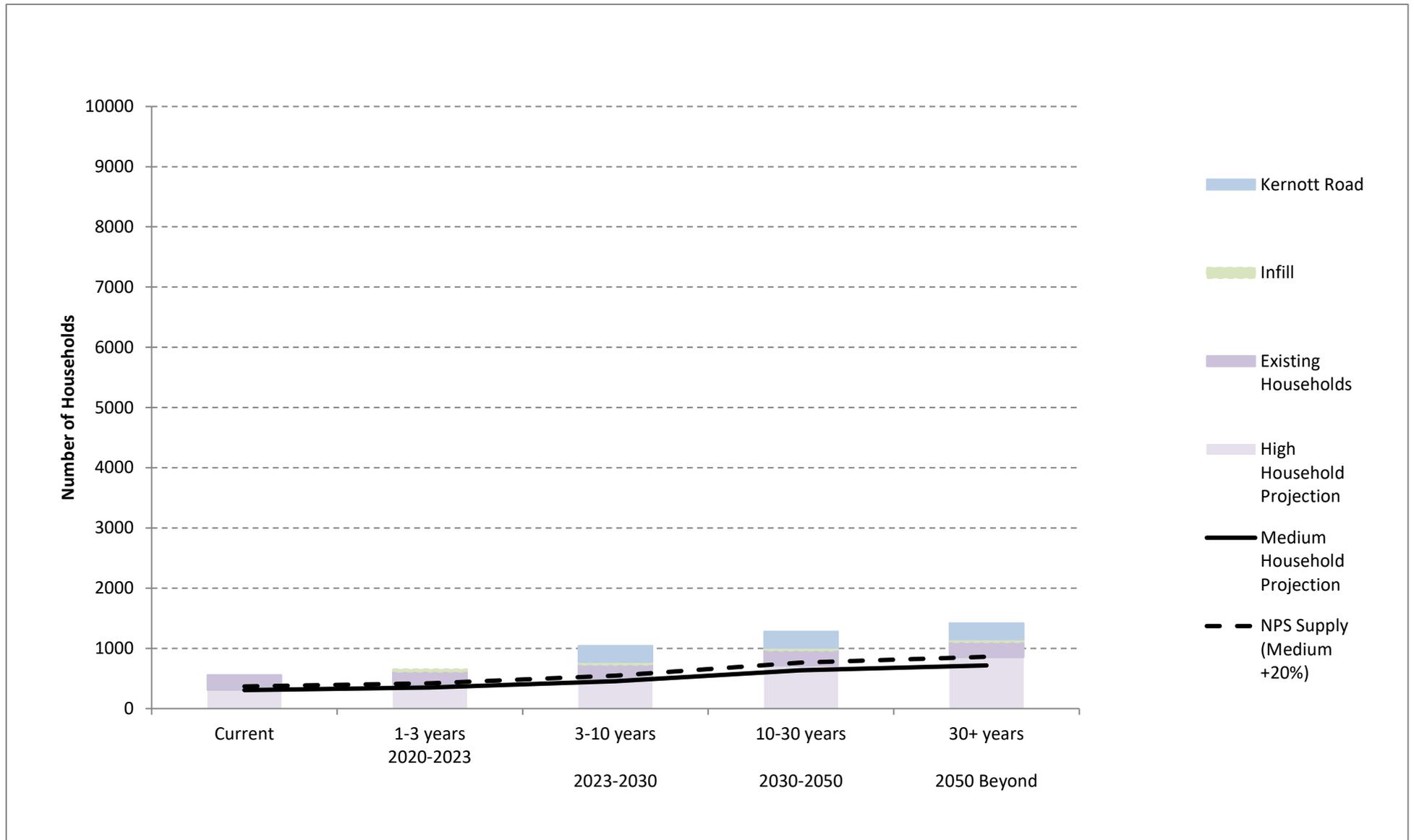


Figure. 11. Horotiu supply and demand analysis

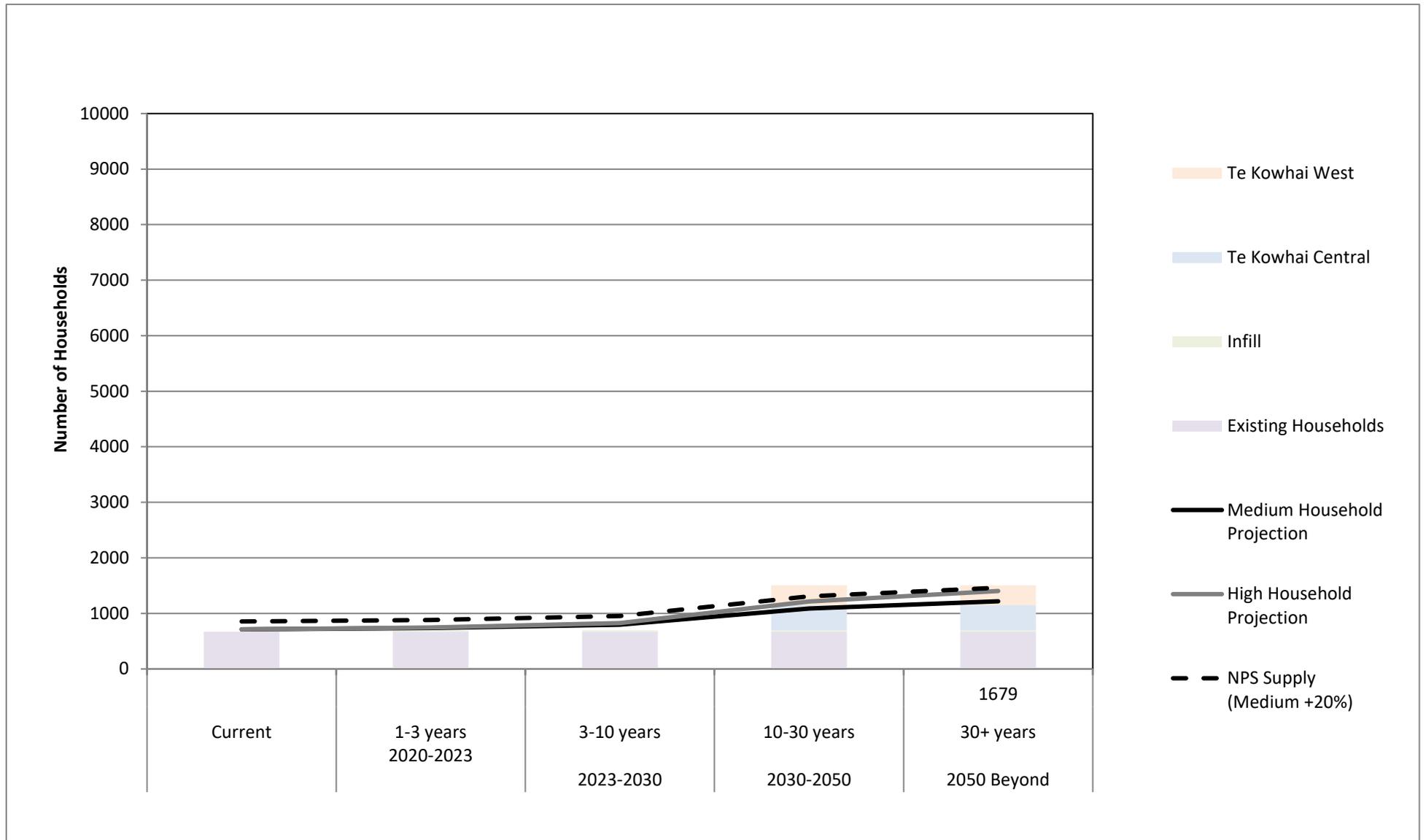


Figure. 12. Te Kowhai supply and demand analysis

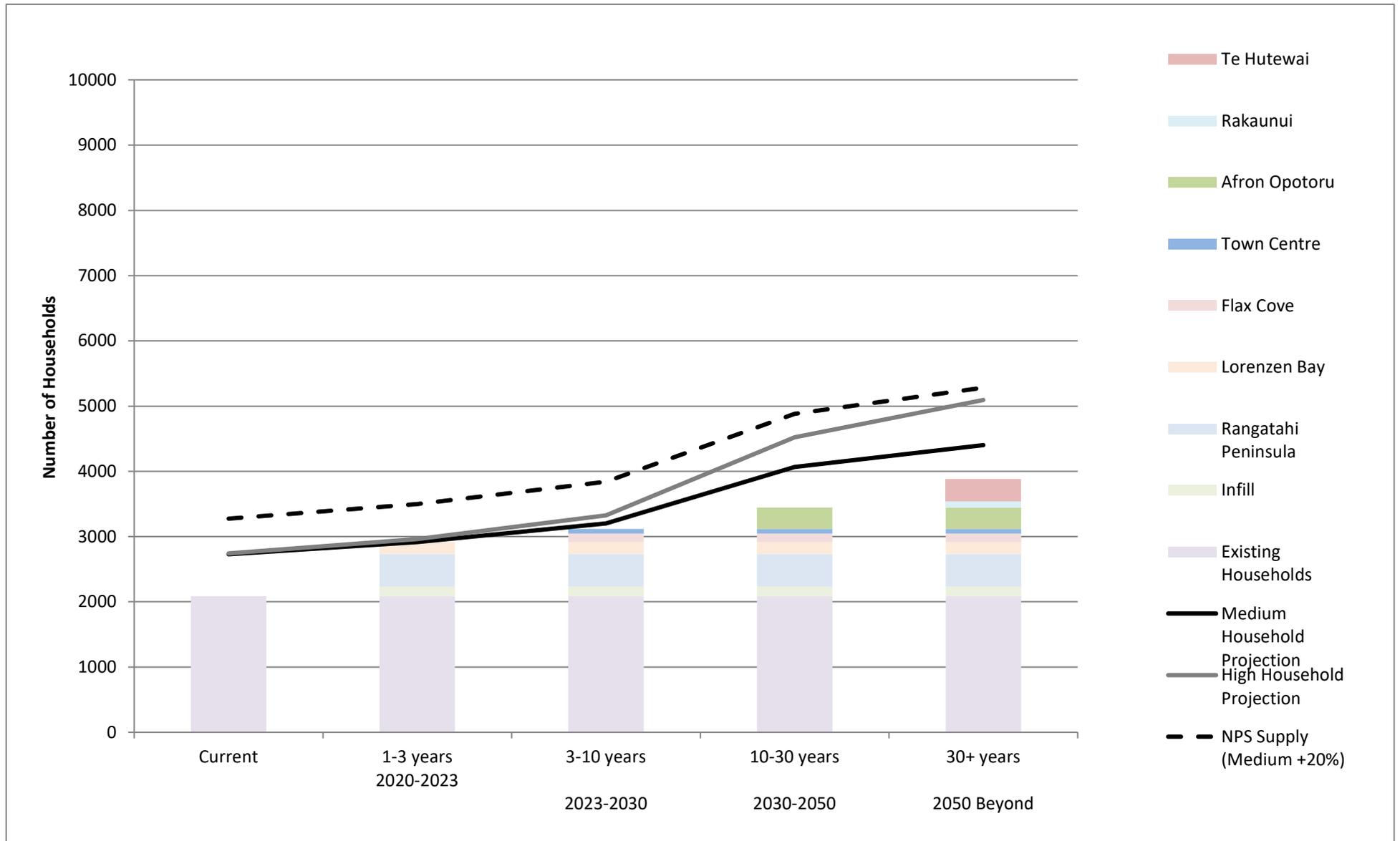


Figure. 13. Raglan supply and demand analysis