Notice of Meeting:

I hereby give notice that an ordinary Meeting of the Strategic Growth Committee will be held on:

Date:	**Thursday 20 May 2021**
Time:	**9.30am**
Meeting Room:	**Council Chamber and Audio Visual link**
Venue:	**Municipal Building, Garden Place, Hamilton**

Richard Briggs
Chief Executive

Strategic Growth Committee
Komiti Rautaki
OPEN AGENDA

Membership

Chairperson *Heamana*	Cr D Macpherson	
Deputy Chairperson *Heamana Tuarua*	Cr Ryan Hamilton	
Members	Mayor P Southgate	Cr R Pascoe
	Deputy Mayor G Taylor	Cr S Thomson
	Cr M Bunting	Cr M van Oosten
	Cr M Forsyth	Cr E Wilson
	Cr M Gallagher	Maangai Maaori James Whetu
	Cr K Naidoo-Rauf	Maangai Maaori Olly Te Ua
	Cr A O'Leary	
Quorum:	**A majority of members (including vacancies)**	
Meeting Frequency:	**Six weekly**	

Becca Brooke
Governance Manager
Menetia Mana Whakahaere

13 May 2021

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Purpose

The Strategic Growth Committee is responsible for:

1. Guiding sustainable physical development and growth of Hamilton to meet current and future needs, including oversight of strategic land-use planning, boundary alignment, and existing and alternative planning, funding and financing models for growth-related projects.
2. Driving collaboration with neighboring Councils, Iwi, private sector and central government to meet Hamilton's growth ambitions.

In addition to the common delegations, the Strategic Growth Committee is delegated the following Terms of Reference and powers:

Terms of Reference:

1. To monitor and provide advice on the overall development and implementation of urban growth and development strategies, strategic land use, and spatial plans (e.g. Hamilton to Auckland Corridor and Hamilton-Waikato Metropolitan Spatial Plan), and long-term network infrastructure planning in line with national policy requirements.
2. To provide direction and monitor Council's approach to the levying and use of rates for growth, as well as development contributions.
3. To develop, and monitor the implementation of the infrastructure Activity Management Plans to inform the 2021-31 Long Term Plan to ensure that Council looks after its existing assets and provides agreed levels of service.
4. To provide direction on and assess proposals for seeking alternative funding models, such as special purpose vehicles and infrastructure funding and financing.
5. To provide direction on strategic priorities for network infrastructure aligned to city development, and oversight of strategic projects associated with those activities.
6. To provide advice on the development and implementation of the Long Term Infrastructure Strategy.
7. To assess proposals for Private Developer Agreements that exceed the Chief Executive's delegations for Unfunded Growth Projects[i] and, if appropriate for Unfunded Growth Projects[i] to recommend such agreements to the Council for approval.
8. To provide direction regarding Council's involvement in and with Urban Development Authorities, regional alliances, plans, initiatives and forums for spatial planning (for example, Future Proof, strategic boundary land use agreements and joint council growth related discussions).
9. To consider the impacts of land use and urban development on the environment.
10. To provide clear direction on Council's strategic priorities to organisations and groups, for which Council facilitates funding, aligned with these Terms of Reference, and to oversee those funding arrangements and receive their strategic and business plans and annual performance reports.
11. To monitor and oversee the delivery of Council's non-financial performance and non-financial key projects, against the Long Term Plan, excluding key performance indicator reporting which is the responsibility of the Finance Committee.
12. To oversee the development of the City's Smart City Strategy.

The Committee is delegated the following powers to act:

- Approval of purchase or disposal of land for network infrastructure, or parks and reserves for works and other purposes within this Committee's area of responsibility that exceeds the Chief Executive's delegation and is in accordance with the Annual plan or Long Term Plan.

The Committee is delegated the following recommendatory powers:

- Adoption of the Long Term Infrastructure Strategy to the Council.
- Approval of additional borrowing to the Finance Committee.
- Approval of city boundary changes to the Council, including in respect of Strategic Boundary Land Use Agreements.
- Approval of infrastructure Activity Management Plans to inform the 2021-31 Long Term Plan to the Council.
- The Committee may make recommendations to Council and other Committees

Recommendatory Oversight of Policies and Bylaws:

- *Development Contributions Policy*
- *Growth Funding Policy*
- *Hamilton Gateways Policy*
- *Sale and Disposal of Council Land Policy*

[i] Unfunded Growth Projects are defined in the Growth Funding Policy as:

a) Not funded projects
b) Funded projects but which are proposed to commence earlier than the sequencing and timing established in the long term plan; and/or
c) Funded projects but which are now proposed to occur beyond the scale, scope and cost prescribed or anticipated for those projects in the long term plan.

1 Apologies – *Tono aroha*

2 Confirmation of Agenda – *Whakatau raarangi take*

The Committee to confirm the agenda.

3 Declaration of Interest – *Tauaakii whaipaanga*

Members are reminded of the need to be vigilant to stand aside from decision making when a conflict arises between their role as an elected representative and any private or other external interest they might have.

4 Public Forum – *Aatea koorero*

As per Hamilton City Council's Standing Orders, a period of up to 30 minutes has been set aside for a public forum. Each speaker during the public forum section of this meeting may speak for five minutes or longer at the discretion of the Chair.

Please note that the public forum is to be confined to those items falling within the terms of the reference of this meeting.

Speakers will be put on a Public Forum speaking list on a first come first served basis in the Committee Room prior to the start of the Meeting. A member of the Council Governance Team will be available to co-ordinate this. As many speakers as possible will be heard within the allocated time.

If you have any questions regarding Public Forum please contact Governance by telephoning 07 838 6727.

Item 5

Council Report

Committee: Strategic Growth Committee **Date:** 20 May 2021

Author: Tyler Gaukrodger **Authoriser:** Becca Brooke

Position: Governance Advisor **Position:** Governance Manager

Report Name: Confirmation of the Strategic Growth Committee Open Minutes of 30 March 2021

Report Status	*Open*

Staff Recommendation - *Tuutohu-aa-kaimahi*

That the Strategic Growth Committee confirm the Open Minutes of the Strategic Growth Committee Meeting held on 30 March 2021 as a true and correct record.

Attachments - *Ngaa taapirihanga*

Attachment 1 - Strategic Growth Committee Unconfirmed Open Minutes - 30 March 2021

Strategic Growth Committee
Komiti Rautaki Whakatupu
OPEN MINUTES

Minutes of a meeting of the Strategic Growth Committee held in Council Chamber, Municipal Building, Garden Place, Hamilton on Tuesday 30 March 2021 at 9.31am.

PRESENT

Chairperson	Cr D Macpherson
Heamana	
Deputy Chairperson	Cr R Hamilton
Heamana Tuarua	
Members	Mayor P Southgate
	Cr M Bunting (via Audio Visual link)
	Cr M Forsyth (via Audio Visual link)
	Cr M Gallagher
	Cr K Naidoo-Rauf (via Audio Visual link)
	Cr A O'Leary
	Cr R Pascoe
	Cr S Thomson (via Audio Visual link)
	Cr M van Oosten
	Cr E Wilson
	Maangai Maaori J Whetu
	Maangai Maaori O Te Ua (via Audio Visual link)
In Attendance	Jen Baird – General Manager City Growth
	Blair Bowcott – Executive Director Special Projects
	Chris Allen – General Manager Development
	Amy Trigg – Senior Policy Analyst
	Karen Saunders – Growth Programme Manager
	Robyn Denton – Operations Team Leader
	Jackie Colliar – Strategic Manager - Infrastructure
	Peter Winder – Director – McGredy Winder & Co.
Governance Team	Amy Viggers – Governance Team Leader
	Carmen Fortin and Tyler Gaukrodger – Governance Advisors

1. Apologies – *Tono aroha*

Resolved: (Cr Macpherson/Cr Bunting)

That apologies for absence from Deputy Mayor Taylor, and for partial attendance from Mayor Southgate (Council Business) and Cr van Oosten (Council Business) are accepted.

2. Confirmation of Agenda – *Whakatau raarangi take*
Resolved: (Cr Macpherson/Cr Hamilton)

That the agenda is confirmed noting the following:

a) Late item 6 (Chair's Report (Declaration of Conflict of Interest)) is accepted. This was circulated as a late item to enable staff the time needed to address the resolution from the last committee meeting.
b) Late item 11 (Hamilton-Waikato Metro Waste Water Detailed Business Case Project Update) is accepted. This was circulated as a late item to enable staff time to incorporate points raised by members on the matter. It is to be taken after item 6 to accommodate Guest Speaker availability.
c) Late item 12 (Hamilton Urban Growth Strategy Review Scope) is accepted. This has been circulated as a late item to enable staff the time needed to address the resolution from the last committee meeting.

3. Declarations of Interest – *Tauaakii whaipaanga*
No members of the Council declared a Conflict of Interest.

4. Public Forum – *Aatea koorero*

Helena Tuteao, **Gerri Pomeroy** and **Joy Ho** (Disabled Persons Assembly New Zealand) spoke to item 8 (Draft Housing Strategy and Action Plan) in support of the strategy, noting the pillars of wellbeing and encouraging housing accessibility for disabled people.

5. Confirmation of the Strategic Growth Committee Open Minutes of 18 February 2021
Resolved: (Cr Macpherson/Cr Hamilton)

That the Strategic Growth Committee confirm the Open Minutes of the Strategic Growth Committee Meeting held on 18 February 2021 as a true and correct record.

6. Chair's Report

The Chair spoke to the report, noting the urban growth strategy objectives, growth locations, the Te Huia service and the Rotokauri development. Cr Wilson spoke to the Te Huia project. The Chair and staff responded to questions from Members concerning collaboration with other Councils, commuters into Hamilton City from outside the city boundary, developing a strategic land agreement with Waipa District Council, Te Huia service goals, timetable,service quality, patronage, and collaboration with Central Government.

Staff Action: *Staff undertook to provide an update on the Te Huia train service project to a future Infrastructure Operations Committee meeting.*

Resolved: (Cr Macpherson/Cr Gallagher)

That the Strategic Growth Committee:

a) receives the report; and

b) requests staff organise workshops with Elected Members and management representative of HCC, WDC, WRC and NZTA to consider the Cambridge-Hamilton corridor transport needs and report back to the 29 July 2021 Strategic Growth.

Item 6 (Chair's Report) was adjourned following the above vote and Item 11 (Hamilton-Waikato Metro Waste Water Detailed Business Case Project Update) was taken to accommodate availability.

11. Hamilton-Waikato Metro Waste Water Detailed Business Case Project Update

The Executive Director Special Projects, Strategic Manager Infrastructure and Peter Winder (McGredy Winder & Co) spoke of the impact to the Waikato river of each of the proposed options and the scope and scale of growth. They responded to questions from Members concerning land acquisition, service to the Waikato Airport, three waters reform, quality of facilities ensuring compliance with increasing water quality requirements, the detailed business case process, changes to the preferred option, direction of Waipa District Council, southern plant options and collaboration, affordability of options, long term solutions, timeline of reports, visibility with committee Members, resource consenting, and expansion of current plants.

Motion: (Cr Macpherson/Cr Hamilton)

That the Strategic Growth Committee:

a) receives the report;

b) notes **Option 4A (Five Plant Option)** as the preferred staff-recommended wastewater servicing option to take forward for refinement, and to inform completion of the Southern Metro Wastewater Detailed Business Case;

c) notes that the full Southern Metro Wastewater Detailed Business Case will be presented to the 29 July 2021 Strategic Growth Committee meeting for endorsement.

d) notes that successful implementation of a **Refined Option 4A** (as outlined in paragraph 68 of the staff report) requires collaborative boundaryless planning and partnership;

e) notes that successful implementation of a **Refined Option 4A** requires financial contribution and multi-partner co-ordination to complete land acquisition, designation and consenting processes for a new southern plant over the next three years in addition to the significant investment needed at the Cambridge and Pukete plants;

f) requests the Hamilton City Council Governance Group members to indicate that any support for **Option 4A** to take forward for refinement and completion of the Southern Metro Wastewater Business Case, is subject to the Waipa District and Waikato District commitment to invest in securing land and discharge consents for the new southern plant;

g) requests staff include in the Hamilton City Council submissions on the Waipa District and Waikato District Council Long term Plans a request to include necessary budgetary provision to support an equitable contribution to future-proof the delivery of a new southern plant;

h) notes that further investigation will be undertaken as part of the Northern Detailed Business Case to consider the servicing solution for the Northern Metro Area communities; and

i) notes that further investigation will be undertaken as part of the Southern Metro Wastewater Detailed Business to consider wastewater servicing solutions for Southern Metro Area communities and areas, including those immediately adjacent to the current Hamilton City boundary.

Amendment: (Cr Wilson/Cr Gallagher)

That the Strategic Growth Committee:

a) receives the report;

b) notes **Option 4A (Five Plant Option)** as the preferred staff-recommended wastewater servicing option to take forward for refinement, and to inform completion of the Southern Metro Wastewater Detailed Business Case;

c) notes that the full Southern Metro Wastewater Detailed Business Case will be presented to the 29 July 2021 Strategic Growth Committee meeting for endorsement.

d) notes that successful implementation of a **Refined Option 4A** (as outlined in paragraph 68 of the staff report) requires collaborative boundaryless planning and partnership;

e) notes that successful implementation of a **Refined Option 4A** requires financial contribution

and multi-partner co-ordination to complete land acquisition, designation and consenting processes for a new southern plant over the next three years in addition to the significant investment needed at the Cambridge and Pukete plants;

f) requests the Hamilton City Council Governance Group members to indicate that any support for **Option 2A** to take forward for refinement and completion of the Southern Metro Wastewater Business Case, is subject to the Waipa District and Waikato District commitment to invest in securing land and discharge consents for the new southern plant;

g) requests staff include in the Hamilton City Council submissions on the Waipa District and Waikato District Council Long term Plans a request to include necessary budgetary provision to support an equitable contribution to future-proof the delivery of a new southern plant;

h) notes that further investigation will be undertaken as part of the Northern Detailed Business Case to consider the servicing solution for the Northern Metro Area communities;

i) notes that further investigation will be undertaken as part of the Southern Metro Wastewater Detailed Business to consider wastewater servicing solutions for Southern Metro Area communities and areas, including those immediately adjacent to the current Hamilton City boundary; and

j) requests that the CE prepares a submission to the Hamilton City Council 2021-31 Long Term Plan to reflect the support for Option 2A.

The Amendment was put.

Those for the Amendment:	Councillors Wilson, Gallagher, Forsyth and Maangai Whetu.
Those against the Amendment:	Councillors Macpherson, Bunting, Hamilton, Pascoe, O'Leary, Thomson, Naidoo-Rauf and Maangai Te Ua.

The Amendment was declared LOST.

The Motion was then put and declared CARRIED.

Resolved: (Cr Macpherson/Cr Hamilton)

That the Strategic Growth Committee:

a) receives the report;

b) notes **Option 4A (Five Plant Option)** as the preferred staff-recommended wastewater servicing option to take forward for refinement, and to inform completion of the Southern Metro Wastewater Detailed Business Case;

c) notes that the full Southern Metro Wastewater Detailed Business Case will be presented to the 29 July 2021 Strategic Growth Committee meeting for endorsement.

d) notes that successful implementation of a **Refined Option 4A** (as outlined in paragraph 68 of the staff report) requires collaborative boundaryless planning and partnership;

e) notes that successful implementation of a **Refined Option 4A** requires financial contribution and multi-partner co-ordination to complete land acquisition, designation and consenting processes for a new southern plant over the next three years in addition to the significant investment needed at the Cambridge and Pukete plants;

f) requests the Hamilton City Council Governance Group members to indicate that any support for **Option 4A** to take forward for refinement and completion of the Southern Metro Wastewater Business Case, is subject to the Waipa District and Waikato District commitment to invest in securing land and discharge consents for the new southern plant;

g) requests staff include in the Hamilton City Council submissions on the Waipa District and

Waikato District Council Long term Plans a request to include necessary budgetary provision to support an equitable contribution to future-proof the delivery of a new southern plant;

h) notes that further investigation will be undertaken as part of the Northern Detailed Business Case to consider the servicing solution for the Northern Metro Area communities; and

i) notes that further investigation will be undertaken as part of the Southern Metro Wastewater Detailed Business to consider wastewater servicing solutions for Southern Metro Area communities and areas, including those immediately adjacent to the current Hamilton City boundary.

Cr Wilson dissenting.

Cr van Oosten left the meeting (11:00am) during the above item. She was not present when the matter was voted on.

The meeting was adjourned from 11.01am to 11.17am during the above item.

Mayor Southgate left the meeting during the above adjournment. She was not present when the matter was voted on.

6. Chair's Report - Continued

The Chair noted a minor alteration to the motion and why the late circulation was allowed. The Governance Team Leader outlined the reason for the report being circulated late. The Chair and staff responded to questions from Members concerning legal advice and public perception of the conflict.

Resolved: (Cr Macpherson/Cr Bunting)

That the Strategic Growth Committee:

a) receives the memoranda titled 'Declaration of Conflict of Interest' from Mr Bowcott and Mr Allen to the CE, Mayor and Chair of the Strategic Growth Committee, dated 24 March 2021 into the formal record of this meeting of the committee, and are formally acknowledged by the members of this committee; and

b) notes that Mr Bowcott and Mr Allen may continue to participate in Council's review of its Urban Growth Strategy on the basis that they and the Chief Executive keep the potential conflicts under constant review and report back to the committee if the circumstances relating to the potential conflicts evolve as the review of the Urban Growth Strategy progresses.

Mayor Southgate re-joined the meeting (12:09pm) during the above item. She was present when the matter was voted on.

7. Approval of Hamilton City Council's Draft 1 Submission to the Draft Waikato Regional Land Transport Plan 2021-2051

The Operations Team Leader took the report as read, noting the change to the Draft submission. She responded to questions from Members concerning draft submission changes and climate change considerations.

Resolved: (Cr Forsyth/Cr Macpherson)

That the Strategic Growth Committee:

a) receives the report;

b) approves HCCs **Draft 2** submission (attached to these minutes as **Appendix 1**) to the Draft

Waikato Regional Land Transport Plan 2021-2051, subject to minor editorial changes;

c) notes the approved submission will be sent to the Waikato Regional Council by 31 March 2021;

d) notes that HCC representatives will request to speak in support of the approved submission at the Waikato Regional Transport Committee hearings scheduled for 16 and 19 May 2021; and

e) notes that the approved submission will be uploaded to the Hamilton City Council's website.

8. Draft Housing Strategy and Action Plan

The Senior Policy Analyst thanked Disabled Persons Assembly New Zealand for their help in the development of the strategy. She introduced the report, noting collaboration with external parties. Staff responded to questions from Members concerning confirmation of the plan, collaboration with Kainga Ora, changes to zoning, affordable housing, frequency of the strategy review, and collaboration with local communities.

Resolved: (Cr Hamilton/Cr Gallagher)

That the Strategic Growth Committee:

a) receives the report; and

b) approves the Draft Housing Strategy and the Draft Action Plan.

Mayor Southgate retired from the meeting (12:35pm) during the above item. She was not present when the item was voted on.

The meeting was adjourned from 12:57pm to 1:52pm

12. Hamilton Urban Growth Strategy Review - Scope approval

The Growth Programme Manager introduced the report, noting the review process and scope, long term goals, and the formation of a working group. Staff confirmed that the working group discussion would include potential growth cell areas. Staff responded to questions from Members concerning out of sequence growth strategies, the District Plan, potential growth cells, cost and timeframe of the original strategy development, timeline of the new strategy development, duplication of cost between the Urban Growth Strategy and District Plan, estimate of budget and frequency of working group meetings.

Resolved: (Cr Macpherson/Cr Hamilton)

That the Strategic Growth Committee:

a) approves the scope of the Hamilton Urban Growth Strategy review, as set out in paragraphs 15, 16 and 17 of the staff report;

b) approves the formation of a working group for the purposes of the Hamilton Urban Growth Strategy Review made up of Councillors Hamilton, Macpherson, Pascoe, Gallagher, Thomson, van Oosten, Maangai Maaori Whetu and staff;

c) notes that staff will bring back project budget information to the Strategic Growth Committee on 20 May 2021; and

d) notes that staff will provide regular progress updates to the Strategic Growth Committee.

Cr van Oosten re-joined the meeting (2:19pm) during the above item. She was present when the matter was voted on.

9. Open Information only reports

The Chair took the report as read.

Resolved: (Cr Macpherson/Cr Hamilton)

That the Strategic Growth Committee receives the following information only reports:

a) General Manager's Report;
b) Future Proof Update Report;
c) Peacocke Programme Update;
d) Ruakura Update; and
e) Development Contributions Remission Quarter 2 2021.

10. Resolution to Exclude the Public

Resolved: (Cr Macpherson/Cr Hamilton)

Section 48, Local Government Official Information and Meetings Act 1987

The following motion is submitted for consideration:

That the public be excluded from the following parts of the proceedings of this meeting, namely consideration of the public excluded agenda.

The general subject of each matter to be considered while the public is excluded, the reason for passing this resolution in relation to each matter, and the specific grounds under section 48(1) of the Local Government Official Information and Meetings Act 1987 for the passing of this resolution follows.

General subject of each matter to be considered	Reasons for passing this resolution in relation to each matter	Ground(s) under section 48(1) for the passing of this resolution
C1. Confirmation of the Strategic Growth Committee Public Excluded Minutes of 18 February 2021 C2. Newcastle Strategic Water Supply Upgrade - Contract Award C3. Public Excluded Information only reports C1. Future Proof Implementation Committee - Public Excluded Minutes	) Good reason to withhold) information exists under) Section 7 Local Government) Official Information and) Meetings Act 1987)	Section 48(1)(a)

This resolution is made in reliance on section 48(1)(a) of the Local Government Official Information and Meetings Act 1987 and the particular interest or interests protected by Section 6 or Section 7 of that Act which would be prejudiced by the holding of the whole or relevant part of the proceedings of the meeting in public, as follows:

Item C1.	to prevent the disclosure or use of official information for improper gain or improper advantage	Section 7 (2) (j)
Item C2.	to enable Council to carry out commercial	Section 7 (2) (h)

	activities without disadvantage to enable Council to carry out negotiations	Section 7 (2) (i)
Item C3.	to prevent the disclosure or use of official information for improper gain or improper advantage	Section 7 (2) (j)
Item C1.	to enable Council to carry out negotiations	Section 7 (2) (i)

The meeting went into a public excluded session at 2:34pm.

The meeting was declared closed at 2:40pm.

Appendix 1:

Hamilton City Council
Te kaunihera o Kirikiriroa

Private Bag 3010
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New Zealand

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DRAFT 2

Submission by

Hamilton City Council

DRAFT WAIKATO REGIONAL LAND TRANSPORT PLAN 2021-2051

30 March 2021

1.0 SUMMARY OF HCC'S KEY POINTS AND REQUESTS

1.1 HCC believes that a transformational response to achieving mode shift is required, particularly in order to be able to contribute meaningfully to the governments call to action associated with their declaration of a climate emergency on 2 December 2020, and that the Regional Land Transport Plan is not aligned with a transformational shift.

1.2 HCC seeks the support of Waikato Regional Transport Committee to jointly advocate to government for better alignment of GPS 2021 with the increased importance of climate change and also in regard to the opportunity that exists right now for transformational investment in mode shift with the assistance of stimulus funding.

1.3 HCC seeks elevation in the priority of mode shift programmes and projects in the Access and Mobility category that are likely to have the biggest impact on climate change.

1.4 In support of the importance of mode shift in the Hamilton metro area to achieve any Waikato Regional targets, it is noted that within the City boundary 62% of carbon emissions are from transport compared with 20% across New Zealand, and that Hamilton contributes 32% to the carbon emissions from transport in the Waikato.

1.5 To be consistent with the RTC submissions to Waka Kotahi, HCC requests the inclusion of a paragraph in Section 6 - Funding advocating for additional Crown funding relating to transformational mode shift to supplement any normal NLTP partnership funding between HCC and Waka Kotahi.

1.6 HCC supports the RLTP's focus on implementing the land use and transport pattern identified through the Hamilton-Waikato Metro Spatial Plan, including the priority development areas and investment in connecting multi modal and rapid transit. It is recognised that these areas will require significant funding in the transport network to enable them to deliver on their potential and seeks that the RLTP explicitly recognises this (regardless of funding source).

1.7 HCC note that HCC officers will continue working with WRC on updates and corrections to the projects included in the draft RLTP 2021-2051 to align with Hamilton City Council's emerging 2021-31 Long Term Plan.

2.0 INTRODUCTION

2.1 Hamilton City Council (HCC) considers that the Regional Land Transport Plan (the Plan) doesn't reflect the increasing importance that government is placing on climate change and the need for transformational mode shift. This is in part a matter of timing, with the review of the Plan commencing prior to the declaration by government of a climate emergency in December 2020.

2.2 HCC has been consistent in its views on the need for greater action on climate change through its various submissions, including:

- On 17 February 2020 to Arataki - Waka Kotahi NZ Transport Agency 2021-2031 10 Year view of the Land transport System - refer here
- On 15 May 2020 to the Draft Government Policy Statement on Land Transport 2021/22-2030/31 - refer here
- On 8 December 2020 - Waka Kothi Investment Proposal 2021-31 - refer here

2.3 In its submission to the Wakai Kotahi Investment Proposal, HCC advised that it believed a transformational response to achieving mode shift is required, particularly in order to be able to contribute meaningfully to the governments call to action associated with their declaration of a climate emergency on 2 December 2020, and that their Investment Proposal was not aligned with a transformational shift.

2.4 HCC requested the support of Waka Kotahi to jointly advocate to government for better alignment of GPS 2021 with the increased importance of climate change and also in regard to the opportunity that exists right now for transformational investment in mode shift with the assistance of stimulus funding.

2.5 Attached is a letter (**Appendix 1**) that the Mayor of Hamilton sent to key Ministers on 22 December 2020 advising of the risk of an opportunity lost for mode shift to walking and cycling.

2.6 On 2 March 2021, HCC adopted a set of environment principles to guide project planning and decisions and to make sure possible environmental impacts are considered upfront.

2.7 The principles are directly related to improving residents' wellbeing, which is now a key purpose of local government.

2.8 The six principles are:

- Restoring and protecting the health and wellbeing of our waterways.
- Protecting and enhancing our natural taonga, whenua and biodiversity.
- Embracing the sustainable use of resources.
- Promoting a circular economy.
- Transitioning to a low carbon future.
- Build our resilience to climate change.

2.9 An Environment Policy will now be developed based on the principles. Hamiltonians will be invited to provide input into the policy later this year.

2.10 Given the context above, HCC offers the following observations and requests for change to the Plan:

- **Observation** - one of the biggest contributions to addressing climate change effects will be mode shift in greater Hamilton. The GPS includes climate change as one of the four GPS

priorities, yet the RLTP has climate change as an underpinning objective, which carries no weighting for activity prioritisation.

Page 13 introduces a key feature of Access Hamilton, which is the intervention hierarchy. The second highest priority approach following Integrated planning is managing demand, which includes mode shift. This priority is not reflected in the RLTP weightings.

- **Request** - elevate the priority of mode shift programmes and projects in the Access and Mobility category that are likely to have the biggest impact on climate change. These programmes and projects are anchored in the Access and Mobility objective, which has the lowest weighting (25% - assigned prior to the declared climate change emergency) of the three main objectives (the others being Strategic Corridors and Economic Development and Road Safety) noting that the underpinning objective of climate change has not been given a weighting for prioritisation purposes.

  In particular, HCC would like to see elevation of projects, which are part of the transformational 20 Minute City proposal including Eastern Pathways (current priority #56/78), Biking and Micro Mobility (currently #58/70) and the Central City (Ferrybank) Walking and Cycling Bridge (#65/70). It is noted that further progress on the Business Cases for these projects has provided greater clarity on the Investment Profiles for these projects which will also support their elevation in the Significant Transport Activities rankings.

- **Observation** - HCC in its submission to the draft GPS expressed concern in regard to the amount of funding allocated to Walking and Cycling Improvements and expressed a view that it did not align with the strategic direction of the GPS. In particular, HCC indicated that without a step change in the way the transport budget was allocated, cities such as Hamilton would be unlikely to achieve significant mode shift.

  Both the Regional Connections Committee and the Regional Land Transport Committee have made submissions to Waka Kotahi Investment Proposal pointing out that while a stated priority is to improve public transport outcomes, the funding to support this isn't provided in the GPS.

  The Regional Transport Committee, in its submission to the Waka Kotahi Investment Proposal, supported the HCC request to *"advocate to government for better alignment of GPS 2021 with the increased importance of climate change and for transformational investment in mode shift with the assistance of stimulus funding"*.

- **Request** - to be consistent with the RTC submissions to Waka Kotahi, HCC requests the inclusion of a paragraph in Section 6 - Funding advocating for additional Crown funding relating to transformational mode shift to supplement any normal NLTP partnership funding between HCC and Waka Kotahi.

  HCC understands that while these mode shift projects may have low priority in the Regional Significant Transport Activity table (Appendix 7), they may be high in the list of projects associated with the Walking and Cycling Activity or Public Transport Infrastructure funding class for the Waikato Region. However, the low regional ranking assigned, driven by the 25% weighting, is sending the wrong message from the Waikato to national decision-makers about the importance we place on achieving mode shift.

  Hamilton City Arterial Corridors play a strategically important function as part of the wider strategic regional network (page 24 summary). Objective 2 for Strategic Corridors (page 52) indicates a planned transport response that supports liveable urban areas and future growth areas with a priority being to provide multi-modal transport solutions to support housing and growth in the Hamilton-Waikato metropolitan area.

  New transport Corridors include multi-modal solutions in scope, but the importance of

mode shift is not recognised for the role they play in protecting existing strategic corridors and allowing them to function in the existing built environment.

HCC is progressing two significant programmes to address this which are Eastern Pathways and Biking and Micro-mobility. HCC requests that these projects be treated as projects associated with strategic corridors and that they be listed as Priorities for Objective 2 under Strategic Corridors and be prioritised accordingly. This request is reinforced under the case for investment (page 55), which states that for the Greater Hamilton Strategic Corridors, investment in multi-modal transport outcomes is required to support the future urban form envisaged in the Hamilton-Waikato Metro Spatial Plan.

2.11 It is recognised that the RLTP 2021 is an amalgamation of the programmes that have been developed by each of the Road Controlling Authorities within the Waikato Region to reflect their community needs, alongside the Public Transport Services provided by the Waikato Regional Council.

2.12 HCC also support the approach taken in the development of the RLTP 2021, noting that it also supports important projects outside the Waikato, for example supporting rail improvements in Auckland to make it faster and easier to move freight and passengers by train to and from Auckland.

3.0 Draft RLTP 2021 Executive Summary

3.1 The 2021 RLTP Executive Summary is a useful 'at a glance' reference document.

3.2 HCC requests the following minor changes to the Programme Implementation column (Page 7):

- Economic Development and Strategic Corridors. Recommend removing the Low-Cost Low Risk packages from this priority line and including them under 'Safety' and 'Access and Mobility' priorities instead as these are where the key benefits from the Low-Cost Low Risk programmes will be delivered.
- Underpinning Objectives - Programme Implementation - Transport Modelling. Note that these activities will include the development of a Hamilton Traffic Model as part of the rebuild of the Waikato Regional Transport Model.

3.3 HCC also notes that on Map 1 10 Year priorities for the Waikato Region - the Hamilton-Waikato Metro Spatial Area should include improve safety outcomes in the list.

4.0 Section 1 - Introducing the Draft RLTP 2021

4.1 HCC is concerned that the Key Achievements table (commencing on page 12 and continued onto Page 13) undersells the significance of the transport investment in Peacock by referring to the work as 'enabling work'. The Peacocke transport project is the largest project that HCC has undertaken and probably the largest project undertaken by a local authority outside Auckland, with a substantive local share investment. It is also a key first step in the Southern Links programme.

4.2 HCC support and agree with the list of Strategic Regional Planning drivers (page 16), and in particular:

- Hamilton to Auckland (H2A) Corridor Plan.
- Hamilton-Waikato Metro Spatial Plan.
- Hamilton-Waikato Mode Shift Plan.

4.3 Under the heading Hamilton to Auckland (H2A) Corridor plan on page 16, references are made to the Plan's vision to support sustainable growth and to increase connectivity between

Hamilton and Auckland. It should also pick up the priority development areas, particularly Ruakura where the Eastern Transport Corridor will be significant transport infrastructure required to unlock the full potential of this high priority development area.

4.4 On page 17, Table 1 GPS - HCC is not sure where the key areas for focus for regions is sourced from, but HCC requests that addressing climate change (both looking at reducing effects of climate change and addressing results of climate change through resilience funding) be added.

4.5 The vision for land transport in the Waikato Region (page 18) of *"an integrated, safe and resilient transport system that delivers on the well-beings of our diverse Waikato communities"* is supported by HCC.

4.6 HCC notes that the vision and objectives for the land transport system have been refined from the 2018 RLTP.

4.7 HCC support the priority transport problems in the RLTP 2021 (page 18) which propose to be addressed through a range of implementation measures:

- Strategic corridors and Economic development - ensuring our strategic inter and intra-regional corridors are fit for purpose and are efficient, particularly in the context of growth pressures in the Hamilton-Waikato metro spatial area, the Hamilton to Auckland Corridor and in the wider upper North Island.
- Road Safety - tackling our complex road safety problem to ensure we have a safe and accessible transport system where no-one is killed or seriously injured on our region's roads.
- Access and Mobility - providing better transport options for our people, in our urban and rural communities.

4.8 HCC is concerned that the weightings of the Strategic Objectives remained unchanged from the 2018 RLTP, especially in light of the climate emergency that was announced in December 2020 and believe that the underpinning objective for climate change needed to be elevated to a priority transport problem and have a weighting order to effect the change that is needed moving forward.

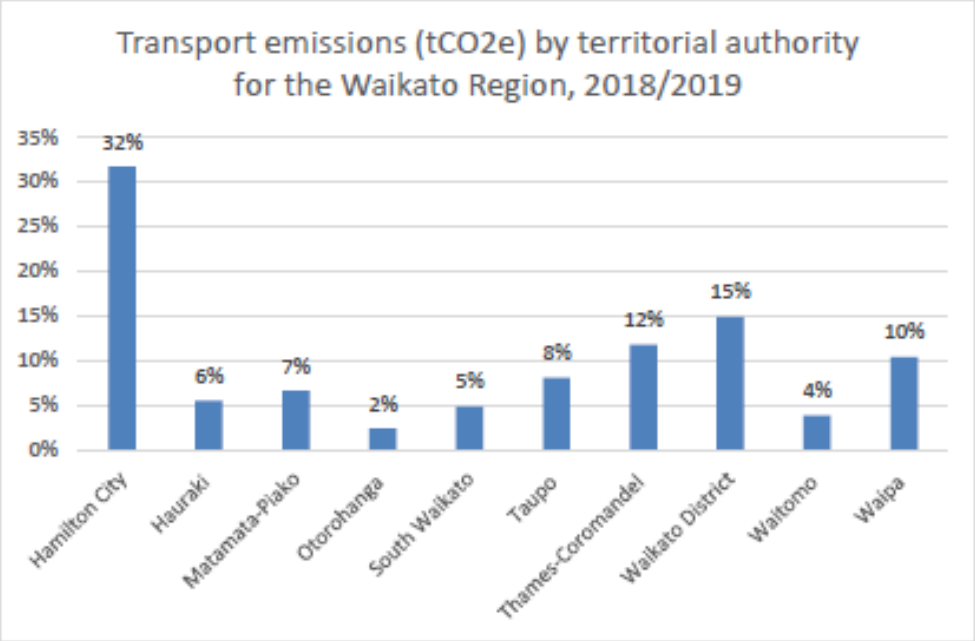
4.9 HCC suggests that the existing method for prioritising significant transport activities (Appendix 5) provides a mechanism to recognise the elevated importance of Climate Change through the "Fourth Order - Regional Preference/RTC Discretion" step.

4.10 It is recognised that the timeframes for the delivery of the draft RLTP 2021 have not allowed more in-depth coverage of climate change, but HCC request that the RTC continue to monitor this rapidly changing focus area and to incorporate this into the development of the 2024 RLTP, which will require a more in-depth review as part of the six-yearly review process set out in the LTMA.

4.11 HCC notes that In Figure 6 page 19 the headline target for Access and Mobility will be reviewed as part of the development of the Regional Public Transport Plan.

4.12 HCC supports the inclusion of a headline target for climate change in Figure 6 (page 19) but would note that the target minimum reduction of 25% by 2030 from 2018/19 levels seems low compared with targets being set by other RLTPs throughout the country and requests that an evidence-based emissions reduction target be established. This headline target should reflect the emissions reduction required by 2030 in line with the global 1.5°C goal.

4.13 Hamilton will be key to achieving any emissions reduction target for transport, given that the urban environment presents the greatest opportunity for mode shift. Hamilton contributes 32% to the carbon emissions from transport in the Waikato Region, as shown in the graph below.



5.0 SECTION 3 TRANSPORT ISSUES FOR THE WAIKATO REGION IN THE NEXT 3-10 YEARS

5.1 Page 37- Rail Corridor issues - HCC would like to add:

5.2 *"congestion and constraints in the Hamilton-Waikato Metro Spatial Plan area including lack of electrification and double tracking".*

5.3 On page 37 there is a statement that says the region needs to ensure that land use decisions do not compromise the important role our strategic road networks play for freight. HCC would like an addition to this that says:

5.4 *"... but ensuring that the transport corridors enable the land use decisions made by the region and its stakeholders".*

5.5 On page 46 there is a pie chart that indicates 20% of New Zealand's carbon emissions are from Transport. Cutting transport emissions is clearly one of the more significant contributions that the Waikato can make.

5.6 HCC, in collaboration with WRC, has completed an assessment on a city boundary basis and determined that 62% of carbon emissions are from transport within the boundary of Hamilton. We have a significantly higher transport contribution which is mainly due to diesel emissions 52% and then petrol 43%. The pie chart below illustrates the percent of total gross emissions by sub-sector for Hamilton City.

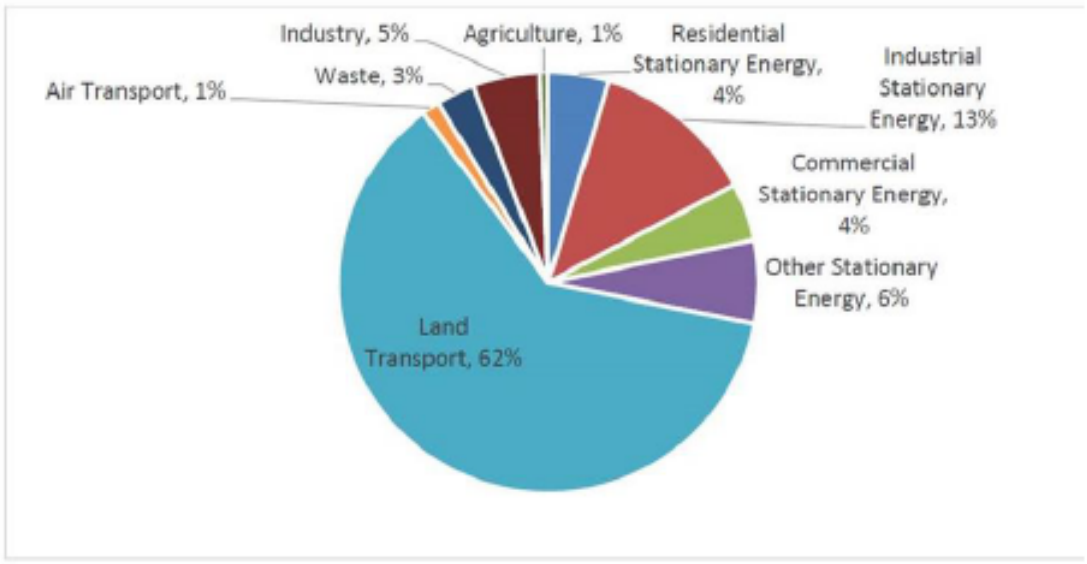


Figure 2. GPC BASIC Community GHG Emissions Inventory for Hamilton City, 2018/19 Percent of Total Gross Emissions by Sub-Sector

5.7 In the HCC submission to Arataki, HCC requested recognition of Hamilton as a focus area for transforming urban mobility under the section on 'Tackling Climate Change', given that the Arataki summary identified the Waikato as having the second highest carbon emission profile in the country, with NIWA reports identifying Hamilton's transport infrastructure as a significant contributor.

5.8 HCC notes that mode shift is an appropriate response to reducing emissions and the associated impact on climate change. HCC supports any initiatives that increase mode shift by providing better travel options and through targeted improvements to public transport access and priority on the network, including the state highway network.

6.0 SECTION 4 - REGIONAL POLICY FRAMEWORK

6.1 HCC is in support of the Regional Policy Framework and the summary of the RLTP 10 Year Priorities.

6.2 Priorities for Objective 1 (page 52) - HCC requests that the Ruakura Eastern Transport Corridor and the Northern River Crossing be added to the description of Strategic corridors around the greater Hamilton Area.

6.3 Policies for Objective 2 (page 53) - HCC requests that P10 be amended slightly to read *"ensure regionally significant multi-modal corridors are protected and developed to serve the future development and transport needs of the region"*.

6.4 Key implementation measure M5 could be expanded to specifically reference completion of the Ruakura Eastern Transport Corridor.

6.5 HCC requests that Key Implementation measure M26 (page 60) be deleted as the actions included in this measure are already covered in M 25 (page 60) and M41 (page 62).

6.6 HCC, in its submission to Waka Kotahi, also requested the development of a national plan setting out detailed local government transport targets that will need to be achieved to meet climate change goals set by government. HCC is pleased to see Implementation Measure M42 (page 62) which aligns with this request.

7.0 SECTION 5 - REGIONAL PROGRAMME OF TRANSPORT ACTIVITIES

7.1 Page 69, Figure 20 and 21 pie charts are misleading, with Figure 21 based on number of activities, without regard to cost. An indication of the split after the high state highway and local road maintenance would be useful.

7.2 On page 70, Map 4 Contribution of Regionally Significant Activities to Objectives - the following changes are required to the Hamilton City insert to more accurately reflect the programme of activities:

- Delete - Hamilton Ring Road 4 laning Hukanui to Gordonton - this is unfunded in the Hamilton City Council Long Term Plan.
- Add - Hamilton Biking and Micro-mobility Programme (contributing to Access and Mobility).
- Add - Road Safety Improvements (contributing to safety).
- Add - Ruakura Eastern Transport Corridor (contributing to economic development).
- Change - Hamilton Ring Road Wairere/Cobham interchange to 'black' to indicate it is an existing commitment.
- Change - SH1 Hamilton to Cambridge Cycle connection to 'black' to indicate it is an existing commitment.

7.3 Table 4 Page 71 - HCC requests the following changes:

- Strategic Corridors - Hamilton Growth. Ruakura Eastern Transport corridor should be added along with Biking and Micro-mobility strategic corridors and Wairere Drive 4 laning, - Hukanui to Gordonton should be deleted.
- Climate Change - add Eastern Pathways and Biking and Micro-mobility.

8.0 SECTION 6 FUNDING

8.1 Table 6 Other Sources of Revenue (page 77) - HCC considers that developer contributions are part of local share funding. Supplementary funding may arise through financial contributions or mitigation works.

8.2 Provincial Growth Fund - HCC request that the description of 'Ruakura Spine Road' be changed to 'Ruakura Spine Road (Stage 1 connection to Expressway)'.

8.3 HCC note that Figure 22 - 10 Year Forecast activity class will need to be updated following updates of projects and funding included in Appendix 6.

9.0 APPENDIX 6 AND 7

9.1 HCC note that there have been a number of changes to the Hamilton City programmes and projects included in the draft RLTP 2021 in both Appendix 6 - Transport Activity Class tables and Appendix 7 - Significant Transport Activities table.

9.2 While some changes are specifically included within this submission, it is noted that HCC officers will continue working with WRC staff on updates and corrections to the projects included in the draft RLTP 2021 to align with Hamilton City Council's emerging 2021-31 Long Term Plan.

9.3 HCC note that the Ruakura Eastern Transport Corridor is included in the Significant Transport Activities table (Appendix 7, page 126), but not included in Table 5 New and Improved Infrastructure for Local Roads.

9.4 HCC requests that Appendix 7 be reformatted to reflect projects with Activity Class tables

(similar to Appendix 6) so that there is greater visibility of the programmes/projects within each of the Activity areas and there is better reflection of the relative priority of each of the programmes/projects in the Significant Activities.

10.0 FURTHER INFORMATION AND HEARINGS

10.1 Should the Waikato Regional Council require clarification of Hamilton City Council's submission, or additional information, please contact **Robyn Denton** (Network Operations and Use Team Leader, City Transportation) on 07 838 6910 or 021 971 127, email robyn.denton@hcc.govt.nz in the first instance.

10.2 Hamilton City Council would like to speak in support of this submission at the hearings scheduled for Friday 16 April and Monday 19 April 2021.

Yours faithfully

Richard Briggs
CHIEF EXECUTIVE

Item 9

Council Report

Committee: Strategic Growth Committee **Date:** 20 May 2021

Author: Tyler Gaukrodger **Authoriser:** Becca Brooke

Position: Governance Advisor **Position:** Governance Manager

Report Name: Chair's Report

Report Status	*Open*

Recommendation - *Tuutohu*

That the Strategic Growth Committee:

a) receives the report;

b) requests the Chief Executive to report to the July meeting of the Strategic Growth Committee on the UNISA work plan for the Whangarei – Tauranga transport links project;

c) requests the Waikato Connections Committee via Hamilton City Council Elected Members to consider the Tauranga free school student bus project, and its applicability to Hamilton;

d) requests a staff report to the July meeting of the Strategic Growth Committee on the proposed new southern growth cell and the implications for Hamilton city; and

e) requests a staff report to the July meeting of the Strategic Growth Committee on the Housing Acceleration Fund with outline proposals for HCC's application to the fund.

Attachments - *Ngaa taapirihanga*

Attachment 1 - Chair's Report ***– To be circulated under separate cover.***

Council Report

Committee: Strategic Growth Committee **Date:** 20 May 2021

Author: Tilly Murcott **Authoriser:** Jen Baird

Position: Programme Manager **Position:** General Manager City Growth

Report Name: Ruakura and East Programme Update

Report Status	*Open*

Purpose – *Take*

To inform the Strategic Growth Committee on progress of the Ruakura and East Programme.

Staff Recommendation - *Tuutohu-aa-kaimahi*

2. That the Strategic Growth Committee receives the report.

Executive Summary - *Whakaraapopototanga matua*

3. This is the first update to the Strategic Growth Committee on the progress of the Ruakura and East programme, as at May 2021.

4. Staff are committed to making sure that people are at the heart of developing the Ruakura and East community, and are implementing a programme approach to make this happen. A programme approach allows staff to work in collaboration with key stakeholders, partners, and the community to deliver wellbeing outcomes.

5. The following is a summary of programme activity and updates.

   i. The next six months will bring all Ruakura and East projects under one programme umbrella to plan for, and deliver, community and wellbeing outcomes.

   ii. Ruakura is identified as a Priority Development Area (PDA) in the Hamilton Waikato Metropolitan Spatial Plan (HW-MSP). Ruakura is the focus of multiple Central Government and local government organisations within the Future Proof Partnership to determine what innovative tools and alternative planning processes can be utilised to see the HW-MSP vision for Ruakura come to fruition.

   iii. Staff recognise that the Ruakura and East area sits within the context of the broader Metro Spatial Area. Given the area straddles the current Waikato/Hamilton boundaries, integrated boundaryless land-use and strategic infrastructure planning will be key to achieving the programme vision and objectives. Key linkages and interactions between the programme area and activities in the broader Metro Spatial Area will be reported regularly.

   iv. As part of the Crown Infrastructure Partners (CIP) funding package, Tainui Group Holdings (TGH) are delivering works to connect the bulk water and wastewater infrastructure to the Ruakura Superhub site, with the Council identified as a co-investor for this infrastructure.

v. Council is managing a large infrastructure project which delivers the Ruakura Stage 1 key transport connections including;

a) The Ruakura Road West realignment connecting the Expressway Ruakura Interchange with the city network at Silverdale Road

b) Road 3 to access the Ruakura Inland Port west development

c) The realignment of Percival Road.

vi. Council is working in partnership with TGH and MBIE through the Provincial Development Unit, which is contributing $16.8M of funding.

vii. The project to urbanise and upgrade the existing Ruakura Road between Wairere Drive and Silverdale Road is well advanced. The contract for construction of the Ruakura Road Urban Upgrade has now been awarded, with works commencing on site in May 2021 and scheduled to be substantively complete by the end of 2021.

viii. The Mangaonua Gully Erosion Control Programme is a $4M project being jointly funded by Council and the Central Government's COVID-19 Response and Recovery Package as part of the Ruakura Superhub. Approximately 100,000 native plants will be used in the project, which is expected to begin mid-2021 and be complete mid-2023.

ix. TGH have signalled their intent to reconsider land use and are undertaking master planning work to be ready for engagement with Council and other stakeholders. It is expected that this master planning will be carried out in collaboration with Council and integrates with the future planning of infrastructure, including the Ruakura Eastern Transport Corridor and Council's multi modal aspirations.

x. Monthly meetings are held between Council and TGH. TGH has supplied an update on the Ruakura Superhub, refer paragraph 68-90 of this report.

xi. Staff will be meeting with Waka Kotahi as the completion of the Waikato Expressway nears (end of 2021).

xii. TGH hosted a Ruakura Superhub information session on 29 April 2021. TGH partnered with Council and other agencies to deliver a collaborative, community-focused event.

6. Having considered the Significance and Engagement Policy, staff have assessed that the matters in this report have low significance and that the recommendation complies with Council's legal requirements.

Background - *Koorero whaimaarama*

7. Staff are applying a place-based programme approach, like the Peacocke Programme, to the Ruakura and East growth cell (refer Ruakura and East Map **Attachment 1**).

8. Waikato-Tainui and TGH are key partners for the development of Ruakura and TGH's 490ha Superhub project, anchored by a 30ha inland port. The first 17ha stage of the port is in development and the entire project is expected to deliver up to 6,000-12,000 jobs once fully developed over the next four decades.

9. In 2020, Ruakura received funding to progress the development:

i. $16.8M grant for the first stage of the Eastern Transport Corridor, and two other connecting roads through the Provincial Growth Fund

ii. $40M shovel-ready funding (50% grant and 50% loan to TGH) awarded to TGH towards water infrastructure and road projects delivered by Ruakura by TGH and Council.

10. Council continues to work in partnership with TGH and Central Government to deliver the next stages of the Ruakura Growth area including delivery of critical transportation, bulk infrastructure and environmental protection works.

11. The programme approach commenced in early 2021, and staff are currently establishing the programme strategy and plan.

Ruakura and East Programme Vision and Objectives

12. Staff are currently working with key stakeholders and the community to develop a vision for the programme.

13. The Ruakura and East growth cell sits within the broader Metro Spatial Area. Given the geographic location of the programme areas, boundaryless land use and infrastructure planning will be key tenets to achieving the programme vision and objectives.

14. Integration of Hamilton City and Waikato District Council land use and infrastructure planning is occurring through the Future Proof Work Programmes and Metro Wastewater Projects. Key linkages and interactions between the programme area and activities in the broader Metro Area context will be reported regularly through the programme updates and/or the relevant strategic infrastructure project updates.

15. The Ruakura and East Programme includes delivering:

    i. innovative infrastructure finance and funding
    ii. strategic network infrastructure
    iii. community facilities and infrastructure
    iv. developer and consenting activities
    v. ecological pro tection and biodiversity enhancement
    vi. monitoring and reporting
    vii. commercial activities.

16. The Programme supports the delivery of the proposed 2021-31 Long Term Plan and the five priorities of Council, with the programme placing a particular emphasis on ‘shaping a city where our people thrive’.

Discussion – *Matapaki*

Planning/Land Use

17. Ruakura is one of Hamilton’s largest greenfield growth cells and contains the greatest diversity of land uses of any greenfield growth cell in Hamilton.

18. Ruakura is anchored by the Inland Port development, which is a nationally significant project that has the potential to substantially improve productivity and GDP at a national scale.

19. It is also home to Innovation Park, which is an important research and development facility to commercialise agri-business and related research through Waikato University and private business in the sub-region.

20. Supporting Ruakura is a range of industrial and logistics-zoned land that is needed to support the proposed Inland Port. To the north of growth cell, there is a substantial residentially zoned area called Greenhill Park, developed by Chedworth Holdings.

Ruakura 2 (R2)

21. The area of land immediately north of the Ruakura Growth Cell is referred to as Ruakura 2 (R2).

22. R2 is approximately 200ha in area and is currently under the jurisdiction of Waikato District Council. It has been identified as a future part of Hamilton City since a strategic agreement on land transfers between Waikato District Council and the Council was established in 2005.

23. The land is zoned rural under the Operative Waikato District Plan and special planning provisions apply to the entirety of R2 to preserve it for future urbanisation as part of the longer-term growth of Hamilton.

24. In 2020, the 2005 strategic agreement was renegotiated. The process of transferring R2 will be commenced by the Chief Executive of Hamilton City Council providing written notice to the Chief Executive of Waikato District Council of a transfer request, as opposed to the previous agreement where a specific date and triggers were needed to be met before the transfer could be executed. Any decision to issue a transfer request must be made considering the impacts of growth on Council, strategic infrastructure decisions affecting Council, and strategic land use considerations.

25. While currently outside the existing Ruakura area, it is important to include R2 as part of the Ruakura programme because of its status under the 2020 Strategic Agreement, its geographic proximity to Ruakura, and important strategic transport and 3 waters connections that can be extended from Ruakura into the R2 area. For example, there are benefits in exploring how the proposed Eastern Transport Corridor in Ruakura could be extended into R2 and provide for much greater levels of connectivity and possible public transport enhancements. Further business case work and other programme initiatives will look at these matters to identify planning and investment opportunities in both Ruakura and R2.

Ruakura Inland Port and Industrial Land

26. The southern and middle portions of Ruakura contain the Inland Port and supporting employment land.

27. The Inland Port and its surrounds were approved by a Board of Inquiry in 2014, and the Council issued land use consents for the Inland Port in 2015. Construction has commenced, and port operators and tenants have been secured by TGH.

28. The Inland Port requires additional infrastructure investment to see its full potential realised – in particular, this investment includes funding for the Eastern Transport Corridor.

Ruakura in the Hamilton-Waikato Metropolitan Spatial Plan (HW-MSP)

29. Ruakura is also identified as a Priority Development Area (PDA) and locality in the HW-MSP. It is an important node in the proposed rapid and frequent transport network contained in the HW-MSP.

30. The long-term transport solutions required to support Ruakura will be tested through the HW-MSP Programme Business Case currently being developed by the Future Proof partners.

31. TGH have signalled their intent to reconsider land use and are undertaking master planning work to be ready for engagement with Council and other stakeholders. It is expected that this master planning is carried out in collaboration with Council and integrates with the future planning of infrastructure, including the Ruakura Eastern Transport Corridor and Council's multi modal aspirations.

32. Agreement on future land and associated infrastructure servicing will be critical to enabling development east of the Waikato Expressway.

33. Ruakura is the focus of multiple Central Government and local government organisations within the Future Proof Partnership to determine what innovative tools and alternative planning processes can be utilised to see the HW-MSP vision for Ruakura come to fruition.

34. Progress updates on the Priority Development Area workstream will be reported back to the Strategic Growth Committee and Council throughout 2021.

Development activity and consenting

35. A map showing the location of development activity in Ruakura and East can be seen in **Attachment 2**.

Ruakura North – Residential Area

36. Greenhill Park, at the northern end of the Ruakura Growth Cell, is a medium density area that commenced development in 2015. The entirety of the Greenhill Park area is being developed by Chedworth Holdings and is enabled from both a planning and infrastructure perspective. The company has, from mid-2015 through to late 2020, obtained Land Development Plan (LDP) consents and subdivision consents for LDP Areas J, Q (north of Pardoa Boulevard), M, I, L, K and U (refer Ruakura Land Development Plan **Attachment 3**). Chedworth Holdings continues to bring medium density housing on line, and it is expected that additional consents for housing will be lodged in 2021. Currently 989 residential lots have been consented.

37. TGH is the owner of the Residential-zoned land shown as LDP V at the eastern end of Powells Road. Subdivision consent was granted in 2016 for 102 lots. The consent has not been given effect to and will lapse on 21 December 2021. TGH applied in March 2021 to extend the lapse date of this consent and this is currently being processed.

Innovation Park

Gallagher Hub Building and Parking (granted 22 November 2019)

38. A three-level building including 3589m^2 GFA of combined research and innovation tenancies, a conference space for up to 125 people and a café seating up to 45 people, is currently being constructed.

NZ Food Innovation Waikato Ltd - Spray Dryer (granted 20 December 2018)

39. An expansion of an existing spray dryer operation, with a second spray dryer being consented, has a GFA of 2800m^2.

40. Wider discussions with Innovation Park on an updated Concept Plan are continuing; however, there is no formal application at this stage.

Ruakura Industrial Area

41. TGH is the owner/developer of most of the industrial-zoned land in Ruakura (south of Powells Road). TGH, from early 2016 through to late 2020, obtained LDP consents and subdivision consents for LDP A and C.

42. A separate land use consent for the Freight Handling Activities and Freight Handling Infrastructure was granted in March 2016 for the Inland Port. Significant earthworks commenced this construction season to give effect to these consents.

43. A resource consent is likely to be sought this year for establishing a service station and family dining on a 1.4ha block within LDP C adjacent to the Waikato Expressway and the re-aligned Ruakura Road.

44. Higgins Contractors Ltd obtained consent in June 2020 to establish and operate a temporary asphalt production plant within the south-east corner of LDP E adjoining the Waikato Expressway and the re-aligned Ruakura Road for sealing the Expressway.

45. The plant is required to be decommissioned and the land reinstated within three years. Council has recently received a change of conditions application to enable the plant to operate 24 hours and this is currently being processed.

Network Infrastructure

Ruakura Road Urban Upgrade

46. The project to urbanise and upgrade the existing Ruakura Road between Wairere Drive and Silverdale Road is well advanced. This project improves safe walking and cycling connections for the community.

47. As outlined in Strategic Growth Committee reports for 12 November 2020 (minutes) and 30 March 2021 (minutes), the contract for construction of this upgrade has now been awarded with works commencing on site in May 2021 and scheduled to be substantively complete by the end of 2021.

48. It was identified that to construct the Ruakura Road upgrade most effectively, sections of the road would be temporarily closed for a period of indicatively three months – subject to detailed works programming. Closures are anticipated between July and October this year, with detailed communications and engagement to be further developed.

49. A closure enables significant construction efficiencies including overall time and cost savings, as well as reduced health and safety risk regarding constructing in a constrained corridor while also managing vehicle, pedestrian, and cycle movements.

50. A small parcel of land is planned to be procured from the Transpower Site, for which agreements are yet to be finalised. Discussions are continuing and procurement is currently not critical to construction progress.

Ruakura Superhub Stage 1 Transport Corridors – Expressway to Ruakura/Silverdale

51. Council is primarily responsible for delivering key transportation connections through the Ruakura Superhub Stage 1 area. This includes the major arterial road between the University and the Waikato Expressway Ruakura Interchange, as well as 'Road 3' and 'Realigned Percival Road'. This project is jointly funded by TGH, the Central Government Provincial Growth Fund and Council.

52. In parallel with early construction, final safety and road pavement design reviews have been completed, which may result in some design changes.

53. Construction works are underway, and it is currently anticipated that works will be complete by April 2022.

Managonua Gully Erosion Control – Stream Protection Stage 1

54. As part of the CIP funding package, Council has committed to delivering a substantial upgrade to the Mangaonua Stream/Gully, including erosion control in conjunction with accessibility and other improvements.

55. While this is funded as an Erosion Control Project, staff are taking the opportunity to work with all appropriate stakeholders to do it in a way that delivers on stakeholder expectations for gully enhancement.

56. The stream rehabilitation project for Mangaonua catchments is intended to aid in improving stream health and to protect against existing and future ongoing erosion.

57. Improving bed and bank stability will result in a receiving environment with increased habitat complexity, reduced sediment conveyance and increased local indigenous biodiversity that is more resilient. Importantly, natural flow regimes in receiving water bodies should be protected, resulting in an environment that has enhanced amenity value for the community.

58. Assessments were carried out in 2020 and staff are now working through design, using natural mitigations such as rocks and logs in six locations along the stream.

59. The total project is budgeted at $4M, with $910K to be funded by Council and the remaining $3.09M funded via the CIP crown grant.

60. Investigation, design, and land access discussions are underway in relation to this, with construction activities anticipated to commence in the 2021-22 summer construction season.

61. This project is dependent on private land access/easement agreements being in place, which is currently a risk to delivery.

Bulk Water and Wastewater Infrastructure and, Water Allocation

62. As part of the CIP funding package, TGH are delivering works to connect the bulk water and wastewater infrastructure to the Ruakura Superhub site, with Council identified as a co-investor for this infrastructure.

63. Investigation and design works are underway, with construction activities anticipated to commence in the 2021-22 summer construction season.

64. Consideration of water availability will be required under the city's existing water allocation consent or a new water allocation consent will be required for both the R2 area and Iwi aspiration for Ruakura, to extend the footprint of industrial land on the eastern side of the Waikato Expressway at the Ruakura Interchange and converting the land at the Tramway block from industrial to residential uses.

Parks and Open Spaces

65. The future open space network within Ruakura will predominantly be guided by the Ruakura Structure Plan within the District Plan. The open space network will consist of:

    i. Greenway – the green corridor that runs from the north-west along Pardoa Boulevard and down adjacent to the Spine Road to link to open space along Silverdale Road and the Mangaonua gully to the south
    ii. Gullies – at the northern end (Kirikiriroa Stream headwaters) and southern end (Mangaonua gully) of the structure plan area
    iii. Open space buffers – open space areas and planting shall provide an effective/suitable buffer, between different types of land uses
    iv. Neighbourhood reserves – these provide a range of informal recreation facilities including children's play areas, and spaces for passive and active recreation.

66. The open space network will come into Council ownership through the subdivision process as the land starts to develop.

67. At this stage, the only parts of the open space network that have gone through the subdivision process are two amenity reserve lots of 1.12ha and 2.05ha located on Silverdale Road adjacent to Waikato University. These will be vested once the infrastructure in this area has been developed and titles are issued. No other open spaces are actively being progressed in Ruakura.

Tainui Group Holdings (TGH) Ruakura Superhub Partner Update

Overview

68. Ruakura Superhub is a visionary project to transform the Eastern Hamilton boundary, anchored by a 30ha inland port and complementary logistics, industrial, residential, and retail areas. It will include an 8ha wetland with walking tracks, wildlife habitat and thousands of native plants (refer Ruakura Superhub Images **Attachment 4**)

Key benefits

69. Ruakura Superhub will bring economic, social, cultural and environmental benefits for many years to come. It unlocks the 'golden triangle', connecting customers to high-volume road, rail and sea network and is right next to East Coast Main Trunk Line (ECMT) rail line and the Waikato Expressway. It will significantly influence the emerging Upper North Island supply chain and ensure better connections to and from national and global markets for Waikato-domiciled businesses.

70. Environmental benefits include CO_2 savings, road to rail, and local environmental protections. For example, modelling shows the potential to reduce long distance truck movements by 65,000 movements per year.

Timing and staging

71. Ruakura Superhub will continue to grow and develop for 20-30 years and will add around 8% to the footprint of the city when complete.

72. The first phase of development includes 92ha out of the total 490ha long-term development, with Phase 1 on track for opening in early-mid 2022.

73. Stage 1 includes the consented Port, Logistics, Industrial and Service Centre areas of Ruakura.

74. Stage 1 also includes the first 9ha of the Inland Port being developed by a joint venture of TGH and world-class port operator, Port of Tauranga.

The developer

75. TGH is developing Ruakura Superhub on behalf of Waikato-Tainui which owns the 490ha of whenua that was returned to the iwi as part of the Raupatu settlement in 1995.

76. TGH will be working with a range of partners in NZ Government, local government, and local businesses to build Ruakura with the least amount of stress and disruption possible for residents.

77. TGH is a highly experienced regional developer of high quality, large-scale developments such as The Base, Auckland Airport and Hamilton hotels, Centre Place North and the new ACC Centre in Hamilton.

Funding and responsibilities

78. In 2020 the public roading and infrastructure elements at Ruakura received funding from the Provincial Growth Fund (PGF) of $16.8M and Crown Infrastructure Partners (CIP)of $40M (made up of an unsecured, 15-year interest free loan $20M and a grant of $20M.)

79. Council is contributing a portion of the cost of Package 1 ('Ruakura Rd West, Road 3 and Percvial Rd') works up to a maximum of $5M (refer Ruakura Superhub Images – **Attachment 4**). TGH will fund the balance of Stage 1, including all privately-owned infrastructure, and will more than match these tranches of external funding.

Roading

80. Under the Provincial Growth Fund agreement, Council is responsible for delivering Ruakura Road West, Road 3 and the realignment of Percival Road. These works have been tendered and are now let within budget.

81. Under the CIP funding agreement, TGH is responsible for delivering bulk infrastructure, earthworks, port ground development and the privately-owned roads accessing the port. The enabling works and bulk earthworks associated with these packages continues to go well. Formation of the 8ha BS1 wetland is also proceeding well.

82. Tender packages are being prepared for the next package of TGH infrastructure works, including Road 2, port access roads, streetlighting and kerbing. Tenders closed late April 2021. This package is part of the approved CIP funding package. A working group has now been set up by Future Proof to advance the priorities that were established in the HW-MSP. This working group is facilitated by Waikato Regional Council; TGH is represented by Brian Croad. Ruakura has been identified as a priority project.

Other strategic progress

83. Just prior to COVID-19 reaching Aotearoa, TGH announced a new port partner in the Port of Tauranga (PoT).

84. PoT is New Zealand's largest sea port, processing over 1.23M Twenty Foot Equivalent Unit (TEU) annually, mostly export containers with a growing import volume. A hinterland inland port based in the Waikato region where many of their export customers reside, allows PoT to manage their dockside facilities more productively.

85. The announcement of Peter Baker Transport Group (PBT) as the inaugural tenant in November 2020 gave further momentum to the project following PoT's announcement, and the Central Government and council funding announced earlier in 2020.

86. The advent of COVID-19 dramatically affected businesses and supply chains globally. The impact to Ruakura's tenant pipeline was noticeable with several key importer prospects engaging with TGH seeking to secure their supply chains and advancing investment strategies that were previously set up to ten years out.

87. Logistics West has received considerable interest from importers looking to shore up supply chain security and the Ruakura leasing team is actively engaging with a live tenant pipeline.

Timeline of key milestones

Key milestone	Current forecast
Agree co-funding from PGF and HCC	Completed
Tranche 1 approved, delivery team established and design underway	Completed
Agree co-funding from CIP	Completed
PoT agreements finalised and resource consent variation approved	Completed
Site establishment and bulk earthworks completed	05-2022
Commence construction of RRW	04/2022
Logistics tenant pre-commitment	Completed
Port and service centre open and WEX connection established	04-2022
First industrial and logistics tenants open	10-2022

Communication and engagement

88. As the developer of Ruakura Superhub, TGH is the communications lead for the project. Monthly cross- agency meetings are held with Council and Waka Kotahi to enable information sharing and ensure alignment.

89. This collaborative approach was apparent in the community information 'drop-in' session held on 29 April with a multi-agency approach, for promoting and delivering this community focused session.

Feedback mechanisms

90. All TGH digital channels, events and information will point any enquiries or feedback to a single, central contact – *0508 Ruakura* and *enquiries@tgh.co.nz*. The main external communications resource is the website: *www.ruakura.co.nz*. This is supplemented by a range of communications collateral and channels such as resident letter drops.

The next six months: June – November 2021

91. The next six months includes bringing all Ruakura and East projects under one programme umbrella to plan for, and deliver, community and wellbeing outcomes.

92. Currently the focus is on enabling, planning, and designing the programme for FY21/22, which includes:

- setting up the programme for success
- implementing a Ruakura and East Programme Communications and Engagement Strategy
- building and continuing to form mana-enhancing partnerships
- continuing stakeholder and community engagement
- initiating and planning for future capital and operational projects
- investigating innovative ways to unlock strategic infrastructure funding and funding opportunities
- understanding and monitoring impacts of the various COVID-19 alert levels on the programme
- collaborate with TGH on master planning and future planning of infrastructure
- continuing work on key infrastructure including the progression of the Ruakura Road Urban Upgrade
- continuing the consenting processes
- identifying opportunities for the community to thrive
- establishing monitoring and reporting.

Wellbeing Considerations - *Whaiwhakaaro-aa-oranga tonutanga*

93. The purpose of Local Government changed on 14 May 2019 to include promotion of the social, economic, environmental and cultural wellbeing of communities in the present and for the future ('the 4 wellbeings').

94. The subject matter of this report has been evaluated in terms of the 4 wellbeings during the process of developing this report as outlined below.

95. The recommendations set out in this report are consistent with that purpose.

Social

96. Development of Ruakura and East will help provide for a connected city, allowing communities to access employment, education, health and other essential services, as well as access to recreational and social opportunities.

97. The social impacts of transport were considered as part of the designation of the Ruakura Road Interchange undertaken by the Transport Agency in 2015 and through the Board of Inquiry for the inland port and the subsequent plan change to bring the broader Ruakura area into the District Plan.

98. Social wellbeing and economic wellbeing are strongly linked. Increasing economic development activity in north-west Hamilton provides the opportunity for businesses and their

employees to grow and prosper. Generating income to support families, whaanau, hapuu and communities which creating opportunities for social connection.

99. Growth in economic opportunity and participation can improve the social and cultural outcomes in a community.

100. As part of construction procurement, a key focus of our contractor selection and delivery is maximising potential benefits in accordance with the Central Government broader outcomes procurement framework. This includes opportunities to:

- enhance supply chain value through the local economy
- target employment outcomes for priority social groups
- enhance construction industry capacity and capability development
- target sub-contract opportunities.

Economic

101. Increasing economic development activity in Ruakura provides the opportunity for businesses and their employees to grow and prosper, generating income to provide present and future financial security.

102. The Ruakura development will deliver an estimated 12,000 jobs once fully developed, bringing significant regional and national economic benefits.

103. The initial Ruakura development projects are estimated to directly create around 250 full-time jobs over the next three-year period, not including jobs created by the port operation and planned logistics buildings.

104. Completion of the Ruakura transport network is an important enabler of the Ruakura Inland Port, which is intended to drive a mode shift from road to rail when fully developed, which is particularly important given the expected 53% growth in the freight by 2042.

105. Economic growth attracts new people to Hamilton, further expanding our economic base.

Environmental

106. The Council is committed to ensuring the effects of city development are not at the detriment of our natural environment.

107. Around 10% of Ruakura has been set aside as public open space, offering transitioning between different zones with reserves and recreational amenities. The existing master plan includes key green spaces which will be connected to cycleways and walkways, forming a 'green spine' to allow for safer pedestrian and cycle access through the area.

108. Native plantings will feature throughout the open space area and be integrated with the swales and linear wetlands, to meet stormwater and ecological needs.

109. The intended outcomes of the Mangaonua Gully Erosion Control and Steam Rehabilitation projects are to protect the stream bed and banks against existing and future erosion, protect infrastructure, improve stream habitat quality and abundance, and improve amenity value.

i. Improving bed and bank stability will result in a receiving environment with increased habitat complexity, reduced sediment generation and conveyance, and increased local indigenous biodiversity that is more resilient.

ii. Managing the changes in the natural flow regimes in receiving water bodies should be protected, resulting in an environment that has enhanced amenity value for the community.

iii. Approximately 100,000 native plants will be used in the Mangaonua Gully Erosion Control Programme, which is expected to begin mid-2021 and be complete mid-2023.

110. Economic development and growth can drive innovations that actively respond to the challenges of climate change.

Cultural

111. Staff are committed to working collaboratively with Waikato-Tainui and Mana Whenua, working in partnership to achieve the best outcomes for the people of Hamilton.

112. Establishing an effective partnership with Iwi will be integral to the success of many projects across the programme. We respect the special status of Tangata Whenua, are committed to the principles of Te Tiriti O Waitangi and further Maaori aspirations through building mana-enhancing relationships.

113. Ruakura is a critical platform for enabling Waikato Tainui economic development aspirations. Waikato-Tainui advise it is intended to provide a long-term source of income to support the health, wellbeing and education of the future generations of Waikato-Tainui.

114. Maangai Maaori will provide a political voice for Maaori within the decision-making of the Strategic Growth Committee.

115. As part of the procurement and delivery of the Ruakura Superhub Stage 1 Transport Connections Package, Council will be giving effect to the Waikato Tainui talent and capability plan. This includes prioritising sustainable employment outcomes in the construction industry for Waikato-Tainui tribal members and encouraging sub-contract opportunities for Maaori owned business.

116. Engagement with tangata whenua is ongoing regarding opportunities to incorporate appropriate cultural consideration and recognition into design and construction of Council delivery components.

117. THaWK has been engaged in the design of Ruakura Road Urban Upgrade and connection to the Waikato Expressway. THaWK has actively contributed to landscape and urban design to incorporate cultural heritage.

118. Staff will recognise and consider Iwi aspirations and environmental plans when planning projects within Ruakura and East catchments.

Financial Considerations - *Whaiwhakaaro Puutea*

119. Staff are developing financial reporting requirements for the Ruakura and East programme, and these will be included in updates to this Committee once the 2021-2031 Long Term Plan has been adopted.

120. The Ruakura Programme financial report as at 31 March 2021 was included as part of the Capital Portfolio reporting presented to the Finance Committee meeting on 13 May 2021.

Risks – *Tuuraru*

121. Good risk management is being applied on the existing infrastructure projects, but programme risks are being developed. Staff will work with the Risk Manager to identify and manage programme-level risks in accordance with the organisational risk management framework.

122. A key programme-level risk is that strategic infrastructure is currently being installed, which has been sized and located to service the current Ruakura area based on land use as outlined in the current Structure Plan. If changes to land zones or areas to be serviced are increased, capacity and timing of existing or currently planned infrastructure will need to be reviewed.

Significance & Engagement Policy - *Kaupapa here whakahira/anganui*

123. Having considered the Significance and Engagement Policy, staff have assessed that the matters in this report have low significance.

Communications and engagement activities

124. Staff are developing an overarching Ruakura and East Programme Communication and Engagement Strategy, which will mean consistent and correct messaging is shared with the right people, at the right time, in the right way across the projects and work across the growth cell.

125. Staff have been engaging with directly affected landowners and key stakeholders on key projects in Ruakura, such as the Ruakura Superhub Stage 1 Transport Corridors project.

126. Stakeholders and neighbouring residents and landowners have been kept up to date with the works through letter drops, newsletters, one-on-one meetings and open days.

127. Construction is commencing May 2021 on the Ruakura Road Urban upgrade project. Stakeholder meetings have taken place with primary stakeholders (major landowners) directly affected by the work. This includes Waikato Regional Council, Innovation Park, TGH, WEL network, Transpower and Ag Research. Staff plan to continue engaging with the community as the project progresses.

128. Mangaonua Gully erosion control project communication and engagement continues with the landowner on the eastern side of the gully.

129. All three projects within the programme had a presence at the Ruakura Superhub open day, which was held on 29 April 2021.

130. Staff are continuing to engage with environmental and cultural groups, key developers, and Government agencies including Waka Kotahi NZ Transport Agency.

131. Monthly meetings are scheduled between Council staff and TGH, to ensure there is consistent messaging across the growth cell.

Attachments - *Ngaa taapirihanga*

Attachment 1 - Ruakura and East Map - May 2021

Attachment 2 - Ruakura and East Development Map - May 2021

Attachment 3 - Ruakura Land Development Plan Area (LDP) - April 2021

Attachment 4 - Ruakura Superhub Images - May 2021

RUAKURA AND EAST

Legend

Completed

2021-24

Future

Delivered by Tainui Group Holdings

Puketaha Road

Mangaiti Gully (R2 drains into this gully)

R2 - Future Growth Area

Gordonton Road

Wairere Drive

Greenhill Road

Waikato Expressway (by Waka Kotahi NZ Transport Agency)

Ruakura wastewater interceptor water supply

Eastern Transport Corridor planning

Ruakura reservoir one COMPLETE

Ruakura reservoir two

Fifth Avenue extension

Powells Road

Fifth Avenue

Realignment of SH26

Structure Plan and Infrastructure assessment including Future Transport Hub

Ruakura Superhub

Ruakura Road

Wetland

Mangaonua erosion control

SH26

Knighton Road

University

Hillcrest Road

Silverdale Road

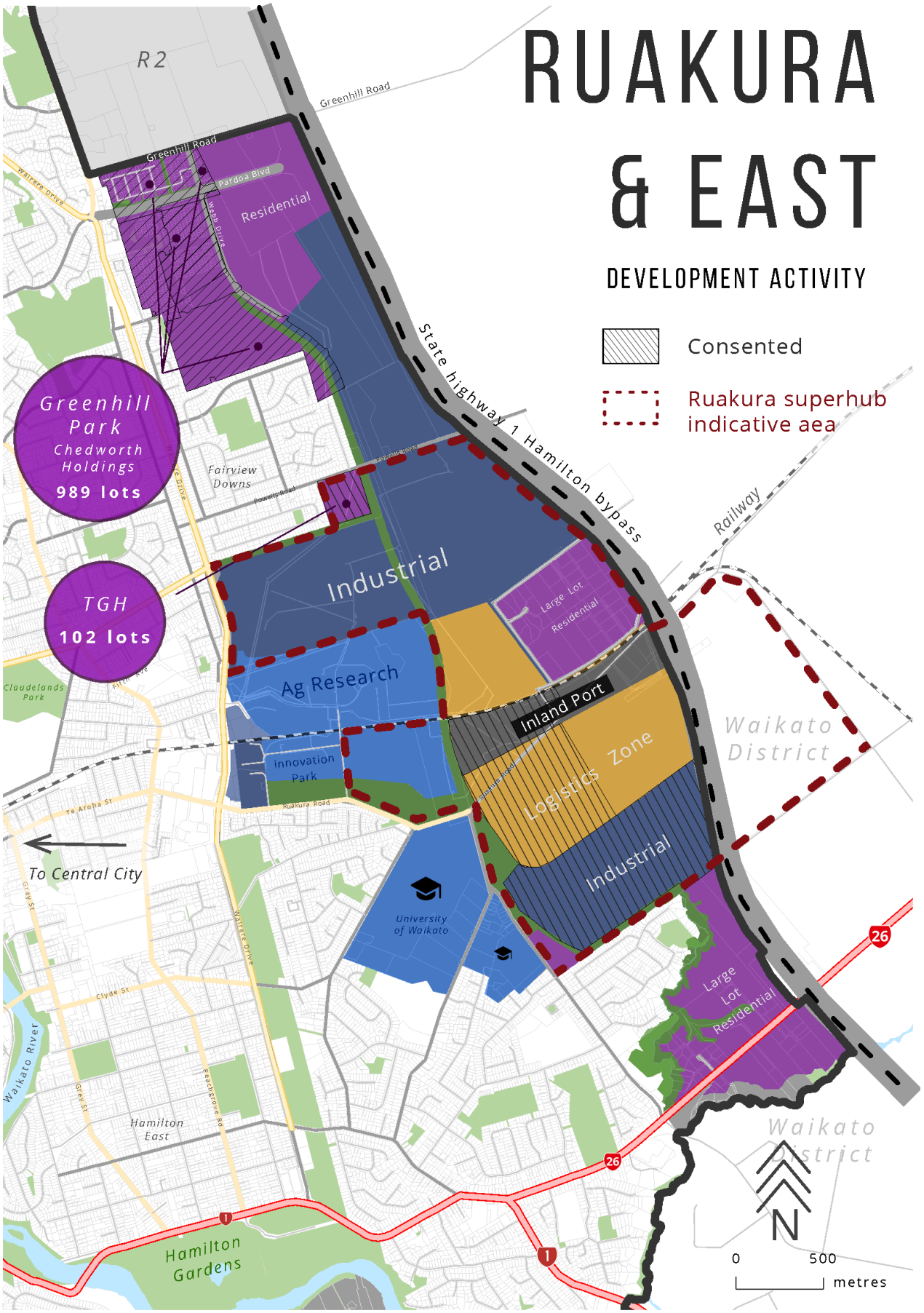
Morrinsville Road

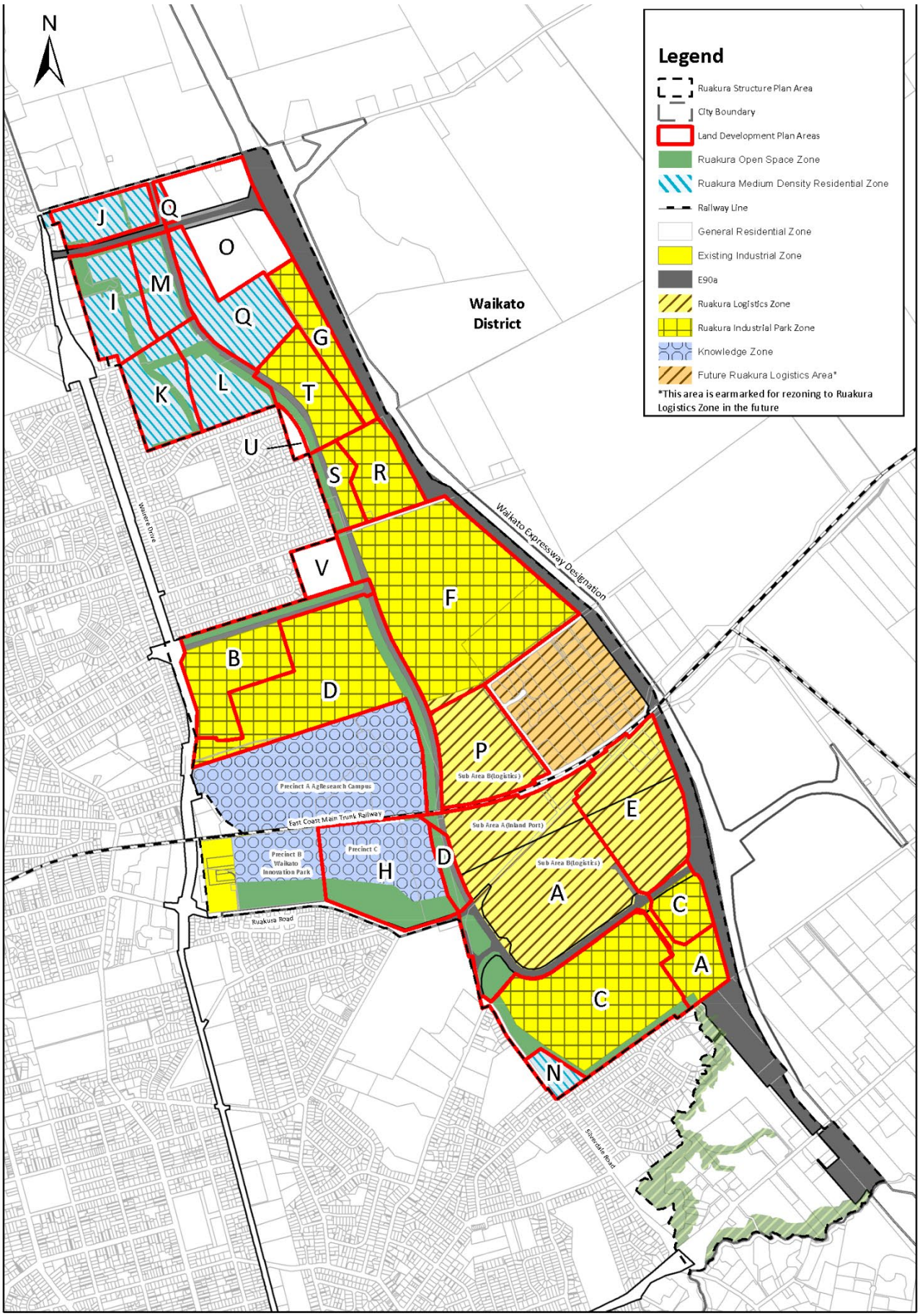
Ruakura Road urban upgrade

Ruakura stage one – key transport connections

SH26 Revocation

Cobham Drive SH1


RUAKURA & EAST
DEVELOPMENT ACTIVITY
Consented
Ruakura superhub indicative aea
R2
Greenhill Road
Pardoa Blvd
Residential
State highway 1 Hamilton bypass
Railway
Greenhill Park
Chedworth Holdings
989 lots
TGH
102 lots
Fairview Downs
Industrial
Large Lot Residential
Ag Research
Inland Port
Logistics Zone
Innovation Park
Waikato District
To Central City
University of Waikato
Industrial
Large Lot Residential
Claudelands Park
Hamilton East
Hamilton Gardens
Waikato River
Clyde St
Grey St
Te Aroha St
Ruakura Road
Peachgrove Rd
Wairere Drive
26
1
N
0
500
metres


N
Legend
Ruakura Structure Plan Area
City Boundary
Land Development Plan Areas
Ruakura Open Space Zone
Ruakura Medium Density Residential Zone
Railway Line
General Residential Zone
Existing Industrial Zone
E90a
Ruakura Logistics Zone
Ruakura Industrial Park Zone
Knowledge Zone
Future Ruakura Logistics Area*
*This area is earmarked for rezoning to Ruakura Logistics Zone in the future
Waikato District
Waikato Expressway Designation
Wairere Drive
East Coast Main Trunk Railway
Precinct A AgResearch Campus
Precinct B Waikato Innovation Park
Precinct C
Sub Area A(Inland Port)
Sub Area B(Logistics)
Sub Area B(Logistics)
Ruakura Road
Silverdale Road
J
Q
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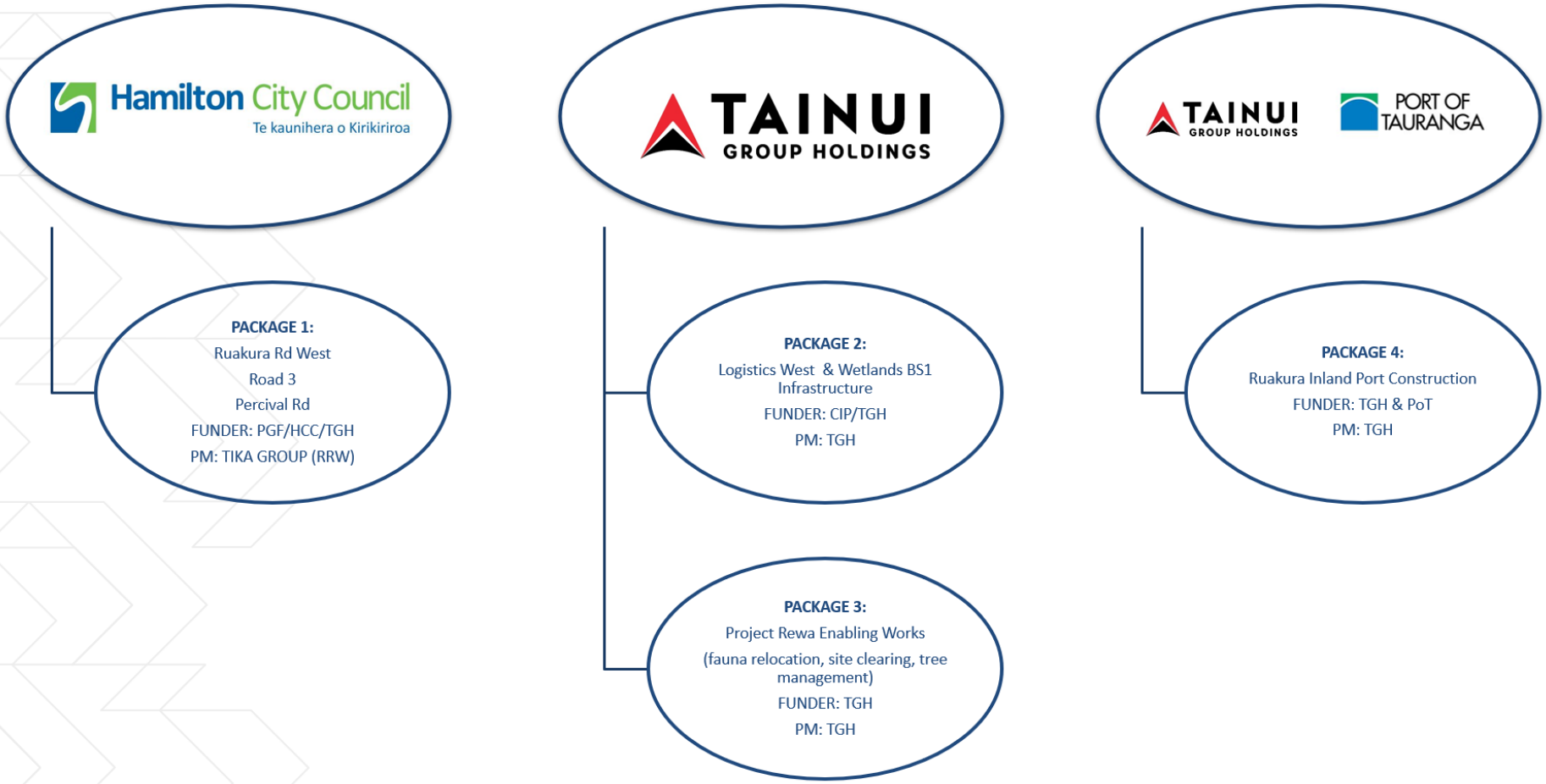
1. **Ruakura Superhub Stage 1 location**


Ag Research
Future Spine Road
EMCT RAILWAY
East Coast Main Trunk Line
Future Knowledge Area
INLAND PORT
17ha
LOGISTICS PRECINCT
35ha
SERVICE CENTRE
5ha
WETLAND
10ha
INDUSTRIAL PRECINCT
25ha
NEWS H1 - WAIKATO EXPRESSWAY (WEX)
HAMILTON CBD
(3km)
University Park
Waikato University
Silverdale Park
Silverdale Road
Ruakura Road West
Road 4
Nevada Road East
Mangaonua Stream
HAMILTON AIRPORT
(10km)
Silverdale Housing Area

2. Ruakura Superhub packages of work

Overview – 1 superhub, 4 packages of work



3. Ruakura Superhub earthworks activity

Attachment 4

Item 7

Item 8

Council Report

Committee: Strategic Growth Committee **Date:** 20 May 2021

Author: Hannah Windle **Authoriser:** Jen Baird

Position: Programme Manager - Special Projects **Position:** General Manager City Growth

Report Name: Hamilton Urban Growth Strategy Review - Proposed Principles for Out-of-Boundary Growth

Report Status	*Open*

Purpose - *Take*

1. To inform the Strategic Growth Committee of the existing principles that Council has in place to direct funding for out-of-sequence growth projects.

2. To seek approval from the Strategic Growth Committee of the process for consolidating and finalising all growth principles to direct both out-of-sequence and out-of-boundary growth proposals.

   To seek approval from the Strategic Growth Committee of the draft interim principles for considering out-of-boundary growth proposals to form the basis of communication with landowners.

3. To inform the Strategic Growth Committee of the project budget for the Hamilton Urban Growth Strategy (HUGS) review as per the resolution from the Strategic Growth Committee Meeting on 30 March 2021.

Staff Recommendation - *Tuutohu-aa-kaimahi*

4. That the Strategic Growth Committee:

   a) receives the report;

   b) notes the growth principles Council has in place for out of sequence development in its existing Growth Funding Policy;

   c) approves the process for finalising the growth principles as part of the full Hamilton Urban Growth Strategy review; and

   d) approves the draft principles for out-of-boundary development to be used to communicate expectations to landowners, noting the principles may be refined through the duration of the Hamilton Urban Growth Strategy review;

   e) notes the Hamilton Urban Growth Strategy review project budget detail as outlined in the staff report.

Executive Summary - *Whakaraapopototanga matua*

5. The Strategic Growth Committee (the Committee) approved a review of the Hamilton Urban Growth Strategy on 18 February 2021 and the scope of the review on 30 March 2021.

6. The development of principles to guide decision-making on out-of-sequence and out-of-boundary growth was identified as an early deliverable due to increasing development interest from landowners around the city boundary.

7. Council already has principles in its Growth Funding Policy (GFP) to address out-of-sequence growth.

8. Increasing interest and pressure from landowners beyond the current city boundary to develop requires council to set clear expectations on what needs to be delivered if these proposals are to be progressed.

9. Draft principles have been developed and workshopped by the Hamilton Urban Growth Strategy Working Group on 3 May 2021.

10. The principles have a strong wellbeing focus and set the expectation that any proposed out-of-boundary development must create quality communities rather than just additional housing.

11. It is proposed that the principles remain in draft form until the Hamilton Urban Growth Strategy (HUGS) review is complete, at which point council repeals or amends the GFP to create one set of principles to deal with both out-of-sequence and out-of-boundary growth. The proposed draft principles are outlined in point 36 of this report.

12. Working with neighbouring councils is a critical consideration in finalising these principles.

13. A detailed budget for the full HUGS review has been developed, and all costs can be met through existing budgets or reallocation from existing projects, this is further outlined below.

14. Staff consider the decisions in this report have low significance and that the recommendations comply with the Council's legal requirements.

Background - *Koorero whaimaarama*

15. The Strategic Growth Committee approved a review of the Hamilton Urban Growth Strategy on 18 February 2021 to ensure Council has a robust and up-to-date strategic framework in place to address growth challenges.

16. The scope of the review was approved by the Strategic Growth Committee at the meeting on 30 March 2021.

17. As an early deliverable of the strategy review, it was identified that there is a need for development of a set of principles to guide decision making on opening out-of-sequence or out-of-boundary areas for development.

18. The purpose of to the principles are to assist in communicating with landowners who feel they have a growth opportunity beyond the current city boundary and set out 'bottom-lines' that developers must deliver to progress their projects.

19. Central Government direction through the National Policy Statement – Urban Development (NPS-UD) also requires that councils need to be open to responding to growth that is out-of-sequence or unanticipated if it provides significant additional development capacity.

20. Concurrently, the Future Proof partnership is developing principles for inclusion in the Waikato Regional Policy Statement (RPS) for out-of-sequence development to give effect to the NPS-UD. Hamilton City Council will be required to give effect to these.

Discussion - *Matapaki*

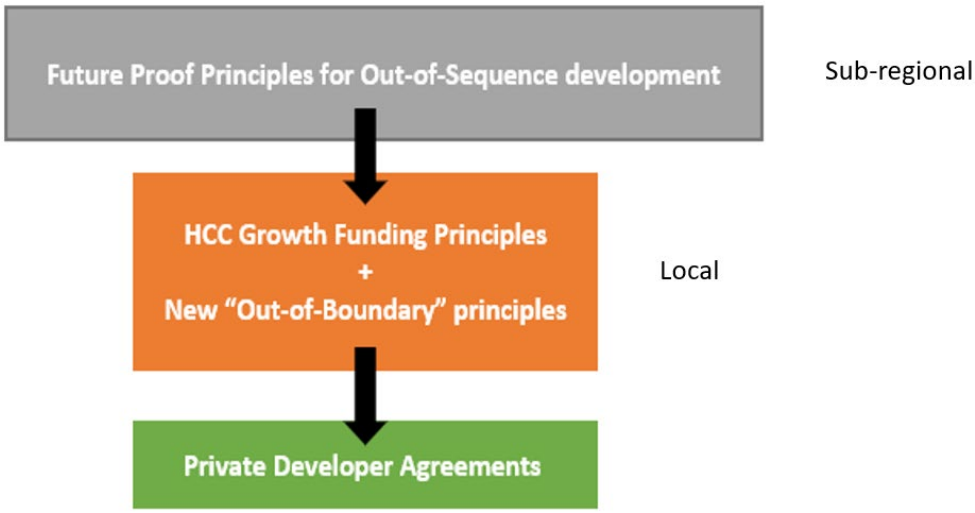
21. Due to increasing contact from landowners beyond the city boundary seeking growth opportunities (and potential boundary changes) Council identified a need for some high-level 'growth principles' to communicate to the development community Hamilton City Council's expectations that need to be met for proposals to be eligible for consideration.

22. These principles will set out expectations that developers must deliver on to progress their projects and will guide Council decision-making.

23. In effect they become a policy/guide for what Council is expecting for urban development that is not planned or sequenced, however they can't replace or remove the statutory tests for any plan changes put in by any landowner.

24. Council has several growth principles already in place, but they are specific and tailored for bespoke purposes – none are specifically for considering out-of-boundary proposals.

25. A diagram of existing and proposed growth principles is provided below.



26. The Future Proof principles for out-of-sequence development are being developed specifically to give effect to the NPS-UD requirement to consider out-of-sequence plan changes. Hamilton City Council is one partner involved in writing these, and they are likely to be finalised in the next 2 months.

27. In the context of Future Proof, there is no 'out-of-boundary' consideration – it is all related to 'out-of-sequence', so these principles apply in both circumstances for Council.

28. Once the Future Proof principles have been agreed by Future Proof partners, they will be included in the Waikato Regional Policy Statement (RPS) which means Council will be required to give effect to them.

29. Council has an existing Growth Funding Policy in place to direct Council decision-making in respect of growth projects and associated infrastructure where projects are looking to be progressed out-of-sequence with Council's Long-term Plan.

30. The GFP is used to address projects that occur within the current Hamilton City Council boundary (although it does not explicitly exclude land beyond this). Minor amendments to this policy have been consulted on through the development of the Long Term Plan 2021-2031 (proposed change version can be accessed here).

31. Through the Long Term Plan deliberations, the Council passed a resolution to approve the revised Growth Funding Policy subject to minor changes and noted that the final revised GFP will be reported to the 24 June 2021 Council meeting for approval.

32. It is recommended that the new principles developed should apply exclusively to out-of-boundary proposals, with proposals within the city still being subject to the existing GFP.

33. Longer-term, and post-completion of the HUGS review, there is an option to repeal the GFP and create a single set of principles for out-of-sequence and out-of-boundary growth in its place.

Purpose of Principles

34. The HUGS Working Group met for the first time on 3 May 2021 where they participated in a workshop to develop and agree the purpose and content of the principles.

35. It was noted that the principles need to provide for:

    i. Growth that improves the wellbeing of Hamiltonians
    ii. A way to evaluate potential growth opportunities and to inform decision making
    iii. Capturing value uplift for the benefit of the community
    iv. Create quality communities, not just more houses
    v. Innovative and robust solutions to infrastructure provision
    vi. Financial sustainability now and into the future
    vii. Developments that deliver on climate and emissions targets

Proposed Draft Principles

36. Following the HUGS Working Group meeting, the following draft principles were developed and refined:

    Any out-of-boundary development must enhance the overall wellbeing of Hamiltonians and create quality communities by:

    Delivering:

    i. 15 min neighbourhoods
    ii. compact and accessible developments
    iii. affordable housing choices
    iv. sustainable and integrated infrastructure solutions
    v. a significant portion of land value uplift for the benefit of the wider community
    vi. places to work, or quality connections to places of work
    vii. places for recreation

    Enhancing Hamilton's economy

    Protecting and recognising cultural heritage

    Responding to climate change

    Growing green areas and biodiversity

    Meeting the costs of all infrastructure

37. Once the principles are agreed, staff will develop guidance with examples to sit alongside the principles to assist with their interpretation and communication.

How will these principles be used?

38. It is intended that the principles be used by both Members and staff to communicate expectations to all landowners who approach council with proposals for out-of-boundary developments. For example, conversations have occurred with multiple developers regarding the future of specific parcels of land around the city, including WA to the west and R2 to the east.

39. There is an opportunity to engage early with interested developers to test the draft principles on a selection of these proposals to explore whether they can deliver the outcomes that Hamilton is seeking.

40. Staff will provide updates of these discussions in future HUGS updates as they progress, particularly the applicability of the draft principles, and whether the principles may need to be amended if any gaps are identified after testing.

41. Future Proof has also developed a process to collect and share information on out-of-sequence proposals with all partners, and this will form part of our communication with landowners.

42. In their current state, the principles are not intended to be used as an evaluation tool, but rather a communication tool to set realistic expectations with landowners.

43. It is proposed that the principles be publicly consulted on as part of the full HUGS strategy and confirmed at the same time.

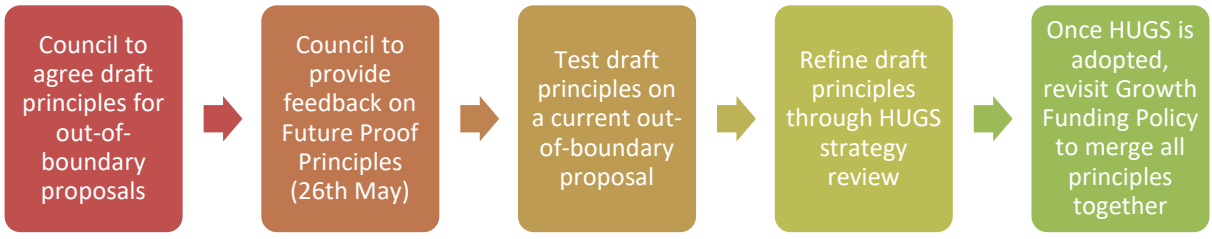
44. Post-HUGS adoption, there is an option to repeal or amend the Council's current GFP to create one set of growth principles that apply to both out-of-sequence and out-of-boundary proposals.

45. Introductory conversations have occurred between HCC HUGS project staff and strategic planning staff at Waipa District Council and Waikato District Council to inform them that this process is underway, and to seek any initial feedback on what these principles should address.

46. Staff from both councils indicated general support for the intent and content of the draft principles and agreed with their purpose to assist in communicating with landowners beyond the current Hamilton City Council boundary.

47. It is intended that there will be regular engagement with neighbouring councils as the principles are progressed.

Process for finalising principles



Financial Considerations – *Whaiwhakaaro Puutea*

48. At the Strategic Growth Committee meeting on 30 March 2021, staff agreed to provide further details of the HUGS project budget to this meeting.

49. Project deliverables have been further scoped and refined, and a proposed budget is outlined below (noting that no work has yet been commissioned so these figures are estimates based on similar work packages, and initial conversations with consultants).

Cost	Details	Estimated

		budget
Personnel Costs	No new FTE's. Project Manager, Project owner and sponsor, technical input land use, community & network, infrastructure planning, strategic transport and waters, climate change, comms & engagement advisor, growth programmes and other staff as required. Estimated 1-6 hours per week across 12 - 18 months.	Within existing personnel budgets
Consultants & Professional Services	Scenario planning, Multi-Criteria Assessment, facilitation and report	$250,000
Technical Consultants	Any additional research/analysis not already underway and included as part of other projects, if required.	$100,000
Legal	Legal review and value capture advice	50,000
Communications & Engagement	Engagement Campaign City Wide, special consultative process and document production	50,000
Contingency	10%	$50,000
	Total	**$500,000**

50. The project can be completed with existing FTEs within existing personnel budgets.

51. Staff will utilise already budgeted operational expenditure from the City Growth Budget from FY 20/21 and Year 1 of the 2021-31 Long Term Plan. This budget is for growth related activities and projects including business cases. The HUGS review aligns with that intended purpose.

52. The total estimated budget for this project is similar to the costs of programme business cases, for example HIF and Rotokauri Stage 1 and comparable to the Hamilton-Waikato Metro Spatial Plan budget.

53. Much of the analysis required for the project is planned for and budgeted within existing projects, for example NPS-UD analysis being undertaken as part of the District Plan Programme. The HUGS project budget allows for $100,000 for any additional technical analysis, if required.

Legal and Policy Considerations - *Whaiwhakaaro-aa-ture*

54. Staff confirm that the staff recommendation complies with the Council's legal and policy requirements, noting that the HUGS is not a statutory document.

Wellbeing Considerations - *Whaiwhakaaro-aa-oranga tonutanga*

55. The purpose of Local Government changed on the 14 May 2019 to include promotion of the social, economic, environmental and cultural wellbeing of communities in the present and for the future ('the 4 wellbeings').

56. The subject matter of this report has been evaluated in terms of the 4 wellbeings during the process of developing this report as outlined below.

57. The recommendations set out in this report are consistent with that purpose.

Social

58. The reviewed HUGS will complement other Council and external strategies that support social wellbeing outcomes, for example the Housing Strategy.

59. The reviewed HUGS may also contribute towards social wellbeing outcomes by:

    i. providing a strategic direction and framework that will contribute towards delivery of competitive land markets to address housing affordability;

    ii. enabling funding and delivery of community amenity at the right time to support new and existing communities, for example schools, parks, playgrounds and community facilities; and

    iii. assisting with increased community understanding and support for new models of living, for example intensification.

Economic

60. The reviewed HUGS may contribute towards economic wellbeing outcomes by:

    i. enabling better long-term investment decisions on how and where our city will grow;

    ii. reducing the time between zoning of land and funding and delivery of strategic infrastructure;

    iii. improving flexibility to respond to or decline out-of-sequence growth opportunities;

    iv. planning and enabling land for jobs; and

increased innovative external funding of infrastructure through partnerships, private developer agreements or alternative infrastructure funding and financing solutions.**Environmental**

61. The reviewed HUGS may contribute towards environmental outcomes by:

    i. providing a preferred urban form and growth strategy that responds and aligns to climate change policy, actions and targets;

providing a preferred urban form and growth strategy that reflects existing internal and external environmental strategies, for example Nature in the City, Te Ture Whaimana o Te Awa o Waikato, Waikato-Tainui Environmental Plan. **Cultural**

62. The reviewed HUGS may contribute towards cultural outcomes by providing a preferred urban form and growth strategy that is aligned with the outcomes in He Pou Manawa Ora, for example being a city that celebrates its special Maaori heritage, rich history, natural environmental wonders and ensuring that everyone has a voice in developing it.

Risks - *Tuuraru*

63. There are no known risks associated with the decisions required for this matter.

Significance & Engagement Policy - *Kaupapa here whakahira/anganui*

Significance

64. Staff have considered the key considerations under the Significance and Engagement Policy and have assessed that the matter(s) in this report has/have a low level of significance.

Engagement

65. Staff have commenced discussions with Waikato District Council and Waipa District Council staff regarding the draft principles for out-of-boundary development and the scope of the HUGS review.

66. Further regular engagement is planned as the review progresses, and this will be formalised as part of the project communication and engagement plan.

Attachments - *Ngaa taapirihanga*

There are no attachments for this report.

Item 9

Council Report

Committee: Strategic Growth Committee **Date:** 20 May 2021

Author: Nathan Dalgety **Authoriser:** Jen Baird

Position: Programme Manager – Analytics **Position:** General Manager City Growth

Report Name: NIDEA 2021 Growth projections and peer review

Report Status	*Open*

Purpose - *Take*

1. To inform the Strategic Growth Committee on:

   i. the recently released NIDEA 2021 growth projections, and

   ii. the outcome of the peer review requested by Members of these projections at the 25 February 2021 Council Meeting.

2. To seek the Strategic Growth Committee's approval for the NIDEA 2021 High demographic projections for Hamilton to be used as a base in planning and development of the 2022-23 Annual Plan.

3. To seek the Strategic Growth Committee's approval for staff to investigate and develop a 'dwelling' projection model that will reflect demographic, economic, land use, housing supply and consenting pipeline data, to support the planning and development of the 2022-23 Annual Plan.

4. To inform the Strategic Growth Committee that NIDEA Low 2020 remains the growth scenario for the 2021-31 LTP, and outline the options available to respond to increased growth prior to the 2022-23 Annual Plan.

Staff Recommendation - *Tuutohu-aa-kaimahi*

5. That the Strategic Growth Committee:

   a) receives the report;

   b) approves the use of the NIDEA High 2021 demographic projections for the purposes of planning and development of the 2022-23 Annual Plan;

   c) requests staff investigate and develop a 'dwelling' projection model (as described in paragraphs 55-59 of the staff report) to support the planning and development of the 2022-23 Annual Plan, with the results to be presented to Members at a briefing in November 2021; and

   d) notes that NIDEA Low 2020 remains as the Council's 2021-31 Long Term Plan growth projections, as adopted at the 12 November 2020 Strategic Growth Committee and subsequent Council Long Term Plan meetings.

Executive Summary - *Whakaraapopototanga matua*

6. At their meeting on 12 November 2020, the Strategic Growth Committee resolved to use the University of Waikato National Institute of Demographic and Economic Analysis (NIDEA) 2020 Low demographic projections for the 2021-31 Long Term Plan.

7. Some Members expressed concern at that meeting that the NIDEA Low 2020 projections may prove to be too low and directed staff to report back to the Committee on the updated NIDEA 2021 projections. These were published on the 14 April 2021 and is attached to the report as **Attachment 1**.

8. At their 25 February 2021 meeting, the Council requested that a peer review of the NIDEA 2021 projections be undertaken. That peer review has been completed by the Research and Evaluation Unit (RIMU) at Auckland Council and is attached to this report (**Attachment 2**).

9. The peer review concluded that the demographic projections were largely robust, but that specific consideration had not been given to consenting activity, strategic land use planning including local or regional infrastructure development, housing supply, developing spatial plans, or economic factors.

10. This report recommends retaining NIDEA Low 2020 for the 2021-31 LTP (as resolved by the Strategic Growth Committee on 12 November 2020). Staff consider that the NIDEA Low 2020 growth projections are appropriate for the 2021-31 LTP, particularly given the new NIDEA High 2021 projections are not significantly different within the first 12-24 months of the LTP.

11. Staff have identified material risks to the timely adoption of the 2021-31 LTP if the underpinning growth projections were changed at this point in the process.

12. These risks, which were also raised in high level conversation by Audit NZ and the Council's City Solicitor, include:

    i. public consultation has concluded and changing the growth projections was not directly consulted on;

    ii. the significant re-work of a number of inputs to the LTP in a short space of time that are likely to be needed across a number of facets of the business; and

    iii. the underpinning significance of growth projections to the LTP.

13. Staff recommend the retention of NIDEA Low 2020 as its Long Term Plan growth projections and updates them to NIDEA High 2021 for the 2022-23 Annual Plan.

14. In addition, staff are seeking approval to investigate and develop a 'dwelling' projection model that better reflects and projects the 'on the ground' activity in dwelling growth, using the NIDEA High 2021 demographic scenario as a base. This would mitigate the risks outlined above, and still allow the Council to respond to higher growth in an agile manner over the next 12 months, such as bringing forward capital projects through the Finance Committee.

15. Staff consider the matters in this report to have medium significance and that the recommendations comply with the Council's legal requirements.

Background - *Koorero whaimaarama*

16. Growth projections are required to enable a local authority to prepare the financial and infrastructure strategies stated in sections 101(a) and 101(b) of the LGA. Projections help councils to understand the scale, location and timing of investment to deliver to the needs of the community.

17. Demographic projections are produced by expert demographers using Census data and economic/demographic models, which output population and household projections for a given spatial area.

18. Due to issues with the 2018 Census, key census data releases required to update the NIDEA population and household projections were significantly delayed and not made available in time to support the 2021-31 LTP. As a result, the NIDEA 2020 projections used in the 2021-31 LTP are predicated on the 2013 Census but rebased using the Statistics NZ population estimates for Hamilton. This is further detailed in the 12 November 2020 Strategic Growth Committee report.

19. The NIDEA projections based on the 2018 Census (referred to as NIDEA 2021) were finalised and published on 14 April 2021, with the data and documentation made available on the Waikato Projections Group - Creating Futures website.

20. The Waikato Projections Group consists of staff representatives from Hamilton City Council, all the district councils in the Waikato, and the Waikato Regional Council. It also includes representatives from Waikato District Health Board and Waka Kotahi NZTA (Waikato Regional Transport Model).

2018 Census

21. The 2018 Census was the first predominantly online-based census in New Zealand's history. While it was a technological leap forward, the participation rate was far below historical rates, which has a direct bearing on the statistical robustness of the results. As a result, 89% of the total number of census records will come from 2018 Census forms and 11% will come from other Government "administrative data".

22. Due to the 2018 Census participation rate issue, key census data releases required to update the NIDEA and Statistics NZ population and household projections were significantly delayed and not made available in time to support the 2021-31 LTP. As a result, the 2021 NIDEA projections were delayed and finally released in April 2021.

23. Future Proof partners (and most other councils in New Zealand) have experienced similar issues in adopting growth projections. Most have taken similar action when recommending a growth scenario for their respective 2021-31 LTPs, i.e. adopting projections based on the 2013 Census.

Discussion - *Matapaki*

How can the Council respond if growth is higher than the projections?

24. If monitoring shows that growth is significantly different to the projections, Members will be advised, and the following actions can be considered and undertaken to ensure that the capital programme remains appropriate:

    i. the projections can be updated;

    ii. the capital programme can be amended by the Finance Committee;

    iii. changes can be made to the Annual Plan; and

    iv. changes can be incorporated in the next Long-Term Plan (2024-34).

25. Council measures and monitors land supply already. These processes have been refined and the importance of them raised through the NPS-UD.

26. The projections are used as a guide to enable planning for growth across Hamilton. Council's Growth Funding & Analytics unit monitors growth in the city closely. It continually monitors

the number of consents for both subdivisions and dwellings, as well as the types of dwellings and the number of Code of Compliance Certificates issued.

27. Statistics NZ updates its population estimates every year. These are monitored, and any significant variances can be incorporated into decision making.

Providers of demographic projections

28. There are two main reputable organisations that produce demographic projections for the Waikato – Statistics NZ and NIDEA.

29. A number of consultancy firms also provide bespoke demographic projections for the Waikato and Hamilton, including Deloitte and Infometrics.

30. These organisations all provide demographic projections that are based on assumptions relating to demographic trends, migration, births/deaths, etc; none specifically consider consenting activity, strategic land use planning including local or regional infrastructure development, housing supply, spatial plans, or economic factors (with the exception of Infometrics, who include regional employment forecasts to inform net migration projections).

NIDEA 2021 Projections

31. The NIDEA 2021 projections provide demographic projections (based on the 2018 Census) for the whole of the Waikato Region and all the territorial authorities that are wholly or substantively contained within the region. The demographic projections include three scenarios (low, medium and high) for each of population, family and household, and labour force, to a projection horizon of 2068.

32. The purpose of the NIDEA demographic projections is to provide a consistent, robust and shared datasets to support regional and local planning and decision making in the Waikato region.

33. The overall picture in the demographic projections is one of regional population growth throughout the projection period. However, that growth is projected to be much slower for most territorial authorities (TAs) than their recent experience. For the most part, that can be attributed to a 'reset' in net international migration because of the Covid-19 pandemic and associated border closures. Covid-19 has caused a substantial shift in population trajectory for the Waikato Region and its territorial authorities.

34. The TAs are projected to have slightly different trajectories, with different mechanisms underlying their patterns of growth and decline. Waikato, Matamata-Piako, Waipā, and Taupō Districts are projected to experience population growth driven by internal migration along with an ageing population. Hamilton is projected to experience strong population growth driven by internal migration along with maintaining a relatively young population age structure.

35. Overall, the number of households is projected to closely follow the trajectory of the population for each territorial authority, but made up of fewer couples with children and two-parent families, and more one-parent families and one-person households.

Statistics NZ 2021 projections

36. In March 2021, Statistics NZ also published a new set of population projections based on the 2018 Census (referred to as StatsNZ 2021). Statistics NZ adopts a 'top-down' approach to demographic projections. This means that projections are first completed at the national level; these subsequently serve as a constraint for projections for territorial authority areas.

37. The StatsNZ 2021 projections are not currently a viable alternative, as Statistics NZ has only published population projections and is not scheduled to publish household projections until March 2022.

NIDEA 2021 Projections peer review

38. On 25 February 2021, the Council requested a peer review of the NIDEA 2021 projections.

39. Staff engaged the Research and Evaluation Unit (RIMU) at Auckland Council to undertake an independent 'common sense' peer review of the NIDEA 2021 demographic projections for Hamilton.

40. The review considered the contents of the NIDEA projections report (**Attachment 1**) and undertook comparisons between NIDEA 2021 projections and the most recent Statistics NZ 2021 projections (StatsNZ 2021). Note that most recent population figures were compared; however for the household projections, earlier Statistics NZ Household figures (2017) were used as the 2021 figures were not available.

41. The key findings of the peer review (**Attachment 2**), which was completed in early May 2021 are listed below:

    a) The overall methodology, as described in the NIDEA report, appears sound.

    b) Comparisons made between NIDEA 2021 and the StatsNZ 2021 population projections (the primary means of assessing the reasonableness of the NIDEA projections in this review) show that projected total populations are very similar between the two sources. For example, in the medium growth scenario, percentage differences are within +/- 0.9% throughout the period 2018-2048.

    c) There is an unexpected difference between the NIDEA 2021 and the StatsNZ 2021 projections in terms of projected age distribution that merits further investigation. Specifically — and while still within the bounds of reasonableness — there is a smaller increase over time in the proportion of the population aged 65 years and over in the NIDEA projections, as detailed in Section 2.1.2.

    d) There are differences in trends between some of the NIDEA 2021 and earlier Statistics NZ household type and family type projections that would be worth exploring further. However, it would be beneficial to wait until the new (2018-base) household and family projections from Statistics NZ are produced before undertaking this analysis.

    e) A key limitation of the NIDEA 2021 projections is that they consider only demographic factors; land use considerations are excluded. Marked changes in local or regional infrastructure development, housing availability, land supply and/or planning rules have the potential to make any projections less accurate predictors of reality.

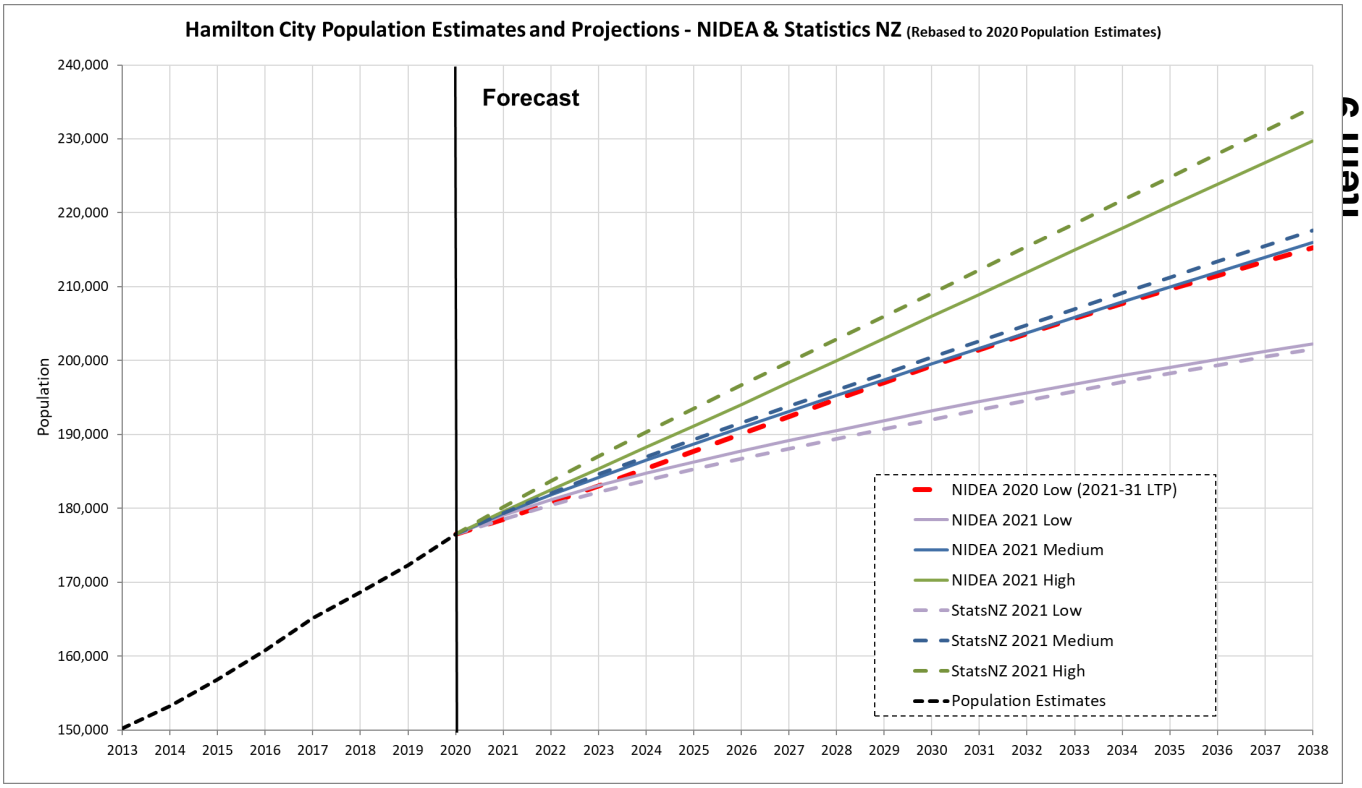
42. The peer review concluded that – in the context of demographic projections where the future cannot be known with certainty and without having access to more detailed data – it is considered that the NIDEA 2021 demographic projections are reasonable.

Population Projections

43. Figure 1 below illustrates and compares the NIDEA 2021 (all scenarios), NIDEA 2020 Low (2021-31 LTP) and StatsNZ 2021 (all scenarios) population projections, which have all been rebased to the 2020 Population Estimate for Hamilton city.

44. It should be noted that Statistics NZ has indicated the 2019 and 2020 Population Estimates for Hamilton city are still provisional; they are to be finalised in September 2021, and have the potential to change. This is particularly relevant given the migration uncertainties related to the Covid-19 border closures.

Figure 1 – Hamilton City Population Estimates and Projections – NIDEA & Statistics NZ - Rebased to 2020 Population Estimates



45. As mentioned in the peer review, the NIDEA 2021 population projections are similar to the StatsNZ 2021 projections, with the exception of the high scenario. The StatsNZ 2021 High scenario projects approximately 3,283 more people than the NIDEA 2021 High scenario at the end of 2031.

46. Table 1 below illustrates the annual (fiscal year) difference in population projections between the NIDEA 2020 Low (the 2021-31 LTP scenario) and NIDEA 2021 High scenarios across the 2021-31 LTP 10-year timeframe. At the end of Year 1, Year 3 and Year 10 of the 2021-31 LTP, the nominal difference in population is 1,720, 3,404 and 7,489 respectively.

47. To put the difference into further context, the NIDEA 2021 High scenario is projecting that Hamilton city reaches 200,000 residents by 2028, which is approximately 3 years earlier than the NIDEA 2020 Low scenario.

Table 1 – Annual (Fiscal Year) Hamilton City Population Projections – Rebased to 2020 Population Estimates

Scenario	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
NIDEA 2020 Low (2021-31 LTP)	180,741	183,036	185,377	187,741	190,090	192,422	194,744	197,038	199,276	**201,483**
NIDEA 2021 High	182,461	185,359	188,238	191,145	194,079	197,036	200,012	202,995	205,982	**208,972**
Difference	1,720	2,323	2,861	3,404	3,989	4,613	5,268	5,957	6,706	**7,489**

48. Accordingly, staff recommend the NIDEA 2021 High population scenario for Hamilton to be used for the purpose of planning and the development of the 2022-23 Annual Plan. This aligns with current trends in population estimates and aligns best with staff's expected population growth trajectory.

Household Projections

49. Household/dwelling growth drives the Councils' growth planning and capital investment, yield/uptake analysis and revenue.

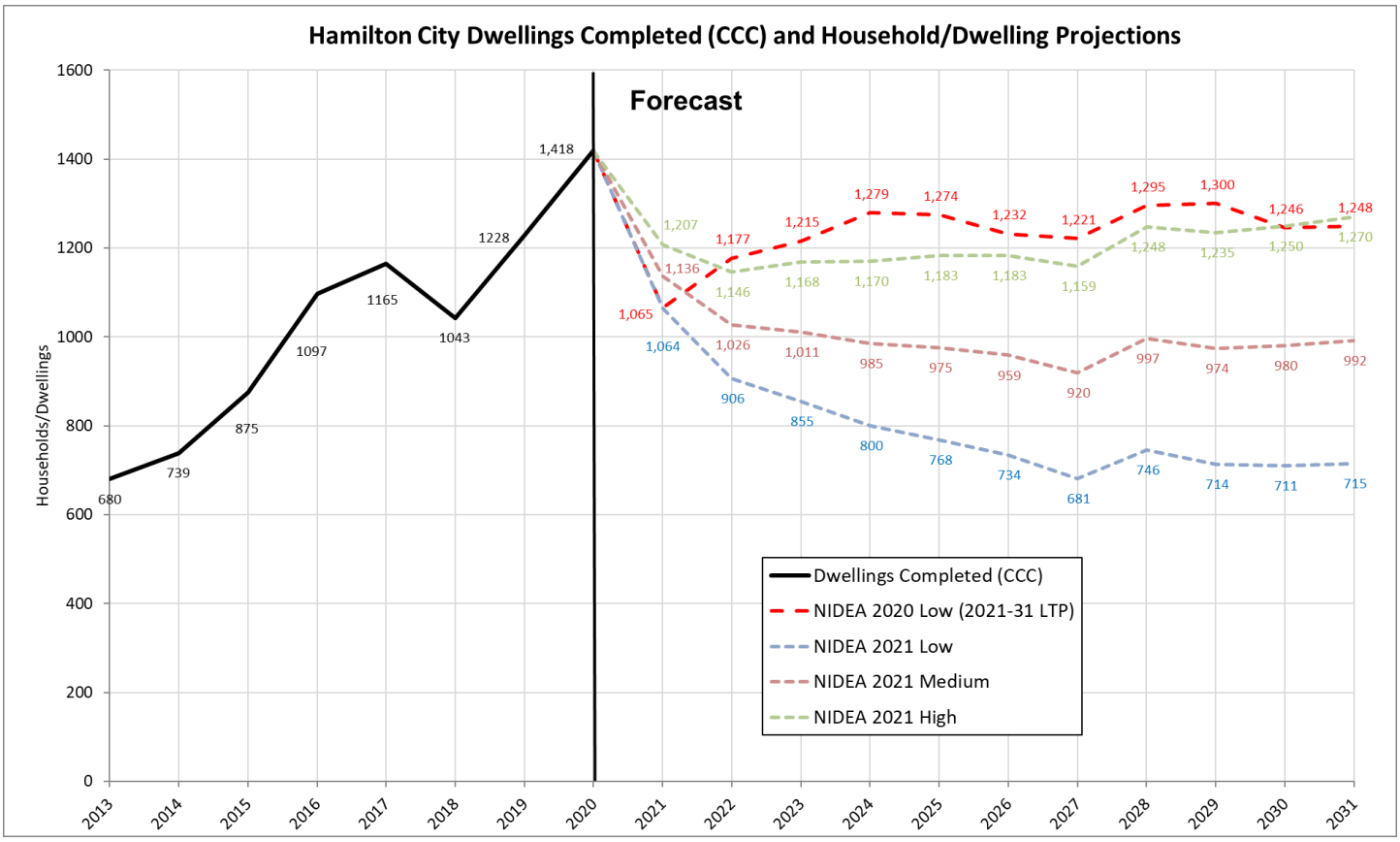
50. Household projections are an output of a demographic model, which considers population cohorts and household living arrangement types to determine and project the number of

households per year. Councils use growth in household projections as a proxy for the number new dwellings that are expected to be built in any given year.

51. Household projections are infrequently updated/generated, often only once or twice between every 5-year Census period.

52. Figure 2 below illustrates and compares the NIDEA 2021 (all scenarios) with the NIDEA 2020 Low household projections (Statistics NZ have not yet released updated household projections). The NIDEA 2021 High scenario is very similar to the NIDEA 2020 Low scenario.

Figure 2 – Hamilton City New Dwellings Completed (CCC) and Household/Dwelling Projections



53. Table 2 below illustrates the annual (fiscal year) difference in the household/dwelling projections between the NIDEA 2020 Low and NIDEA 2021 High scenarios across the 2021-31 LTP 10-year timeframe. The total difference in projected households/dwellings between the two scenarios across the full 10-year timeframe is 477 less households/dwellings.

Table 2 – Annual (Fiscal Year) Hamilton City Additive Household/Dwelling Projections

Scenario	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
NIDEA 2020 Low (2021-31 LTP)	1,177	1,215	1,279	1,274	1,232	1,221	1,295	1,300	1,246	1,248	**12,488**
NIDEA 2021 High	1,146	1,168	1,170	1,183	1,183	1,159	1,248	1,235	1,250	1,270	**12,011**
Difference	-30	-48	-109	- 92	- 48	-62	-48	-65	4	22	**-477**

54. Accordingly, staff recommend the NIDEA 2021 High scenario for Hamilton to be used as a base input in planning and development of the 2022-23 Annual Plan. However, staff recognise that the NIDEA 2021 High scenario is projecting lower households than recent consenting activity trends.

Proposed 'dwelling' projection model

55. Staff are seeking approval to investigate and develop a new 'dwelling' projection model to support the planning and development of the 2022-23 Annual Plan, using the NIDEA 2021 High demographic projections as a base.

56. Using household projections to underpin growth planning and capital investment has generally been sufficient historically and is used by most councils; however, Hamilton City Council now requires a more robust and agile method in determining the expected growth in new dwellings, particularly for the short to medium timeframes.

57. The proposed dwelling model will use a Machine Learning methodology to predict future dwelling growth from demographic, economic, land use, housing supply and consenting pipeline data for the short to medium term timeframes (1-3 years, 5-10 years) and draw on the base household projections for the longer term (10+ years).

58. The proposed dwelling model will give Council a more robust and 'on the ground' set of projections on which to base future growth planning and capital investment. The model is also proposed to be updated monthly, giving the Council much more agility to respond to ups/downs of the economy and construction industry.

59. The dwelling projections model is expected to be resourced and completed internally by staff, peer reviewed by a reputable external organisation once complete, and results presented to Elected Members in Q4 2021.

Futureproof

60. The final NIDEA 2021 projections were presented to the Waikato Projections Group on 19 April 2021, which consisted of staff representatives from the Futureproof partners.

61. Several key points were raised in the minutes:

    a) A consistent set of projections across the Futureproof partner councils is critical;

    b) There was a clear preference from attending HCC and Waikato District staff for the high population scenario, while Waipa District staff originally preferred medium, but agreed to support high scenario; and

    c) A high population scenario is considered most plausible, considering:

        i) Futureproof is a high growth area;

        ii) it supports the development of spare capacity (for HBAs) compared to a medium (or low) scenario;

        iii) it provides positive signals for regional spatial planning across the Waikato (as part of the proposed Strategic Planning Act);

        iv) overcapacity is not an immediate problem; if needed, we can adopt high growth and be confident we have enough land supply to meet the obligations.

Financial Considerations - *Whaiwhakaaro Puutea*

62. There are no direct financial considerations in relation to the recommendation in this report. However, there are broad financial implication in terms of infrastructure provision and funding if a different growth projection series is adopted as opposed to the one recommended by staff.

Legal and Policy Considerations - *Whaiwhakaaro-aa-ture*

63. The National Policy Statement – Urban Development (NPS-UD) requires councils to assess their capacity for housing and business use in the short, medium and long term. This assessment includes analysis of demand, driven by household projections, compared with the amount of land enabled for these uses and supplied or planned with infrastructure. A 20% margin of supply above demand is required in years 1-10 and a 15% margin in years 10-30.

64. If a land shortage is identified (i.e. demand is predicted to be higher than supply), the NPS-UD requires the Council to increase development capacity through a plan change or other mechanisms to increase the supply of land. Therefore, the Council may be required to plan additional growth cells and provide infrastructure, or to bring forward the provision of infrastructure in existing growth cells to provide enough development capacity to meet demand plus a 20% buffer.

65. There are no legal considerations in relation to the recommendations in this report, there for staff confirm that the recommendation complies with the Council's legal and policy requirement.

Wellbeing Considerations - *Whaiwhakaaro-aa-oranga tonutanga*

66. The purpose of Local Government changed on 14 May 2019 to include promotion of the social, economic, environmental and cultural wellbeing of communities in the present and for the future ('the 4 wellbeings').

67. The subject matter of this report has been evaluated in terms of the 4 wellbeings during the process of developing this report as outlined below. The recommendations set out in this report are consistent with that purpose.

68. Growth projections form the base of planning for our community.

69. Providing the right amount of infrastructure, particularly community infrastructure, is vital to the social, economic, environmental and cultural wellbeing of Hamiltonians. Providing too little can be detrimental, while providing too much could result in increased costs for residents in the form of rates and service charges.

70. Staff are confident that the projections mentioned in this report will be the most appropriate for planning in the 2021-31 LTP and the subsequent 2022-23 Annual Plan, and will allow the Council to ensure that the four wellbeings are well supported.

Social

71. Growth projections are demographic projections, including age/sex and the makeup of households in Hamilton over time. Growth projections assist in planning infrastructure and services in anticipation of a growing and changing city.

Economic

72. The projections help the Council to plan appropriate services and development capacity for a growing and changing city. Appropriate services and development capacity help enable economic growth.

Cultural

73. Cultural wellbeing is enabled by planning for city infrastructure and services to acknowledge and support their local communities' shared cultural attributes.

Environmental

74. The growth projections are crucial to informing how the city will grow and help inform the Councils ability to plan or mitigate the environmental impacts this growth might cause.

Risks - *Tuuraru*

75. If the Council were to change its growth projections now, it may introduce material risks to the timely adoption of its 2021-31 LTP, as outlined above in the report.

76. If growth is significantly different to the projections, there are broad financial implication in terms of infrastructure provision, funding and timing.

Significance & Engagement Policy - *Kaupapa here whakahira/anganui*

77. Staff have considered the key considerations under the Significance and Engagement Policy and

have assessed that the matter(s) in this report has/have a medium level of significance.

78. Community views and preferences are known to the Committee through the consultation and verbal submissions Long Term Plan process.

Attachments - *Ngaa taapirihanga*

Attachment 1 - NIDEA 2018-base Population, Family and Household, and Labour Force Projections for the Waikato Region, 2018-2068

Attachment 2 - Peer Review of NIDEA Growth Projections

THE UNIVERSITY OF WAIKATO
Te Whare Wānanga o Waikato

2018-base Population, Family and Household, and Labour Force Projections for the Waikato Region, 2018-2068

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Commissioned Research Report (Final Draft)

Prepared for Waikato Regional Council

April 2021

2018-base Population, Family and Household, and Labour Force Projections for the Waikato Region, 2018-2068

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The views expressed in this report are those of the authors and do not reflect any official position on the part of the University of Waikato.

Disclaimer

The projections discussed in this report are based on historical data and assumptions made by the authors. While the authors believe that the projections can provide plausible and indicative inputs into planning and policy formulation, the reported numbers cannot be relied upon as providing precise forecasts of future population levels. The University of Waikato will not be held liable for any loss suffered through the use, directly or indirectly, of the information contained in this report.

Acknowledgements

We thank Statistics New Zealand for providing much of the data used to generate these demographic projections. We also thank Jacques Poot for helpful guidance on these and/or earlier projections, and Tony Fenton, Beat Huser, and Garry McDonald for comments on these and/or earlier projections.

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Executive Summary

This report outlines a set of 2018-base demographic projections of the Waikato Region, and all of the territorial authorities that are wholly or substantively contained within the region. The demographic projections include three variants (low; medium; and high) for each of population, family and household, and labour force, to a projection horizon of 2068.

The projections of total and age- and sex-specific populations were prepared using a newly-developed multi-regional cohort component model that covers the whole of New Zealand (except the Chatham Islands Territory), and incorporates separate components of population change for internal migration flows (based on a gravity model) and international migration flows (immigration and emigration Family and household, and labour force, projections were then derived from the population projections, by applying assumptions about living arrangement type rates and labour force participation rates respectively.

The overall picture in the demographic projections is one of regional population growth throughout the projection period. However, that growth is projected to be much slower for most TAs than their recent experience. For the most part, that can be attributed to a 'reset' in net international migration as a result of the coronavirus pandemic and associated border closures. The coronavirus pandemic has caused a substantial shift in population trajectory for the Waikato region and its territorial authorities.

The territorial authorities are projected to have slightly different trajectories, with different mechanisms underlying their patterns of growth and decline. Thames-Coromandel and Hauraki Districts are projected to experience spill-over growth from surrounding and nearby faster-growing TAs, combined with an old and ageing population age structure. Waikato, Matamata-Piako, Waipā, and Taupō Districts are projected to experience population growth driven by internal migration along with an ageing population. Hamilton City is projected to experience strong population growth driven by internal migration along with maintaining a relatively young population age structure. Otorohanga District is projected to experience similar effects to Hamilton City, but where net international out-migration is a more substantial feature. South Waikato and Waitomo Districts are projected to experience spill-over growth from surrounding and nearby faster-growing TAs that becomes more substantial over time, combined with maintaining a relatively young population age structure.

Overall, the number of households is projected to closely follow the trajectory of the population for each territorial authority, but made up of fewer couples with children and two-parent families, and more one-parent families and one-person households. The labour force projections also closely follow the trajectory of the population for each territorial authority, but are lower due to the ageing population.

Finally, this report offers some suggestions for future improvements to the model, assumptions, and associated projections.

1. Introduction

The Waikato Regional Council (WRC) approached the University of Waikato in 2016 with a request to produce new Territorial Authority (TA) level population, household and labour force projections for the Waikato Region, subsequent to the release of data from the 2018 Census. These projections use a newly-developed multi-regional cohort component model that covers the whole of New Zealand (except the Chatham Islands Territory), and incorporates separate components of population change for internal migration flows (based on a gravity model) and international migration flows (immigration and emigration). This represents an improvement on the previously used Whole-of-Waikato (WOW) population model, which had been used in previous 2013-base and earlier population projections developed by the University of Waikato (Cameron 2020a; 2020b; 2020c; Cameron and Cochrane, 2014a; 2015; 2016; Cameron *et al.*, 2007; 2008; Jackson et al., 2014b), as well as being integrated into the Waikato Integrated Scenario Explorer (WISE) model (Rutledge *et al.*, 2008; 2010). The WISE model is a systems-based integrated model that incorporates economic, demographic, and environmental components across the entire Waikato Region. The new population projections model is not incorporated directly into WISE, but remains a key input into the WISE model.

This report briefly summarises the the Waikato 2018-base population projections for TAs in the Waikato Region. The methodology underlying the new population model is described in detail, along with the assumptions that were applied for the 2018-base projections. This model represents an improvement on previous models (e.g. Cameron and Cochrane, 2014; 2015; 2016), as it incorporates directional migration flows, and separates internal and international migration. It also incorporates improvements in the age distribution of migration. These improvements to the population model were requested subsequent to a peer review of the WOW population model (Wilson, 2015). The family and household, and labour force, projections derived from the population projections follow a similar methodology as that employed in Cameron and Cochrane (2016) for the 2016-updated Waikato projections.

This project continues to build on the pioneering demographic projections work by the University of Waikato (Cameron *et al.*, 2007; 2008). The model has developed over time, and the methodology and assumptions that are now employed are substantially different from those adopted for official Statistics New Zealand (SNZ) projections. The population model generates projections for all of the TAs in New Zealand (with the exception of Chatham Islands Territory).

However, in this report we limit ourselves to reporting the results for TAs that are wholly or substantively contained within the Waikato Region.

Three projection variants were developed for the TA-level population, family and households, and labour force: (1) a low-variant; (2) a medium-variant; and (3) a high-variant. As discussed in Section 2.9 of the report, these three variants should be interpreted as individual scenarios from the many possible futures that could be realised for population, family and households, and the labour force. In sum, this project involved calculating population, family and household, and labour force projections for each TA in the Waikato Region, and for the region in total, for each of the three variants (low, medium, and high). These projections will feed into a follow-up report on population, and family and household, projections at the SA2 statistical area level (Cameron and Cochrane, 2021 forthcoming). In addition, a fourth scenario was prepared for population only, which ignored the assumed impact of the coronavirus pandemic (see Section 2.7 for further details).

The projections were delayed several times due to delays in the release of necessary data from the 2018 Census of Population and Dwellings.[1] In particular, the 2018-base Estimated Resident Population data for June 2018 was only updated and made available by SNZ in October of 2020.[2] Moreover, at the time of compiling these projections, updated fertility and mortality assumptions from SNZ were not available (see Section 2.4), nor were living arrangement type rate assumptions (see Section 2.10). However, our expectation is that the lack of these assumptions does not lead to significant bias in the resulting projections, and waiting for their availability would have further delayed delivery of this report and the associated projections.

The remainder of the report is structured as follows:

- Section 2 briefly summarises the data and methodology used in preparing the projections;
- Section 3 presents and briefly discusses the national-level population projections, obtained by summing the TA-level projections for the entire country;
- Section 4 presents and briefly discusses the TA level demographic (population, family and household, and labour force) projections, for all (low-variant, medium-variant, and high-variant) scenarios; and

[1] For example, see https://www.stats.govt.nz/news/2018-census-data-release-delayed.
[2] See https://www.stats.govt.nz/information-releases/subnational-population-estimates-at-30-june-2020.

- Section 5 concludes.

2. Data and Methods

2.1 Data

The data used in the formulation of these projections were sourced from Statistics New Zealand (SNZ). This includes national and subnational data from the five-yearly Census of Population and Dwellings (1991, 1996, 2001, 2006, 2013, and 2018), SNZ national and subnational population estimates, national and subnational period life tables, national and subnational vital statistics data, the SNZ subnational demographic projections series, and the reported assumptions underlying those projections. The TA-level boundaries for the projections are consistent with boundaries at the time of the 2018 Census of Population and Dwellings.

In each case, the TA-level projections presented in this report are for the whole territorial authority. In the case of the Waikato Region projections (see Section 4.12), the projections are for the whole Waikato Region. The regional projections require some post-hoc calculations because of the inconsistency in boundaries between TAs and the region. Specifically, in the Waikato region projections we assume that the proportion of the TA-level population (and families and households, and labour force) that lives outside of the region (for Waitomo and Taupō Districts), and the proportion of the TA-level population (and families and households, and labour force) that lives inside the region (for Rotorua District), remains constant over time.

2.2 The Cohort Component Model

The most common methodology used to generate population projections relies on the cohort component model, which dates back at least to Whelpton (1928). This is the methodology used by SNZ, the major supplier of data on current and projected population size, growth and structure for New Zealand regions and districts. In recent years, new methodologies have been developed for population projections, such as stochastic and microsimulation approaches (see e.g. Dharmalingam and Pool, 2006). This report adopts a new methodology for the cohort component model, improving on the methodology originally developed by Cameron et al. (2007; 2008) and used in subsequent projections (Cameron 2020a; 2020b; 2020c; Cameron and Cochrane, 2014a; 2015; 2016; Jackson et al., 2014b).

The general approach that was used in developing the population projections is as follows. The current population (base population) is first defined, and then assumptions are made about demographic changes to this population, which are then applied using the cohort component model. The cohort component model is a stock-flow model that is based on the following fundamental 'accounting identity' of population growth:

usually resident population in area *i* at the end of year *t*

= usually resident population in area *i* at the beginning of year *t*

+ births to mothers residing in area *i* during year *t*

– deaths of residents of area *i* during year *t*

+ inward migration from other regions into region *i* during year *t*

– outward migration of residents from area *i* to other regions during year *t*

+ inward migration from overseas into region *i* during year *t*

– outward migration of residents from area *i* to overseas during year *t*

Starting with a given base year usually resident population (see Section 2.3), the usually resident population one year later is calculated using the equation above. This end-year usually resident population becomes the start-year usually resident population for the next iteration of the model. This procedure is repeated for each year through to the end of the projection period (the projection horizon), and separately for each sex. Separate assumptions are used for each of the demographic 'drivers'. Births are derived by multiplying age-specific fertility rates by the numbers of women of childbearing age (13-49) (see Section 2.4). Deaths are derived by multiplying age- and sex-specific mortality rates by the numbers of people of each age and sex (see Section 2.4). Age- and sex-specific internal migration flows are derived by applying an age-sex-specific migration profile to total internal migration flows between pairs of TAs derived from a gravity model (Poot *et al.*, 2016). Age- and sex-specific international migration flows are derived by applying an age-sex-specific migration profile to total international migration flows (separately for immigration and emigration).

The procedure for deriving estimates of migration flows is a key departure from the method employed by SNZ, and is also the main improvement on the method previously employed in projections by the University of Waikato (e.g. Cameron and Cochrane, 2016). Another key

departure from the modelling approach used by SNZ is that our model is bottom-up, rather than top-down (Willekens, 1983). A top-down approach projects the population at the national level first, using a national-level model, then projects each sub-national area either separately or as part of a multi-regional model. The sub-national projections in a top-down approach are constrained to sum to the previously determined national projection. A bottom-up approach instead projects each subnational area separately first, and derives a national projection as a sum of the subnational projections. The bottom-up approach has the advantage of more accurately reflecting differences in sub-national drivers of population change; however, the lack of an 'adding-up' constraint could lead to unrealistic national-level projections (which can be addressed through appropriate calibration of the model, as described in Section 2.8). For more on the advantages and disadvantages of top-down versus bottom-up approaches to population projections, see Cameron et al. (2021).

The remainder of this section describes the methods used for deriving each of the components used in the cohort component model, as well as the methods used to validate and calibrate the model. Finally, the methods employed in the family and household projections and labour force projections are described.

2.3 Base Populations

The base populations used for the projections were the Estimated Resident Populations (ERP) at 30 June 2018, revised by SNZ in 2020. As this ERP is only reported by SNZ in 5-year age groups, the single-year age groups necessary for the population projection model were derived by interpolating the ERP for each territorial authority using the TA-level Census Usually Resident Population (CURP) counts by single-year-of-age from the 2018 Census of Population and Dwellings. Separate interpolations were undertaken for each sex.

2.4 Fertility and Mortality Assumptions

The fertility and mortality assumptions used in the projections were initially based on the subnational 'medium' fertility and mortality assumptions used by SNZ in their 2013-base subnational population projections. These are the same fertility and mortality assumptions as used in the Waikato 2016-update demographic projections (Cameron and Cochrane, 2016).

More recent SNZ assumptions (i.e. those used in their 2018-base subnational population projections) were not available at the time that these projections were developed. Moreover, having considered alternative time series for fertility and mortality, in the past the assumptions used by SNZ with respect to fertility and mortality in their subnational population projections have proven to be adequate for our purposes (see Cameron *et al.*, 2007; 2008), and they remain relevant and generally unbiased even five years later. As SNZ use past fertility and mortality (survivorship) rates based on the official deaths and births statistics to develop their projections, the SNZ assumptions therefore represent an appropriate starting point.

Age-specific fertility rates by single-year-of-age (of the mother) were derived by first interpolating the five-year subnational age-specific fertility rate using the national-level age-specific fertility rate profile by single-year-of-age. The resulting profiles were then scaled to match the projected total fertility rate (from SNZ) for each territorial authority. The total fertility rate for each territorial authority was assumed to follow the SNZ projections to 2043 then remain invariant after 2043. Sex at birth was assumed to follow a constant pattern similar to past trends, with 105.5 males for every 100 females at birth.

However, during the calibration process (see Section 2.8), it became clear that the SNZ fertility assumptions generate far too many births at both the national and subnational levels, and resulted in a projected national population that was implausibly high. This was confirmed by comparing the number of projected births by TA for the June years 2018 to 2020, with the actual numbers reported in vital statistics data. In part, this over-projection of births arose because New Zealand has been going through a period of historic low fertility.[3] To better account for this lower-than-expected fertility, we scaled the SNZ fertility assumptions for each TA down so that they replicated the 2018-2020 total number of reported births, then applied the TA-level scaling factors to all of the future projected age-specific fertility rates. Ultimately though, a better approach for future projections may be to generate our own age-specific fertility rate projections that adequately capture current fertility trends. We leave this as an exercise for future improvements in the projections model.

In terms of mortality, age-specific survivorship rates by single-year-of-age and sex were derived by first interpolating the survivorship rates from the subnational abridged life tables for each territorial authority using the national life tables by single-year-of-age. The resulting

[3] For example, see https://www.stats.govt.nz/news/new-zealands-birth-rate-lowest-on-record-deaths-drop-in-2020.

profiles were then scaled to match the projected life expectancy at birth for each territorial authority. Life expectancy at birth for each territorial authority was assumed to follow the SNZ projections to 2043, then continue to improve in a linear fashion through until 2068. This represents a slight modification on the previous mortality assumptions, which assumed no further improvements in life expectancy after 2043 (Cameron and Cochrane, 2016).

2.5 Internal Migration Model

In a departure from previous University of Waikato population projection models, we derive the internal migration flows using a gravity model. The gravity model of migration is an empirical regularity, and recognises that the migration flow between two places (the origin *i*, and the destination *j*) depends on the 'economic mass' of the origin and destination (proxied by the population size), and the distance between them (Poot et al., 2016). Specifically, migration flows (in both directions) between larger origins and destinations, and between places that are closer together, are substantially larger (holding other factors constant) than migration flows between smaller origins and destinations, and between places that are further apart.

We first estimated the internal migration gravity model using 2013 and 2018 Census data on internal migration flows, population estimates, and inter-TA distances. We limited our analysis to two consecutive Censuses to avoid, because taking more data could lead us to under-weight more recent structural factors that affect internal migration and over-weight historical trends.

Internal migration flows data were derived from the Census question on address five years ago, combined with current address. We used those data to construct an origin-destination matrix for all people who answered the address-five-years-ago question in the 2013 Census, and anyone for whom the same data were available for the 2018 Census.[4] Population data were the estimated usually resident population by TA at 30 June of 2013 and 2008 (the population at the start of each five-year period). Distance was the straight-line distance between the geographic centroid of each TA. Poot et al. (2016) showed that the gravity model is robust to the choice of alternative distance measures. In addition, we included dummy variables for internal migration

[4] The address-five-years-ago question was not asked in the 2018 Census. Instead, an address-one-year-ago question was asked, and data on address-five-years-ago were constructed by SNZ from administrative data sources, as well as data from the 2013 Census. See http://datainfoplus.stats.govt.nz/item/nz.govt.stats/58180123-b856-4fed-9b91-b006d16e43b8/13/ for further details.

flows between geographically contiguous (i.e. neighbouring) TAs, and between the North and South Islands. Past research has shown that internal migration flows between the islands are much lower than can be explained purely by distance (Poot, 1986). To ensure the model picks up idiosyncratic differences in push and pull factors between TAs, it also includes origin and destination fixed effects. This specification of gravity model has previously been successfully used for inter-regional (Cameron and Poot, 2014a; 2014b) and inter-urban (Poot et al., 2016) migration flows in New Zealand.

The resulting gravity model is shown in Table 1. Overall, the model explains around 84.9% of the variation in internal migration flows. The origin population is statistically significant and has the expected positive sign. The destination population is not statistically significant and is negative in sign; however, this is not unusual in a gravity model that also includes both origin and destination fixed effects, and it is not straightforward to interpret the coefficients on the population variables (Cameron and Poot, 2019). The distance variable is negative and highly statistically significant. The contiguity and Cook Strait dummy variables are also statistically significant and of the expected sign.

Table 1: Gravity model of internal migration

Variable	**Coefficient (Standard Error)**
Ln(Origin Population)	1.171*** (0.289)
Ln(Destination Population)	-0.345 (0.275)
Ln(Distance)	-1.010*** (0.016)
Cook Strait Dummy	-0.480*** (0.023)
Contiguity Dummy	0.536*** (0.038)
N	7,630
Adjusted R^2	0.8491

N.B. Origin and destination fixed effects are omitted from the table for brevity; * p<0.1; ** p<0.05; *** p<0.01.

The gravity model shown in Table 1 was embedded within the population model. The projected internal migration flows depend on the populations of origin and destination at a given point in time, as well as the time-invariant distance, contiguity, and Cook Strait variables, and the fixed effects. The embedding of the gravity model within the population model represents one of the

key innovations in this latest population model, and has been developed over a number of years (Cameron and Poot, 2013; 2014a; 2014b; 2016).

The gravity model provides a projection of the *total* annual internal migration flow between each pair of origin and destination TAs in each year. To convert this total into *age-sex-specific* migration flows, we first estimated a profile of the age-specific in-migration rates based on address-five-years-ago data for each TA from the 2018 Census. The age-specific migration profile for each TA was based on data for that TA as a destination, as this was expected to more accurately reflect age-specific origin-destination internal migration flows. These data were first smoothed using the model migration schedule method described by Rogers et al. (1978) and the Microsoft Excel algorithm developed by Wilson (2010). Then, a second round of smoothing was used to reduce high migration rates at older ages for some TAs. Finally, each migration profile was standardised to sum to one. Separate migration profiles were not developed by sex, due to the sparse nature of the data for many TAs. Instead, internal migration flows were assumed to be equally prevalent for each sex (in effect, each migration profile was converted to a sex-specific migration profile that was standardised to sum to 0.5). For some TAs, the migration profile algorithm could not convert to a plausible profile. In those cases, mostly occurring for TAs with small populations (and hence a small number of internal migrants), the profile for a neighbouring TA was substituted. This process was not necessary for any TAs in the Waikato region.

An example of a resulting migration profile is shown in Figure 1, for Hamilton City. Note that there is a significant peak in migration flows to Hamilton City at young ages, followed by a tapering off at older ages. In contrast, other TAs often have a peak of in-migration at older ages, representing retirement migration flows.

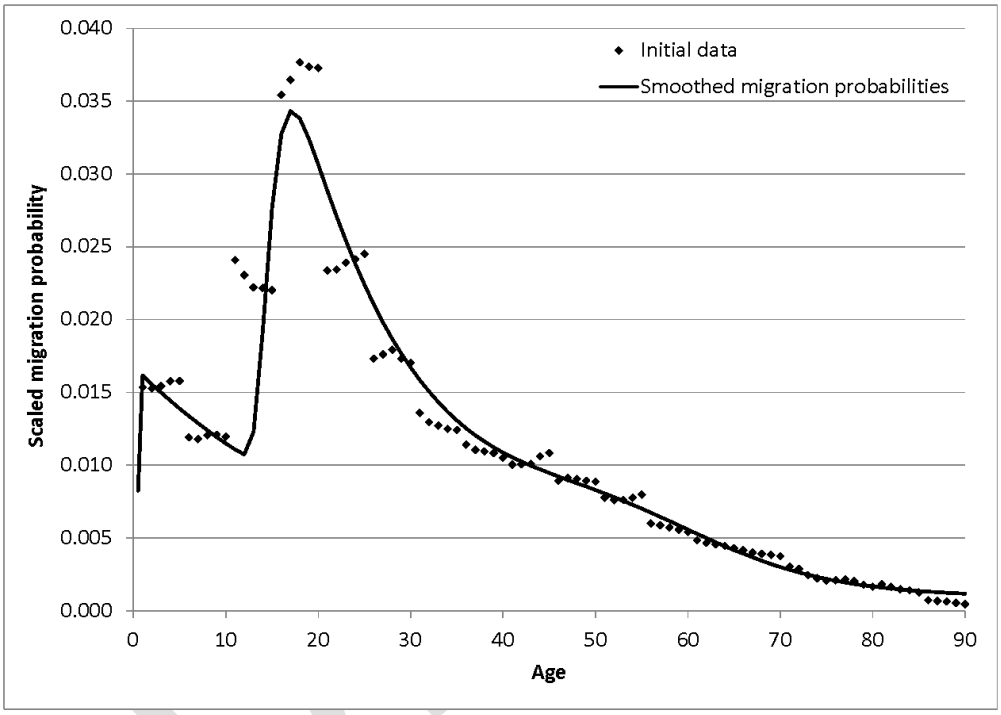
2.6 International Migration Assumptions

International migration flows represent the most challenging component of population change to project, due to the extensive uncertainty over their future trajectory. Our original intention was to model emigration based on a TA-specific partial gravity model, and immigration based on a time series model, with TA-specific immigration flows based on TA-level population shares. This is the approach adopted by IPSS in Japan for their subnational projections.[5]

[5] See http://www.ipss.go.jp/site-ad/index_english/population-e.html.

However, when we tested various structural models of international migration flows (immigration and emigration), based on partial gravity models, these models either did not perform well in-sample, or generated projections of future emigration flows that were implausibly large.

Figure 1: Age-specific in-migration profile for Hamilton City



We then tested various time series econometric models of national-level international migration flows (both immigration and emigration). The best model, in terms of both in-sample and out-of-sample performance, appears to be a fairly simple error correction model. This model takes a long-run average level of immigration and emigration, and 'decays' deviations from that long-run average over time, until the flows reach the average. In principle the long-run average could be replaced by a time trend, but in this case the time trend would lead to implausibly large projected migration flows, especially later in the projection period. The long-run average for both immigration and emigration was taken as the average annual level over the period

from 1990-2020. The optimal 'decay rate' in the error correction model for immigration was 27 percent (meaning that the difference between the projected annual immigration flow and the long-run trend reduced by 27 percent each year), while the optimal 'decay rate' in the error correction model for immigration was 31 percent.

Figure 2 illustrates the actual and projected national-level immigration flows. All scenarios are presented (see Sections 2.7 and 2.8 for further details on the different variant scenarios). This figure clearly shows the historically high immigration flows that New Zealand has experienced in recent years, as well as the variability in those flows. The impact of the coronavirus pandemic is evident in the substantial drop in immigration in the June 2021 year, followed by a gradual error correction back to the long-term trend level of immigration, which is 106,947 per year. Figure 3 shows the corresponding data for emigration, with similar features, and a gradual error correction back to the long-term trend level of emigration, which is 83,842 per year. Figure 4 shows the data for net international migration (immigration minus emigration), where the high degree of uncertainty is clearly on display.

Figure 2: Actual and projection national-level immigration flows, 2002-2068

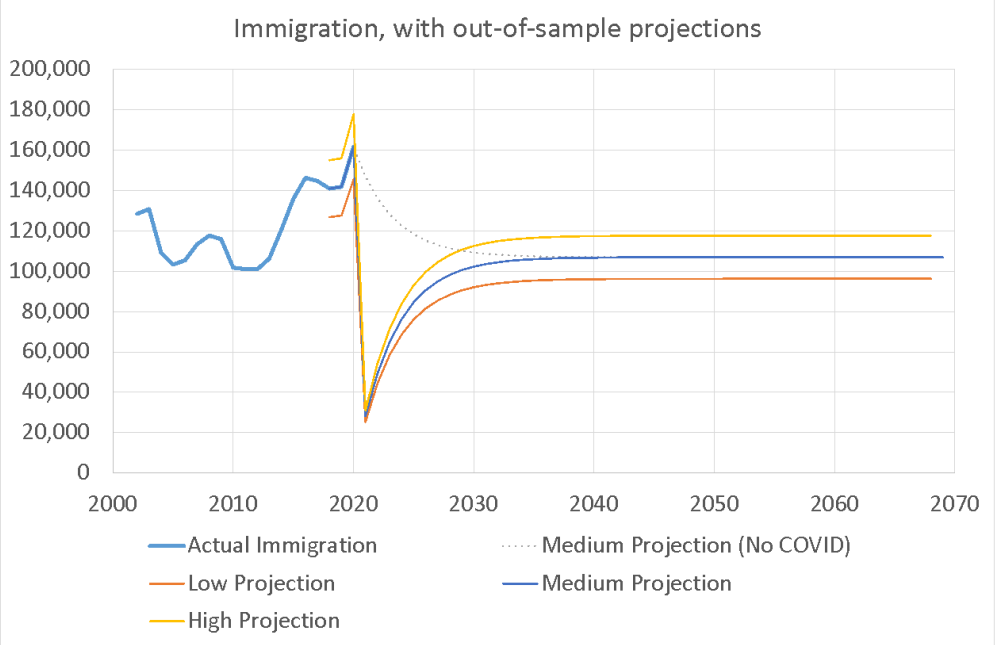


Figure 3: Actual and projection national-level emigration flows, 2002-2068

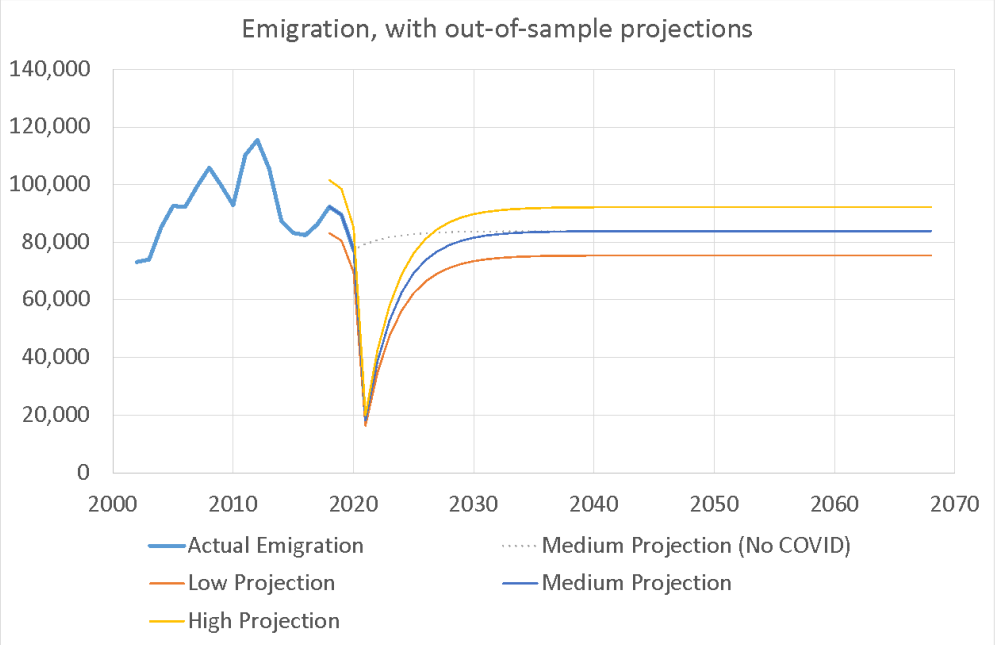
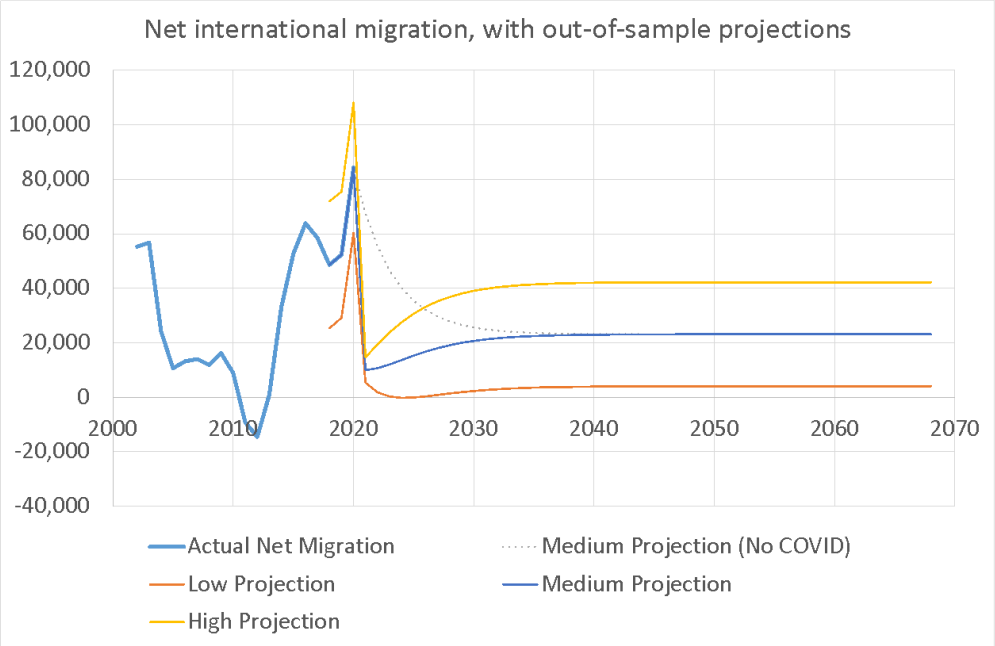


Figure 4: Actual and projection national-level net international migration flows, 2002-2068



Similar to the gravity model of internal migration, the error correction models provide projections of annual *total* international migration flows in each direction (emigration and immigration), but at the national level. To apportion immigration and emigration flows by TA, we first attempted structural modelling (as noted above). We then compared the TA shares of immigration and emigration flows with TA shares of population for the periods 2008-2013 and 2013-2018 (as reported in the 2013 and 2018 Censuses). Having tested various apportionments based on population shares of immigration and emigration, we identified that apportionment based on a modified share of population provided a plausible projection of future flows across TAs. The modified share of emigration for each TA was the share of population for each TA, with the exception of Auckland, where the share was decreased by 17.53 percentage points (being the average difference between Auckland's population share and its share of past emigration).[6] Emigration shares were then standardised to sum to one. Similarly, the modified share of immigration for each TA was the share of population for each TA, with the exception of Auckland, Hamilton City, Wellington City, Christchurch City, and Queenstown-Lakes District, where the shares were increased by 14.42, 0.40, 1.98, 1.33, and 1.23 percentage points respectively (being the average difference between those TA's population share and their share of past immigration).[7]

That process provides TA-specific *total* emigration and immigration flows. To convert these totals into age-sex-specific international migration flows for each TA, we estimated separate of the age-specific immigration and emigration profiles based on address-five-years-ago data for each TA from the 2018 Census. The age-specific immigration profile for each TA was based on data for that TA as a destination, as this was expected to more accurately reflect age-specific international migration flows. The age-specific emigration profile for each TA was based on data for that TA as an origin for *internal* migration flows, because data on emigration flows are not available.[8] The process of developing the profiles was identical to that used for internal migration profiles, with each migration profile was standardised to sum to one. Separate migration profiles were not developed by sex, again due to the sparse nature of the data for many TAs. Similar to the case for internal migration profiles, for some TAs, the migration profile algorithm could not convert to a plausible profile. In those cases, mostly occurring for TAs with small populations (and hence a small number of internal migrants), the

[6] Auckland is a significantly smaller contributor to emigration flows than would be implied by its population share.
[7] Auckland, Hamilton City, Wellington City, Christchurch City, and Queenstown-Lakes District are significantly larger recipients of immigration flows than would be implied by their respective population shares.
[8] Emigrants are not observed in the Census because they have moved overseas.

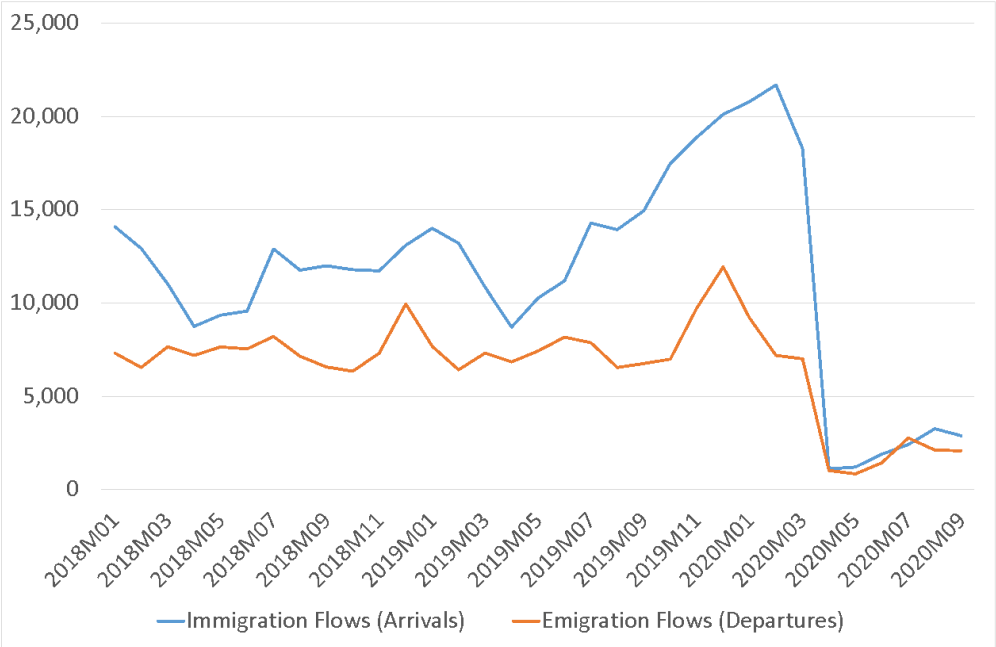
profile for a neighbouring TA was substituted. In the Waikato Region, only one TA was affected, with the emigration profile for Waikato District replaced by the profile for Waipā District.

2.7 The Projected Impact of the Coronavirus Pandemic

One challenge to contemporary population projections in 2020/21 is anticipating and projecting the impact of the ongoing coronavirus pandemic. New Zealand has been fortunate to avoid the worst impacts on mortality that many other countries are experiencing (Balmford et al., 2020). Thus, we assumed no current or future impact on mortality arising from the pandemic. Similarly, there is little evidence currently to support significant changes in fertility as a result of the pandemic. While it is known that fertility is lower in times of economic recession (Sobotka et al., 2011), the New Zealand economy has bounced back from the pandemic well, and other than some changes in the timing of births, we anticipate no long-run deviation from trend fertility as a result of the pandemic. We also anticipate no change in internal migration flows, which might only be disrupted for short periods as the result of geographically-specific and time-limited lockdowns.

In contrast, international migration flows have been heavily affected by the pandemic. This is illustrated in Figure 5, which shows monthly immigration and emigration flows over the period from January 2018 to September 2020. After the coronavirus pandemic started, migration flows in *both* directions fell by around 80 percent, and have remained low since. Specifically, immigration flows in April-September 2020 were 82.6 percent lower than the corresponding months in 2019, and emigration flows in the same months were 76.5 percent lower. To account for the impacts of coronavirus on immigration and emigration, these percentage reductions were explicitly built into the projected immigration and emigration flows. The effect of this can be seen in Figures 2 and 3 above, by comparing the medium-variant projection with the medium (No COVID) projection. The medium projection starts low, with both immigration and emigration recovering to the long run trend over time. In contrast, the projection of immigration and emigration excluding the impact of the coronavirus pandemic start high and fall gradually over time towards the long run average.

Figure 5: Monthly international migration flows, 2018-2020



2.8 Validation and Calibration of the Population Model

Once the population model was parameterised, it was validated to ensure fidelity of the model, i.e. that all components (fertility and births; mortality and survivorship; internal migration; and international migration) were working as intended. This process identified no issues with the structure or initial parameterisation of the model.

Calibration of the model involved several stages. First, the projected number of births, by TA and in total for New Zealand as a whole, were compared with the actual number of births over the period from 2017 to 2020. As noted above, this resulted in a necessary downward adjustment to the projected total fertility rates for each TA. Second, the total population of New Zealand was calibrated by comparing the growth rate with recent national population projections. This resulted in no adjustment to the model parameters, as it confirmed a plausible path for future national population (in total, and by age and gender) (see also Section 3). Third, the total populations and growth rates for each TA were calibrated by adjusting the gravity model fixed effects, in order to more accurately reflect the relative growth rates from past subnational population projections. As no prior University of Waikato projections were

available for TAs outside of the Waikato and Bay of Plenty regions, the medium-variant 2013-base SNZ projections were used as the baseline for these comparisons. Finally, the TA-level age structures were calibrated through minor adjustments to the migration age profiles. This ensured that the model did not over- or under-project TA-level migration flows into or out of certain age groups, unbalancing the resulting age distribution.

2.9 Low-variant and High-variant Population Projection Assumptions

Following calibration of the medium-variant population projection model (see Section 2.8), other projection scenarios were run. In addition to the baseline (medium-variant) projections outlined above, we present low-variant and high-variant (as well as the medium-variant without COVID) population projections which are based on an alternative set of assumptions. These represent plausible alternative scenarios to the baseline (medium-variant) population projection scenario (see Section below on interpretation of the results).

For fertility and mortality, each age- and gender-specific rate (fertility, and mortality/survivorship) was multiplied by a shift factor, following Cameron and Poot (2010; 2011). The percentage change in each of the rates is given by k, whereby k is based on a distribution for fertility and mortality/survivorship. The entire deterministic path of fertility and mortality rates over the 2018-2068 projection period was shifted by the corresponding factors. In this way, setting all multipliers to zero would result in the baseline projection, and the multiplier was varied around zero to increase or decrease each rate.

Following Cameron and Poot (2010; 2011), distributional assumptions for each multiplier were based on observed data from 1950 to 2009. The fertility multiplier was assumed normally distributed with a mean zero and standard deviation of 1.25 (giving a range of about +/- 5% of the mean fertility rates). The survivorship multiplier was assumed normally distributed with mean zero and a standard deviation of 0.5 (i.e. giving a range of +/- 2% of the mean mortality rates).

For international migration (emigration and immigration), the high-variant projections assumed 10% lower emigration and 10% higher total immigration throughout the projection period, while the low-variant projections assumed 10% higher emigration and 10% lower total immigration throughout the projection period. These assumptions were based on observed variation in emigration and immigration over the period from 1980 to 2020, and approximately

represent one standard deviation lower, and higher, net migration flows for the low-variant and high-variant projections respectively.

The internal migration model was not adjusted for the low-variant or high-variant projections from that used for the medium-variant projections. That is because internal migration is a means of distributing population within the country, so by definition has no role in creating higher or lower projected populations, when the population of the entire country is being projected. That is, if internal migration were increased for some TAs, it must be reduced for other TAs, because the overall sum of net internal migration must be zero.

The interpretation of different projection scenarios is important. Specifically, the three variants (low, medium, and high) should be interpreted as individual scenarios from the many possible futures that could be realised for population, family and households, and the labour force. No scenario is any more likely than any other scenario of being the 'actual' path that future trends follow. However, the three variants (low, medium, and high) can be used to give a coarse representation of the uncertainty in the projections.

The medium-variant scenario represents approximately the centre of the distribution of all potential scenarios generated with this model and within the plausible distribution of assumptions. It is not exactly the middle of the distribution because the distribution of scenarios is likely to be asymmetric (for most TAs, the distribution has more 'upside risk' than 'downside risk') – for a demonstration of this, see Jackson et al. (2014a; 2014b), which include both a medium scenario projection, and a median stochastic projection. The interval between the low-variant scenario and the high-variant scenario represents approximately a 67 percent projection interval of all potential scenarios generated with this model and within the plausible distribution of assumptions. This interpretation was demonstrated by Stoto (1983) and Alho et al. (2008), and has recently been employed by Cameron *et al.* (2021) in a book chapter on uncertainty in subnational population projections. Under this interpretation, the interval between the low-variant and high-variant projections should be expected to capture the actual future population approximately 67 percent of the time. Approximately 33 percent of the time, the actual future population can be expected to be either higher than the high-variant projection, or lower than the low-variant projection.

An alternative way of interpreting the three variants (low, medium, and high) is that the low-variant projection is broadly representative of the bottom one-third of all potential scenarios generated with this model and within the plausible distribution of assumptions. The medium-

variant projection is broadly representative of the middle one-third of all potential scenarios generated with this model and within the plausible distribution of assumptions. The high-variant projection is broadly representative of the top one-third of all potential scenarios generated with this model and within the plausible distribution of assumptions.

Regardless of interpretation, it should be recognised that population projections are not a forecast of the future, unless they are considered alongside an appropriate measure of uncertainty. While the interval between the low-variant and high-variant projection adequately captures this uncertainty for the medium-variant projection, an even better method for representing uncertainty is to use stochastic population projections, where the uncertainty is directly modelled (e.g. see Cameron and Poot, 2010; 2011).

2.10 Family and Household Projection Methods and Assumptions

Projections of the future number of families and households were obtained by applying age- and gender-specific assumptions about future trends in living arrangement type rates (LATRs) and average household sizes to the projected population, as described in Cameron et al. (2007). The number of persons living in a particular living arrangement type is derived by multiplying the age- and gender-specific living arrangement type rate (LATR) by the number of persons at that age and gender and summating. LATRs can be thought of as the probability of an individual being in a particular living arrangement. Living arrangements include families (couples without children, couples with children, and one-parent families), other multi-person households (containing no families), single-person households, and people living in non-private dwellings (such as prisons, nursing homes, or student halls of residence). The number of households is made up of the number of family households (which is necessarily smaller than the number of families, because some households contain more than one family), other multi-person households, and single-person households.

We used LATRs and other assumptions (the average number of families per family household, and the average household size for other multi-person households) provided by SNZ, which were used in their 2013-base subnational family and household projections, as these were the best available data at the time of these projections. The 2016-update projections made a further modification of the base populations to account for people living in non-private dwellings. Following discussions with SNZ and careful inspection of the base data, we note that these

adjustments are not necessary. However, applying the LATR assumptions of SNZ clearly leads to an over-projection of families and households, compared with Census data (see Cameron and Cochrane, 2016). In the current projections, rather than making a population adjustment to better reflect the expected number of Census-year households at the beginning of the projection period (scaled to account for net Census undercount, as well as an adjustment for the difference between the March Census date and the 30 June projections date), we instead directly scaled the initial number of family households, other multi-person households, and single-person households to match the expected number in each TA. Those TA-specific scaling factors were then applied to the projected living arrangement type rates throughout the projection period, to ensure a consistent time series with the actual Census data on families and households in each TA.

LATRs were assumed to follow the SNZ projections to 2038, then continue to improve in a linear fashion through until 2068. This represents a slight modification on the previous LATR assumptions, which assumed no further changes in LATRs after 2038 (Cameron and Cochrane, 2016). In contrast, the number of households per multi-family household and the number of persons per other multi-person household were assumed to follow the SNZ projections to 2038, then held constant from 2038 through until 2068.

Separate family and household projections were created corresponding to each of the low-variant, medium-variant, and high-variant population projections. Each family and household projection used the same projected LATRs and other assumptions.

2.11 Labour Force Projection Methods and Assumptions

The Labour Force projections were obtained by applying age- and sex-specific assumptions about future trends in labour force participation rates (LFPR) to the population projections (see Cameron *et al*., 2007). Following Bryant *et al*. (2004) and Jackson *et al*. (2014b), we assumed three long-run trends in labour force participation would continue into the future, specifically we assumed that: (1) age- and sex-specific participation rates increase in a linear fashion to 2043 before stabilising and remaining constant thereafter; (2) the labour force participation of prime age women increases over a twenty year period (2018-2043) so that half of the age-specific gender gap in labour force participation in 2013 is closed by 2043 (i.e. if the difference in labour force participation rates between the genders in a particular age group was six

percentage points in 2018, we assume that the gap would have closed to three percentage points by 2043); and (3) current increases in labour force participation rates amongst older workers continue out to 2043 before stabilising.

In the case of the latter assumption, we essentially assume that over the twenty-year period 2018-2043 the labour force participation rate profile of those older than the age group in which peak labour force participation occurs ages by five years, e.g. in 2043 the labour force participation rates of 50-54 year olds will be equal to the participation rates of 45-49 year olds in 2018. In instances where this would result in a fall in the age specific participation rate the higher (previous) rate is used. Similarly, in applying the second assumption (on changes in the labour force participation of women), if the female labour force participation rate was higher than the male labour force participation rate in any age group the higher rate was used. This ensured that the labour force participation rate of women did not fall in any age group. The effect of considering these three assumptions separately can be seen in earlier projections (Jackson *et al.*, 2014b).

Separate labour force projections were created corresponding to each of the low-variant, medium-variant, and high-variant population projections. Each labour force projection used the same projected labour force participation rates, which correspond to Scenario 4 in Jackson et al. (2014b).

3. National-Level Population Projections

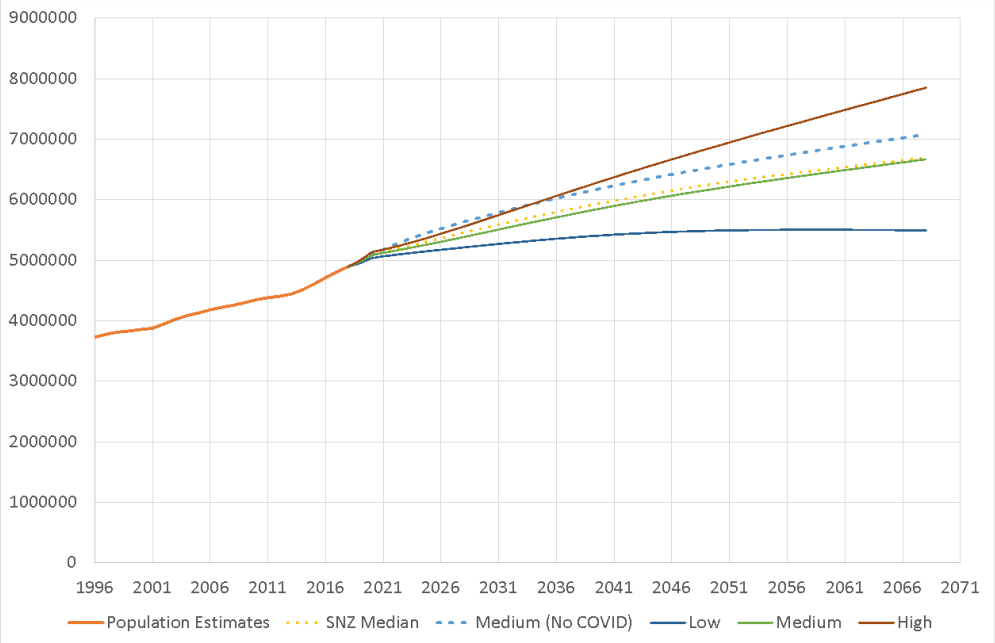
This section presents the population projections at the national level, obtained by summing the TA-level population projections for all TAs (except Chatham Islands Territory, which is not included in the model). As noted in the previous section, four projection scenarios are presented: (1) a low-variant population projection; (2) a medium-variant population projection; (3) a high-variant population projection; and (4) a medium-variant population projection that ignores the effect of the coronavirus pandemic. As noted in Section 2.9, the first three scenarios should be viewed as three possible futures, based on known assumptions about future fertility, mortality and net migration, and should not be interpreted as forecasts of future population.

Figure 6 presents the 2018-base national population projections to 2068, along with historical population estimates from Statistics New Zealand back to 1996. The 2020-base Statistics New

Zealand (SNZ) median stochastic projection is also included for comparison. A 2018-base national population projection from SNZ was no longer available at the time of writing.

The June 2018 national population estimate (base population) is 4.90 million. Under the medium-variant population projection scenario, the national population increases throughout the projection period, reaching 6.67 million in 2068. Under the low-variant scenario, the national population increases to a peak of 5.51 million in 2058 before declining to 5.50 million in 2068. Under the high-variant scenario, the population increases throughout the projection period, reaching 7.85 million in 2068. In comparison, the SNZ 2020-base median stochastic projection tracks very similar to the medium-variant projection presented here, with the national population projected to increase to 6.70 million in 2068. The low-variant projection is somewhat lower than the 10th percentile of the SNZ stochastic projections, while the high-variant projection is similar to the 90th percentile of the SNZ stochastic projections (data not shown).

Figure 6: National population projections, 2018-2068



The medium-variant with no coronavirus impact tracks initially higher than the high-variant projection until 2034, then runs approximately parallel to the medium-variant projection

thereafter. The impact of the coronavirus pandemic on the national population is a reduction in the total population size by 2068 of approximately 400,000 people.

4. Population, Family and Household, and Labour Force Projections

This section presents the population, family and household, and labour force projections for each TA wholly or substantially located in the Waikato Region.[9] For population, four projection scenarios are presented: (1) a low-variant population projection; (2) a medium-variant population projection; (3) a high-variant population projection; and (4) a medium-variant population projection that ignores the effect of the coronavirus pandemic. As noted in the previous section, these three scenarios should be viewed as three possible futures, based on known assumptions about future fertility, mortality and net migration, and should not be interpreted as forecasts of future population. The family and household projections and labour force projections are also each presented for the first three scenarios.

All projections are presented in diagrammatic form[10] – tables showing the population projections numerically are included in Appendix I, which are also available using the Waikato Integrated Scenario Explorer software tool (Rutledge *et al.*, 2008; 2010). Tables showing the family and household projections numerically are included in Appendix II, and tables showing the labour force projections numerically are included in Appendix III.

[9] Rotorua District is excluded, as it is substantially located in the Bay of Plenty region. However, parts of Rotorua District are included in the Waikato Region projections presented in Section 4.11.

[10] In the figures for the family and household projections, the difference between the sum of the four categories presented (couples with children, two-parent families, one-parent families, and one-person households) and the total number of households is made up of the number of 'other multi-person households', as well as accounting for the number of households that contain more than one family.

4.1 Population, Family and Household, and Labour Force Projections for Thames-Coromandel District

Figure 7 presents the 2018-base population projections for Thames-Coromandel District to 2068, along with historical population estimates from Statistics New Zealand back to 1996. The 2018-base Statistics New Zealand (SNZ) projections are also included for comparison.

The June 2018 population estimate (base population) for Thames-Coromandel District is 30,700. Under the medium-variant population projection scenario, the population increases throughout the projection period, reaching 34,172 in 2068. The medium-variant projection shows much lower growth than the recent experience of Thames-Coromandel District, but this reflects the much lower projection international migration flows. The annualised projected population growth over the period 2018-2038 of 0.14% per year is substantially lower than the 0.87% annualised growth experienced over the period 1996-2018, again reflecting the much lower projected international migration. Under the low-variant scenario, the population increases to a peak of 30,990 in 2021 before declining to 27,736 in 2068. Under the high-variant scenario, the population increases throughout the projection period, reaching 40,674 in 2068. In comparison, the SNZ 2018-base medium-variant projection is similar to the Waikato high-variant projection for much of the projection period, but then falls away after the mid-2030s, with the SNZ low-variant similar to the Waikato medium-variant projection until the early-2030s.

Figure 8 disaggregates the components of population change for Thames-Coromandel District over the period 2019-2068 for the medium-variant population projection. As previously noted, net population change in the medium-variant projection scenario is positive throughout the projection period. This is made up of net inward internal migration (more in-migration from the rest of New Zealand than out-migration), offset by natural decrease (more deaths than births), and net outward international migration (more out-migration to overseas than in-migration from overseas). The initial bump in population from the historically high net international migration at the national level can clearly be seen in the first two years of the projections, but is quickly eliminated by the coronavirus border closures and the resulting substantial decrease in international migration flows. The growing contribution of net internal migration reflects mainly spill-over growth from surrounding faster growing TAs.

Figure 7: Population projections for Thames-Coromandel District, 2018-2068

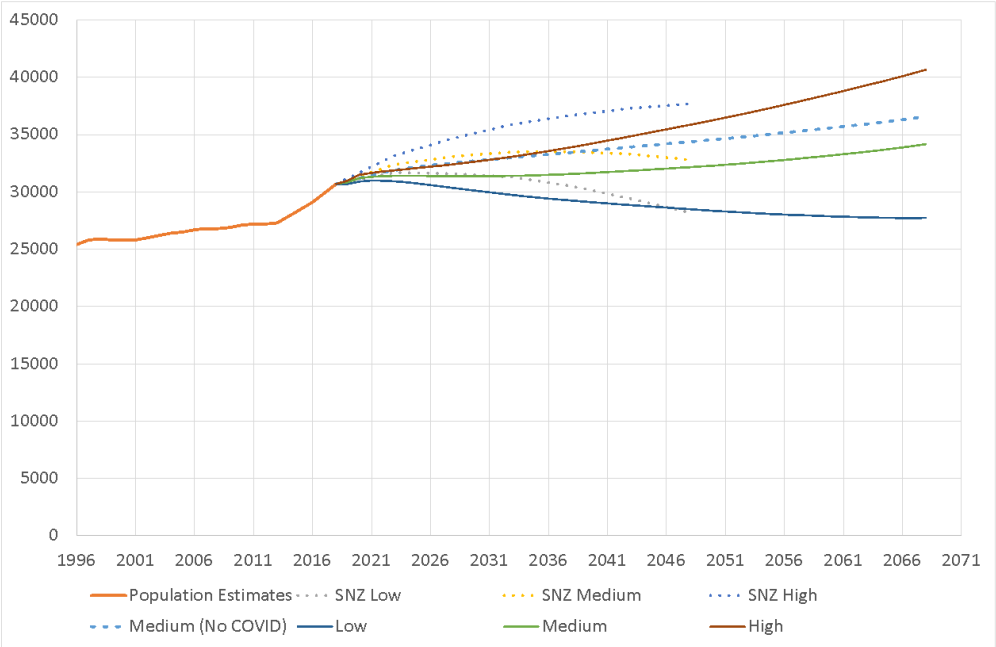
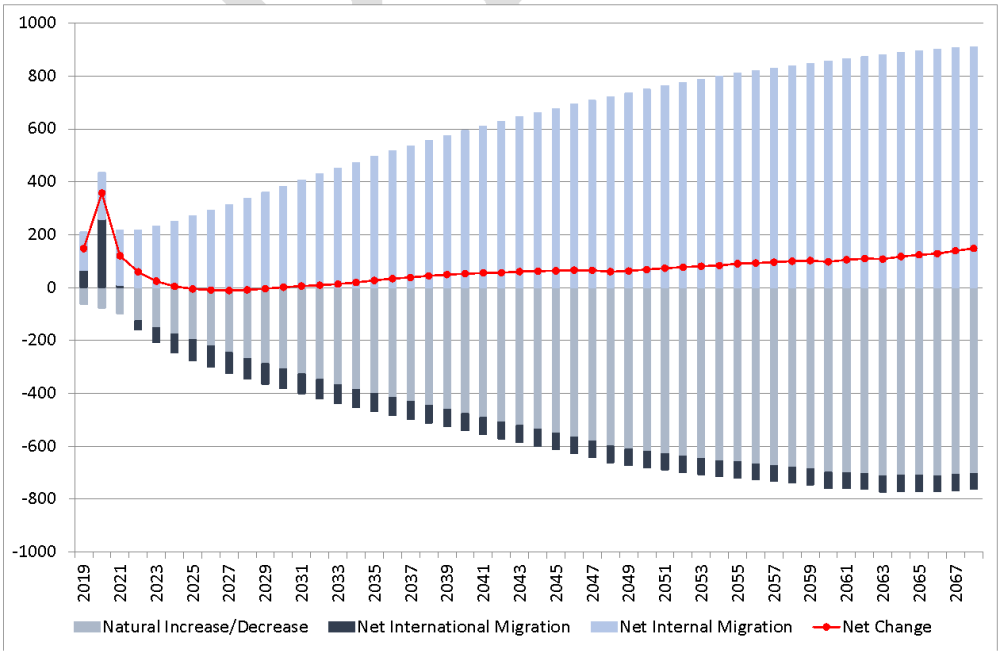


Figure 8: Projected components of population change for Thames-Coromandel District, medium-variant projection, 2019-2068



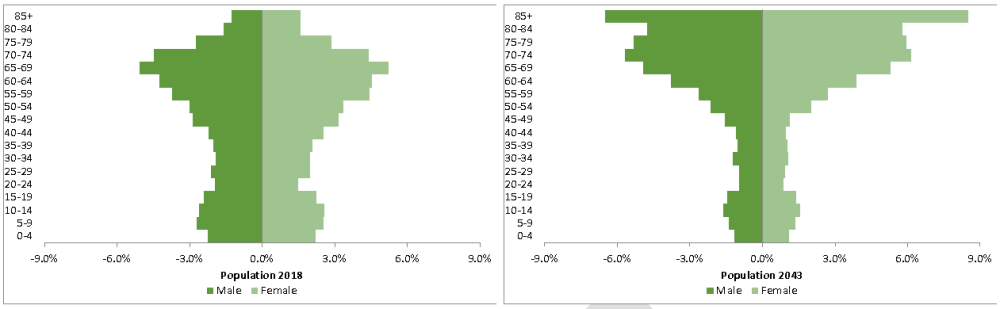
The spill-over growth from net internal migration for Thames Coromandel District is clearly shown in Table 2, which summarises the largest sources and destinations of inward and outward internal migrants respectively, for Thames Coromandel District in 2043 (being the middle of the projection period) for the medium-variant population projection. The largest flows in and out of the district can be attributed to Auckland, Hamilton City, and Tauranga City, all of which are large population centres in close proximity to Thames-Coromandel District. The inward migration from each of those TAs is larger than the outward flow, suggesting that the nearby cities are projected to be a substantial source of net internal migration for Thames-Coromandel District. This may also reflect the ageing New Zealand population, and Thames-Coromandel's attractiveness as a retirement destination.

Table 2: Top sources and destinations of internal migration for Thames-Coromandel District, 2043

Source	Number		Destination	Number
Auckland	1118		Auckland	512
Hamilton	120		Hamilton	96
Tauranga	90		Tauranga	90
Waikato	64		Hauraki	50
Hauraki	58		Waikato	48
Whangarei	35		Western Bay of Plenty	33
Rotorua	35		Whangarei	32
Western Bay of Plenty	32		Rotorua	30
Waipā	31		Waipā	28
Matamata-Piako	30		Matamata-Piako	27

The age structure of Thames-Coromandel District is the oldest in the region and continues ageing rapidly, as shown in Figure 9. In 2018, 30.8 percent of the population are aged 65 years and over, and this is projected to increase to 58.9 percent by 2043. This old age profile leads to the natural decrease shown in the previous figure.

Figure 9: Age-sex structure for Thames-Coromandel District, 2018 and 2043 (medium-variant projection)



The medium-variant family and household projection (by type) for Thames-Coromandel District is shown in Figure 10. The estimated number of total households in June 2018 is 12,807. In terms of total households, the projection closely follows the medium-variant population projection, with the total number of households increasing throughout the projection period, reaching 15,845 in 2068. The number of one- and two-parent families decline fairly consistently over the projection period, while the number of couples without children and one-person households increase throughout the projection period. The low-variant and high-variant family and household projection (by type) for Thames-Coromandel District are shown in Figures 11 and 12 respectively. In terms of total households, the low-variant projection closely follows the low-variant population projection, with the total number of households increasing to a peak of 13,540 in 2038, before declining to 13,158 in 2068. The high-variant projection closely follows the high-variant population projection, with the total number of households throughout the projection period, reaching 18,542 in 2068. The relative size of the families and households by type are similar in the low-variant and high-variant projections to those in the medium-variant projection.

Figure 10: Medium-variant family and household projections for Thames-Coromandel District, 2018-2068

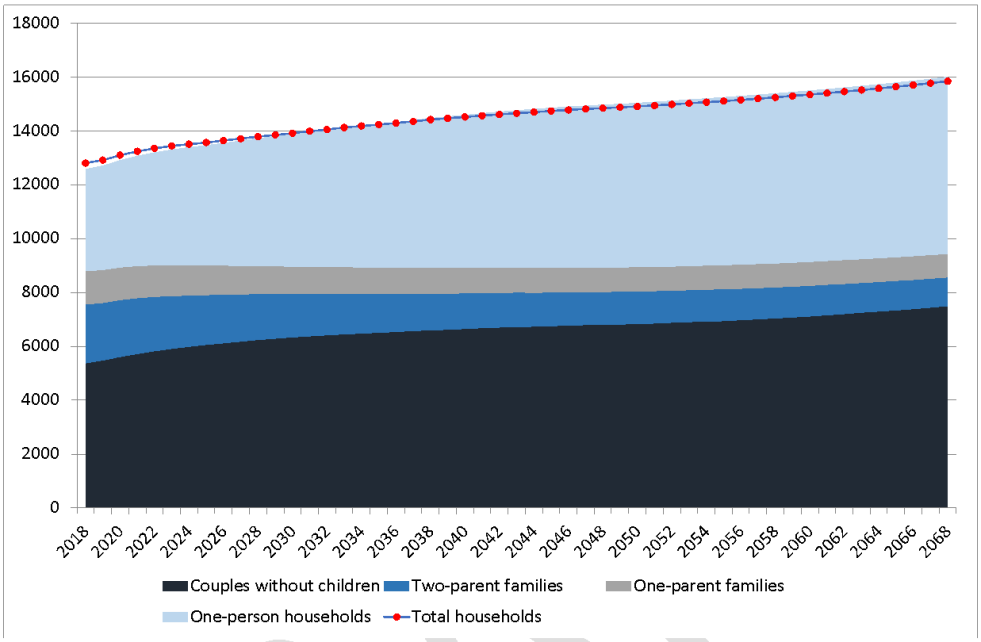


Figure 11: Low-variant family and household projections for Thames-Coromandel District, 2018-2068

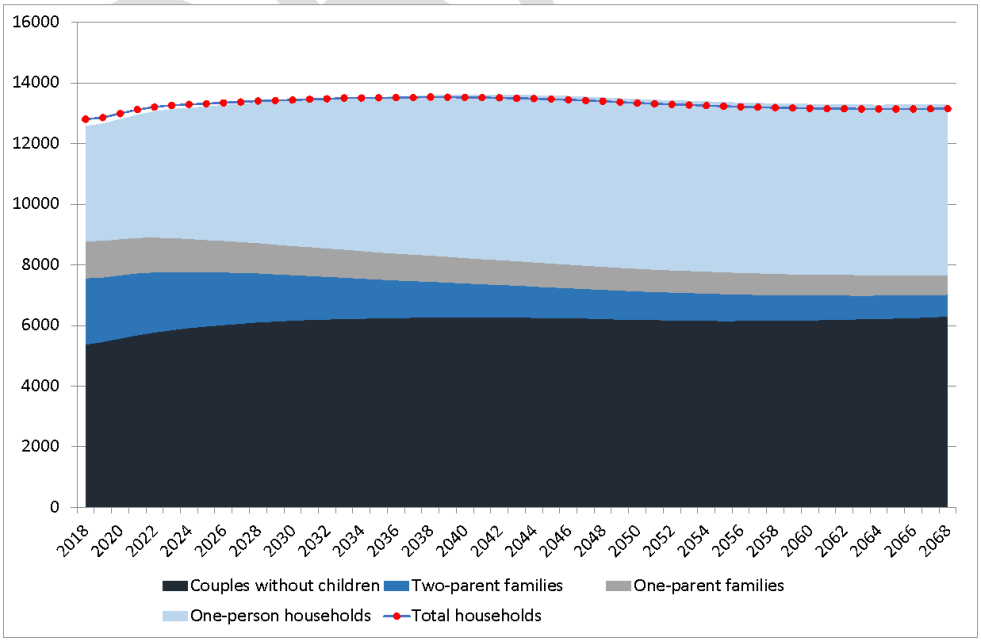
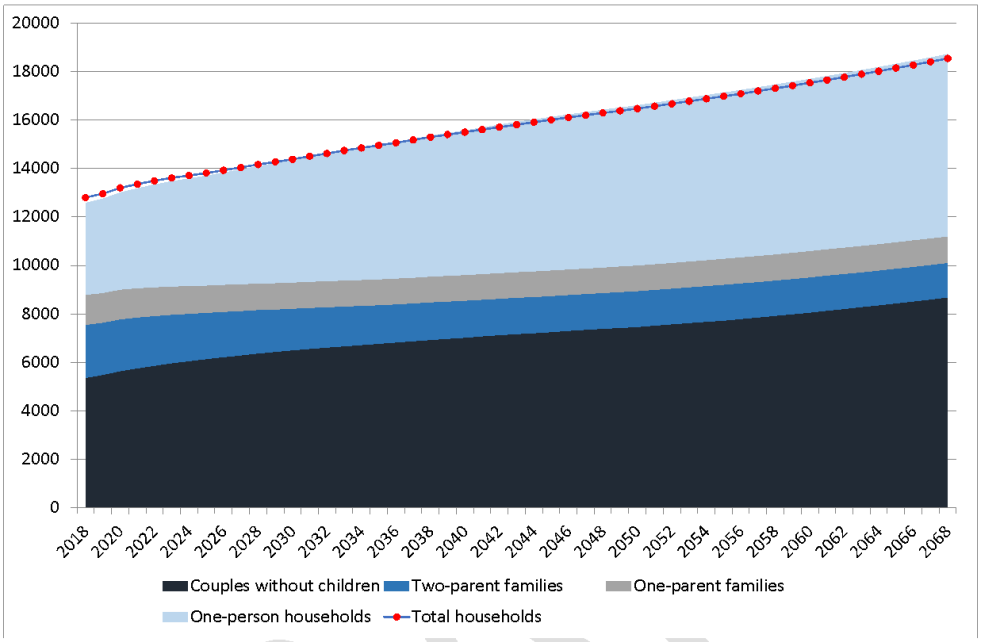
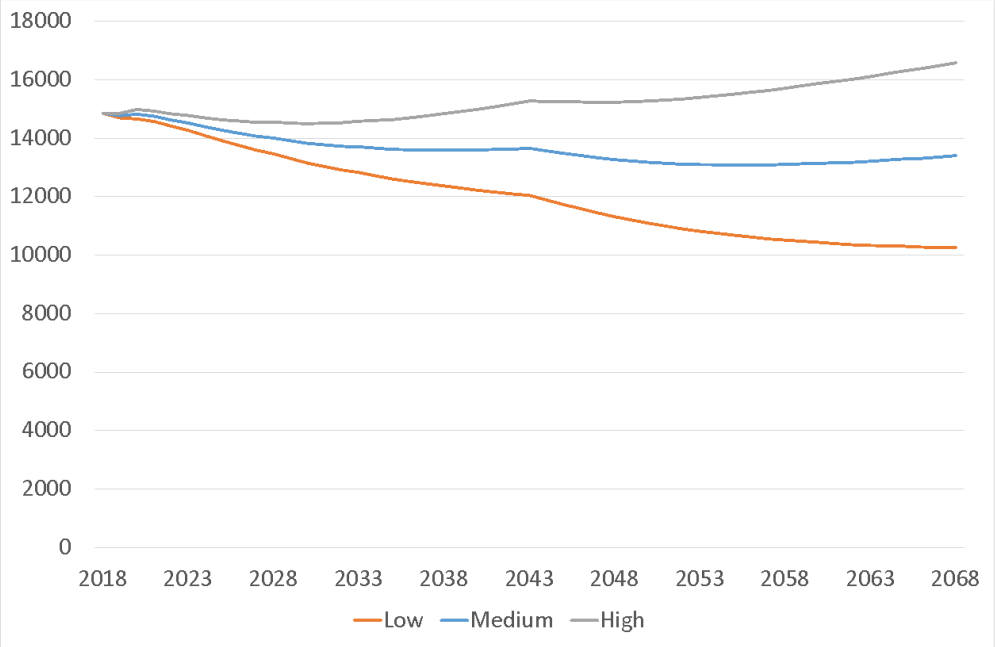


Figure 12: High-variant family and household projections for Thames-Coromandel District, 2018-2068



The labour force projections for Thames-Coromandel District are shown in Figure 13. The estimated labour force in June 2018 is 14,849. In the medium-variant projection, the labour force decreases through most of the projection period, falling to 13,405 in 2068. In the low-variant projection, the labour force decreases more consistently throughout the projection period, falling to 10,259 in 2068. In the high-variant projection, the labour force increases throughout the projection period, reaching 16,583 in 2068.

Figure 13: Labour force projections for Thames-Coromandel District, 2018-2068



4.2 Population, Family and Household, and Labour Force Projections for Hauraki District

Figure 14 presents the 2018-base population projections for Hauraki District to 2068, along with historical population estimates from Statistics New Zealand back to 1996. The 2018-base Statistics New Zealand (SNZ) projections are also included for comparison.

The June 2018 population estimate (base population) for Hauraki District is 20,600. Under the medium-variant population projection scenario, the population increases throughout the projection period, reaching 25,221 in 2068. The medium-variant projection shows lower growth than the recent experience of Hauraki District, but this reflects the much lower projection international migration flows. The annualised projected population growth over the period 2018-2038 of 0.35% per year is somewhat lower than the 0.50% annualised growth experienced over the period 1996-2018, again reflecting the much lower projected international migration. Under the low-variant scenario, the population increases to a peak of 20,996 in 2023 before declining to 20,523 in 2068. Under the high-variant scenario, the population increases throughout the projection period, reaching 29,970 in 2068. In comparison, the SNZ 2018-base medium-variant projection is similar to the Waikato high-variant projection for much of the

projection period, but then falls away after the early-2030s, with the SNZ low-variant similar to the Waikato medium-variant projection only until the mid-2020s.

Figure 14: Population projections for Hauraki District, 2018-2068

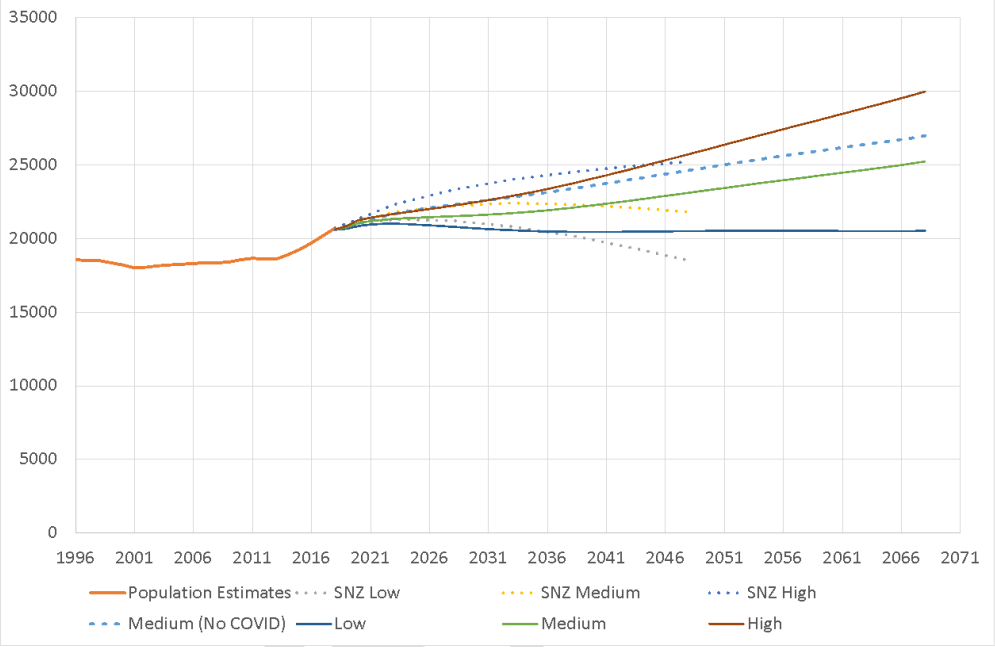
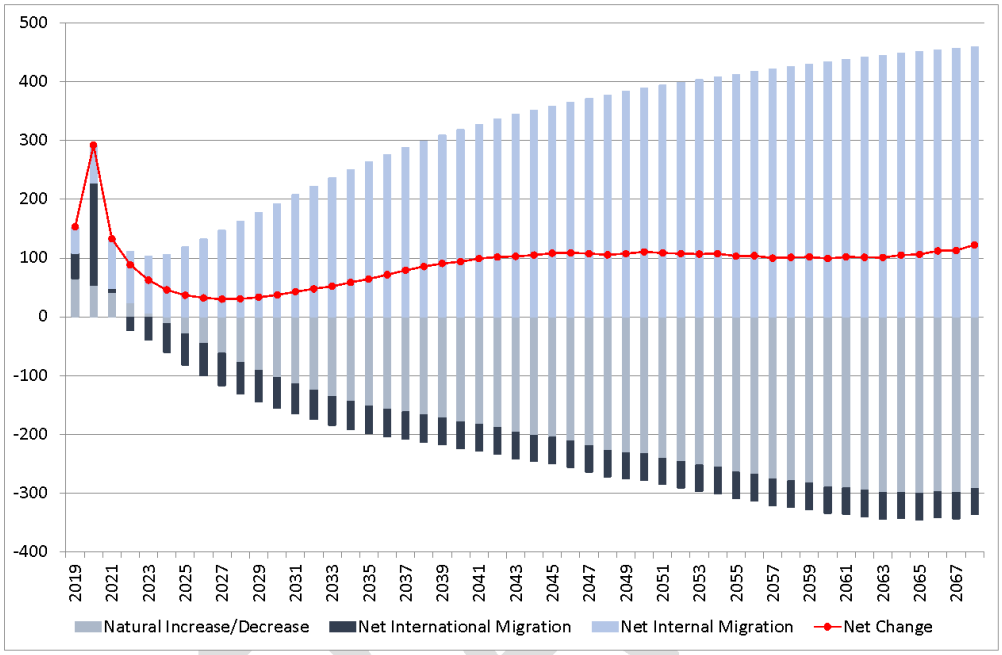


Figure 15 disaggregates the components of population change for Hauraki District over the period 2019-2068 for the medium-variant population projection. As previously noted, net population change in the medium-variant projection scenario is positive throughout the projection period. This is made up of net inward internal migration (more in-migration from the rest of New Zealand than out-migration), offset by natural decrease (more deaths than births), and net outward international migration (more out-migration to overseas than in-migration from overseas). The initial bump in population from the historically high net international migration at the national level can clearly be seen in the first two years of the projections, but is quickly eliminated by the coronavirus border closures and the resulting substantial decrease in international migration flows. The growing contribution of net internal migration reflects mainly spill-over growth from surrounding faster growing TAs.

Figure 15: Projected components of population change for Hauraki District, medium-variant projection, 2019-2068



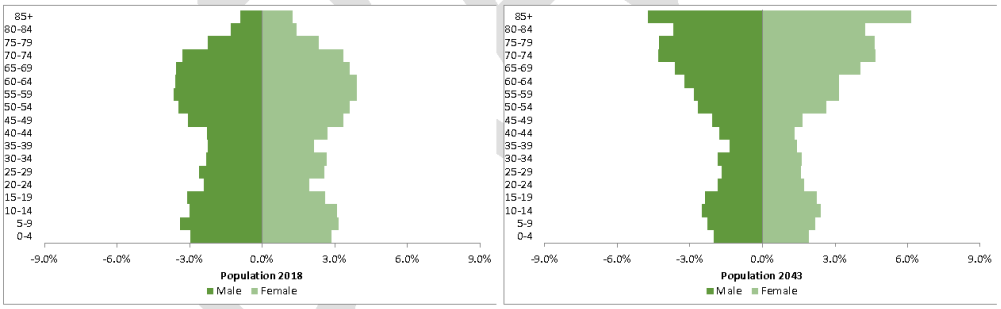
The spill-over growth from net internal migration for Hauraki District is clearly shown in Table 3, which summarises the largest sources and destinations of inward and outward internal migrants respectively, for Hauraki District in 2043 (being the middle of the projection period) for the medium-variant population projection. The largest flows in and out of the district can be attributed to Auckland and Hamilton City, as well as Waikato District and Tauranga City, all of which are large population centres in close proximity to Hauraki District. The inward migration from each of those TAs except Tauranga City is larger than the outward flow, suggesting that the nearby cities are generally projected to be a substantial source of net internal migration for Hauraki District.

Table 3: Top sources and destinations of internal migration for Hauraki District, 2043

Source	Number		Destination	Number
Auckland	823		Auckland	432
Hamilton	98		Hamilton	89
Waikato	79		Tauranga	83
Tauranga	73		Waikato	68
Matamata-Piako	54		Thames-Coromandel	58
Thames-Coromandel	50		Matamata-Piako	57
Western Bay of Plenty	46		Western Bay of Plenty	54
Waipā	25		Waipā	26
Rotorua	25		Rotorua	24
Whangarei	15		Christchurch	16

The age structure of Hauraki District is also the oldest in the region and continues ageing rapidly, as shown in Figure 16. In 2018, 23.3 percent of the population are aged 65 years and over, and this is projected to increase to 44.4 percent by 2043. This old age profile leads to the natural decrease shown in the previous figure.

Figure 16: Age-sex structure for Hauraki District, 2018 and 2043 (medium-variant projection)



The medium-variant family and household projection (by type) for Hauraki District is shown in Figure 17. The estimated number of total households in June 2018 is 8,093. In terms of total households, the projection closely follows the medium-variant population projection, with the total number of households increasing throughout the projection period, reaching 10,698 in 2068. The number of two-parent families declines fairly consistently over the projection period, while the number of one-parent families initially declines, before increasing again after 2035. Couples without children and one-person households increase throughout the projection period. The low-variant and high-variant family and household projection (by type) for Hauraki

District are shown in Figures 18 and 19 respectively. In terms of total households, the low-variant projection closely follows the low-variant population projection, with the total number of households increasing throughout the projection period, reaching 8,924 in 2068. The high-variant projection closely follows the high-variant population projection, with the total number of households throughout the projection period, reaching 12,478 in 2068. The relative size of the families and households by type are similar in the low-variant and high-variant projections to those in the medium-variant projection.

The labour force projections for Hauraki District are shown in Figure 20. The estimated labour force in June 2018 is 10,268. In the medium-variant projection, the labour force decreases to a trough of 10,106 in 2030, before increasing to eventually reach 11,316 in 2068. In the low-variant projection, the labour force decreases through most of the projection period, falling to 8,905 in 2068. In the high-variant projection, the labour force increases throughout the projection period, reaching 13,748 in 2068.

Figure 17: Medium-variant family and household projections for Hauraki District, 2018-2068

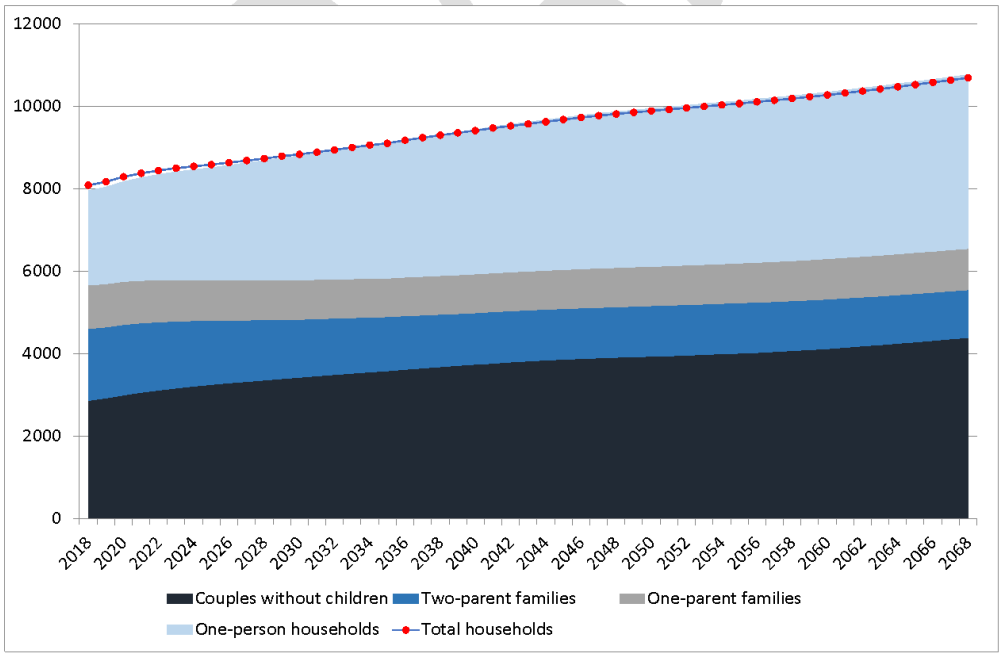


Figure 18: Low-variant family and household projections for Hauraki District, 2018-2068

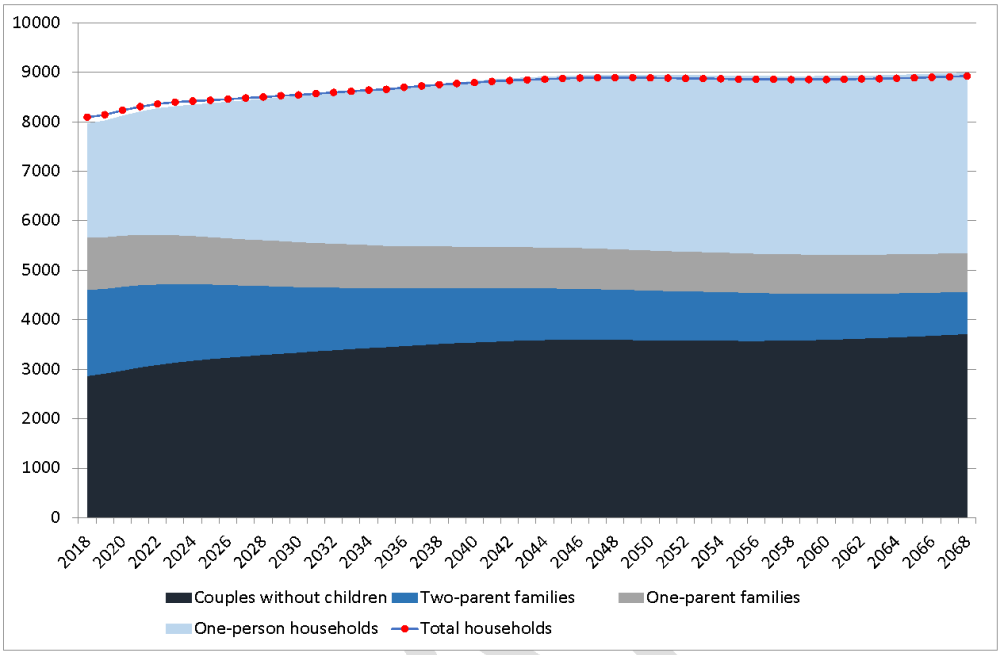


Figure 19: High-variant family and household projections for Hauraki District, 2018-2068

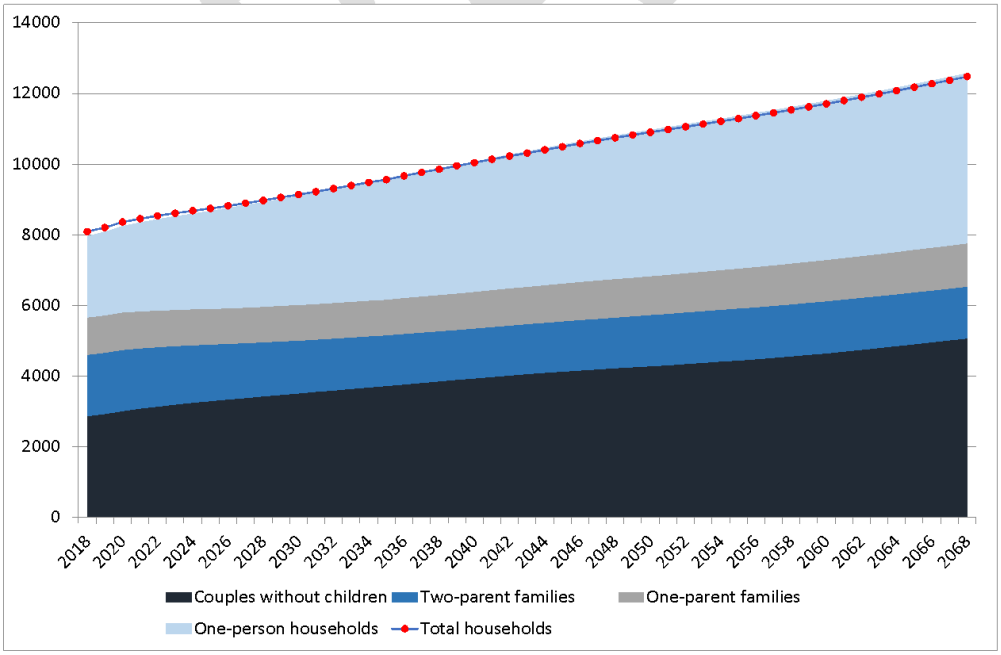
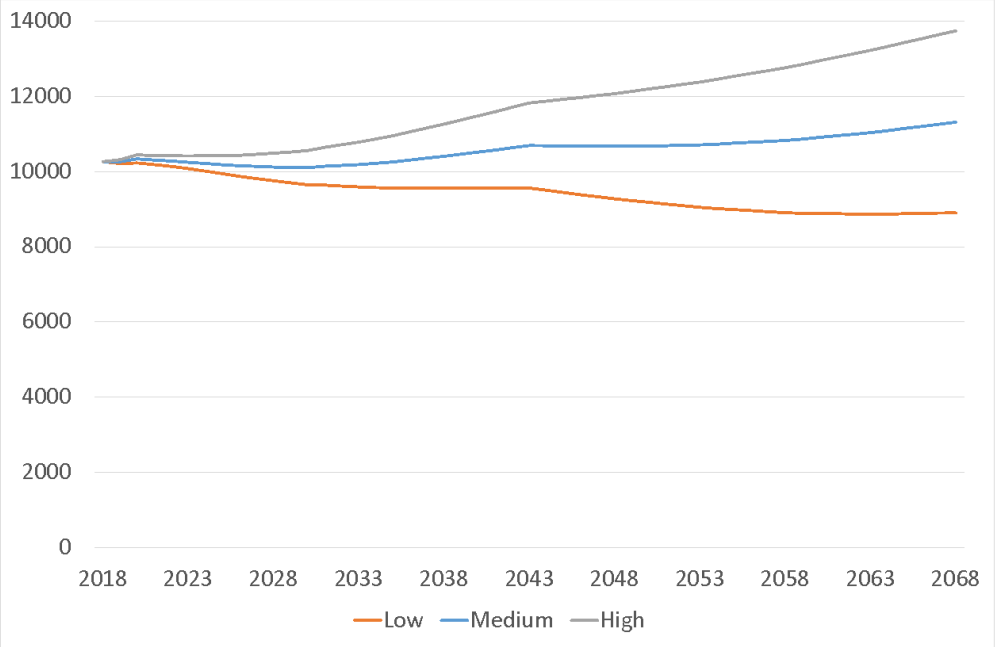


Figure 20: Labour force projections for Hauraki District, 2018-2068



4.3 Population, Family and Household, and Labour Force Projections for Waikato District

Figure 21 presents the 2018-base population projections for Waikato District to 2068, along with historical population estimates from Statistics New Zealand back to 1996. The 2018-base Statistics New Zealand (SNZ) projections are also included for comparison.

The June 2018 population estimate (base population) for Waikato District is 78,200. Under the medium-variant population projection scenario, the population increases throughout the projection period, reaching 120,684 in 2068. The medium-variant projection shows lower growth than the recent experience of Waikato District, but this reflects the much lower projection international migration flows. The annualised projected population growth over the period 2018-2038 of 1.20% per year is somewhat lower than the 1.87% annualised growth experienced over the period 1996-2018, again reflecting the much lower projected international migration. Under the low-variant scenario, the population increases throughout the projection period, reaching 99,229 in 2068. Under the high-variant scenario, the population increases throughout the projection period, reaching 142,269 in 2068. In comparison, the SNZ 2018-base

medium-variant projection is similar to the Waikato high-variant projection, with the SNZ low-variant somewhat lower than the Waikato medium-variant projection.

Figure 21: Population projections for Waikato District, 2018-2068

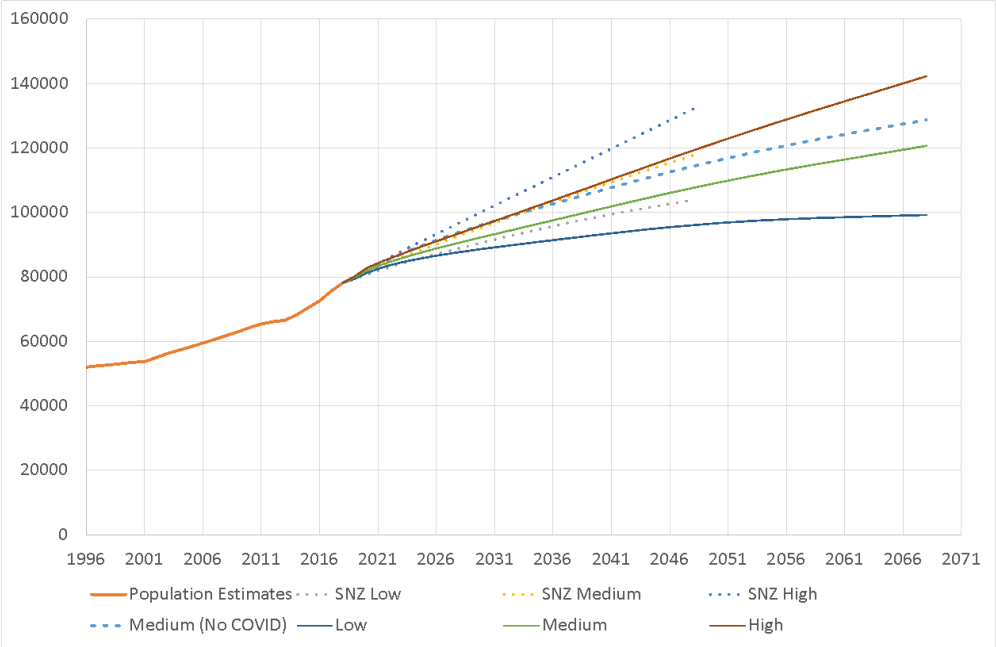


Figure 22 disaggregates the components of population change for Waikato District over the period 2019-2068 for the medium-variant population projection. As previously noted, net population change in the medium-variant projection scenario is positive throughout the projection period. This is made up of net inward internal migration (more in-migration from the rest of New Zealand than out-migration) and natural increase (more births than deaths) up to 2054 (after which there is natural decrease – more deaths than births), and net outward international migration (more out-migration to overseas than in-migration from overseas). The initial bump in population from the historically high net international migration at the national level can clearly be seen in the first two years of the projections, but is quickly eliminated by the coronavirus border closures and the resulting substantial decrease in international migration flows.

Figure 22: Projected components of population change for Waikato District, medium-variant projection, 2019-2068

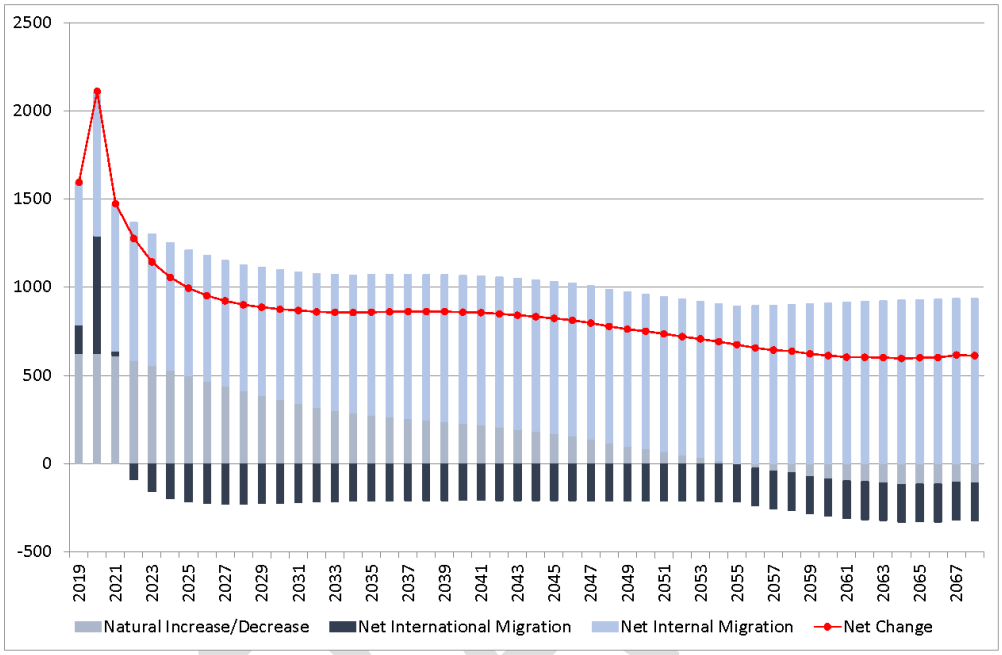


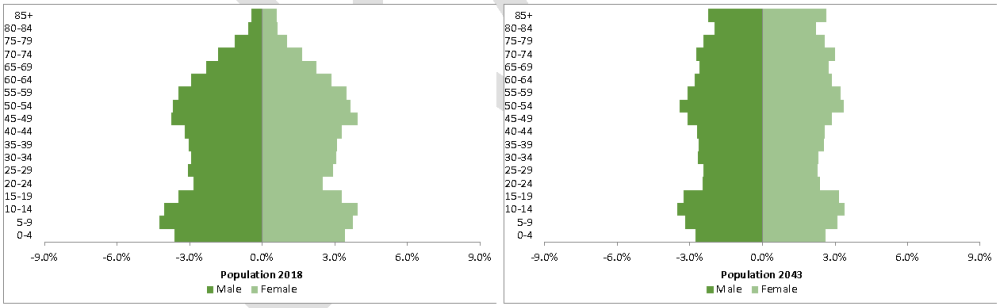
Table 4 summarises the largest sources and destinations of inward and outward internal migrants respectively, for Waikato District in 2043 (being the middle of the projection period) for the medium-variant population projection. The largest flows in and out of the district can be attributed to Auckland, Hamilton City, and Waipā District, all of which are large population centres in close proximity to Waikato District. The inward migration from Auckland is larger than the outward flow, suggesting that Auckland is projected to be a substantial source of net internal migration for Waikato District. In contrast, the outward migration is larger than the inward flow for Hamilton City and Waipā District, suggesting that Waikato District is a net donor of migrants to those TAs.

Table 4: Top sources and destinations of internal migration for Waikato District, 2043

Source	Number		Destination	Number
Auckland	3358		Auckland	2043
Hamilton	1051		Hamilton	1114
Waipā	187		Waipā	229
Tauranga	142		Tauranga	188
Matamat- Piako	122		Matamata Piako	148
Hauraki	68		Hauraki	79
Rotorua	66		Rotorua	76
Western Bay of Plenty	53		Western Bay of Plenty	73
Whangarei	52		Christchurch	65
Thames-Coromandel	48		Thames Coromandel	64

The age structure of Waikato District is much younger than either Thames-Coromandel or Hauraki Districts, as shown in Figure 23. In 2018, 12.5 percent of the population are aged 65 years and over, and this is projected to increase to 25.2 percent by 2043. This young age profile leads to the natural increase that is shown through most of the projection period in the previous figure.

Figure 23: Age-sex structure for Waikato District, 2018 and 2043 (medium-variant projection)



The medium-variant family and household projection (by type) for Waikato District is shown in Figure 24. The estimated number of total households in June 2018 is 25,769. In terms of total households, the projection closely follows the medium-variant population projection, with the total number of households increasing throughout the projection period, reaching 42,841 in 2068. The number of one-parent and two-parent families increase fairly consistently over the projection period, as does the number of couples without children and one-person households.

The low-variant and high-variant family and household projection (by type) for Waikato District are shown in Figures 25 and 26 respectively. In terms of total households, the low-variant projection closely follows the low-variant population projection, with the total number of households increasing throughout the projection period, reaching 35,623 in 2068. The high-variant projection closely follows the high-variant population projection, with the total number of households throughout the projection period, reaching 50,063 in 2068. The relative size of the families and households by type are similar in the low-variant and high-variant projections to those in the medium-variant projection.

The labour force projections for Waikato District are shown in Figure 27. The estimated labour force in June 2018 is 43,465. In the medium-variant projection, the labour force increases throughout the projection period, reaching 66,682 in 2068. In the low-variant projection, the labour force increases throughout the projection period, reaching 54,194 in 2068. In the high-variant projection, the labour force increases throughout the projection period, reaching 79,199 in 2068.

Figure 24: Medium-variant family and household projections for Waikato District, 2018-2068

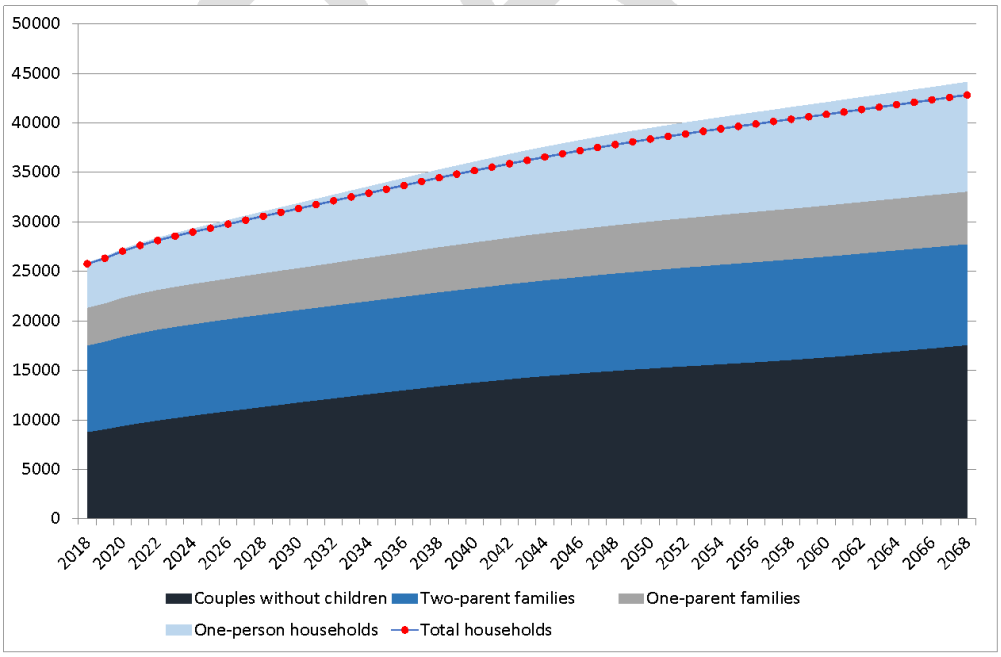


Figure 25: Low-variant family and household projections for Waikato District, 2018-2068

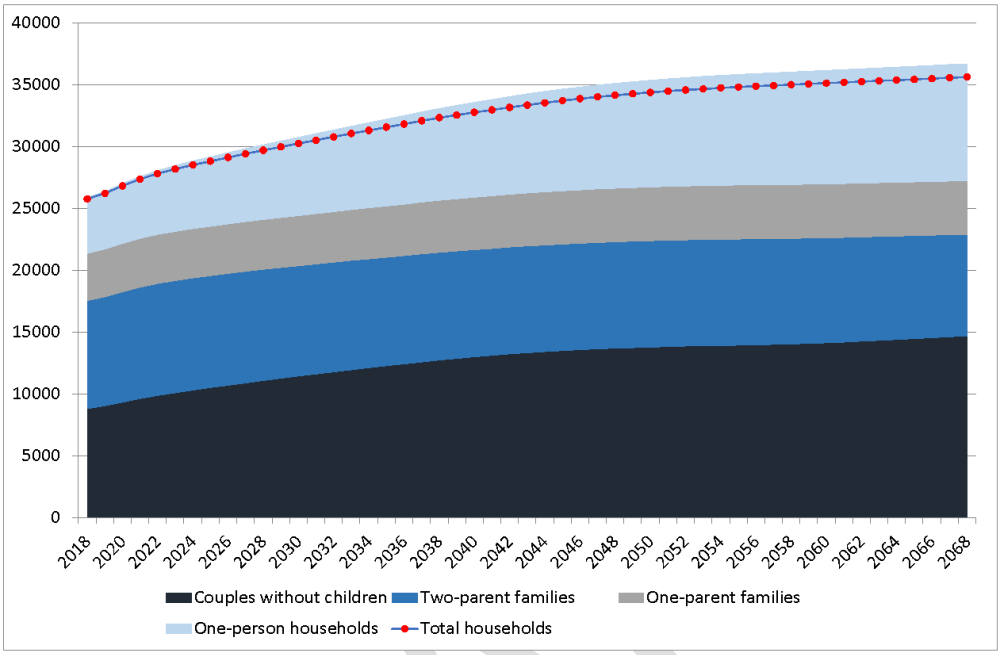


Figure 26: High-variant family and household projections for Waikato District, 2018-2068

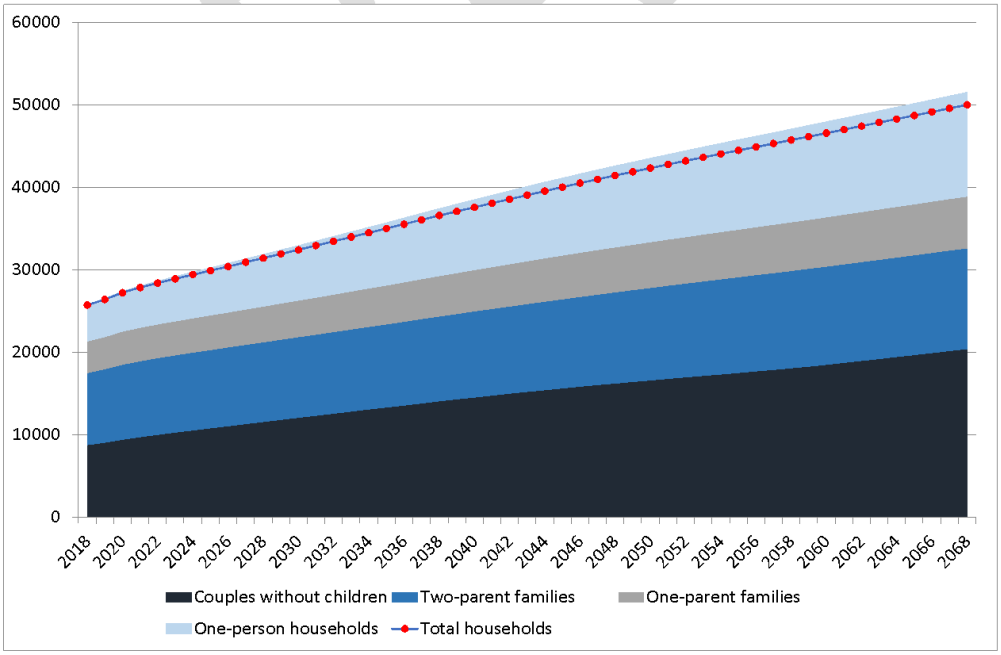
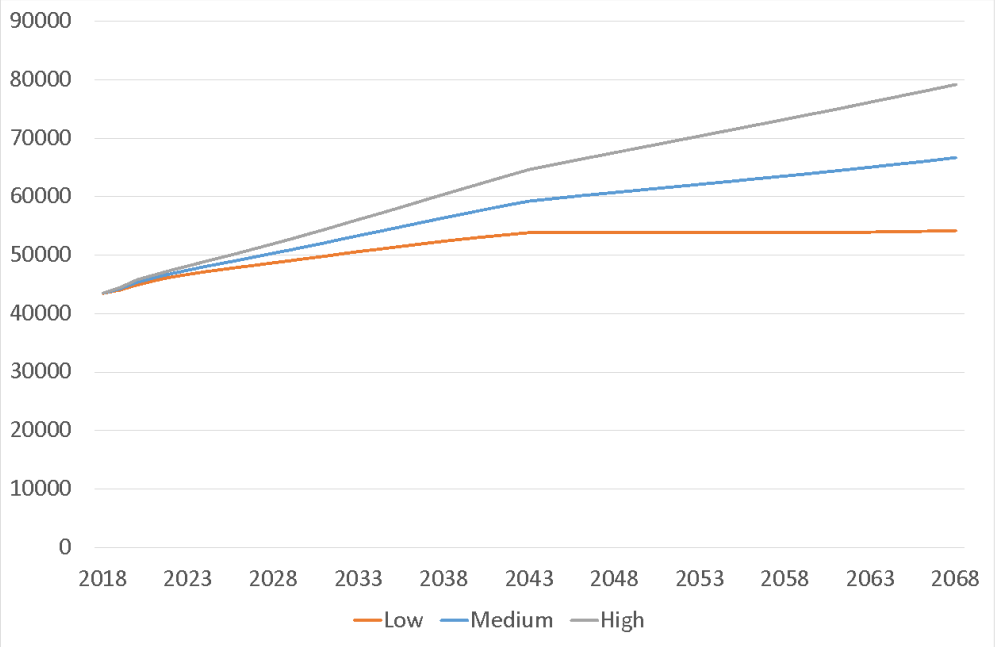


Figure 27: Labour force projections for Waikato District, 2018-2068



4.4 Population, Family and Household, and Labour Force Projections for Matamata-Piako District

Figure 28 presents the 2018-base population projections for Matamata-Piako District to 2068, along with historical population estimates from Statistics New Zealand back to 1996. The 2018-base Statistics New Zealand (SNZ) projections are also included for comparison.

The June 2018 population estimate (base population) for Matamata-Piako District is 35,300. Under the medium-variant population projection scenario, the population increases throughout the projection period, reaching 44,866 in 2068. The medium-variant projection shows lower growth than the recent experience of Matamata-Piako District, but this reflects the much lower projection international migration flows. The annualised projected population growth over the period 2018-2038 of 0.54% per year is slightly lower than the 0.70% annualised growth experienced over the period 1996-2018, again reflecting the much lower projected international migration. Under the low-variant scenario, the population increases to a peak of 36,488 in 2045 before declining to 36,236 in 2068. Under the high-variant scenario, the population increases throughout the projection period, reaching 53,639 in 2068. In comparison, the SNZ 2018-base

medium-variant projection is very similar to the Waikato medium-variant projection, with the SNZ low-variant somewhat lower than the Waikato low-variant projection, particularly after the early 2030s.

Figure 28: Population projections for Matamata-Piako District, 2018-2068

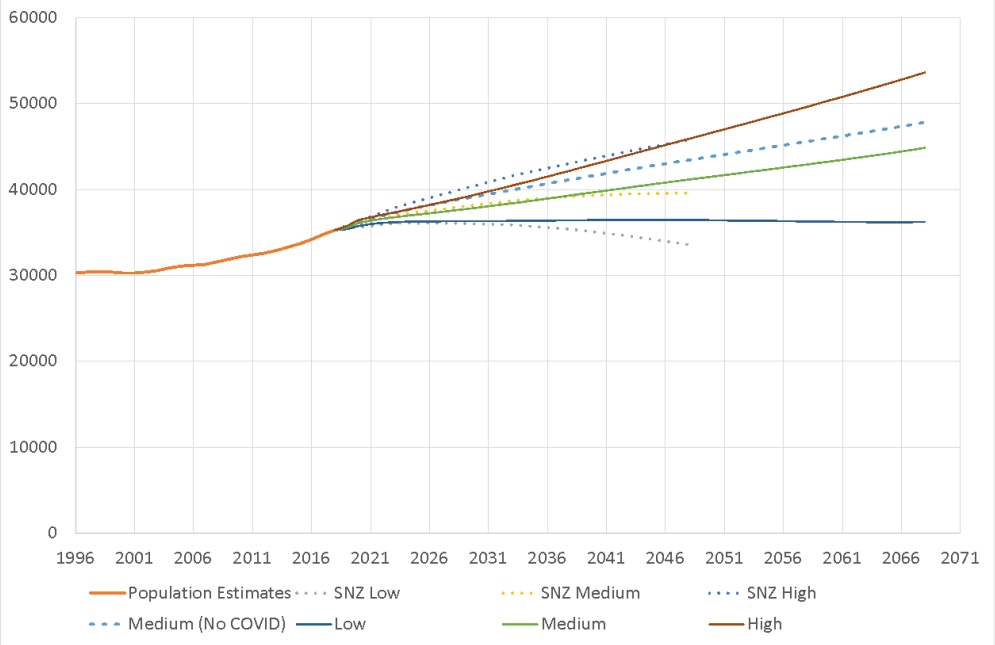


Figure 29 disaggregates the components of population change for Matamata-Piako District over the period 2019-2068 for the medium-variant population projection. As previously noted, net population change in the medium-variant projection scenario is positive throughout the projection period. This is made up of net inward internal migration (more in-migration from the rest of New Zealand than out-migration) and natural increase (more births than deaths) up to 2035 (after which there is natural decrease – more deaths than births), and net outward international migration (more out-migration to overseas than in-migration from overseas). The initial bump in population from the historically high net international migration at the national level can clearly be seen in the first two years of the projections, but is quickly eliminated by the coronavirus border closures and the resulting substantial decrease in international migration

flows. The growing contribution of net internal migration reflects mainly spill-over growth from surrounding faster growing TAs.

Figure 29: Projected components of population change for Matamata-Piako District, medium-variant projection, 2019-2068

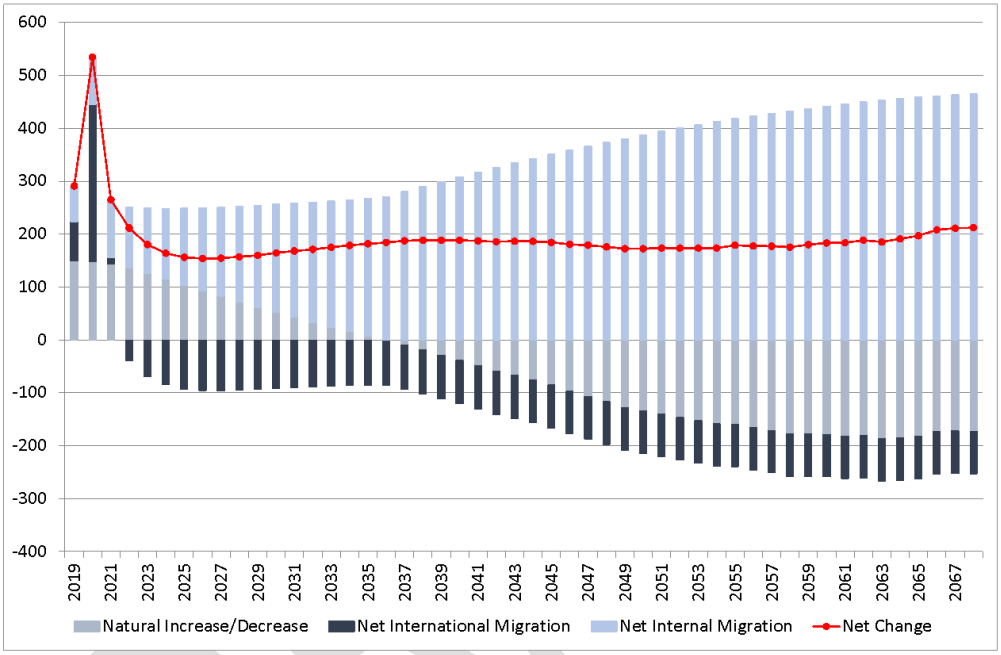


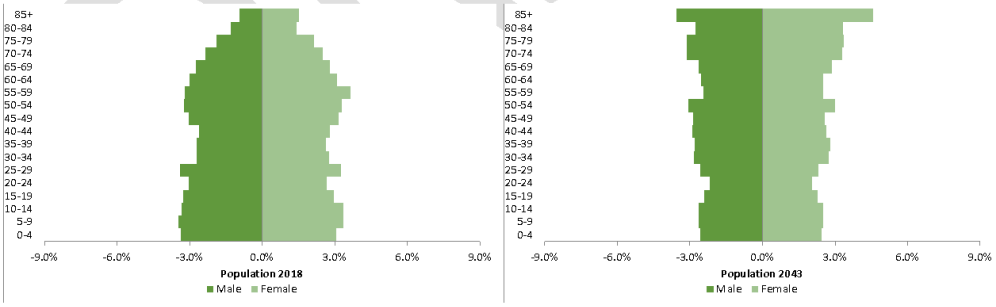
Table 5 summarises the largest sources and destinations of inward and outward internal migrants respectively, for Matamata-Piako District in 2043 (being the middle of the projection period) for the medium-variant population projection. The largest flows in and out of the district can be attributed to Auckland, Hamilton City, and Tauranga City, all of which are large population centres in close proximity to Matamata-Piako District. The inward migration flows from Auckland and Hamilton City are larger than the outward flows, suggesting that Auckland and Hamilton are projected to be a substantial source of net internal migration for Matamata-Piako District. In contrast, the outward migration is larger than the inward flow for Tauranga City, suggesting that Matamata-Piako District is a net donor of migrants to Tauranga.

Table 5: Top sources and destinations of internal migration for Matamata-Piako District, 2043

Source	Number		Destination	Number
Auckland	694		Auckland	349
Hamilton	290		Hamilton	254
Tauranga	170		Tauranga	186
Waikato	148		Waipā	144
Waipā	143		Western Bay of Plenty	131
Western Bay of Plenty	116		Waikato	122
Rotorua	62		Rotorua	59
Hauraki	57		Hauraki	54
South Waikato	41		South Waikato	37
Thames-Coromandel	27		Thames Coromandel	30

The age structure of Matamata-Piako District is moderately old compared with other TAs in the Waikato, but ages relatively quickly, as shown in Figure 30. In 2018, 19.6 percent of the population are aged 65 years and over, and this is projected to increase to 32.6 percent by 2043. The initially young age profile keeps natural increase positive through the early period of the projections, as shown in the previous figure.

Figure 30: Age-sex structure for Matamata-Piako District, 2018 and 2043 (medium-variant projection)



The medium-variant family and household projection (by type) for Matamata-Piako District is shown in Figure 31. The estimated number of total households in June 2018 is 13,205. In terms of total households, the projection closely follows the medium-variant population projection, with the total number of households increasing throughout the projection period, reaching

18,608 in 2068. The number of one-parent families increases fairly consistently over the projection period, as does the number of couples without children and one-person households. The number of two-parent families remains relatively stable. The low-variant and high-variant family and household projection (by type) for Matamata-Piako District are shown in Figures 32 and 33 respectively. In terms of total households, the low-variant projection closely follows the low-variant population projection, with the total number of households increasing throughout the projection period, reaching 15,404 in 2068. The high-variant projection closely follows the high-variant population projection, with the total number of households throughout the projection period, reaching 21,844 in 2068. The relative size of the families and households by type are similar in the low-variant and high-variant projections to those in the medium-variant projection.

Figure 31: Medium-variant family and household projections for Matamata-Piako District, 2018-2068

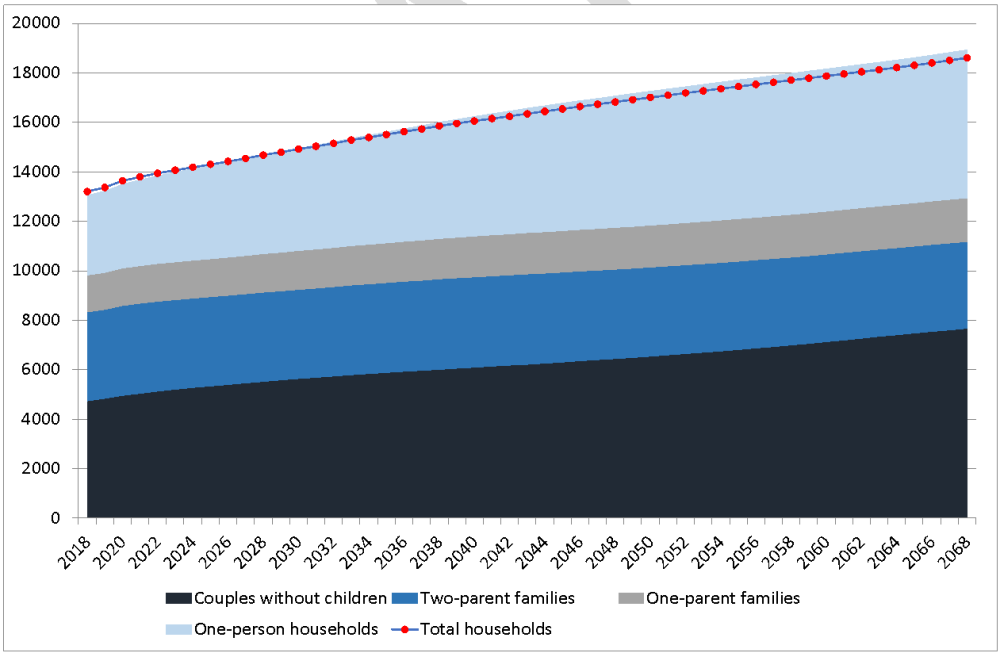


Figure 32: Low-variant family and household projections for Matamata-Piako District, 2018-2068

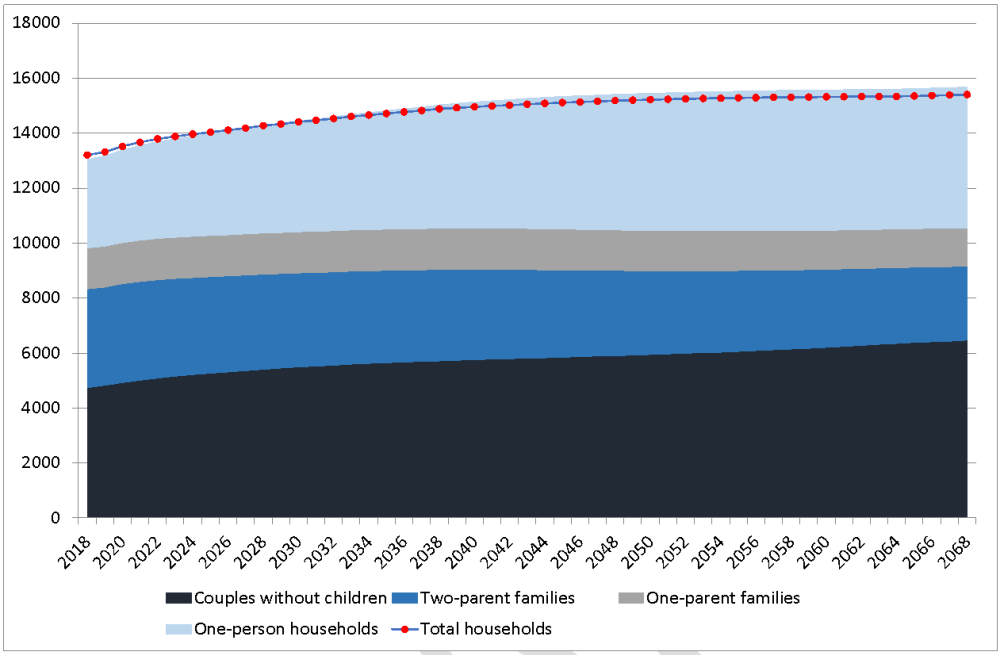
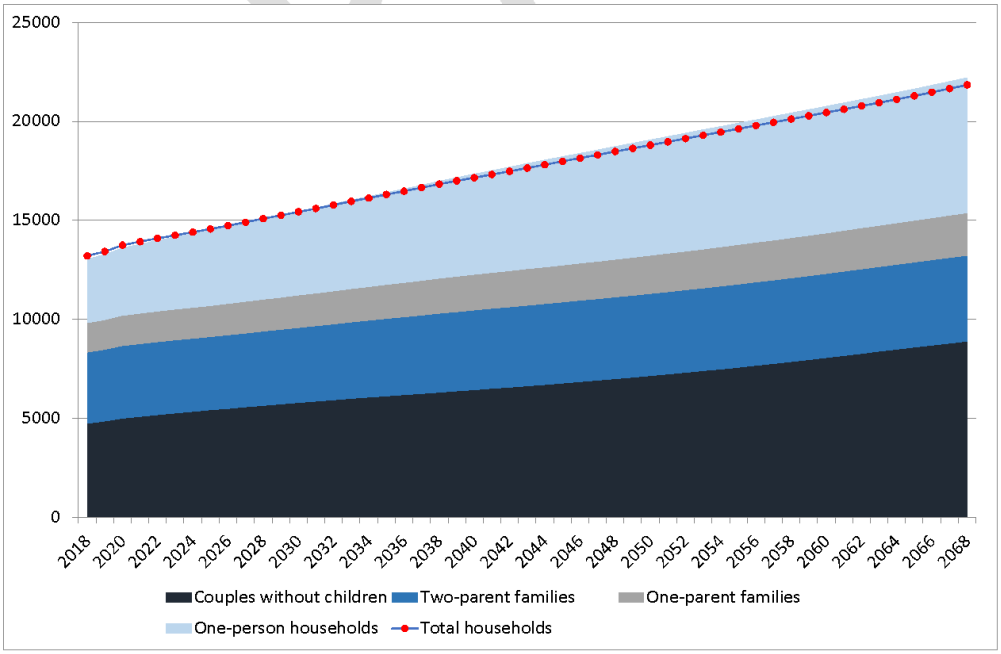
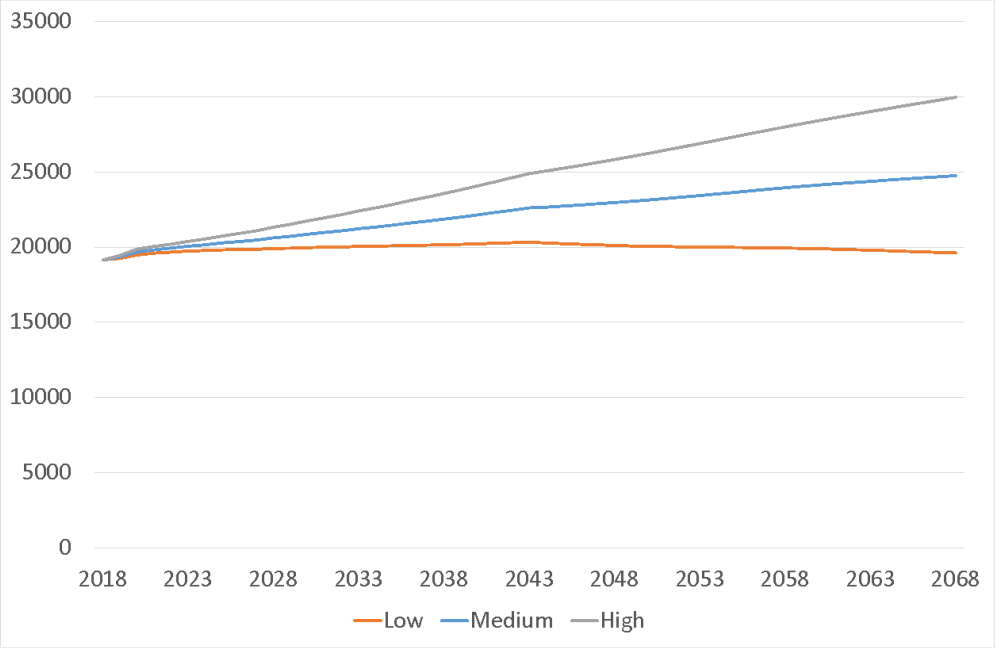


Figure 33: High-variant family and household projections for Matamata-Piako District, 2018-2068



The labour force projections for Matamata-Piako District are shown in Figure 34. The estimated labour force in June 2018 is 19,150. In the medium-variant projection, the labour force increases throughout the projection period, reaching 24,757 in 2068. In the low-variant projection, the labour force increases to a peak of 20,332 in 2043 before declining to 19,607 in 2068. In the high-variant projection, the labour force increases throughout the projection period, reaching 29,975 in 2068.

Figure 34: Labour force projections for Matamata-Piako District, 2018-2068



4.5 Population, Family and Household, and Labour Force Projections for Hamilton City

Figure 35 presents the 2018-base population projections for Hamilton City to 2068, along with historical population estimates from Statistics New Zealand back to 1996. The 2018-base Statistics New Zealand (SNZ) projections are also included for comparison.

The June 2018 population estimate (base population) for Hamilton City is 168,600. Under the medium-variant population projection scenario, the population increases throughout the projection period, reaching 264,198 in 2068. The medium-variant projection shows lower growth than the recent experience of Hamilton City, but this reflects the much lower projection international migration flows. The annualised projected population growth over the period 2018-2038 of 1.25% per year is lower than the 1.82% annualised growth experienced over the period 1996-2018, again reflecting the much lower projected international migration. Under the low-variant scenario, the population increases throughout the projection period, reaching 216,661 in 2068. Under the high-variant scenario, the population increases throughout the projection period, reaching 312,161 in 2068. In comparison, the SNZ 2018-base medium-variant projection is very similar to the Waikato medium-variant projection, with the SNZ high-variant slightly higher than the Waikato high-variant projection, and the SNZ low-variant slightly lower than the Waikato low-variant projection.

Figure 35: Population projections for Hamilton City, 2018-2068

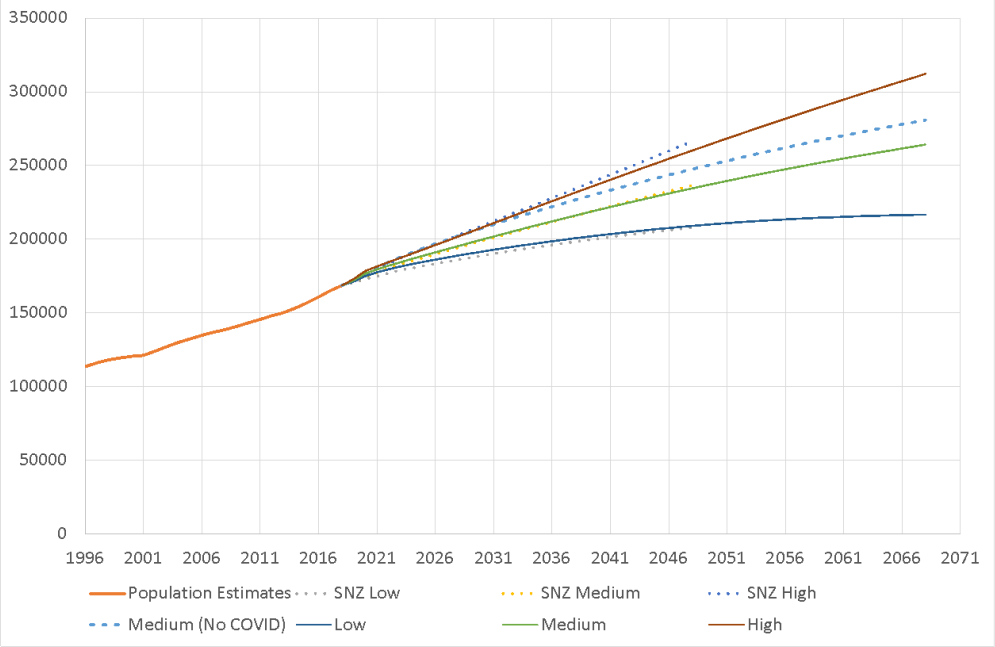


Figure 36 disaggregates the components of population change for Hamilton City over the period 2019-2068 for the medium-variant population projection. As previously noted, net population change in the medium-variant projection scenario is positive throughout the projection period. This is made up of net inward internal migration (more in-migration from the rest of New Zealand than out-migration) and natural increase (more births than deaths), offset by a small amount of net outward international migration (more out-migration to overseas than in-migration from overseas) throughout most of the projection period. The initial bump in population from the historically high net international migration at the national level can clearly be seen in the first two years of the projections, but is quickly eliminated by the coronavirus border closures and the resulting substantial decrease in international migration flows.

Figure 36: Projected components of population change for Hamilton City, medium-variant projection, 2019-2068

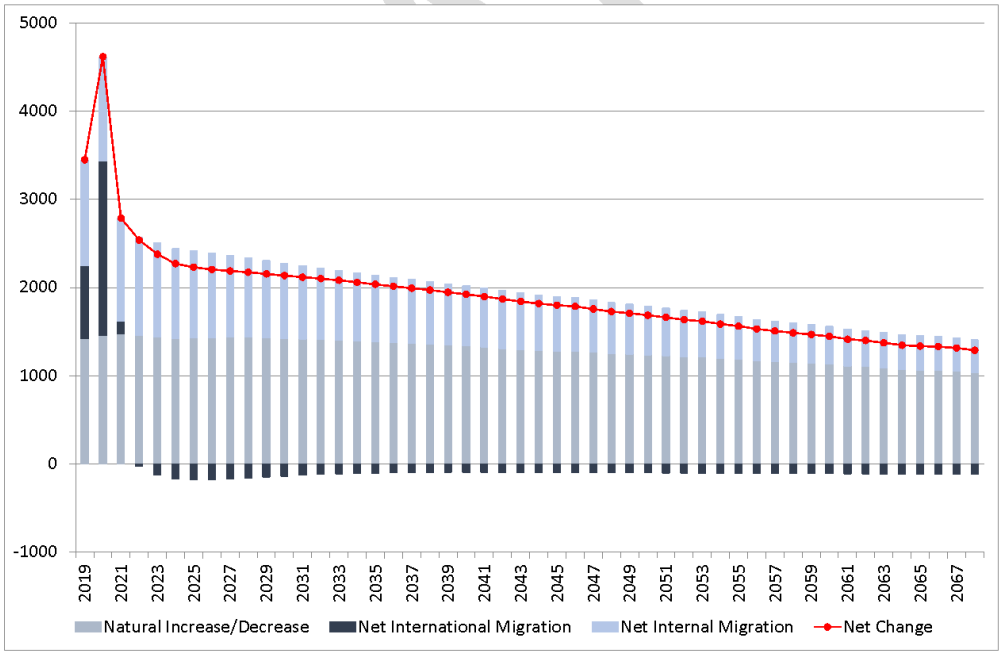


Table 6 summarises the largest sources and destinations of inward and outward internal migrants respectively, for Hamilton City in 2043 (being the middle of the projection period)

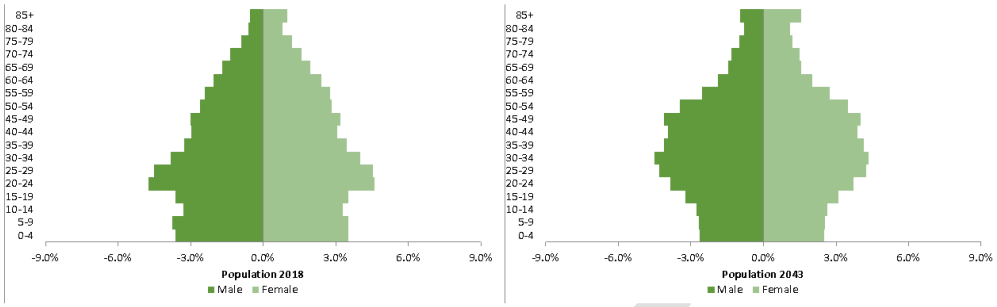
for the medium-variant population projection. The largest flows in and out of the district can be attributed to Auckland, Waikato Distict, and Waipā District, all of which are in close proximity to Hamilton City. The inward migration flows from Auckland and Waikato Distict are larger than the outward flows, suggesting that Auckland and Waikato District are projected to be a substantial source of net internal migration for Hamilton City. In contrast, the outward migration is larger than the inward flow for Waipā District, suggesting that Hamilton City is a net donor of migrants to Waipā District.

Table 6: Top sources and destinations of internal migration for Hamilton City, 2043

Source	Number		Destination	Number
Auckland	3288		Auckland	1887
Waikato	1114		Waipā	1254
Waipā	1089		Waikato	1051
Tauranga	409		Tauranga	513
Matamata Piako	254		Matamata Piako	290
Rotorua	202		Rotorua	217
Western Bay of Plenty	156		Western Bay of Plenty	201
Wellington	117		Christchurch	149
Whangarei	107		Taupō	123
Taupō	102		Whangarei	122

The age structure of Hamilton City is the youngest in the region in 2018, and remains relatively young throughout the projection period, as shown in Figure 37. In 2018, 11.6 percent of the population are aged 65 years and over, and this is projected to slightly increase to 12.5 percent by 2043. This low degree of ageing keeps natural increase positive through the early period of the projections, as shown in the previous figure.

Figure 37: Age-sex structure for Hamilton City, 2018 and 2043 (medium-variant projection)



The medium-variant family and household projection (by type) for Hamilton City is shown in Figure 38. The estimated number of total households in June 2018 is 57,479. In terms of total households, the projection closely follows the medium-variant population projection, with the total number of households increasing throughout the projection period, reaching 102,962 in 2068. The number of one-parent and two-parent families increases fairly consistently over the projection period, as does the number of couples without children and one-person households. The low-variant and high-variant family and household projection (by type) for Hamilton City are shown in Figures 39 and 40 respectively. In terms of total households, the low-variant projection closely follows the low-variant population projection, with the total number of households increasing throughout the projection period, reaching 85,690 in 2068. The high-variant projection closely follows the high-variant population projection, with the total number of households throughout the projection period, reaching 120,325 in 2068. The relative size of the families and households by type are similar in the low-variant and high-variant projections to those in the medium-variant projection.

The labour force projections for Hamilton City are shown in Figure 41. The estimated labour force in June 2018 is 92,473. In the medium-variant projection, the labour force increases throughout the projection period, reaching 165,877 in 2068. In the low-variant projection, the labour force increases to a peak of 137,332 in 2060 before declining to 135,450 in 2068. In the high-variant projection, the labour force increases throughout the projection period, reaching 196,462 in 2068.

Figure 38: Medium-variant family and household projections for Hamilton City, 2018-2068

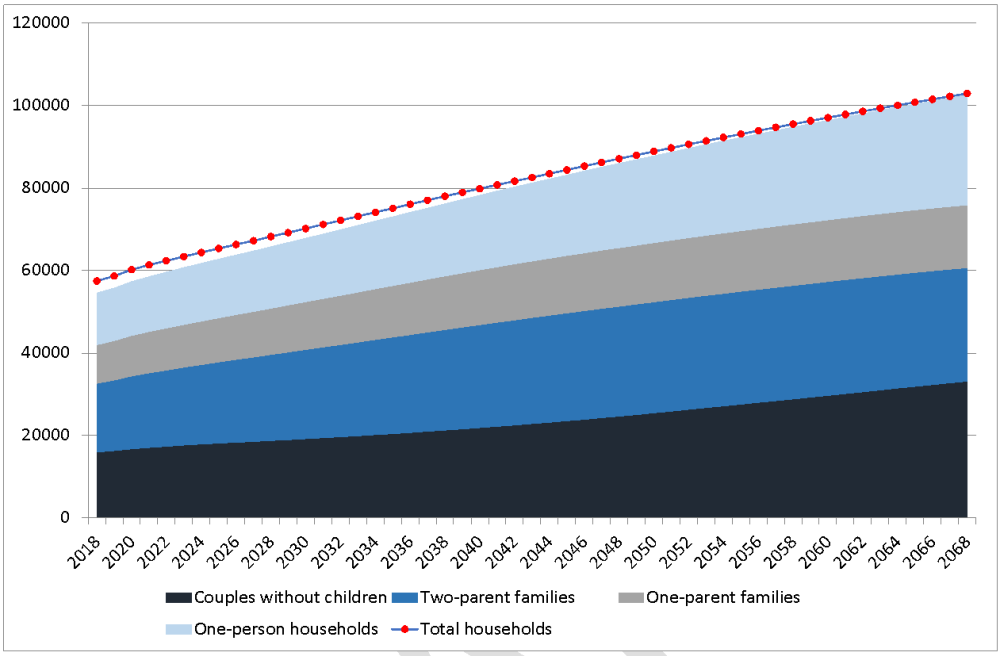


Figure 39: Low-variant family and household projections for Hamilton City, 2018-2068

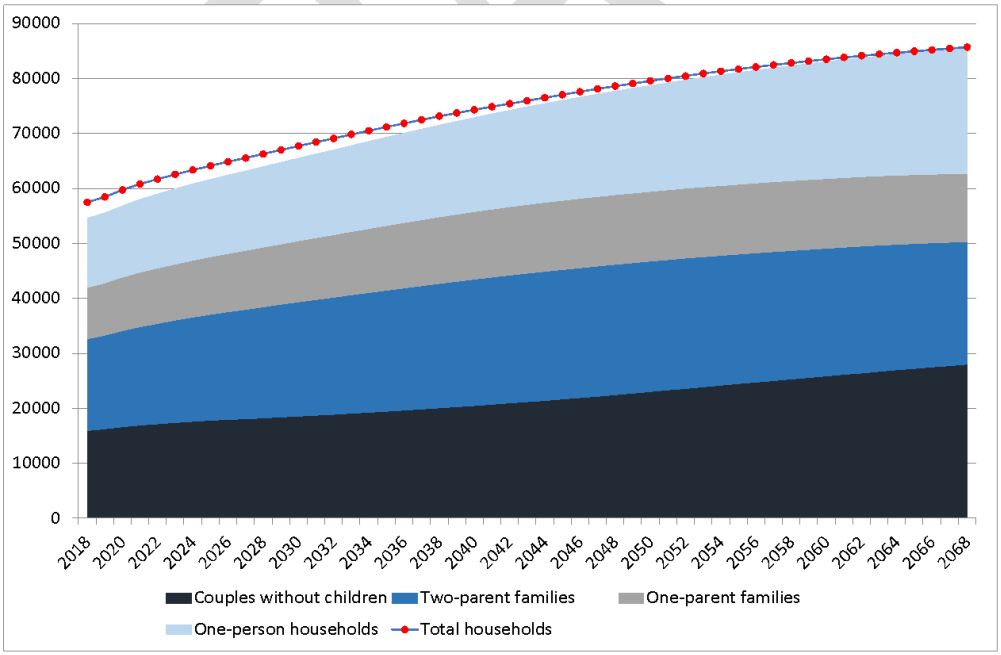


Figure 40: High-variant family and household projections for Hamilton City, 2018-2068

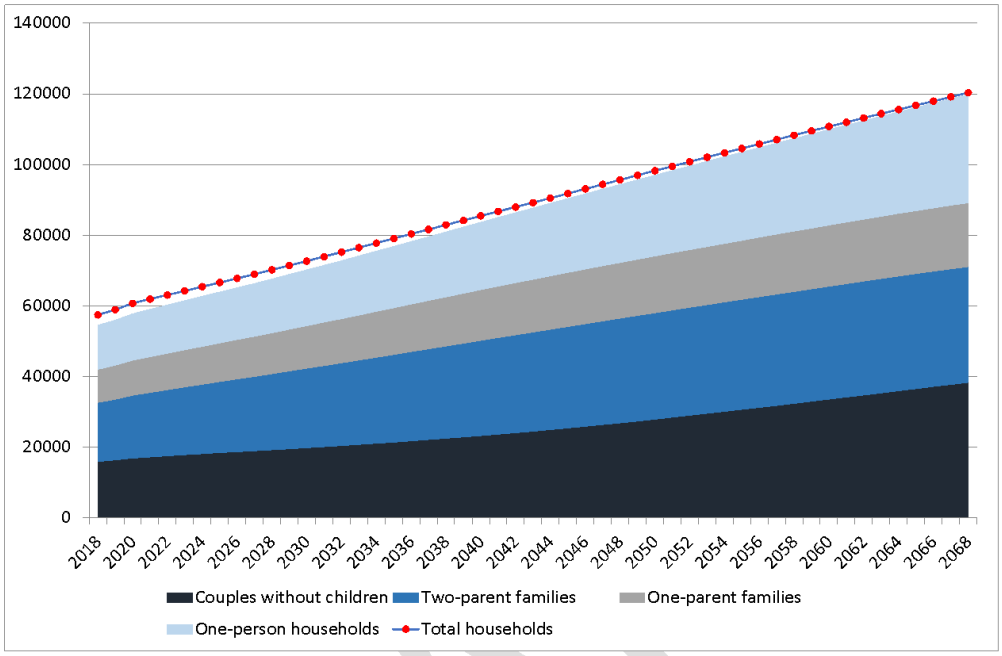
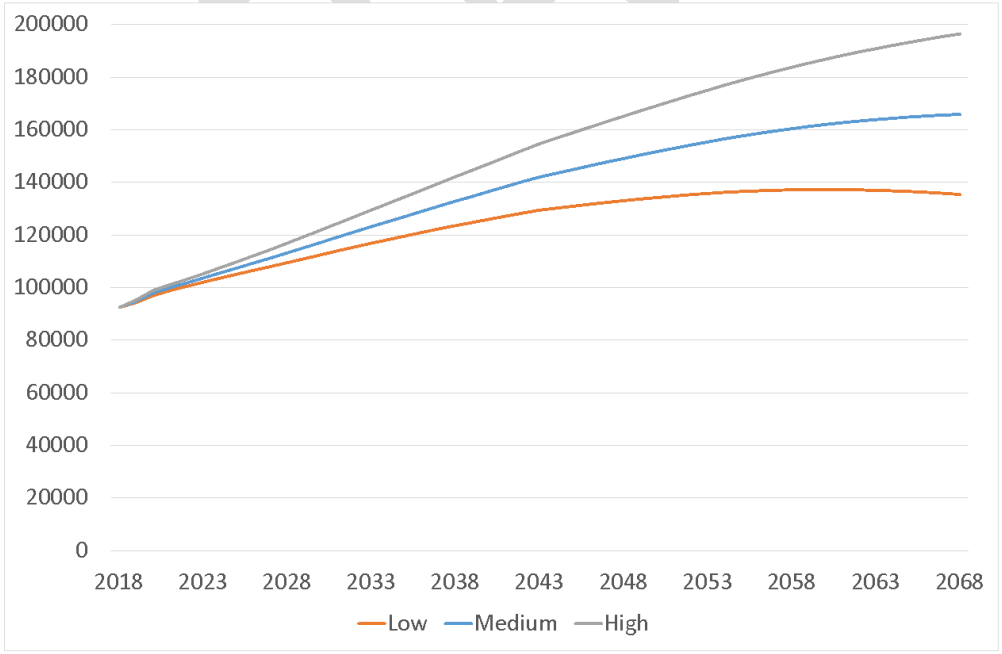


Figure 41: Labour force projections for Hamilton City, 2018-2068



4.6 Population, Family and Household, and Labour Force Projections for Waipā District

Figure 42 presents the 2018-base population projections for Waipā District to 2068, along with historical population estimates from Statistics New Zealand back to 1996. The 2018-base Statistics New Zealand (SNZ) projections are also included for comparison.

The June 2018 population estimate (base population) for Waipā District is 55,000. Under the medium-variant population projection scenario, the population increases throughout the projection period, reaching 77,090 in 2068. The medium-variant projection shows lower growth than the recent experience of Waipā District, but this reflects the much lower projection international migration flows. The annualised projected population growth over the period 2018-2038 of 0.89% per year is substantially lower than the 1.65% annualised growth experienced over the period 1996-2018, again reflecting the much lower projected international migration. Under the low-variant scenario, the population increases throughout the projection period, reaching 62,549 in 2068. Under the high-variant scenario, the population increases throughout the projection period, reaching 91,836 in 2068. In comparison, the SNZ 2018-base medium-variant projection is slightly lower than the Waikato medium-variant projection, with the SNZ high-variant somewhat higher than the Waikato high-variant projection, and the SNZ low-variant very similar to the Waikato low-variant projection.

Figure 43 disaggregates the components of population change for Waipā District over the period 2019-2068 for the medium-variant population projection. As previously noted, net population change in the medium-variant projection scenario is positive throughout the projection period. This is made up of net inward internal migration (more in-migration from the rest of New Zealand than out-migration) and natural increase (more births than deaths) up to 2038 (after which there is natural decrease – more deaths than births), and net outward international migration (more out-migration to overseas than in-migration from overseas). The initial bump in population from the historically high net international migration at the national level can clearly be seen in the first two years of the projections, but is quickly eliminated by the coronavirus border closures and the resulting substantial decrease in international migration flows.

Figure 42: Population projections for Waipā District, 2018-2068

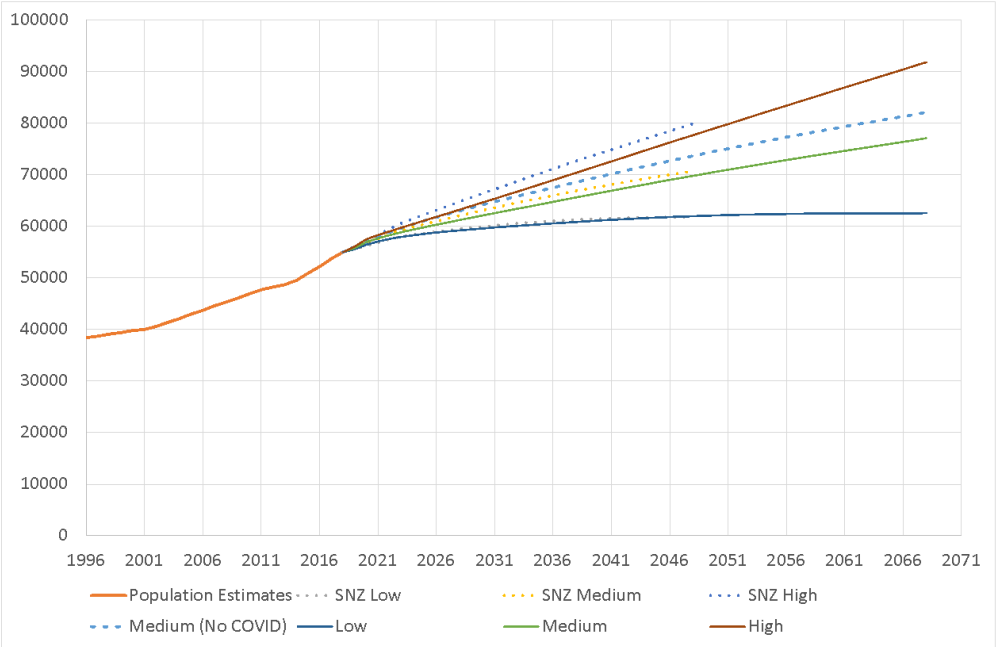


Figure 43: Projected components of population change for Waipā District, medium-variant projection, 2019-2068

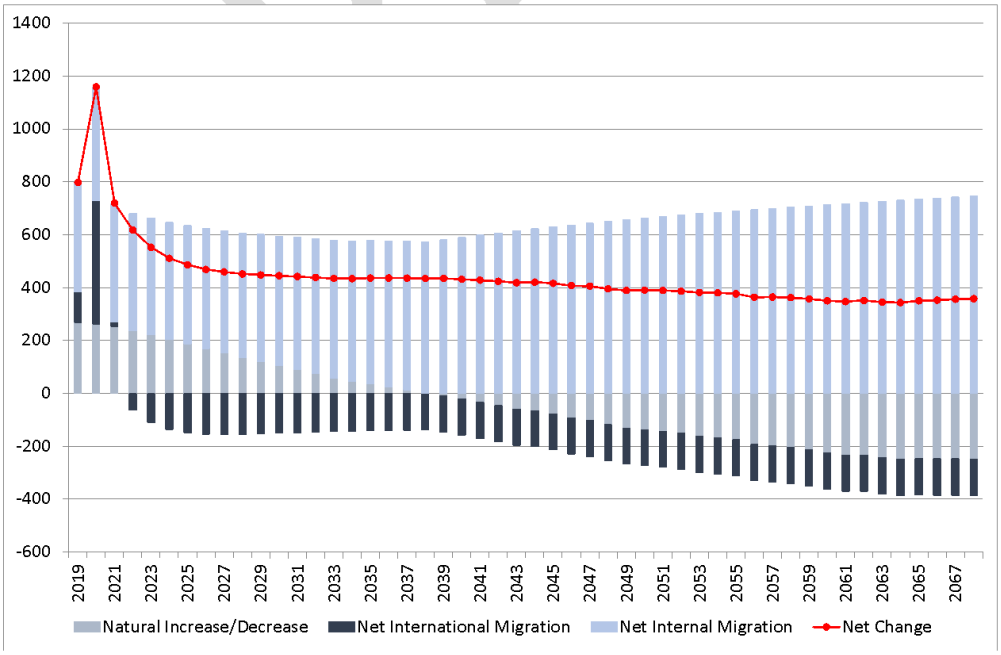


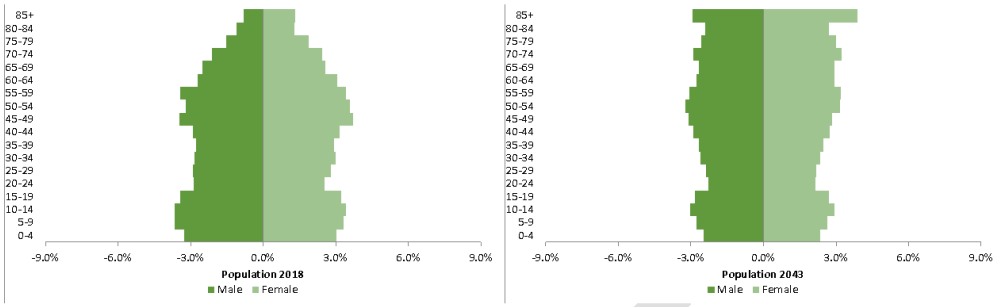
Table 7 summarises the largest sources and destinations of inward and outward internal migrants respectively, for Waipā District in 2043 (being the middle of the projection period) for the medium-variant population projection. The largest flows in and out of the district can be attributed to Hamilton City, Auckland, and Waikato Distict, all of which are large population centres in close proximity to Waipā District. The inward migration from each of those TAs is larger than the outward flow, suggesting that the nearby cities are projected to be a substantial source of net internal migration for Waipā District.

Table 7: Top sources and destinations of internal migration for Waipā District, 2043

Source	Number		Destination	Number
Hamilton	1254		Hamilton	1089
Auckland	953		Auckland	475
Waikato	229		Waikato	187
Tauranga	153		Tauranga	166
Matamata-Piako	144		Matamata Piako	143
Rotorua	85		Rotorua	79
South Waikato	73		Western Bay of Plenty	66
Otorohanga	64		South Waikato	66
Western Bay of Plenty	59		Otorohanga	58
Taupō	43		Christchurch	46

The age structure of Waipā District is moderately old compared with other TAs in the Waikato, but ages relatively quickly, as shown in Figure 44. In 2018, 17.6 percent of the population are aged 65 years and over, and this is projected to slightly increase to 29.2 percent by 2043. This fastest rate of ageing explains the shift from natural increase to natural decrease shown in the previous figure.

Figure 44: Age-sex structure for Waipā District, 2018 and 2043 (medium-variant projection)



The medium-variant family and household projection (by type) for Waipā District is shown in Figure 45. The estimated number of total households in June 2018 is 20,163. In terms of total households, the projection closely follows the medium-variant population projection, with the total number of households increasing throughout the projection period, reaching 30,107 in 2068. The number of one-parent and two-parent families increases fairly consistently over the projection period, as does the number of couples without children and one-person households. The low-variant and high-variant family and household projection (by type) for Waipā District are shown in Figures 46 and 47 respectively. In terms of total households, the low-variant projection closely follows the low-variant population projection, with the total number of households increasing throughout the projection period, reaching 24,811 in 2068. The high-variant projection closely follows the high-variant population projection, with the total number of households throughout the projection period, reaching 35,446 in 2068. The relative size of the families and households by type are similar in the low-variant and high-variant projections to those in the medium-variant projection.

The labour force projections for Waipā District are shown in Figure 48. The estimated labour force in June 2018 is 30,664. In the medium-variant projection, the labour force increases throughout the projection period, reaching 42,918 in 2068. In the low-variant projection, the labour force increases to a peak of 35,417 in 2043 before declining to 34,232 in 2068. In the high-variant projection, the labour force increases throughout the projection period, reaching 51,696 in 2068.

Figure 45: Medium-variant family and household projections for Waipā District, 2018-2068

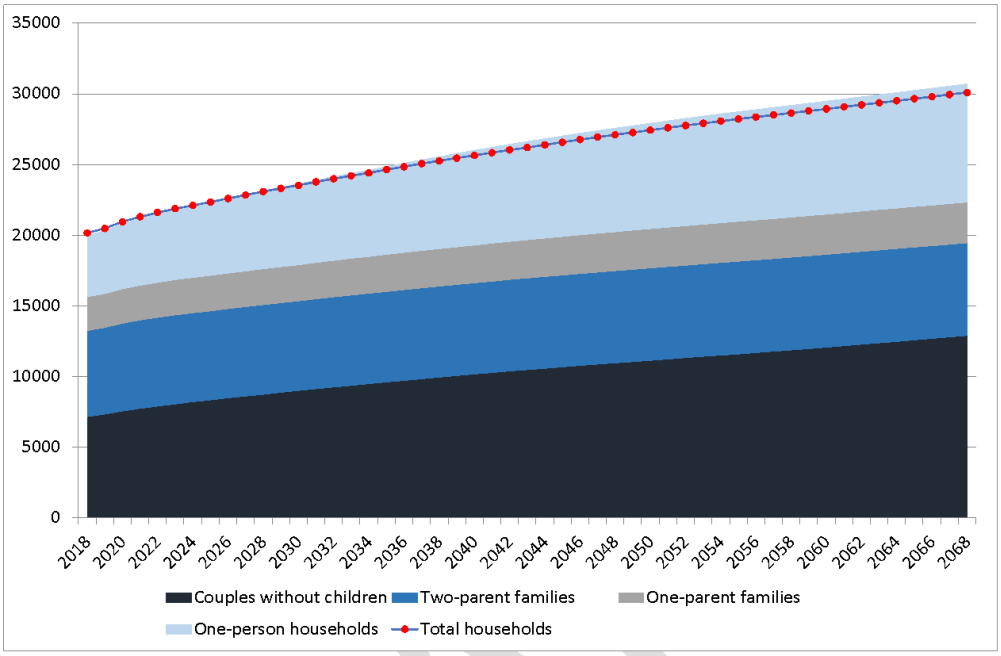


Figure 46: Low-variant family and household projections for Waipā District, 2018-2068

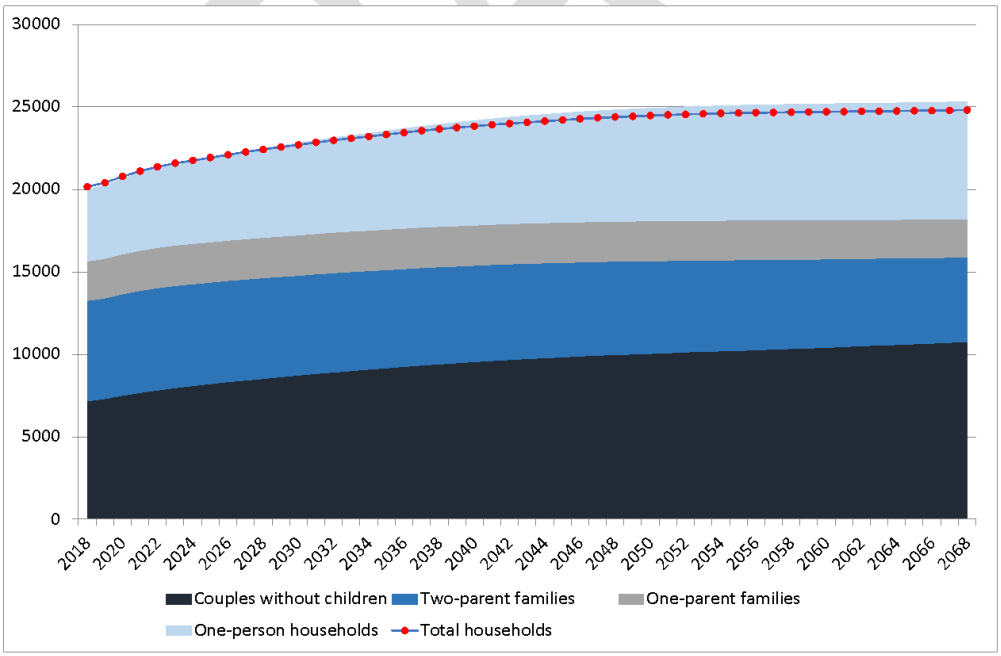


Figure 47: High-variant family and household projections for Waipā District, 2018-2068

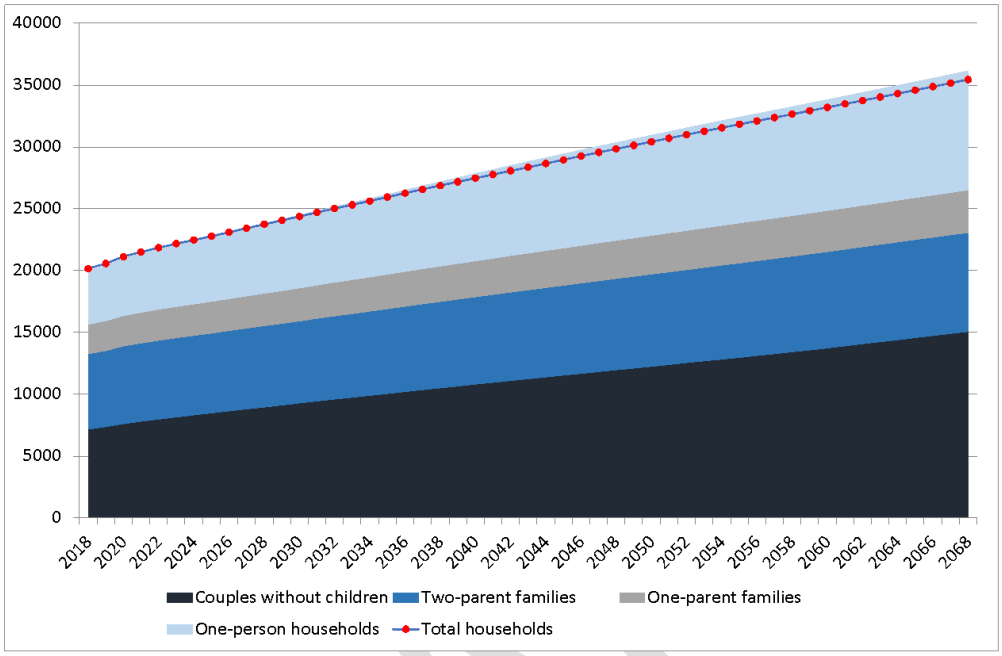
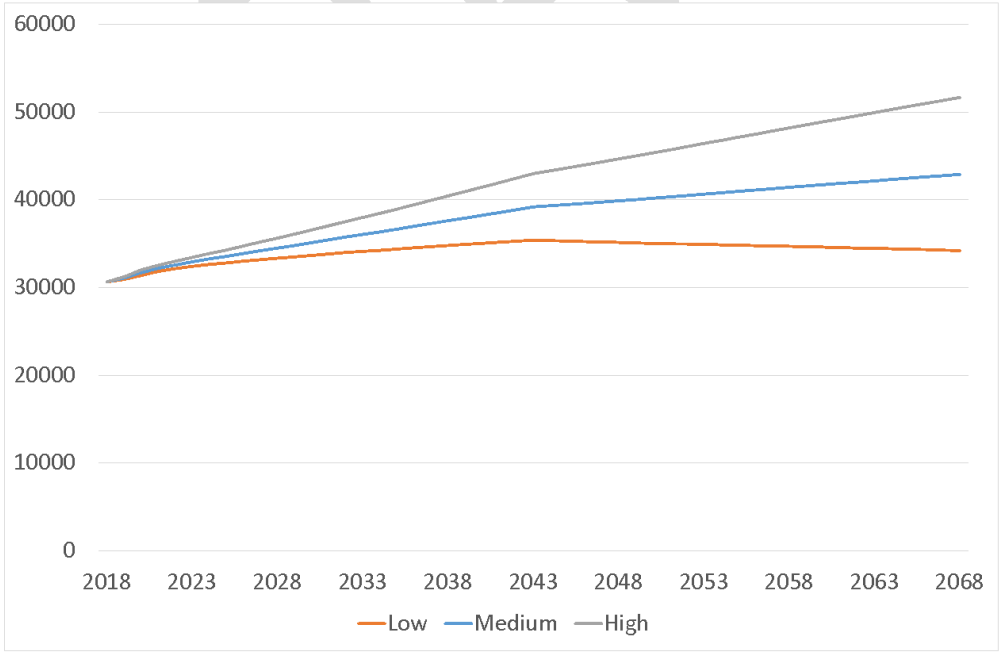


Figure 48: Labour force projections for Waipā District, 2018-2068



4.7 Population, Family and Household, and Labour Force Projections for Otorohanga District

Figure 49 presents the 2018-base population projections for Otorohanga District to 2068, along with historical population estimates from Statistics New Zealand back to 1996. The 2018-base Statistics New Zealand (SNZ) projections are also included for comparison.

The June 2018 population estimate (base population) for Otorohanga District is 10,500. Under the medium-variant population projection scenario, the population increases throughout the projection period, reaching 13,968 in 2068. The medium-variant projection shows higher growth than the recent experience of Otorohanga District, more closely reflecting the TA's experience since 2006. The annualised projected population growth over the period 2018-2038 of 0.63% per year is somewhat lower than the 0.24% annualised growth experienced over the period 1996-2018. Under the low-variant scenario, the population increases throughout the projection period, reaching 11,339 in 2068. Under the high-variant scenario, the population increases throughout the projection period, reaching 16,640 in 2068. In comparison, the SNZ 2018-base medium-variant projection is similar to the Waikato medium-variant projection for much of the projection period, but then falls away after the early-2030s, with the SNZ high-variant projection slightly higher than the Waikato high-variant projection, and the low-variant projection similar to the Waikato low-variant projection only until the mid-2020s.

Figure 50 disaggregates the components of population change for Otorohanga District over the period 2019-2068 for the medium-variant population projection. As previously noted, net population change in the medium-variant projection scenario is positive throughout the projection period. This is made up of net inward internal migration (more in-migration from the rest of New Zealand than out-migration) and natural increase (more births than deaths), offset by net outward international migration (more out-migration to overseas than in-migration from overseas). The initial bump in population from the historically high net international migration at the national level can clearly be seen in the first two years of the projections, but is quickly eliminated by the coronavirus border closures and the resulting substantial decrease in international migration flows.

Figure 49: Population projections for Otorohanga District, 2018-2068

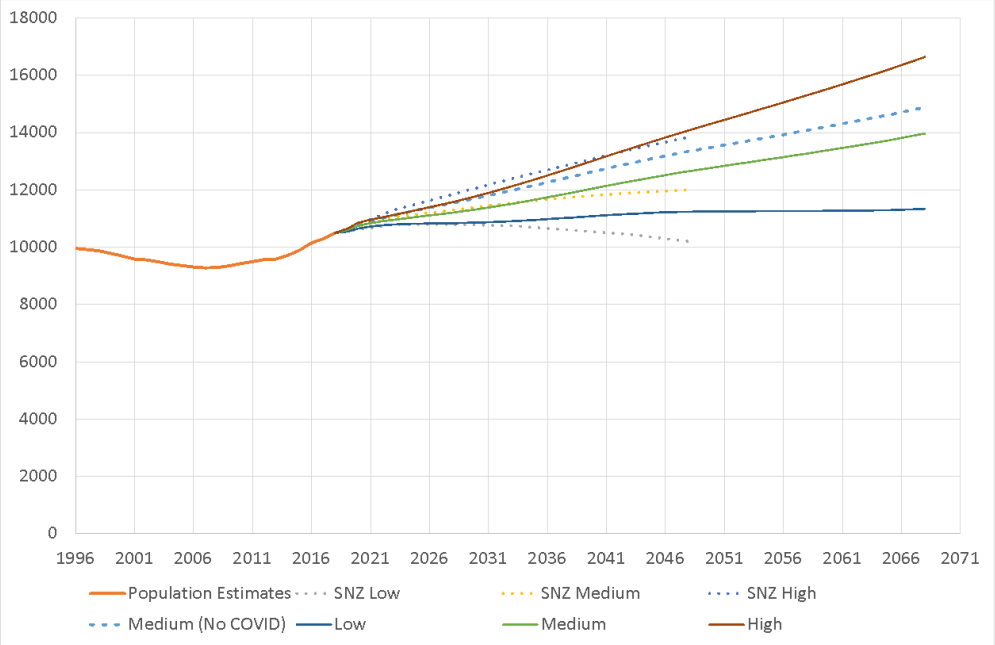


Figure 50: Projected components of population change for Otorohanga District, medium-variant projection, 2019-2068

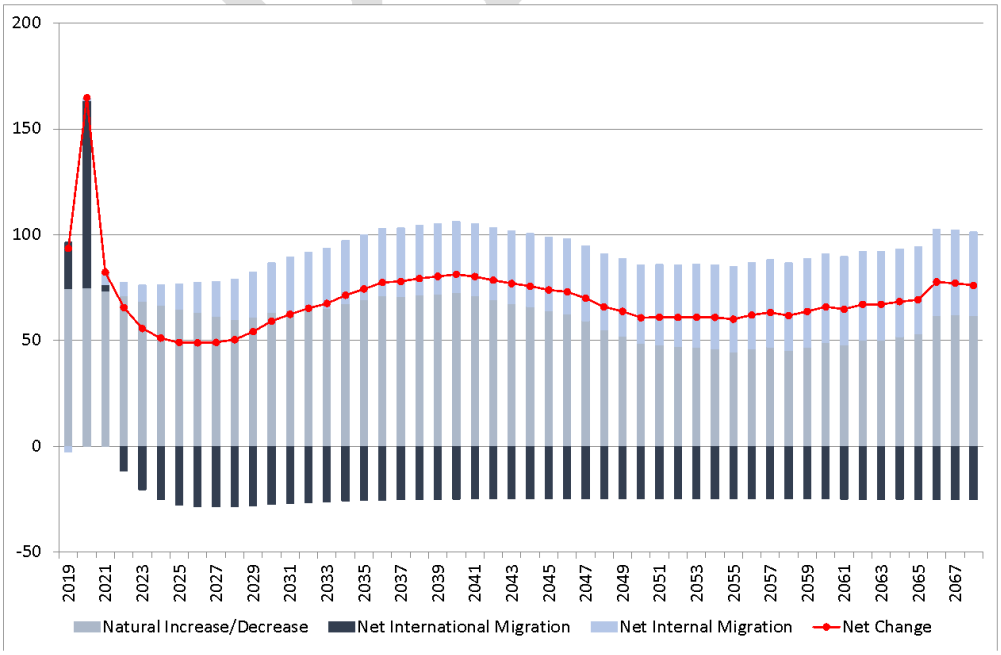


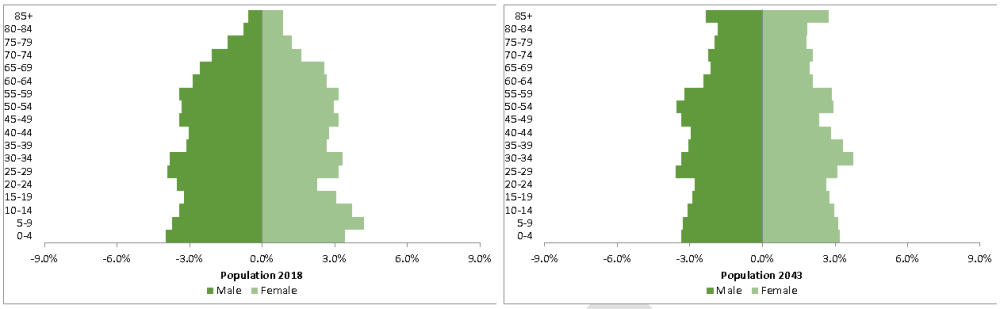
Table 8 summarises the largest sources and destinations of inward and outward internal migrants respectively, for Otorohanga District in 2043 (being the middle of the projection period) for the medium-variant population projection. The largest flows in and out of the district can be attributed to Auckland, Hamilton City, and Waipā Distict, all of which are large population centres in relatively close proximity to Otorohanga District. The inward migration from Auckland and Hamilton City are larger than the outward flows, suggesting that Auckland and Hamilton City are projected to be a substantial source of net internal migration for Otorohanga District. In contrast, the outward migration is larger than the inward flow for Waipā District, suggesting that Otorohanga District is a net donor of migrants to Waipā District

Table 8: Top sources and destinations of internal migration for Otorohanga District, 2043

Source	Number		Destination	Number
Auckland	171		Auckland	94
Hamilton	70		Hamilton	68
Waipā	58		Waipā	64
Waikato	34		Waikato	31
Tauranga	25		Tauranga	30
Taupō	18		Taupō	21
Rotorua	16		Rotorua	17
South Waikato	14		South Waikato	14
Waitomo	12		Waitomo	13
Matamata-Piako	10		Western Bay of Plenty	12

The age structure of Otorohanga District is amongst the most youthful in the Waikato Region and remains relatively young, as shown in Figure 51. In 2018, 14.6 percent of the population are aged 65 years and over, and this is projected to slightly increase to 21.0 percent by 2043. This slow rate of population ageing explains why the district remains in natural increase throughout the projection period, as shown in the previous figure.

Figure 51: Age-sex structure for Otorohanga District, 2018 and 2043 (medium-variant projection)



The medium-variant family and household projection (by type) for Otorohanga District is shown in Figure 52. The estimated number of total households in June 2018 is 3,632. In terms of total households, the projection closely follows the medium-variant population projection, with the total number of households increasing throughout the projection period, reaching 5,285 in 2068. The number of one-parent and two-parent families increases fairly consistently over the projection period, as does the number of couples without children and one-person households. The low-variant and high-variant family and household projection (by type) for South Waikato District are shown in Figures 53 and 54 respectively. In terms of total households, the low-variant projection closely follows the low-variant population projection, with the total number of households increasing throughout the projection period, reaching 4,369 in 2068. The high-variant projection closely follows the high-variant population projection, with the total number of households throughout the projection period, reaching 6,211 in 2068. The relative size of the families and households by type are similar in the low-variant and high-variant projections to those in the medium-variant projection.

The labour force projections for Otorohanga District are shown in Figure 55. The estimated labour force in June 2018 is 5,742. In the medium-variant projection, the labour force increases throughout the projection period, reaching 8,148 in 2068. In the low-variant projection, the labour force increases throughout the projection period, reaching 6,593 in 2068. In the high-variant projection, the labour force increases throughout the projection period, reaching 9,721 in 2068.

Figure 52: Medium-variant family and household projections for Otorohanga District, 2018-2068

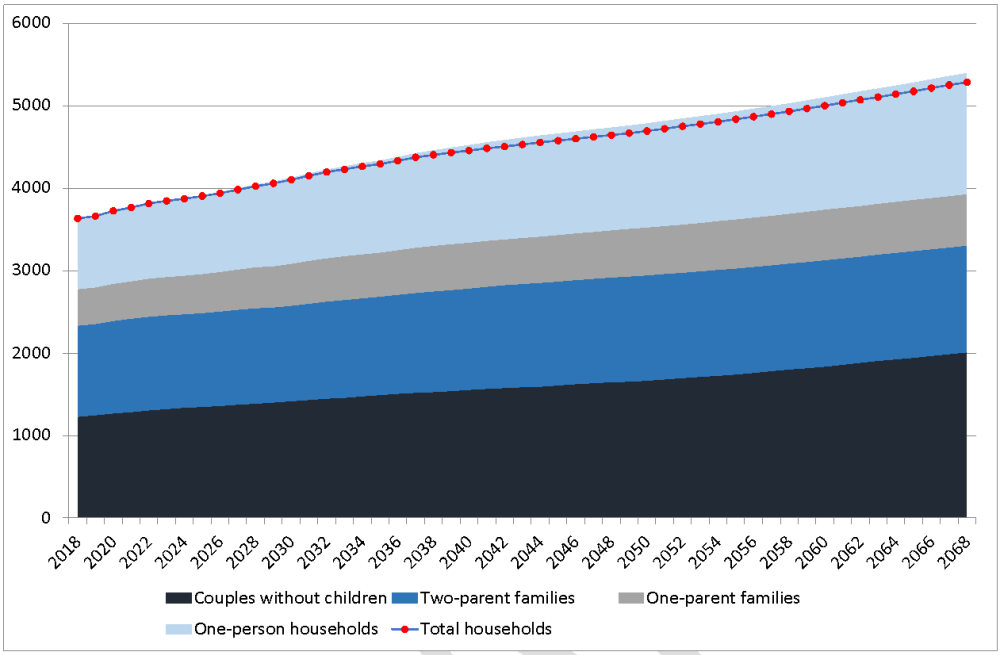


Figure 53: Low-variant family and household projections for Otorohanga District, 2018-2068

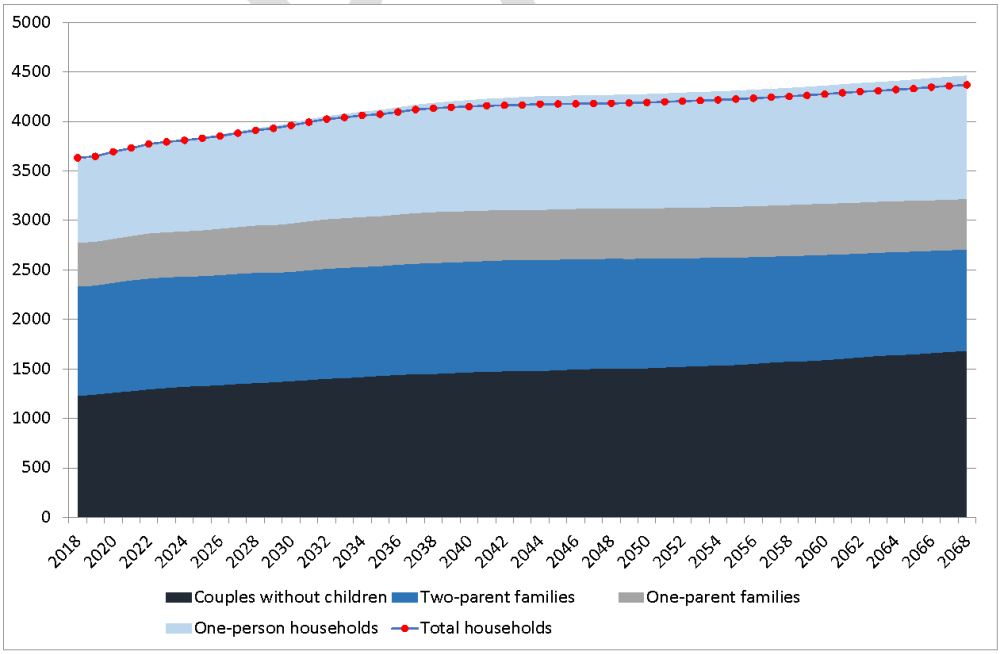


Figure 54: High-variant family and household projections for Otorohanga District, 2018-2068

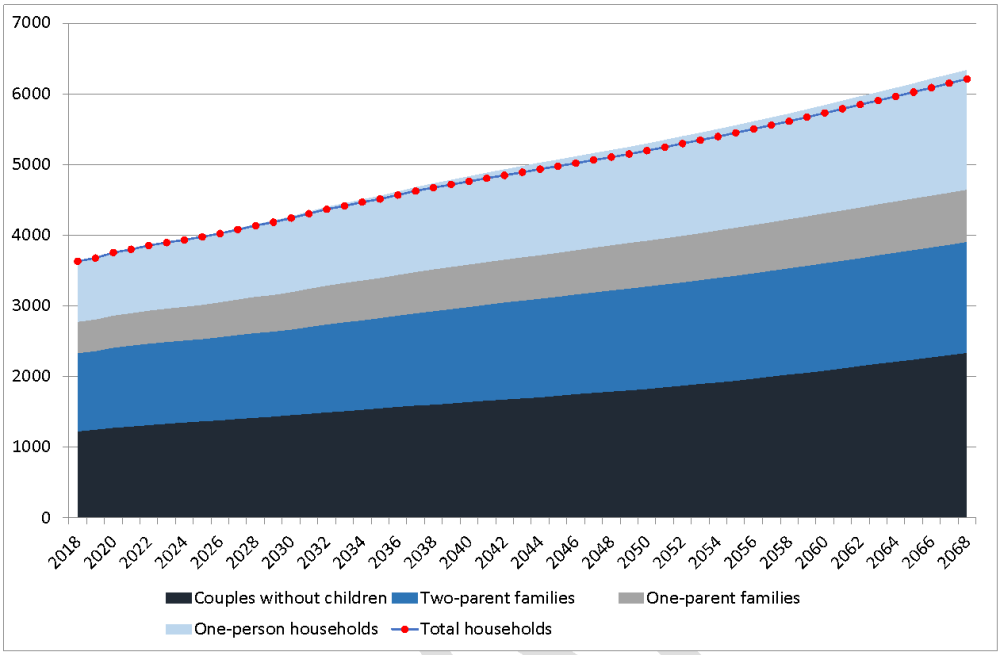
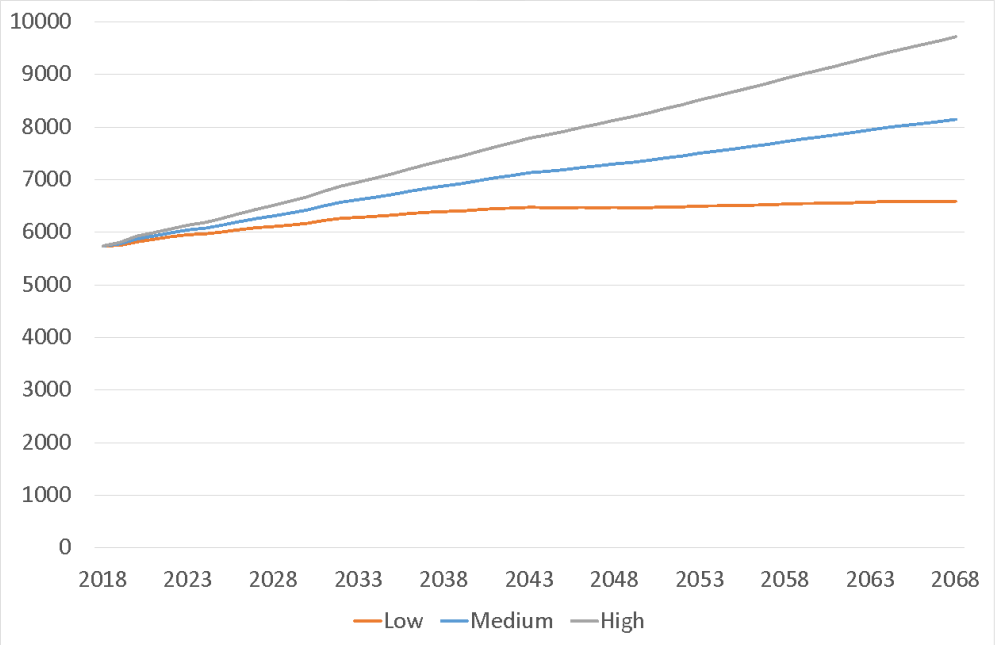


Figure 55: Labour force projections for Otorohanga District, 2018-2068



4.8 Population, Family and Household, and Labour Force Projections for South Waikato District

Figure 56 presents the 2018-base population projections for South Waikato District to 2068, along with historical population estimates from Statistics New Zealand back to 1996. The 2018-base Statistics New Zealand (SNZ) projections are also included for comparison.

The June 2018 population estimate (base population) for South Waikato District is 24,900. Under the medium-variant population projection scenario, the population initially declines, reaching a trough of 24,750 in 2030, then increases throughout the remainder of the projection period, reaching 28,617 in 2068. The medium-variant projection shows higher growth than the recent experience of South Waikato District, more closely reflecting the TA's experience since 2006. The annualised projected population growth over the period 2018-2038 of 0.04% per year is somewhat lower than the -0.18% annualised growth experienced over the period 1996-2018. Under the low-variant scenario, the population decreases to a trough of 22,989 in 2061, before increasing to eventually reach 23,066 in 2068. Under the high-variant scenario, the population increases throughout the projection period, reaching 34,289 in 2068. In comparison, the SNZ 2018-base medium-variant and high-variant projections are higher than the Waikato high-variant projection for much of the projection period, but then the SNZ medium-variant projection falls away after the late-2030s, with the SNZ low-variant projection is similar to the Waikato medium-variant projection until the mid-2030s, before falling away.

Figure 57 disaggregates the components of population change for South Waikato District over the period 2019-2068 for the medium-variant population projection. As previously noted, net population change in the medium-variant projection scenario is initially negative, but then becomes positive from 2031, and remains positive throughout the remainder of the projection period. This is made up of natural increase (more births than deaths), offset by net outward international migration (more out-migration to overseas than in-migration from overseas). Net outward internal migration (more out-migration to the rest of New Zealand than in-migration) gradually reverses, to become net inward internal migration from 2038, as the district benefits from some spill-over growth from the rest of the region. The initial bump in population from the historically high net international migration at the national level can clearly be seen in the first two years of the projections, but is quickly eliminated by the coronavirus border closures and the resulting substantial decrease in international migration flows.

Figure 56: Population projections for South Waikato District, 2018-2068

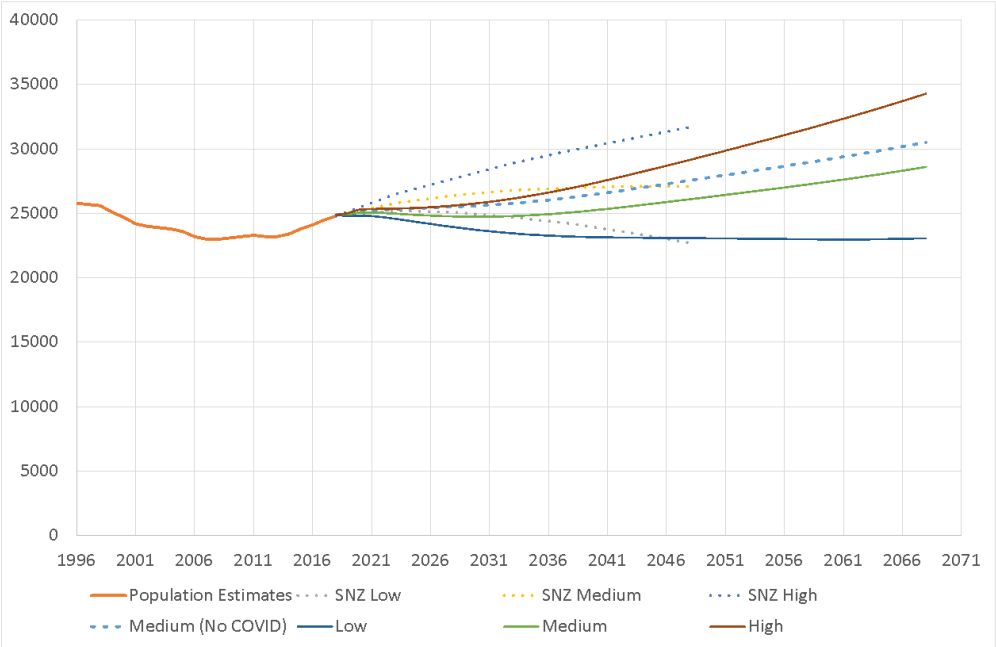


Figure 57: Projected components of population change for South Waikato District, medium-variant projection, 2019-2068

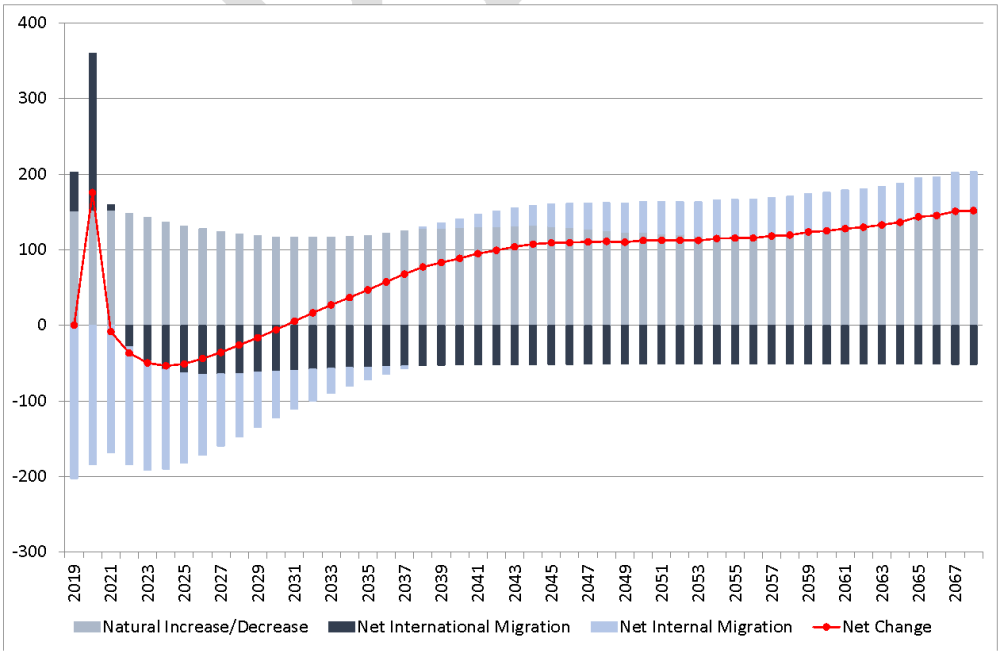


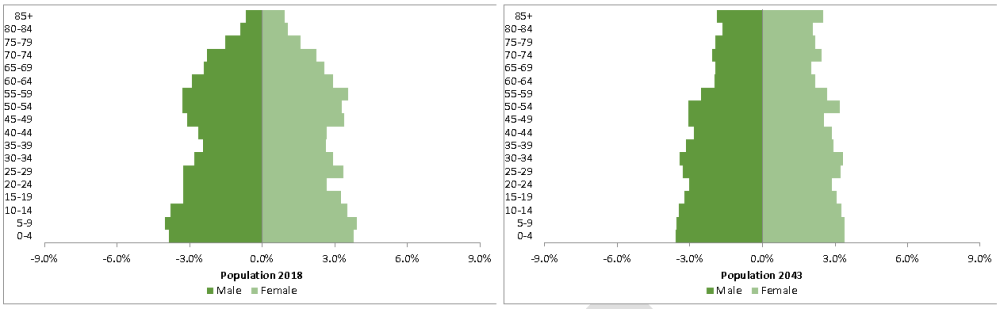
Table 9 summarises the largest sources and destinations of inward and outward internal migrants respectively, for South Waikato District in 2043 (being the middle of the projection period) for the medium-variant population projection. The largest flows in and out of the district can be attributed to Auckland, Rotorua District, Hamilton City, and Tauranga City, all of which are large population centres in relatively close proximity to South Waikato District. The inward migration from Auckland and Hamilton City are larger than the outward flows, suggesting that Auckland and Hamilton City are projected to be a substantial source of net internal migration for South Waikato District. In contrast, the outward migration is larger than the inward flow for Rotorua District and Tauranga City, suggesting that South Waikato District is a net donor of migrants to Rotorua District and Tauranga City.

Table 9: Top sources and destinations of internal migration for South Waikato District, 2043

Source	Number		Destination	Number
Auckland	270		Auckland	150
Rotorua	117		Rotorua	121
Hamilton	89		Tauranga	87
Tauranga	72		Hamilton	86
Waipā	66		Waipā	73
Western Bay of Plenty	47		Western Bay of Plenty	59
Taupō	44		Taupō	51
Matamata Piako	37		Matamata Piako	41
Waikato	27		Waikato	25
Wellington	17		Christchurch	19

The age structure of South Waikato District is moderately old compared with other TAs in the Waikato, but does not age as rapidly as other populations in the region, as shown in Figure 58. In 2018, 16.2 percent of the population are aged 65 years and over, and this is projected to slightly increase to 20.8 percent by 2043. This slow rate of population ageing explains why the district remains in natural increase throughout the projection period, as shown in the previous figure.

Figure 58: Age-sex structure for South Waikato District, 2018 and 2043 (medium-variant projection)



The medium-variant family and household projection (by type) for South Waikato District is shown in Figure 59. The estimated number of total households in June 2018 is 8,815. In terms of total households, the projection closely follows the medium-variant population projection, with the total number of households initially declining, reaching a trough of 8,807 in 2027, then increases throughout the remainder of the projection period, reaching 10,504 in 2068. The number of one-parent families increases fairly consistently over the projection period, as does the number of couples without children and one-person households. The number of two-parent families remains fairly constant over time. The low-variant and high-variant family and household projection (by type) for South Waikato District are shown in Figures 60 and 61 respectively. In terms of total households, the low-variant projection closely follows the low-variant population projection, with the total number of households initially declining, reaching a trough of 8,449 in 2052, then increases throughout the remainder of the projection period, reaching 8,639 in 2068. The high-variant projection closely follows the high-variant population projection, with the total number of households throughout the projection period, reaching 12,397 in 2068. The relative size of the families and households by type are similar in the low-variant and high-variant projections to those in the medium-variant projection.

Figure 59: Medium-variant family and household projections for South Waikato District, 2018-2068

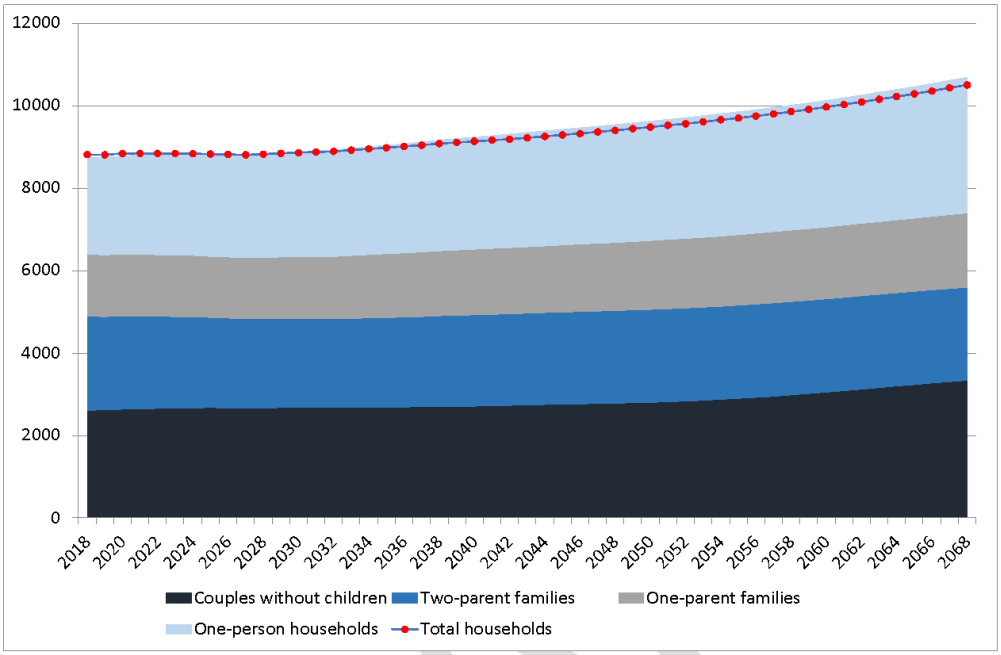


Figure 60: Low-variant family and household projections for South Waikato District, 2018-2068

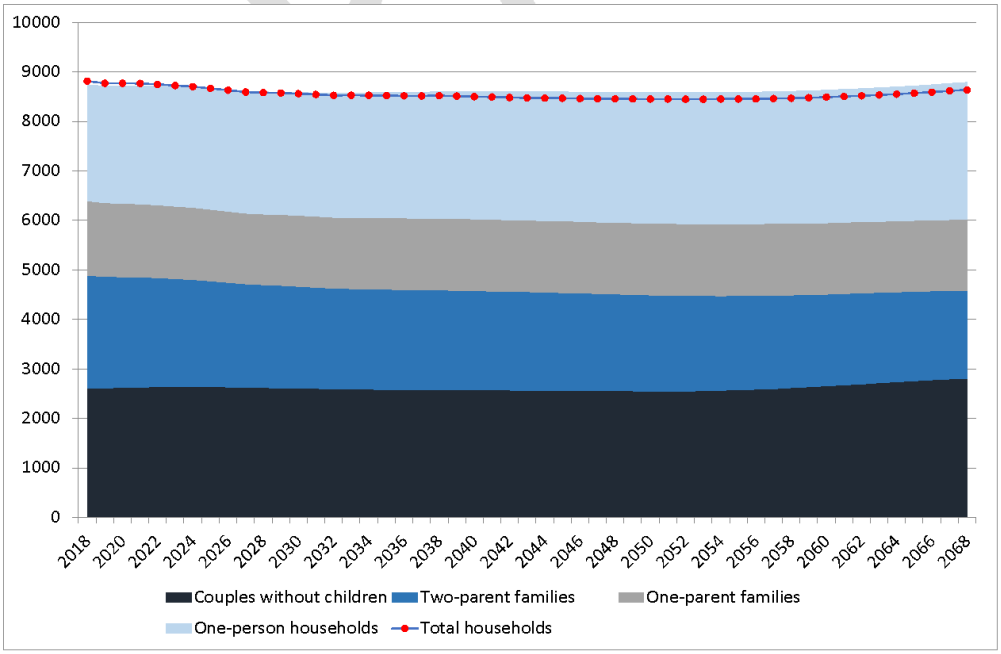
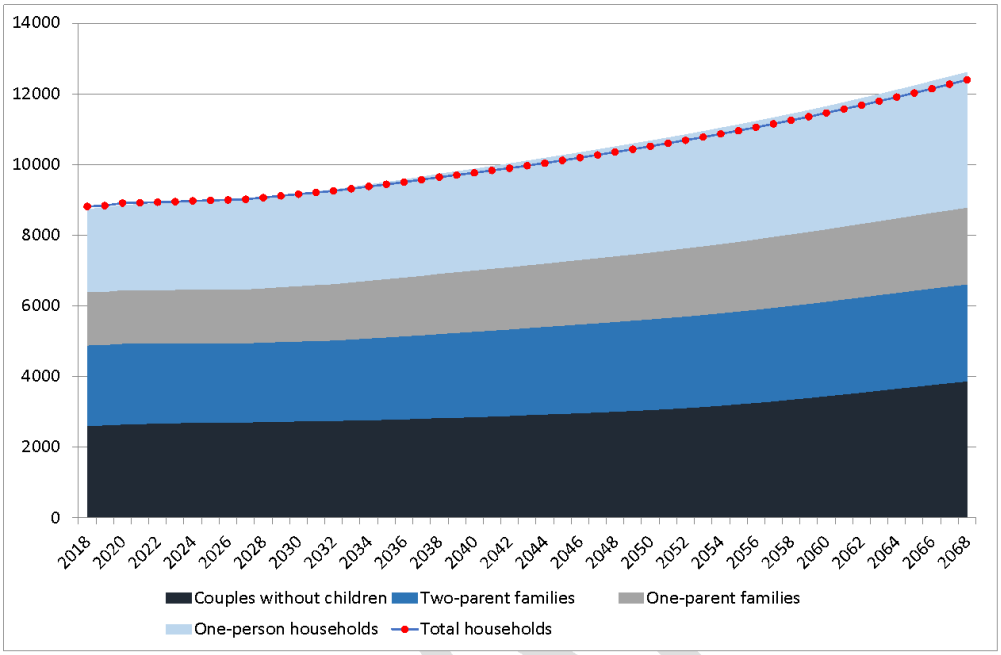
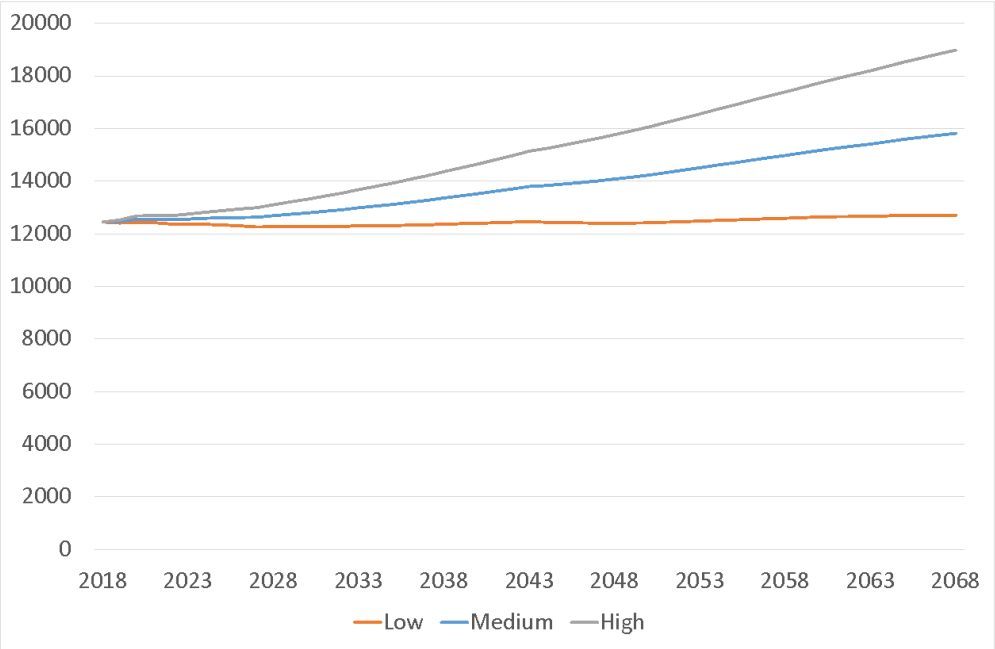


Figure 61: High-variant family and household projections for South Waikato District, 2018-2068



The labour force projections for South Waikato District are shown in Figure 62. The estimated labour force in June 2018 is 12,445. In the medium-variant projection, the labour force increases throughout the projection period, reaching 15,818 in 2068. In the low-variant projection, the labour force initially declines, reaching a trough of 12,261 in 2027, then increases throughout the remainder of the projection period, reaching 12,704 in 2068. In the high-variant projection, the labour force increases throughout the projection period, reaching 18,983 in 2068.

Figure 62: Labour force projections for South Waikato District, 2018-2068



4.9 Population, Family and Household, and Labour Force Projections for Waitomo District

Figure 63 presents the 2018-base population projections for Waitomo District to 2068, along with historical population estimates from Statistics New Zealand back to 1996. The 2018-base Statistics New Zealand (SNZ) projections are also included for comparison.

The June 2018 population estimate (base population) for Waitomo District is 9,630. Under the medium-variant population projection scenario, the population initially declines, reaching a trough of 9,371 in 2034, then increases throughout the remainder of the projection period, reaching 10,384 in 2068. The medium-variant projection shows very similar growth to the recent experience of Waitomo District. The annualised projected population growth over the period 2018-2038 of -0.13% per year is very similar to the -0.17% annualised growth experienced over the period 1996-2018. Under the low-variant scenario, the population decreases to a trough of 8,386 in 2062, before recovering to 8,401 in 2068. Under the high-variant scenario, the population increases throughout the projection period, reaching 12,404 in 2068. In comparison, the SNZ 2018-base medium-variant projection is similar to the Waikato high-variant projection until the early 2030s, before falling away, while the SNZ low-variant

projection is similar to the Waikato low-variant projection until the mid-2030s, before falling away.

Figure 63: Population projections for Waitomo District, 2018-2068

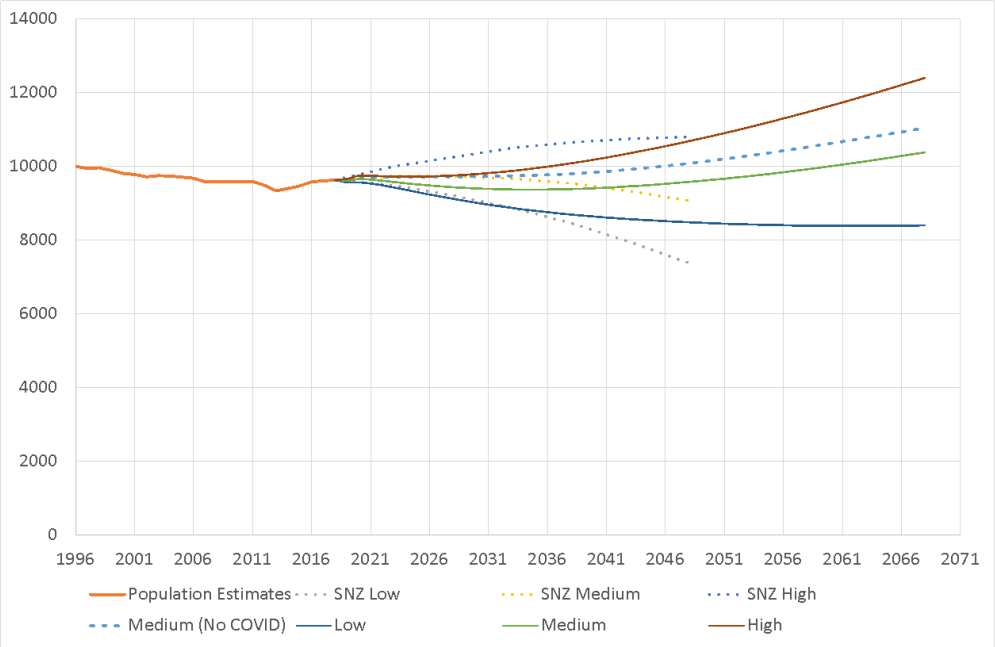


Figure 64 disaggregates the components of population change for Waitomo District over the period 2019-2068 for the medium-variant population projection. As previously noted, net population change in the medium-variant projection scenario is initially negative, but then becomes positive from 2036, and remains positive throughout the remainder of the projection period. This is made up of natural increase (more births than deaths), offset by net outward international migration (more out-migration to overseas than in-migration from overseas). Net outward internal migration (more out-migration to the rest of New Zealand than in-migration) gradually reverses, to become net inward internal migration from 2034, as the district benefits from some spill-over growth from the rest of the region. The initial bump in population from the historically high net international migration at the national level can clearly be seen in the first two years of the projections, but is quickly eliminated by the coronavirus border closures and the resulting substantial decrease in international migration flows.

Figure 64: Projected components of population change for Waitomo District, medium-variant projection, 2019-2068

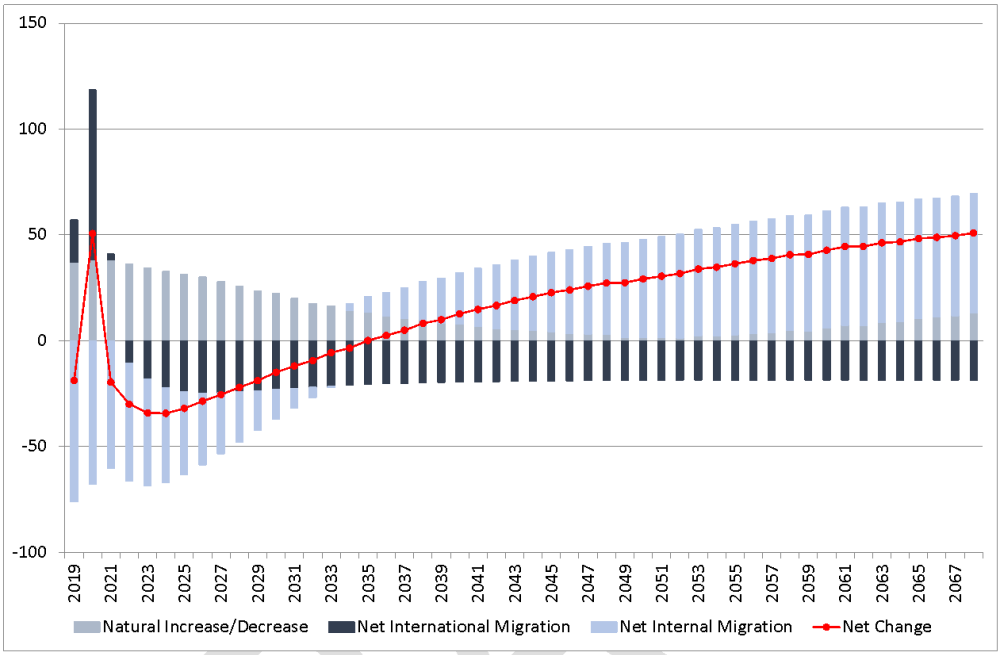


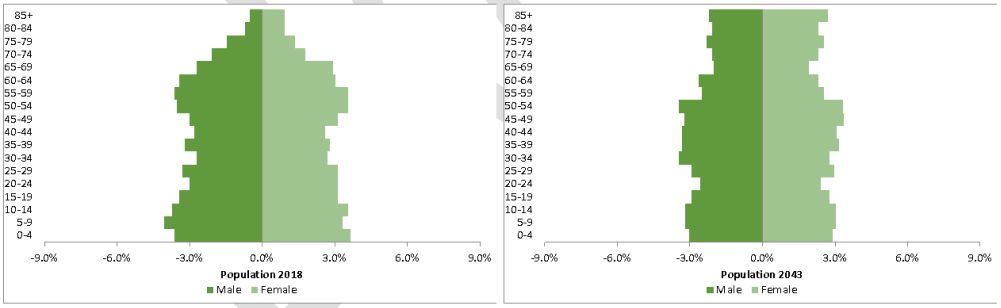
Table 10 summarises the largest sources and destinations of inward and outward internal migrants respectively, for Waitomo District in 2043 (being the middle of the projection period) for the medium-variant population projection. The largest flows in and out of the district can be attributed to Auckland, Hamilton City, and Tauranga City, all of which are large population centres in relatively close proximity to Waitomo District. The inward migration from Auckland and Hamilton City are larger than the outward flows, suggesting that Auckland and Hamilton City are projected to be a substantial source of net internal migration for Waitomo District. In contrast, the outward migration is larger than the inward flow for Tauranga City, suggesting that Waitomo District is a net donor of migrants to Tauranga City.

Table 10: Top sources and destinations of internal migration for Waitomo District, 2043

Source	Number		Destination	Number
Auckland	127		Auckland	68
Hamilton	39		Hamilton	36
Tauranga	16		Tauranga	19
Waipā	15		Taupō	16
Taupō	15		Waipā	16
Waikato	13		New Plymouth	16
Otorohanga	13		Otorohanga	12
New Plymouth	13		Waikato	11
Rotorua	11		Rotorua	11
Wellington	9		Christchurch	9

The age structure of Waitomo District is also amongst the most youthful in the Waikato Region, but ages relatively quickly, as shown in Figure 65. In 2018, 15.4 percent of the population are aged 65 years and over, and this is projected to slightly increase to 22.5 percent by 2043. The initially young age profile explains why the district remains in natural increase throughout the projection period, as shown in the previous figure.

Figure 65: Age-sex structure for Waitomo District, 2018 and 2043 (medium-variant projection)



The medium-variant family and household projection (by type) for Waitomo District is shown in Figure 66. The estimated number of total households in June 2018 is 3,503. In terms of total households, the projection closely follows the medium-variant population projection, with the total number of households increases throughout most of the projection period, reaching 4,071 in 2068. The number of one-parent and two-parent families remains fairly constant over the projection period, while the number of couples without children and one-person households

increases throughout the projection period. The low-variant and high-variant family and household projection (by type) for South Waikato District are shown in Figures 67 and 68 respectively. In terms of total households, the low-variant projection closely follows the low-variant population projection, with the total number of households fluctuating over time on a slightly downward trend, reaching 3,367 in 2068. The high-variant projection closely follows the high-variant population projection, with the total number of households throughout the projection period, reaching 4,784 in 2068. The relative size of the families and households by type are similar in the low-variant and high-variant projections to those in the medium-variant projection.

Figure 66: Medium-variant family and household projections for Waitomo District, 2018-2068

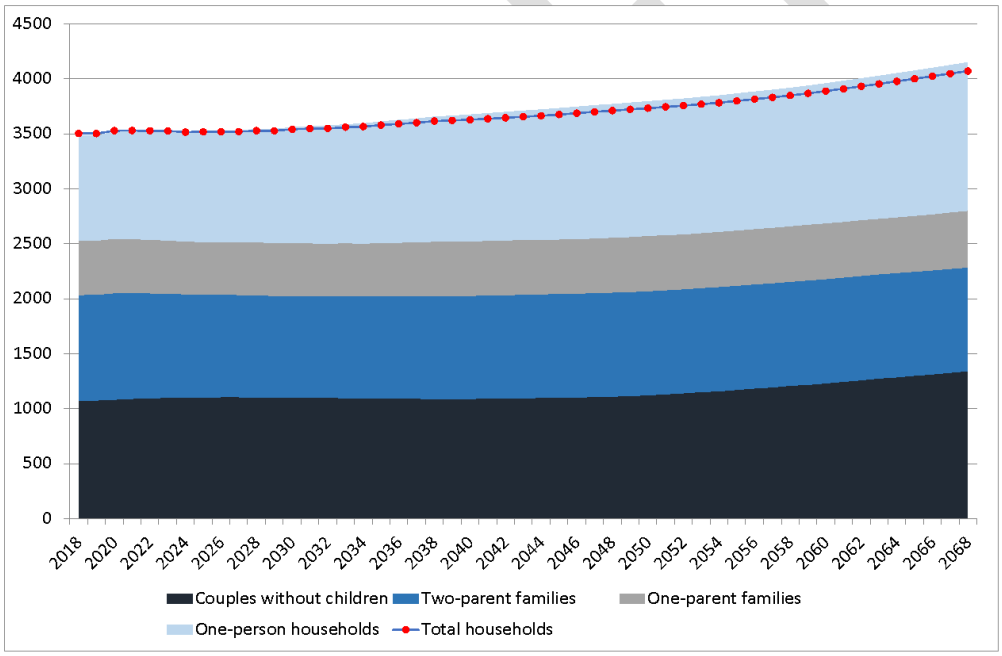


Figure 67: Low-variant family and household projections for Waitomo District, 2018-2068

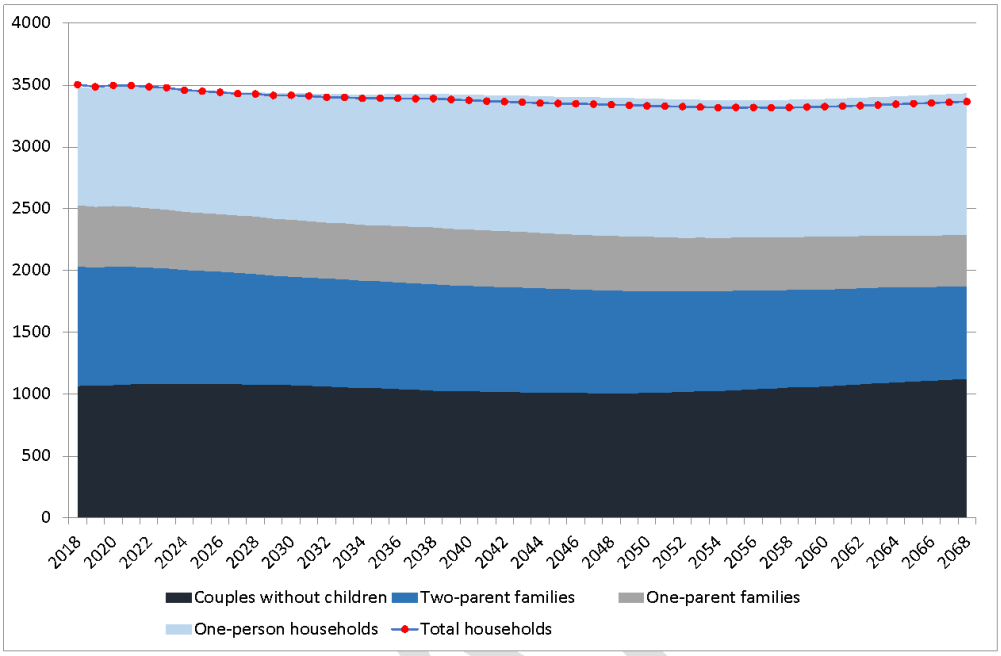
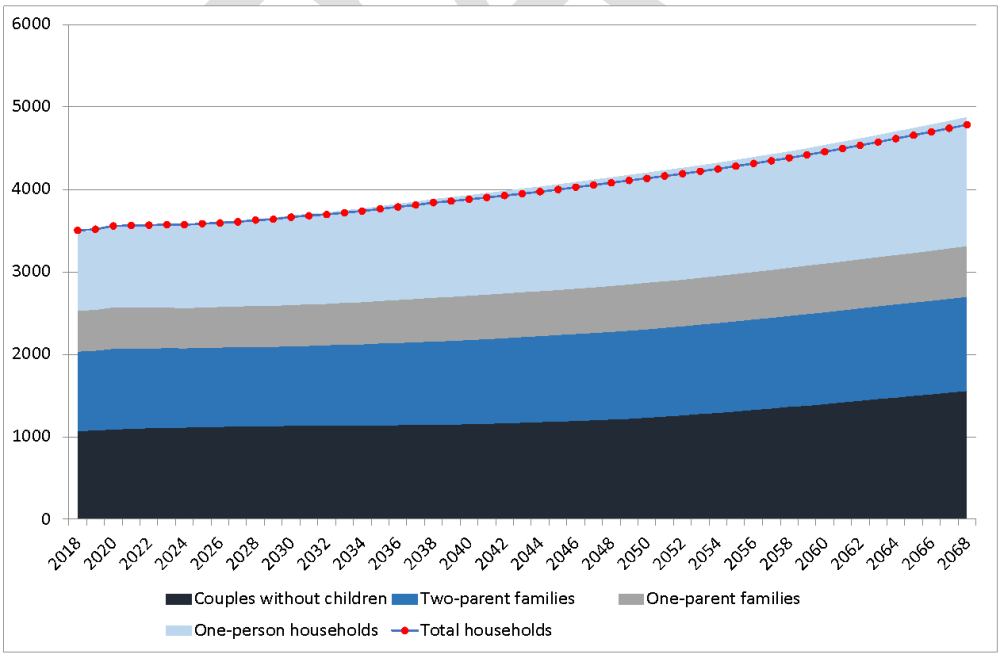
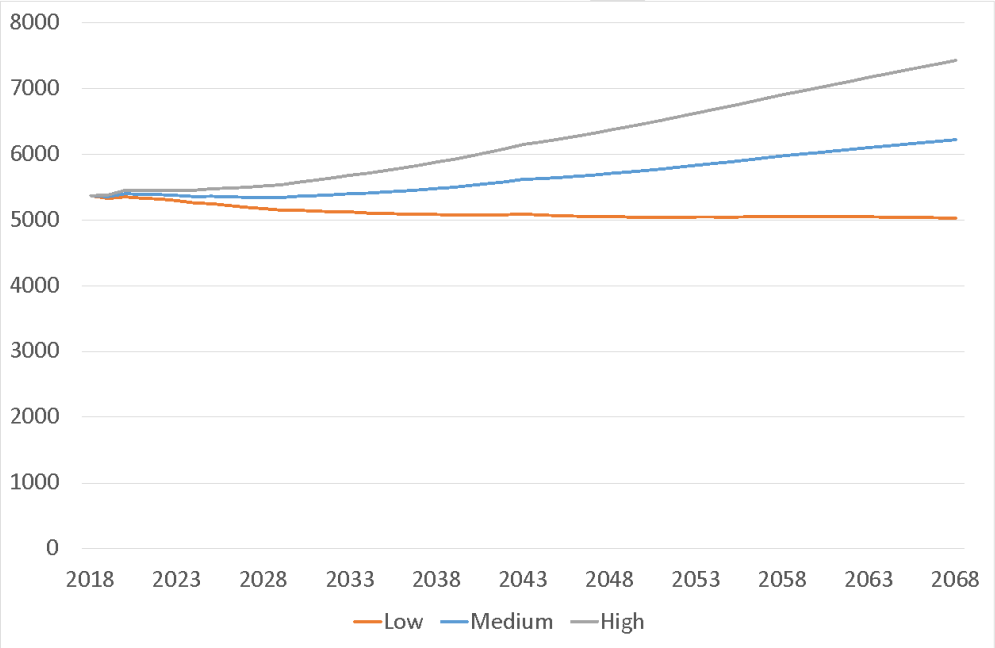


Figure 68: High-variant family and household projections for Waitomo District, 2018-2068



The labour force projections for Waitomo District are shown in Figure 69. The estimated labour force in June 2018 is 5,367. In the medium-variant projection, the labour force initially declines, reaching a trough of 5,341 in 2029, then increases throughout the remainder of the projection period, reaching 6,221 in 2068. In the low-variant projection, the labour force declines throughout of the projection period, reaching 5,030 in 2068. In the high-variant projection, the labour force increases throughout the projection period, reaching 7,427 in 2068.

Figure 69: Labour force projections for Waitomo District, 2018-2068



4.10 Population, Family and Household, and Labour Force Projections for Taupō District

Figure 70 presents the 2018-base population projections for Taupō District to 2068, along with historical population estimates from Statistics New Zealand back to 1996. The 2018-base Statistics New Zealand (SNZ) projections are also included for comparison.

The June 2018 population estimate (base population) for Taupō District is 38,600. Under the medium-variant population projection scenario, the population increases throughout the projection period, reaching 46,129 in 2068. The medium-variant projection shows much lower

growth than the recent experience of Taupō District, but this reflects the much lower projection international migration flows. The annualised projected population growth over the period 2018-2038 of 0.39% per year is very similar to the 0.91% annualised growth experienced over the period 1996-2018. Under the low-variant scenario, the population decreases throughout the projection period, falling to 37,084 in 2068. Under the high-variant scenario, the population increases throughout the projection period, reaching 55,361 in 2068. In comparison, the SNZ 2018-base medium-variant projection is similar to the Waikato high-variant projection until the early 2030s, before falling away, while the SNZ low-variant projection is similar to the Waikato low-variant projection throughout the projection period.

Figure 70: Population projections for Taupō District, 2018-2068

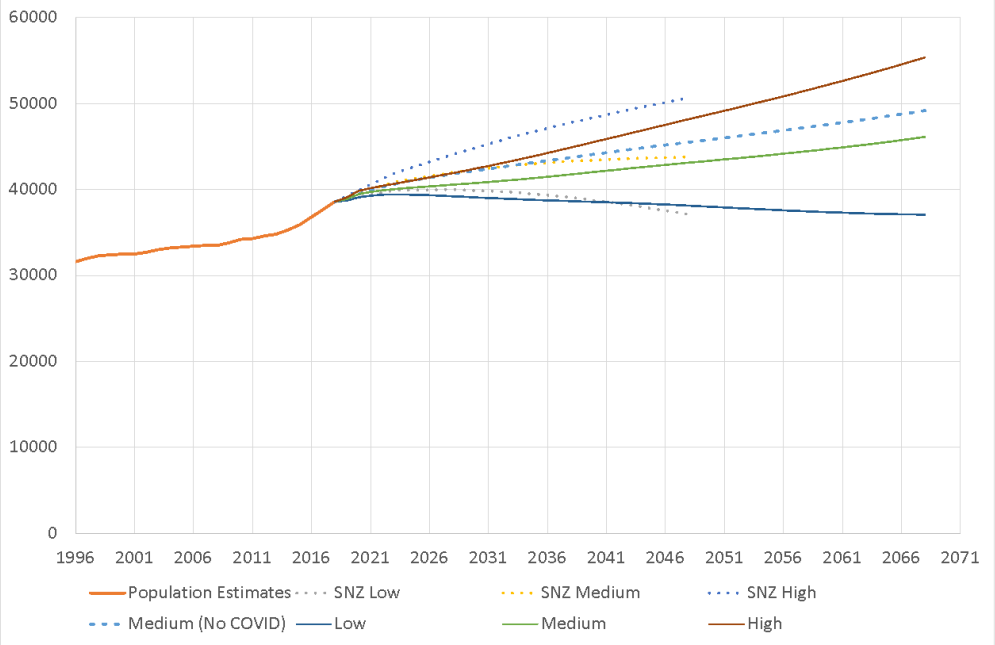


Figure 71 disaggregates the components of population change for Taupō District over the period 2019-2068 for the medium-variant population projection. As previously noted, net population change in the medium-variant projection scenario is positive throughout the projection period. This is made up of net inward internal migration (more in-migration from the rest of New Zealand than out-migration) and natural increase (more births than deaths) up

to 2035 (after which there is natural decrease – more deaths than births), and net outward international migration (more out-migration to overseas than in-migration from overseas). The initial bump in population from the historically high net international migration at the national level can clearly be seen in the first two years of the projections, but is quickly eliminated by the coronavirus border closures and the resulting substantial decrease in international migration flows

Figure 71: Projected components of population change for Taupō District, medium-variant projection, 2019-2068

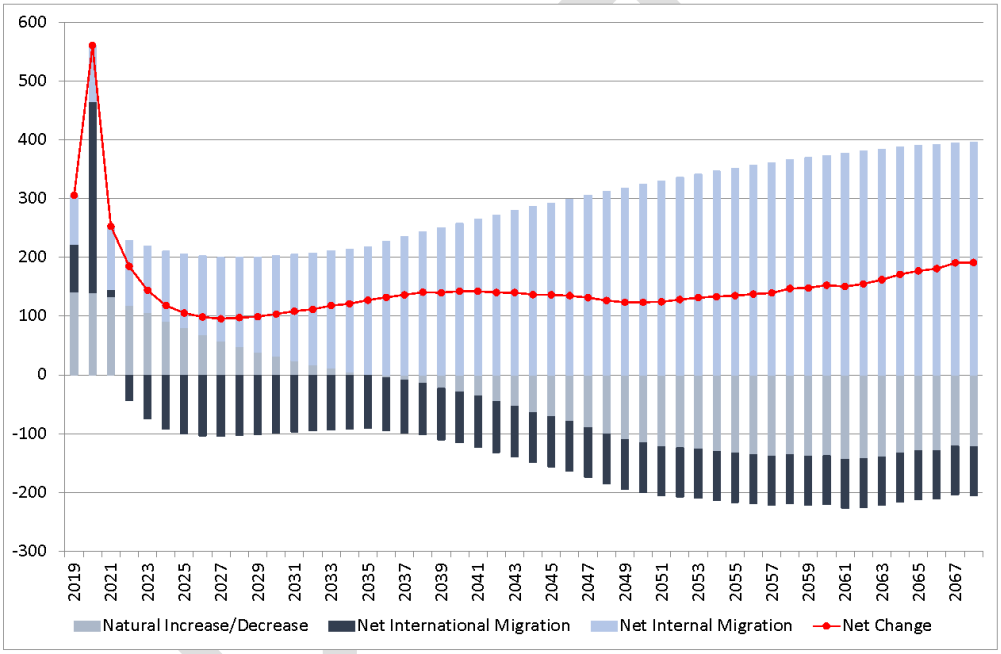


Table 11 summarises the largest sources and destinations of inward and outward internal migrants respectively, for Taupō District in 2043 (being the middle of the projection period) for the medium-variant population projection. The largest flows in and out of the district can be attributed to Auckland, Rotorua District, Hamilton City, and Tauranga City, all of which are large population centres in relatively close proximity to Taupō District. The inward migration from Auckland, Rotorua District, and Hamilton City are larger than the outward flows, suggesting that Auckland, Rotorua District, and Hamilton City are projected to be a substantial

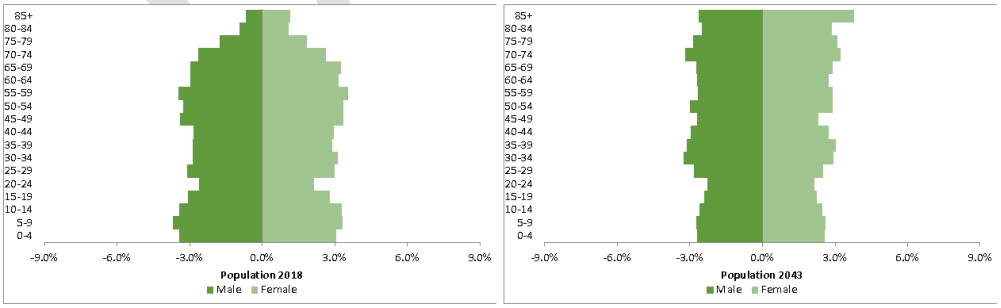
source of net internal migration for Taupō District. In contrast, the outward migration is larger than the inward flow for Tauranga City, suggesting that Taupō District is a net donor of migrants to Tauranga City.

Table 11: Top sources and destinations of internal migration for Taupō District, 2043

Source	Number		Destination	Number
Auckland	520		Auckland	249
Rotorua	170		Rotorua	153
Hamilton	123		Tauranga	103
Tauranga	99		Hamilton	102
Hastings	78		Hastings	84
Whakatane	51		Whakatane	48
South Waikato	51		Christchurch	47
Wellington	51		Palmerston North	45
Waipā	45		South Waikato	44
Waikato	44		Waipā	43

The age structure of Taupō District is moderately old compared with other TAs in the Waikato, but ages relatively quickly, as shown in Figure 72. In 2018, 19.0 percent of the population are aged 65 years and over, and this is projected to slightly increase to 29.8 percent by 2043. This relatively fast rate of ageing explains the shift from natural increase to natural decrease shown in the previous figure.

Figure 72: Age-sex structure for Taupō District, 2018 and 2043 (medium-variant projection)



The medium-variant family and household projection (by type) for Taupō District is shown in Figure 73. The estimated number of total households in June 2018 is 14,356. In terms of total households, the projection closely follows the medium-variant population projection, with the total number of households increases throughout the projection period, reaching 18,367 in 2068. The number of one-parent families increases throughout the projection period, as does the number of couples without children and one-person households. The number of two-parent families decreases throughout the projection period. The low-variant and high-variant family and household projection (by type) for South Waikato District are shown in Figures 74 and 75 respectively. In terms of total households, the low-variant projection closely follows the low-variant population projection, with the total number of households increasing to a peak of 15,554 in 2038 before declining to 15,345 in 2068. The high-variant projection closely follows the high-variant population projection, with the total number of households throughout the projection period, reaching 21,974 in 2068. The relative size of the families and households by type are similar in the low-variant and high-variant projections to those in the medium-variant projection.

Figure 73: Medium-variant family and household projections for Taupō District, 2018-2068

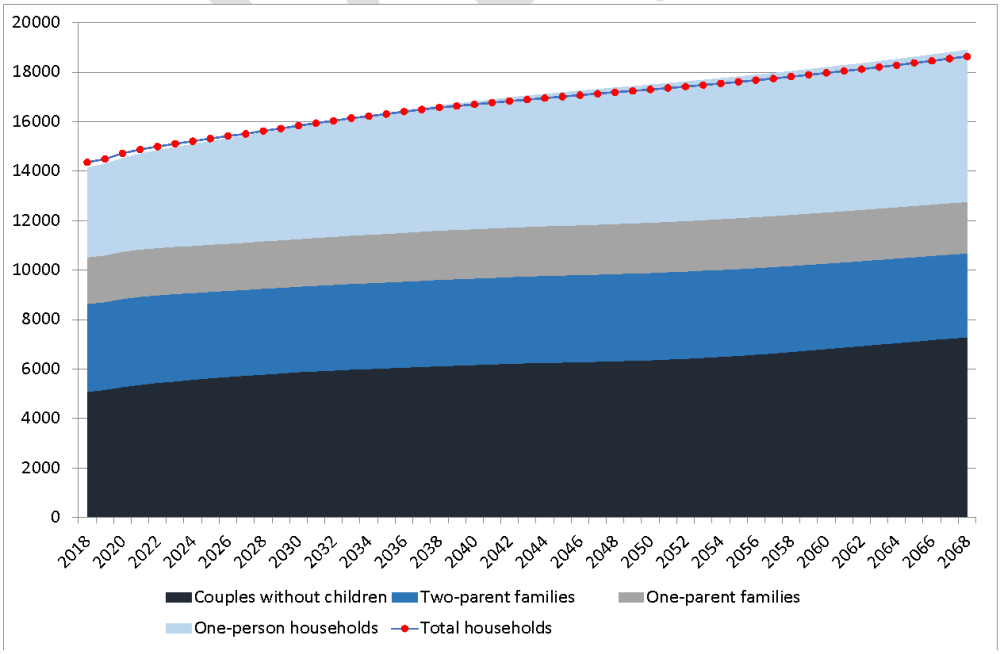


Figure 74: Low-variant family and household projections for Taupō District, 2018-2068

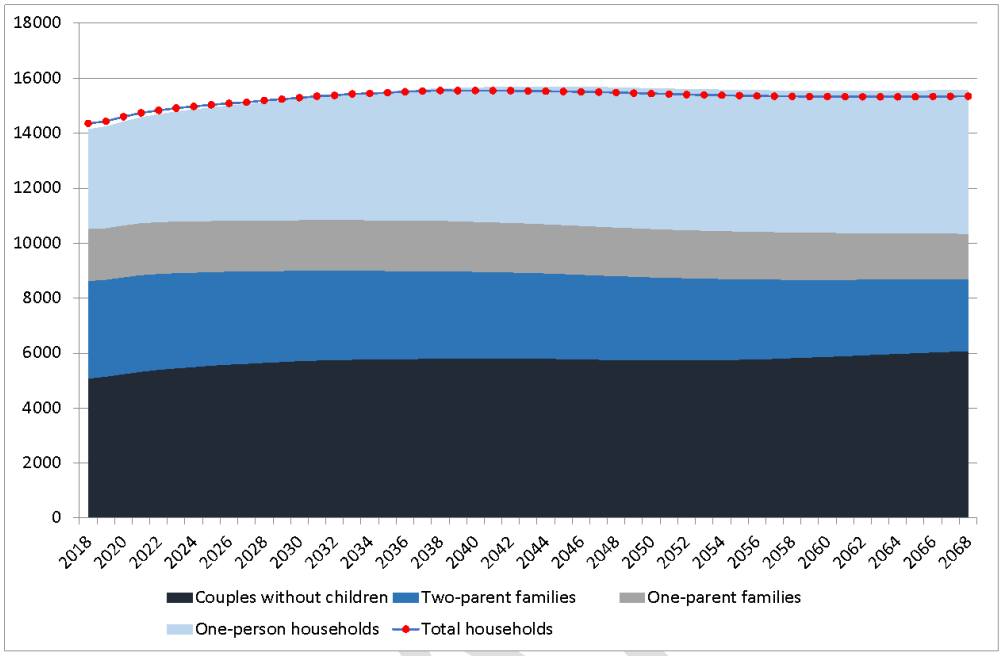
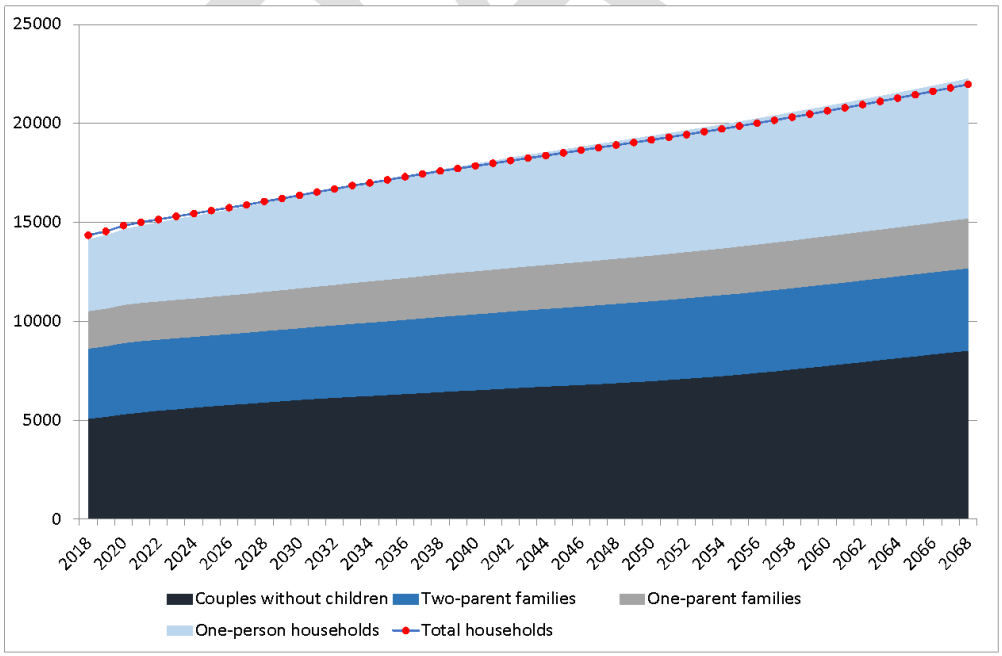
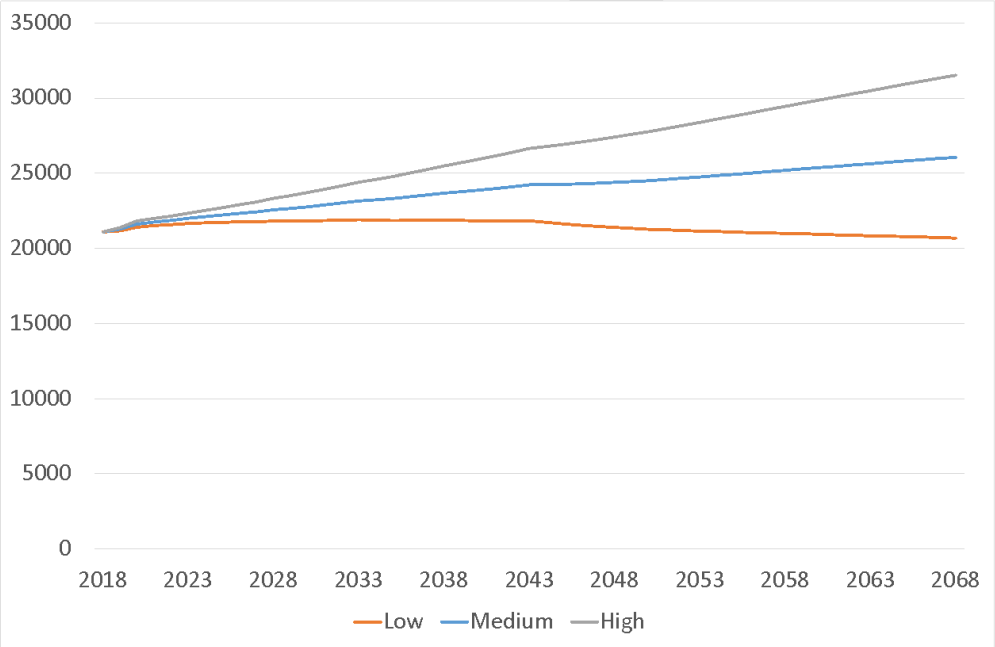


Figure 75: High-variant family and household projections for Taupō District, 2018-2068



The labour force projections for Taupō District are shown in Figure 76. The estimated labour force in June 2018 is 21,092. In the medium-variant projection, the labour force increases throughout the projection period, reaching 26,061 in 2068. In the low-variant projection, the labour force increases to a peak of 21,908 in 2033 before declining to 20,687 in 2068. In the high-variant projection, the labour force increases throughout the projection period, reaching 31,526 in 2068.

Figure 76: Labour force projections for Taupō District, 2018-2068

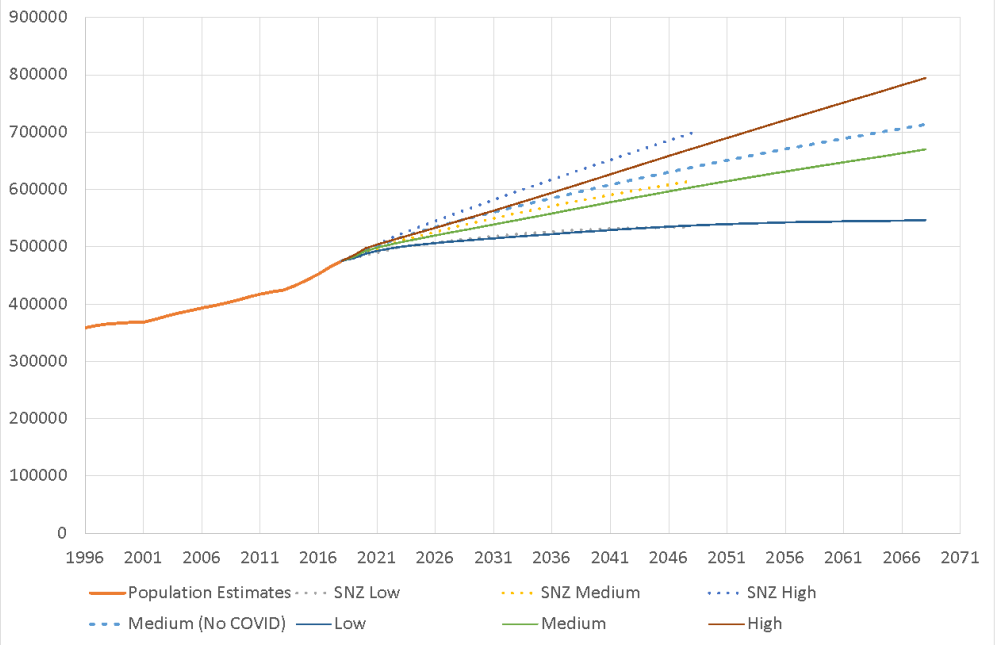


4.11 Total Population Projection for the Waikato Region

Figure 77 presents the 2018-base population projections for the Waikato Region as a whole, generated by summing the projections for all component TAs within each variant, with some adjustments for the different boundaries (see Section 2.1 for details). The 2018-base Statistics New Zealand (SNZ) projections are also included for comparison.

The June 2018 population estimate (base population) for the Waikato Region is 475,600. Under the medium-variant population projection scenario, the population increases throughout the projection period, reaching 669,852 in 2068. Under the low-variant scenario, the population increases throughout the projection period, reaching 546,489 in 2068. Under the high-variant scenario, the population increases throughout the projection period, reaching 794,638 in 2068. In comparison, the SNZ 2018-base medium-variant projection is slightly higher than the Waikato medium-variant projection throughout the projection period. The SNZ high-variant projection is above the Waikato high-variant projection throughout the projection period, while the SNZ low-variant projection is similar to the Waikato low-variant projection.

Figure 77: Population projections for the Waikato region, 2018-2068



5. Discussion and Conclusion

This report outlined the methods and results of Territorial-Authority-level demographic projections for the Waikato Region from 2018 to 2068. These projections were based on a newly-developed population projections model developed by experts at the University of Waikato, which differs in meaningful ways from the model employed by Statistics New Zealand. In particular, the Waikato model is a bottom-up model, projecting all TA populations in New Zealand, from which a national total population projection can be derived. In comparison, SNZ uses a top-down approach, where a national projection is created first, and then TA-level projections are produced later, conforming to an adding-up constraint that their sum must match the national projection. The Waikato model also differs in disaggregating internal and international migration flows, using a gravity model based approach to determine the internal migration flows. This represents a substantial improvement in projections methods from the standard approach of projecting net migration. Family and household projections, and labour force projections, were then derived from the population projections using established methods.

Three variants of the demographic projections were produced (low; medium; and high), representing three different scenarios of future population growth. These three scenarios can be thought of as a central projection (the medium-variant), and a measure of uncertainty (the range between the low-variant and high-variant projection represents approximately a 67 percent projection interval), or as three scenarios representing the top one-third (high-variant), middle one-third (medium-variant), and bottom one-third (low-variant) of all potential scenarios generated with this model and within the plausible distribution of assumptions. A fourth scenario, a medium-variant that ignores the impact of the coronavirus pandemic, was developed for the population projections only.

The overall picture in the demographic projections is one of regional population growth throughout the projection period. However, that growth is projected to be much slower for most TAs than their recent experience. For the most part, that can be attributed to a 'reset' in net international migration as a result of the coronavirus pandemic and associated border closures. Net international migration has fallen by around 85 percent, and the prospects for a rapid return to 'normal' still do not appear good. At the time of writing, a 'travel bubble' with Australia is imminent, but outside of that, permanent migration flows are not likely to re-start until at least 2021. The difference that the coronavirus pandemic has made to the demographic projections is obvious when comparing the medium-variant projection without the coronavirus pandemic with the other projections. The medium-variant projection without the pandemic is substantially higher than the medium-variant, and more similar to the high-variant projection. The coronavirus pandemic has caused a substantial shift in population trajectory for the Waikato region and its TAs.

In spite of the lower net international migration, the region continues to grow, albeit at a slower rate. This overall picture, though, masks substantial variation in the projected population growth experience of the territorial authorities in the region. As noted in previous projections

(e.g. Cameron and Cochrane, 2016), the TAs are projected to see one of several different growth experiences, with different mechanisms underlying their patterns of growth and decline.

First, Thames-Coromandel and Hauraki Districts are projected to experience overall population growth in the medium-variant projection, made up of net internal migration (more in-migration than out-migration), offset by natural decrease (more deaths than births) and net international out-migration (more emigration than immigration). This combination reflects spill-over growth from surrounding and nearby faster-growing TAs, combined with an old population age structure.

Second, Waikato, Matamata-Piako, Waipā, and Taupō Districts are projected to experience overall population growth in the medium-variant projection, made up of net internal migration (more in-migration than out-migration), offset by net international out-migration (more emigration than immigration, while natural increase (more births than deaths) gradually shifts to natural decrease (more deaths than births). This combination reflects population growth driven by internal migration along with an ageing population.

Third, Hamilton City is projected to experience overall population growth in the medium-variant projection, made up of net internal migration (more in-migration than out-migration) and natural increase (more births than deaths), offset by a small amount of net international out-migration (more emigration than immigration). This combination reflects strong population growth driven by internal migration along with a young population age structure

Fourth, Otorohanga District is projected to experience overall population growth in the medium-variant projection, made up of net internal migration (more in-migration than out-migration) and natural increase (more births than deaths), offset by a net international out-migration (more emigration than immigration). This is similar to Hamilton City, but net international out-migration is a more substantial feature, and reflects population growth driven by internal migration along with a young population age structure.

Fifth, South Waikato and Waitomo Districts are projected to experience initial population decline that gradually becomes growth, made up of natural increase (more births than deaths), net internal out-migration (more out-migration than in-migration) that later becomes net internal migration (more in-migration than out-migration), offset by a net international out-migration (more emigration than immigration). This combination reflects spill-over growth from surrounding and nearby faster-growing TAs that becomes more substantial over time, combined with a young population age structure.

While the experience of these TAs are in some ways different, they all share one thing in common. The age structure of all TAs is projected to get older over time. Birth rates are currently low, and projected to remain low. Life expectancy is expected to continue to increase. While migrants tend to be younger than the population average, they also age over time and are not much of a contributor to reducing population ageing (Jackson and Cameron, 2018). All TAs are going to have to develop policy to deal with population ageing. However, some TAs are projected to age faster than others, due to differences in fertility rates and the age structure of migration. In particular, Thames-Coromandel District, already the TA with the oldest age

structure, is projected to age significantly, along with Hauraki District and Matamata-Piako District. In contrast, Hamilton City remains somewhat youthful, possibly due to the presence of two large tertiary education institutions.

Overall, the number of households is projected generally to closely follow the trajectory of the population for each TA. However, over time there is a substantial change in the distribution of households and families, with fewer couples with children and two-parent families, and more one-parent families and one-person households. This reflects underlying long-term social changes in the population.

The labour force projections also generally closely follow the trajectory of the population for each TA. However, the growth of labour force is much slower than the growth of population. This reflects the ageing of the population, with a greater proportion of the population at retirement ages, particularly later in the projection period. The difference between the population and labour force projections is consequently greater for those TAs that experience greater degrees of population ageing.

Finally, this is the first time that this new population projections model has been used to produce population projections. This is also a particularly challenging time to be projecting future population, with the coronavirus pandemic having severely impacted on the trajectory of international migration flows. An uninformed reader would be tempted to look at the projections produced by the model and identify a clear structural break in the time series, and infer that the model is deficient. However, the fact that the model demonstrates the structural break in population trends in 2020 is a key reason to believe that the model is accurately reflecting the underlying structural change in the population. Net international migration has reduced by 85 percent, and it should not be expected that past trends will continue as a result of that. Indeed, we should be deeply sceptical of any model that shows a simple continuation of past trends beyond 2020, as might be obtained from a naïve projection based on a time series extrapolation of the population. The key strengths of the new model are that it picks up this change, and explicitly includes the effects of structural changes in the population on internal migration flows. This is a continuation of improvements in understanding migration flows that researchers at the University of Waikato have been working on for some time.

Having said that, there are a number of improvements that can be made to the model. First, as noted in Section 2, the model could be improved by developing our own in-house projections of fertility (and potentially, mortality). The SNZ 2018-base subnational population projections revised downwards substantially the fertility assumptions relative to earlier projections. However, by developing our own assumptions we would no longer rely on SNZ assumptions, lead to more timely revisions in light of changes in the actual data. Second, we are continuing to consider alternative models of emigration and immigration flows, and how those flows are distributed across TAs. International migration is the most difficult component of population change to project, so it seems likely that there is no perfect solution. However, actively considering alternative means of projecting these flows will enable us to adopt the most suitable measures in the future.

To conclude, the demographic futures (Myers, 2001) of the Waikato Region's territorial authorities cannot be determined with complete accuracy. As demonstrated by recent events, the national and international environment is complex and changeable. It is not possible to perfectly foresee all of the factors that might impact on future population. However, the projections presented in this report should assist planners in better understanding the demographic changes that they are faced with, and the sources and factors that underlie those demographic changes. In short, these projections are simply one tool that should be used in evaluating possible futures for the region.

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Appendix I

Appendix Table A1: Population projections for Thames-Coromandel District, 2018-2068

Year	Absolute population			Growth Rate (Annualised)		
	Low-variant	Medium-variant	High-variant	Low-variant	Medium-variant	High-variant
2018	30,700	30,700	30,700	-	-	-
2019	30,700	30,848	30,996	0.0%	0.5%	1.0%
2020	30,907	31,206	31,505	0.7%	1.2%	1.6%
2021	30,990	31,326	31,664	0.3%	0.4%	0.5%
2022	30,985	31,386	31,788	0.0%	0.2%	0.4%
2023	30,926	31,411	31,896	-0.2%	0.1%	0.3%
2024	30,834	31,415	31,998	-0.3%	0.0%	0.3%
2025	30,723	31,411	32,100	-0.4%	0.0%	0.3%
2026	30,601	31,402	32,204	-0.4%	0.0%	0.3%
2027	30,472	31,390	32,311	-0.4%	0.0%	0.3%
2028	30,342	31,382	32,425	-0.4%	0.0%	0.4%
2029	30,214	31,378	32,545	-0.4%	0.0%	0.4%
2030	30,090	31,379	32,673	-0.4%	0.0%	0.4%
2031	29,968	31,385	32,807	-0.4%	0.0%	0.4%
2032	29,849	31,395	32,945	-0.4%	0.0%	0.4%
2033	29,734	31,408	33,089	-0.4%	0.0%	0.4%
2034	29,624	31,428	33,240	-0.4%	0.1%	0.5%
2035	29,521	31,455	33,399	-0.3%	0.1%	0.5%
2036	29,424	31,490	33,565	-0.3%	0.1%	0.5%
2037	29,331	31,528	33,736	-0.3%	0.1%	0.5%
2038	29,243	31,572	33,914	-0.3%	0.1%	0.5%
2043	28,852	31,847	34,862	-0.3%	0.2%	0.6%
2048	28,495	32,165	35,862	-0.2%	0.2%	0.6%
2053	28,175	32,528	36,918	-0.2%	0.2%	0.6%
2058	27,947	32,991	38,083	-0.2%	0.3%	0.6%
2063	27,773	33,513	39,311	-0.1%	0.3%	0.6%
2068	27,736	34,172	40,674	0.0%	0.4%	0.7%

Appendix Table A2: Population projections for Hauraki District, 2018-2068

Year	Absolute population			Growth Rate (Annualised)		
	Low-variant	Medium-variant	High-variant	Low-variant	Medium-variant	High-variant
2018	20,600	20,600	20,600	-	-	-
2019	20,653	20,753	20,853	0.3%	0.7%	1.2%
2020	20,843	21,045	21,248	0.9%	1.4%	1.9%
2021	20,948	21,178	21,408	0.5%	0.6%	0.8%
2022	20,992	21,267	21,542	0.2%	0.4%	0.6%
2023	20,996	21,329	21,663	0.0%	0.3%	0.6%
2024	20,975	21,375	21,776	-0.1%	0.2%	0.5%
2025	20,938	21,412	21,886	-0.2%	0.2%	0.5%
2026	20,892	21,444	21,998	-0.2%	0.2%	0.5%
2027	20,840	21,474	22,110	-0.2%	0.1%	0.5%
2028	20,786	21,505	22,226	-0.3%	0.1%	0.5%
2029	20,733	21,538	22,346	-0.3%	0.2%	0.5%
2030	20,682	21,575	22,472	-0.2%	0.2%	0.6%
2031	20,636	21,618	22,604	-0.2%	0.2%	0.6%
2032	20,593	21,666	22,743	-0.2%	0.2%	0.6%
2033	20,554	21,718	22,886	-0.2%	0.2%	0.6%
2034	20,521	21,776	23,037	-0.2%	0.3%	0.7%
2035	20,493	21,840	23,195	-0.1%	0.3%	0.7%
2036	20,471	21,912	23,360	-0.1%	0.3%	0.7%
2037	20,457	21,991	23,534	-0.1%	0.4%	0.7%
2038	20,448	22,077	23,715	0.0%	0.4%	0.8%
2043	20,457	22,565	24,689	0.0%	0.4%	0.8%
2048	20,496	23,100	25,725	0.0%	0.5%	0.8%
2053	20,526	23,641	26,784	0.0%	0.5%	0.8%
2058	20,519	24,157	27,831	0.0%	0.4%	0.8%
2063	20,495	24,662	28,872	0.0%	0.4%	0.7%
2068	20,523	25,221	29,970	0.0%	0.4%	0.7%

Appendix Table A3: Population projections for Waikato District, 2018-2068

Year	Absolute population			Growth Rate (Annualised)		
	Low-variant	Medium-variant	High-variant	Low-variant	Medium-variant	High-variant
2018	78,200	78,200	78,200	-	-	-
2019	79,414	79,796	80,177	1.6%	2.0%	2.5%
2020	81,130	81,908	82,687	2.2%	2.6%	3.1%
2021	82,495	83,384	84,274	1.7%	1.8%	1.9%
2022	83,589	84,662	85,737	1.3%	1.5%	1.7%
2023	84,495	85,806	87,119	1.1%	1.4%	1.6%
2024	85,274	86,863	88,455	0.9%	1.2%	1.5%
2025	85,962	87,859	89,760	0.8%	1.1%	1.5%
2026	86,584	88,813	91,047	0.7%	1.1%	1.4%
2027	87,157	89,736	92,321	0.7%	1.0%	1.4%
2028	87,695	90,638	93,589	0.6%	1.0%	1.4%
2029	88,206	91,526	94,854	0.6%	1.0%	1.4%
2030	88,697	92,403	96,118	0.6%	1.0%	1.3%
2031	89,172	93,272	97,383	0.5%	0.9%	1.3%
2032	89,633	94,133	98,648	0.5%	0.9%	1.3%
2033	90,085	94,992	99,916	0.5%	0.9%	1.3%
2034	90,530	95,850	101,188	0.5%	0.9%	1.3%
2035	90,972	96,710	102,468	0.5%	0.9%	1.3%
2036	91,411	97,571	103,755	0.5%	0.9%	1.3%
2037	91,848	98,435	105,048	0.5%	0.9%	1.2%
2038	92,280	99,298	106,345	0.5%	0.9%	1.2%
2043	94,334	103,570	112,849	0.4%	0.8%	1.2%
2048	96,070	107,620	119,227	0.4%	0.8%	1.1%
2053	97,350	111,301	125,326	0.3%	0.7%	1.0%
2058	98,186	114,607	131,120	0.2%	0.6%	0.9%
2063	98,725	117,655	136,696	0.1%	0.5%	0.8%
2068	99,229	120,684	142,269	0.1%	0.5%	0.8%

Appendix Table A4: Population projections for Matamata-Piako District, 2018-2068

Year	Absolute population			Growth Rate (Annualised)		
	Low-variant	Medium-variant	High-variant	Low-variant	Medium-variant	High-variant
2018	2018	35,300	35,300	35,300	-	-
2019	2019	35,419	35,591	35,763	0.3%	0.8%
2020	2020	35,778	36,126	36,473	1.0%	1.5%
2021	2021	35,997	36,391	36,785	0.6%	0.7%
2022	2022	36,131	36,603	37,075	0.4%	0.6%
2023	2023	36,211	36,783	37,355	0.2%	0.5%
2024	2024	36,259	36,947	37,636	0.1%	0.4%
2025	2025	36,286	37,103	37,922	0.1%	0.4%
2026	2026	36,303	37,257	38,214	0.0%	0.4%
2027	2027	36,313	37,412	38,514	0.0%	0.4%
2028	2028	36,320	37,569	38,822	0.0%	0.4%
2029	2029	36,326	37,729	39,137	0.0%	0.4%
2030	2030	36,333	37,894	39,460	0.0%	0.4%
2031	2031	36,341	38,062	39,790	0.0%	0.4%
2032	2032	36,350	38,234	40,126	0.0%	0.5%
2033	2033	36,360	38,409	40,467	0.0%	0.5%
2034	2034	36,372	38,588	40,815	0.0%	0.5%
2035	2035	36,385	38,770	41,167	0.0%	0.5%
2036	2036	36,400	38,954	41,523	0.0%	0.5%
2037	2037	36,415	39,142	41,884	0.0%	0.5%
2038	2038	36,430	39,330	42,248	0.0%	0.5%
2043	2043	36,481	40,267	44,083	0.0%	0.5%
2048	2048	36,469	41,174	45,924	0.0%	0.4%
2053	2053	36,387	42,041	47,758	0.0%	0.4%
2058	2058	36,295	42,924	49,640	-0.1%	0.4%
2063	2063	36,222	43,846	51,583	0.0%	0.4%
2068	2068	36,236	44,866	53,639	0.0%	0.5%

Appendix Table A5: Population projections for Hamilton City, 2018-2068

Year	Absolute population			Growth Rate (Annualised)		
	Low-variant	Medium-variant	High-variant	Low-variant	Medium-variant	High-variant
2018	168,600	168,600	168,600	-	-	-
2019	171,180	172,049	172,919	1.5%	2.0%	2.6%
2020	174,896	176,669	178,443	2.2%	2.7%	3.2%
2021	177,448	179,456	181,467	1.5%	1.6%	1.7%
2022	179,589	181,995	184,404	1.2%	1.4%	1.6%
2023	181,451	184,374	187,302	1.0%	1.3%	1.6%
2024	183,117	186,646	190,181	0.9%	1.2%	1.5%
2025	184,675	188,877	193,088	0.9%	1.2%	1.5%
2026	186,155	191,083	196,022	0.8%	1.2%	1.5%
2027	187,577	193,271	198,979	0.8%	1.1%	1.5%
2028	188,953	195,445	201,955	0.7%	1.1%	1.5%
2029	190,283	197,600	204,938	0.7%	1.1%	1.5%
2030	191,572	199,735	207,925	0.7%	1.1%	1.5%
2031	192,826	201,855	210,915	0.7%	1.1%	1.4%
2032	194,045	203,956	213,903	0.6%	1.0%	1.4%
2033	195,232	206,038	216,888	0.6%	1.0%	1.4%
2034	196,382	208,098	219,863	0.6%	1.0%	1.4%
2035	197,498	210,135	222,828	0.6%	1.0%	1.3%
2036	198,581	212,150	225,781	0.5%	1.0%	1.3%
2037	199,632	214,143	228,724	0.5%	0.9%	1.3%
2038	200,653	216,116	231,656	0.5%	0.9%	1.3%
2043	205,245	225,598	246,069	0.5%	0.9%	1.2%
2048	209,039	234,490	260,106	0.4%	0.8%	1.1%
2053	212,044	242,802	273,779	0.3%	0.7%	1.0%
2058	214,236	250,478	287,000	0.2%	0.6%	0.9%
2063	215,727	257,580	299,782	0.1%	0.6%	0.9%
2068	216,661	264,198	312,161	0.1%	0.5%	0.8%

Appendix Table A6: Population projections for Waipā District, 2018-2068

Year	Absolute population			Growth Rate (Annualised)		
	Low-variant	Medium-variant	High-variant	Low-variant	Medium-variant	High-variant
2018	55,000	55,000	55,000	-	-	-
2019	55,530	55,798	56,065	1.0%	1.5%	1.9%
2020	56,414	56,957	57,500	1.6%	2.1%	2.6%
2021	57,059	57,676	58,294	1.1%	1.3%	1.4%
2022	57,553	58,294	59,035	0.9%	1.1%	1.3%
2023	57,945	58,847	59,749	0.7%	0.9%	1.2%
2024	58,268	59,358	60,449	0.6%	0.9%	1.2%
2025	58,546	59,844	61,144	0.5%	0.8%	1.2%
2026	58,791	60,313	61,838	0.4%	0.8%	1.1%
2027	59,014	60,773	62,535	0.4%	0.8%	1.1%
2028	59,220	61,225	63,234	0.3%	0.7%	1.1%
2029	59,414	61,673	63,937	0.3%	0.7%	1.1%
2030	59,599	62,118	64,644	0.3%	0.7%	1.1%
2031	59,774	62,559	65,353	0.3%	0.7%	1.1%
2032	59,942	62,998	66,064	0.3%	0.7%	1.1%
2033	60,102	63,433	66,776	0.3%	0.7%	1.1%
2034	60,257	63,867	67,491	0.3%	0.7%	1.1%
2035	60,411	64,303	68,212	0.3%	0.7%	1.1%
2036	60,561	64,739	68,937	0.2%	0.7%	1.1%
2037	60,708	65,175	69,664	0.2%	0.7%	1.1%
2038	60,851	65,610	70,393	0.2%	0.7%	1.0%
2043	61,487	67,747	74,049	0.2%	0.6%	1.0%
2048	61,969	69,793	77,680	0.2%	0.6%	1.0%
2053	62,285	71,730	81,265	0.1%	0.5%	0.9%
2058	62,463	73,578	84,816	0.1%	0.5%	0.9%
2063	62,511	75,329	88,309	0.0%	0.5%	0.8%
2068	62,549	77,090	91,836	0.0%	0.5%	0.8%

Appendix Table A7: Population projections for Otorohanga District, 2018-2068

Year	Absolute population			Growth Rate (Annualised)		
	Low-variant	Medium-variant	High-variant	Low-variant	Medium-variant	High-variant
2018	10,500	10,500	10,500	-	-	-
2019	10,542	10,594	10,645	0.4%	0.9%	1.4%
2020	10,655	10,758	10,862	1.1%	1.6%	2.0%
2021	10,724	10,841	10,958	0.6%	0.8%	0.9%
2022	10,767	10,906	11,046	0.4%	0.6%	0.8%
2023	10,793	10,962	11,131	0.2%	0.5%	0.8%
2024	10,809	11,013	11,217	0.2%	0.5%	0.8%
2025	10,820	11,062	11,305	0.1%	0.4%	0.8%
2026	10,828	11,111	11,395	0.1%	0.4%	0.8%
2027	10,835	11,160	11,487	0.1%	0.4%	0.8%
2028	10,840	11,211	11,582	0.1%	0.5%	0.8%
2029	10,849	11,265	11,682	0.1%	0.5%	0.9%
2030	10,861	11,324	11,788	0.1%	0.5%	0.9%
2031	10,876	11,386	11,899	0.1%	0.6%	0.9%
2032	10,892	11,452	12,013	0.2%	0.6%	1.0%
2033	10,911	11,519	12,130	0.2%	0.6%	1.0%
2034	10,932	11,591	12,252	0.2%	0.6%	1.0%
2035	10,956	11,665	12,378	0.2%	0.6%	1.0%
2036	10,982	11,742	12,507	0.2%	0.7%	1.0%
2037	11,008	11,820	12,637	0.2%	0.7%	1.0%
2038	11,035	11,900	12,769	0.2%	0.7%	1.0%
2043	11,163	12,297	13,439	0.2%	0.7%	1.0%
2048	11,241	12,656	14,083	0.1%	0.6%	0.9%
2053	11,257	12,963	14,687	0.0%	0.5%	0.8%
2058	11,265	13,271	15,303	0.0%	0.5%	0.8%
2063	11,285	13,600	15,948	0.0%	0.5%	0.8%
2068	11,339	13,968	16,640	0.1%	0.5%	0.9%

Appendix Table A8: Population projections for South Waikato District, 2018-2068

Year	Absolute population			Growth Rate (Annualised)		
	Low-variant	Medium-variant	High-variant	Low-variant	Medium-variant	High-variant
2018	24,900	24,900	24,900	-	-	-
2019	24,778	24,900	25,022	-0.5%	0.0%	0.5%
2020	24,832	25,076	25,321	0.2%	0.7%	1.2%
2021	24,792	25,068	25,344	-0.2%	0.0%	0.1%
2022	24,704	25,031	25,359	-0.4%	-0.1%	0.1%
2023	24,587	24,982	25,377	-0.5%	-0.2%	0.1%
2024	24,456	24,928	25,402	-0.5%	-0.2%	0.1%
2025	24,320	24,877	25,436	-0.6%	-0.2%	0.1%
2026	24,186	24,834	25,483	-0.6%	-0.2%	0.2%
2027	24,056	24,798	25,542	-0.5%	-0.1%	0.2%
2028	23,934	24,772	25,613	-0.5%	-0.1%	0.3%
2029	23,818	24,756	25,697	-0.5%	-0.1%	0.3%
2030	23,712	24,750	25,792	-0.4%	0.0%	0.4%
2031	23,616	24,755	25,901	-0.4%	0.0%	0.4%
2032	23,529	24,772	26,022	-0.4%	0.1%	0.5%
2033	23,452	24,799	26,154	-0.3%	0.1%	0.5%
2034	23,384	24,836	26,297	-0.3%	0.1%	0.5%
2035	23,325	24,883	26,452	-0.3%	0.2%	0.6%
2036	23,276	24,941	26,617	-0.2%	0.2%	0.6%
2037	23,236	25,009	26,795	-0.2%	0.3%	0.7%
2038	23,205	25,086	26,982	-0.1%	0.3%	0.7%
2043	23,118	25,556	28,020	-0.1%	0.4%	0.8%
2048	23,085	26,105	29,162	0.0%	0.4%	0.8%
2053	23,039	26,665	30,344	0.0%	0.4%	0.8%
2058	22,996	27,249	31,574	0.0%	0.4%	0.8%
2063	22,993	27,889	32,879	0.0%	0.5%	0.8%
2068	23,066	28,617	34,289	0.1%	0.5%	0.8%

Appendix Table A9: Population projections for Waitomo District, 2018-2068

Year	Absolute population			Growth Rate (Annualised)		
	Low-variant	Medium-variant	High-variant	Low-variant	Medium-variant	High-variant
2018	2018	9,630	9,630	9,630	-	-
2019	2019	9,564	9,611	9,658	-0.7%	-0.2%
2020	2020	9,568	9,662	9,756	0.0%	0.5%
2021	2021	9,537	9,642	9,748	-0.3%	-0.2%
2022	2022	9,487	9,612	9,738	-0.5%	-0.3%
2023	2023	9,427	9,578	9,729	-0.6%	-0.4%
2024	2024	9,364	9,544	9,724	-0.7%	-0.4%
2025	2025	9,300	9,512	9,724	-0.7%	-0.3%
2026	2026	9,238	9,483	9,729	-0.7%	-0.3%
2027	2027	9,177	9,457	9,739	-0.7%	-0.3%
2028	2028	9,119	9,435	9,753	-0.6%	-0.2%
2029	2029	9,064	9,417	9,770	-0.6%	-0.2%
2030	2030	9,012	9,402	9,793	-0.6%	-0.2%
2031	2031	8,963	9,390	9,818	-0.5%	-0.1%
2032	2032	8,916	9,380	9,847	-0.5%	-0.1%
2033	2033	8,872	9,375	9,879	-0.5%	-0.1%
2034	2034	8,831	9,371	9,914	-0.5%	0.0%
2035	2035	8,793	9,371	9,953	-0.4%	0.0%
2036	2036	8,757	9,374	9,994	-0.4%	0.0%
2037	2037	8,723	9,378	10,038	-0.4%	0.1%
2038	2038	8,693	9,387	10,086	-0.3%	0.1%
2043	2043	8,568	9,460	10,359	-0.3%	0.2%
2048	2048	8,485	9,580	10,688	-0.2%	0.3%
2053	2053	8,425	9,733	11,057	-0.1%	0.3%
2058	2058	8,394	9,921	11,471	-0.1%	0.4%
2063	2063	8,387	10,140	11,922	0.0%	0.4%
2068	2068	8,401	10,384	12,404	0.0%	0.5%

Appendix Table A10: Population projections for Taupō District, 2018-2068

Year	Absolute population			Growth Rate (Annualised)		
	Low-variant	Medium-variant	High-variant	Low-variant	Medium-variant	High-variant
2018	38,600	38,600	38,600	-	-	-
2019	38,718	38,906	39,094	0.3%	0.8%	1.3%
2020	39,087	39,466	39,846	1.0%	1.4%	1.9%
2021	39,289	39,719	40,149	0.5%	0.6%	0.8%
2022	39,390	39,904	40,418	0.3%	0.5%	0.7%
2023	39,425	40,048	40,671	0.1%	0.4%	0.6%
2024	39,417	40,166	40,916	0.0%	0.3%	0.6%
2025	39,382	40,271	41,161	-0.1%	0.3%	0.6%
2026	39,332	40,369	41,409	-0.1%	0.2%	0.6%
2027	39,272	40,465	41,661	-0.2%	0.2%	0.6%
2028	39,208	40,562	41,920	-0.2%	0.2%	0.6%
2029	39,142	40,661	42,186	-0.2%	0.2%	0.6%
2030	39,076	40,765	42,459	-0.2%	0.3%	0.6%
2031	39,013	40,873	42,741	-0.2%	0.3%	0.7%
2032	38,951	40,985	43,027	-0.2%	0.3%	0.7%
2033	38,893	41,102	43,322	-0.1%	0.3%	0.7%
2034	38,837	41,223	43,623	-0.1%	0.3%	0.7%
2035	38,785	41,351	43,931	-0.1%	0.3%	0.7%
2036	38,736	41,482	44,245	-0.1%	0.3%	0.7%
2037	38,691	41,619	44,565	-0.1%	0.3%	0.7%
2038	38,649	41,759	44,891	-0.1%	0.3%	0.7%
2043	38,421	42,464	46,543	-0.1%	0.3%	0.7%
2048	38,128	43,129	48,186	-0.2%	0.3%	0.7%
2053	37,776	43,760	49,825	-0.2%	0.3%	0.7%
2058	37,461	44,451	51,553	-0.2%	0.3%	0.7%
2063	37,207	45,219	53,378	-0.1%	0.3%	0.7%
2068	37,084	46,129	55,361	-0.1%	0.4%	0.7%

Appendix Table A11: Population projections for the Waikato Region, 2018-2068

Year	Absolute population			Growth Rate (Annualised)		
	Low-variant	Medium-variant	High-variant	Low-variant	Medium-variant	High-variant
2018	475,601	475,601	475,601	-	-	-
2019	480,073	482,437	484,802	0.9%	1.4%	1.9%
2020	487,711	492,510	497,311	1.6%	2.1%	2.6%
2021	492,895	498,337	503,785	1.1%	1.2%	1.3%
2022	496,807	503,329	509,860	0.8%	1.0%	1.2%
2023	499,880	507,800	515,733	0.6%	0.9%	1.2%
2024	502,394	511,946	521,515	0.5%	0.8%	1.1%
2025	504,571	515,929	527,310	0.4%	0.8%	1.1%
2026	506,526	519,822	533,147	0.4%	0.8%	1.1%
2027	508,327	523,661	539,034	0.4%	0.7%	1.1%
2028	510,029	527,481	544,981	0.3%	0.7%	1.1%
2029	511,658	531,291	550,984	0.3%	0.7%	1.1%
2030	513,242	535,108	557,046	0.3%	0.7%	1.1%
2031	514,791	538,934	563,163	0.3%	0.7%	1.1%
2032	516,306	542,763	569,321	0.3%	0.7%	1.1%
2033	517,800	546,604	575,525	0.3%	0.7%	1.1%
2034	519,276	550,455	581,771	0.3%	0.7%	1.1%
2035	520,745	554,328	588,065	0.3%	0.7%	1.1%
2036	522,208	558,218	594,404	0.3%	0.7%	1.1%
2037	523,660	562,122	600,780	0.3%	0.7%	1.1%
2038	525,098	566,034	607,189	0.3%	0.7%	1.1%
2043	531,749	585,368	639,336	0.3%	0.8%	1.3%
2048	537,106	603,905	671,209	0.2%	0.6%	1.0%
2053	540,898	621,356	702,504	0.1%	0.6%	0.9%
2058	543,402	637,925	733,354	0.1%	0.5%	0.9%
2063	544,975	653,840	763,856	0.1%	0.5%	0.8%
2068	546,489	669,852	794,638	0.1%	0.5%	0.8%

Appendix II

Appendix Table A12: Medium-variant family and household projections for Thames Coromandel District, 2018-2068

Year	Families				Households			
	Couples without children	Two-parent families	One-parent families	Total families	Family households	Other multi-person households	One-person households	Total households
2018	5,362	2,189	1,237	8,788	8,587	416	3,805	12,807
2019	5,469	2,141	1,216	8,826	8,616	407	3,891	12,914
2020	5,600	2,115	1,205	8,921	8,700	403	3,996	13,100
2021	5,716	2,072	1,187	8,975	8,744	393	4,104	13,242
2022	5,813	2,019	1,166	8,999	8,760	384	4,210	13,354
2023	5,903	1,962	1,144	9,010	8,762	376	4,304	13,443
2024	5,980	1,903	1,120	9,004	8,748	368	4,391	13,506
2025	6,052	1,846	1,097	8,995	8,731	361	4,476	13,567
2026	6,113	1,804	1,079	8,996	8,724	354	4,563	13,641
2027	6,171	1,753	1,061	8,986	8,706	347	4,659	13,712
2028	6,232	1,706	1,048	8,986	8,697	343	4,750	13,790
2029	6,280	1,656	1,033	8,969	8,673	338	4,840	13,851
2030	6,327	1,609	1,020	8,956	8,653	334	4,927	13,913
2031	6,368	1,574	1,013	8,955	8,643	328	5,016	13,987
2032	6,404	1,533	1,004	8,941	8,622	326	5,104	14,051
2033	6,439	1,504	999	8,942	8,615	324	5,189	14,128
2034	6,469	1,468	989	8,926	8,592	321	5,269	14,181
2035	6,501	1,434	980	8,915	8,573	318	5,344	14,235
2036	6,531	1,408	974	8,913	8,563	315	5,415	14,293
2037	6,566	1,381	966	8,913	8,554	311	5,488	14,353
2038	6,592	1,367	963	8,923	8,556	307	5,557	14,420
2043	6,714	1,277	932	8,923	8,517	289	5,849	14,655
2048	6,797	1,219	907	8,924	8,518	274	6,055	14,847
2053	6,895	1,185	896	8,976	8,567	263	6,196	15,026
2058	7,037	1,148	889	9,075	8,662	260	6,326	15,247
2063	7,245	1,103	882	9,230	8,810	260	6,446	15,516
2068	7,488	1,068	871	9,427	8,997	262	6,585	15,845

Appendix Table A13: Low-variant family and household projections for Thames Coromandel District, 2018-2068

Year	Families				Households			
	Couples without children	Two-parent families	One-parent families	Total families	Family households	Other multi-person households	One-person households	Total households
2018	5,362	2,189	1,237	8,788	8,587	416	3,805	12,807
2019	5,452	2,128	1,209	8,789	8,579	404	3,878	12,862
2020	5,565	2,089	1,191	8,845	8,626	398	3,971	12,995
2021	5,675	2,043	1,171	8,889	8,660	387	4,074	13,122
2022	5,764	1,984	1,148	8,896	8,659	377	4,174	13,211
2023	5,844	1,920	1,122	8,885	8,641	368	4,260	13,269
2024	5,908	1,853	1,093	8,854	8,602	359	4,336	13,297
2025	5,965	1,786	1,065	8,817	8,558	350	4,411	13,319
2026	6,011	1,735	1,042	8,788	8,522	343	4,487	13,352
2027	6,054	1,674	1,020	8,747	8,474	334	4,570	13,378
2028	6,097	1,617	1,001	8,715	8,435	328	4,648	13,411
2029	6,128	1,556	981	8,665	8,379	322	4,724	13,425
2030	6,157	1,499	962	8,619	8,327	316	4,797	13,440
2031	6,179	1,455	950	8,584	8,285	309	4,872	13,466
2032	6,196	1,404	936	8,535	8,230	305	4,945	13,480
2033	6,212	1,365	925	8,502	8,191	302	5,014	13,507
2034	6,222	1,319	910	8,451	8,134	297	5,079	13,510
2035	6,233	1,276	896	8,405	8,082	293	5,138	13,512
2036	6,241	1,241	885	8,367	8,038	289	5,192	13,519
2037	6,254	1,205	872	8,331	7,996	283	5,247	13,526
2038	6,259	1,183	863	8,305	7,964	278	5,299	13,540
2043	6,261	1,054	807	8,122	7,752	253	5,495	13,500
2048	6,209	964	760	7,934	7,572	232	5,597	13,401
2053	6,164	902	728	7,794	7,439	215	5,625	13,279
2058	6,153	842	703	7,698	7,348	207	5,636	13,191
2063	6,206	775	678	7,659	7,310	203	5,633	13,146
2068	6,289	721	652	7,662	7,313	201	5,644	13,158

Appendix Table A14: High-variant family and household projections for Thames Coromandel District, 2018-2068

Year	Families				Households			
	Couples without children	Two-parent families	One-parent families	Total families	Family households	Other multi-person households	One-person households	Total households
2018	5,362	2,189	1,237	8,788	8,587	416	3,805	12,807
2019	5,487	2,154	1,223	8,864	8,653	410	3,904	12,966
2020	5,636	2,142	1,220	8,997	8,774	408	4,022	13,205
2021	5,756	2,102	1,203	9,061	8,828	399	4,134	13,361
2022	5,862	2,055	1,185	9,102	8,860	391	4,247	13,497
2023	5,963	2,005	1,167	9,135	8,883	384	4,349	13,616
2024	6,053	1,954	1,147	9,154	8,893	377	4,445	13,715
2025	6,139	1,906	1,128	9,173	8,903	371	4,541	13,815
2026	6,214	1,873	1,115	9,203	8,925	366	4,640	13,931
2027	6,289	1,832	1,103	9,224	8,937	361	4,748	14,046
2028	6,366	1,795	1,095	9,257	8,960	358	4,852	14,169
2029	6,432	1,755	1,086	9,272	8,967	355	4,955	14,276
2030	6,498	1,718	1,078	9,294	8,979	352	5,056	14,387
2031	6,557	1,694	1,076	9,326	9,002	348	5,160	14,509
2032	6,612	1,663	1,073	9,347	9,013	347	5,263	14,622
2033	6,667	1,644	1,073	9,383	9,039	346	5,363	14,749
2034	6,717	1,617	1,069	9,402	9,050	344	5,460	14,854
2035	6,770	1,592	1,065	9,426	9,064	343	5,551	14,958
2036	6,821	1,575	1,064	9,460	9,088	341	5,639	15,069
2037	6,877	1,557	1,061	9,495	9,114	339	5,729	15,181
2038	6,926	1,552	1,063	9,541	9,149	336	5,816	15,301
2043	7,169	1,500	1,057	9,727	9,284	325	6,203	15,812
2048	7,385	1,476	1,056	9,917	9,466	316	6,515	16,297
2053	7,628	1,470	1,065	10,163	9,700	311	6,768	16,780
2058	7,921	1,459	1,078	10,457	9,981	313	7,017	17,311
2063	8,284	1,437	1,088	10,809	10,317	318	7,260	17,895
2068	8,685	1,420	1,094	11,200	10,690	324	7,528	18,542

Appendix Table A15: Medium-variant family and household projections for Hauraki District, 2018-2068

Year	Families				Households			
	Couples without children	Two-parent families	One-parent families	Total families	Family households	Other multi-person households	One-person households	Total households
2018	2,861	1,741	1,058	5,660	5,498	286	2,309	8,093
2019	2,920	1,721	1,048	5,688	5,521	283	2,371	8,175
2020	2,989	1,713	1,045	5,747	5,572	282	2,443	8,297
2021	3,058	1,683	1,031	5,772	5,591	279	2,512	8,381
2022	3,111	1,652	1,022	5,785	5,599	276	2,576	8,451
2023	3,162	1,621	1,007	5,791	5,599	273	2,634	8,506
2024	3,207	1,588	995	5,790	5,592	270	2,688	8,551
2025	3,247	1,553	985	5,785	5,583	266	2,744	8,592
2026	3,286	1,520	976	5,782	5,574	262	2,803	8,639
2027	3,319	1,491	969	5,779	5,566	260	2,863	8,689
2028	3,356	1,462	965	5,783	5,565	258	2,915	8,738
2029	3,390	1,436	964	5,790	5,567	257	2,972	8,795
2030	3,422	1,408	959	5,789	5,560	256	3,024	8,840
2031	3,457	1,384	953	5,794	5,560	257	3,079	8,897
2032	3,488	1,366	949	5,803	5,563	257	3,132	8,952
2033	3,522	1,346	944	5,812	5,567	257	3,184	9,007
2034	3,554	1,328	941	5,823	5,572	256	3,235	9,063
2035	3,581	1,311	934	5,827	5,571	257	3,283	9,110
2036	3,614	1,299	938	5,852	5,590	257	3,336	9,182
2037	3,647	1,285	940	5,872	5,604	257	3,385	9,245
2038	3,680	1,270	940	5,890	5,615	257	3,433	9,305
2043	3,818	1,234	943	5,995	5,689	252	3,639	9,580
2048	3,908	1,223	954	6,084	5,773	247	3,799	9,820
2053	3,976	1,225	958	6,158	5,844	242	3,917	10,003
2058	4,068	1,209	973	6,250	5,931	242	4,020	10,193
2063	4,211	1,182	990	6,382	6,057	245	4,123	10,425
2068	4,386	1,160	1,001	6,547	6,213	248	4,237	10,698

Appendix Table A16: Low-variant family and household projections for Hauraki District, 2018-2068

Year	Families				Households			
	Couples without children	Two-parent families	One-parent families	Total families	Family households	Other multi-person households	One-person households	Total households
2018	2,861	1,741	1,058	5,660	5,498	286	2,309	8,093
2019	2,911	1,711	1,043	5,664	5,497	281	2,364	8,142
2020	2,971	1,692	1,033	5,697	5,524	279	2,428	8,231
2021	3,037	1,660	1,018	5,715	5,536	276	2,495	8,307
2022	3,086	1,625	1,006	5,717	5,533	272	2,556	8,362
2023	3,132	1,588	989	5,709	5,520	268	2,610	8,398
2024	3,171	1,548	972	5,691	5,497	265	2,658	8,420
2025	3,203	1,506	959	5,668	5,470	259	2,708	8,437
2026	3,234	1,466	945	5,646	5,443	255	2,760	8,458
2027	3,260	1,429	934	5,622	5,416	252	2,813	8,481
2028	3,288	1,392	925	5,605	5,394	249	2,858	8,501
2029	3,313	1,358	920	5,591	5,375	247	2,907	8,528
2030	3,336	1,322	910	5,568	5,348	245	2,951	8,544
2031	3,362	1,290	898	5,551	5,327	245	2,998	8,570
2032	3,383	1,264	890	5,536	5,308	244	3,042	8,594
2033	3,406	1,236	880	5,523	5,290	243	3,085	8,618
2034	3,428	1,210	873	5,511	5,274	242	3,127	8,642
2035	3,445	1,186	861	5,492	5,250	241	3,165	8,656
2036	3,467	1,167	860	5,493	5,247	240	3,208	8,696
2037	3,488	1,145	857	5,490	5,239	239	3,247	8,725
2038	3,509	1,123	852	5,484	5,228	238	3,285	8,751
2043	3,581	1,055	831	5,466	5,187	228	3,433	8,848
2048	3,593	1,013	818	5,425	5,148	218	3,529	8,894
2053	3,577	988	800	5,365	5,091	208	3,575	8,874
2058	3,579	947	795	5,321	5,050	203	3,602	8,855
2063	3,628	898	791	5,317	5,045	202	3,624	8,871
2068	3,708	855	782	5,345	5,072	200	3,652	8,924

Appendix Table A17: High-variant family and household projections for Hauraki District, 2018-2068

Year	Families				Households			
	Couples without children	Two-parent families	One-parent families	Total families	Family households	Other multi-person households	One-person households	Total households
2018	2,861	1,741	1,058	5,660	5,498	286	2,309	8,093
2019	2,928	1,730	1,054	5,713	5,545	284	2,378	8,207
2020	3,007	1,733	1,057	5,797	5,621	285	2,457	8,363
2021	3,078	1,706	1,044	5,828	5,646	282	2,528	8,456
2022	3,136	1,680	1,037	5,853	5,664	280	2,596	8,540
2023	3,193	1,654	1,026	5,873	5,678	277	2,659	8,615
2024	3,244	1,627	1,017	5,888	5,688	275	2,718	8,681
2025	3,291	1,600	1,011	5,902	5,695	272	2,780	8,747
2026	3,337	1,574	1,007	5,918	5,706	269	2,846	8,820
2027	3,378	1,553	1,004	5,936	5,717	268	2,913	8,898
2028	3,424	1,532	1,005	5,960	5,736	267	2,972	8,975
2029	3,467	1,514	1,009	5,989	5,758	267	3,036	9,061
2030	3,508	1,494	1,009	6,010	5,773	267	3,096	9,137
2031	3,553	1,479	1,007	6,038	5,794	269	3,160	9,224
2032	3,593	1,468	1,008	6,069	5,819	270	3,222	9,310
2033	3,637	1,456	1,008	6,101	5,844	271	3,282	9,397
2034	3,680	1,446	1,010	6,136	5,871	271	3,343	9,485
2035	3,718	1,437	1,008	6,163	5,892	272	3,400	9,564
2036	3,762	1,432	1,017	6,211	5,933	274	3,463	9,670
2037	3,807	1,425	1,024	6,255	5,969	275	3,522	9,766
2038	3,851	1,417	1,029	6,297	6,003	275	3,581	9,859
2043	4,056	1,414	1,056	6,526	6,193	276	3,844	10,314
2048	4,222	1,433	1,090	6,746	6,401	277	4,069	10,748
2053	4,375	1,463	1,116	6,954	6,599	277	4,258	11,134
2058	4,557	1,473	1,153	7,183	6,816	282	4,438	11,536
2063	4,793	1,470	1,190	7,453	7,073	289	4,622	11,984
2068	5,064	1,468	1,223	7,756	7,360	296	4,822	12,478

Appendix Table A18: Medium-variant family and household projections for Waikato District, 2018-2068

Year	Families				Households			
	Couples without children	Two-parent families	One-parent families	Total families	Family households	Other multi-person households	One-person households	Total households
2018	8,766	8,744	3,820	21,330	20,334	844	4,591	25,769
2019	9,040	8,853	3,873	21,766	20,730	852	4,750	26,332
2020	9,363	9,019	3,954	22,337	21,253	866	4,935	27,054
2021	9,660	9,111	3,999	22,771	21,646	872	5,117	27,635
2022	9,931	9,176	4,027	23,133	21,970	875	5,285	28,130
2023	10,183	9,215	4,049	23,447	22,247	877	5,451	28,574
2024	10,418	9,245	4,073	23,735	22,499	879	5,610	28,988
2025	10,647	9,266	4,091	24,004	22,733	881	5,771	29,384
2026	10,865	9,300	4,119	24,284	22,976	882	5,931	29,788
2027	11,088	9,324	4,150	24,561	23,217	885	6,090	30,191
2028	11,312	9,330	4,178	24,820	23,439	890	6,252	30,581
2029	11,533	9,339	4,210	25,082	23,664	895	6,415	30,974
2030	11,753	9,345	4,240	25,337	23,883	900	6,580	31,362
2031	11,955	9,369	4,272	25,597	24,105	904	6,741	31,749
2032	12,167	9,386	4,313	25,865	24,335	908	6,900	32,143
2033	12,383	9,398	4,352	26,133	24,564	913	7,064	32,541
2034	12,589	9,407	4,390	26,386	24,778	918	7,226	32,922
2035	12,799	9,418	4,428	26,644	24,997	924	7,391	33,313
2036	12,990	9,446	4,469	26,905	25,218	928	7,551	33,697
2037	13,193	9,477	4,513	27,183	25,455	933	7,708	34,096
2038	13,393	9,500	4,556	27,449	25,681	937	7,867	34,485
2043	14,265	9,642	4,740	28,647	26,677	945	8,607	36,229
2048	14,953	9,831	4,889	29,673	27,633	939	9,247	37,819
2053	15,512	10,025	5,018	30,555	28,454	931	9,789	39,174
2058	16,052	10,163	5,126	31,341	29,186	928	10,278	40,391
2063	16,761	10,212	5,216	32,189	29,975	938	10,695	41,609
2068	17,547	10,210	5,300	33,057	30,784	943	11,113	42,841

Appendix Table A19: Low-variant family and household projections for Waikato District, 2018-2068

Year	Families				Households			
	Couples without children	Two-parent families	One-parent families	Total families	Family households	Other multi-person households	One-person households	Total households
2018	8,766	8,744	3,820	21,330	20,334	844	4,591	25,769
2019	9,006	8,811	3,853	21,670	20,638	847	4,734	26,219
2020	9,295	8,933	3,912	22,139	21,066	856	4,901	26,823
2021	9,582	9,012	3,951	22,545	21,432	862	5,078	27,371
2022	9,836	9,055	3,970	22,861	21,712	863	5,237	27,812
2023	10,068	9,068	3,979	23,115	21,932	862	5,391	28,185
2024	10,277	9,066	3,989	23,332	22,116	861	5,538	28,516
2025	10,478	9,052	3,992	23,521	22,275	860	5,683	28,819
2026	10,665	9,047	4,003	23,715	22,438	858	5,827	29,123
2027	10,856	9,031	4,016	23,902	22,593	858	5,968	29,420
2028	11,046	8,995	4,026	24,066	22,727	860	6,112	29,699
2029	11,231	8,960	4,039	24,230	22,860	861	6,255	29,976
2030	11,414	8,921	4,050	24,385	22,985	862	6,400	30,247
2031	11,578	8,900	4,063	24,542	23,111	863	6,539	30,513
2032	11,749	8,872	4,084	24,705	23,243	864	6,676	30,783
2033	11,925	8,838	4,104	24,867	23,373	866	6,816	31,055
2034	12,088	8,800	4,123	25,011	23,487	867	6,955	31,308
2035	12,253	8,765	4,141	25,159	23,604	870	7,095	31,568
2036	12,399	8,747	4,161	25,307	23,721	870	7,229	31,819
2037	12,555	8,732	4,185	25,472	23,853	871	7,359	32,084
2038	12,707	8,710	4,208	25,625	23,974	872	7,491	32,337
2043	13,303	8,627	4,288	26,219	24,416	861	8,079	33,356
2048	13,666	8,603	4,332	26,601	24,772	834	8,546	34,152
2053	13,860	8,593	4,354	26,807	24,964	806	8,894	34,665
2058	14,007	8,533	4,359	26,899	25,049	785	9,169	35,003
2063	14,305	8,393	4,344	27,042	25,182	778	9,355	35,315
2068	14,668	8,209	4,325	27,202	25,332	767	9,523	35,623

Appendix Table A20: High-variant family and household projections for Waikato District, 2018-2068

Year	Families				Households			
	Couples without children	Two-parent families	One-parent families	Total families	Family households	Other multi-person households	One-person households	Total households
2018	8,766	8,744	3,820	21,330	20,334	844	4,591	25,769
2019	9,073	8,895	3,894	21,862	20,821	857	4,767	26,445
2020	9,432	9,106	3,997	22,534	21,441	875	4,968	27,285
2021	9,739	9,210	4,047	22,996	21,860	883	5,156	27,898
2022	10,025	9,296	4,084	23,405	22,228	888	5,333	28,448
2023	10,299	9,362	4,118	23,780	22,562	892	5,510	28,964
2024	10,559	9,424	4,156	24,139	22,882	896	5,683	29,461
2025	10,816	9,481	4,190	24,487	23,190	901	5,858	29,950
2026	11,065	9,552	4,235	24,852	23,514	906	6,035	30,454
2027	11,320	9,617	4,283	25,221	23,840	912	6,211	30,963
2028	11,578	9,666	4,330	25,574	24,151	921	6,392	31,464
2029	11,835	9,718	4,381	25,933	24,467	929	6,575	31,971
2030	12,092	9,768	4,429	26,290	24,780	937	6,760	32,478
2031	12,333	9,837	4,481	26,652	25,098	944	6,943	32,985
2032	12,584	9,900	4,541	27,025	25,426	952	7,124	33,503
2033	12,842	9,958	4,600	27,400	25,754	961	7,311	34,026
2034	13,090	10,014	4,658	27,762	26,070	969	7,497	34,536
2035	13,344	10,071	4,715	28,130	26,391	979	7,687	35,057
2036	13,581	10,145	4,776	28,502	26,716	986	7,873	35,574
2037	13,832	10,222	4,840	28,894	27,057	994	8,057	36,109
2038	14,080	10,291	4,903	29,275	27,388	1,002	8,244	36,634
2043	15,228	10,657	5,191	31,076	28,939	1,029	9,135	39,104
2048	16,240	11,060	5,447	32,747	30,496	1,044	9,948	41,488
2053	17,164	11,457	5,682	34,304	31,945	1,055	10,685	43,685
2058	18,097	11,793	5,895	35,785	33,325	1,071	11,386	45,782
2063	19,216	12,033	6,090	37,339	34,772	1,099	12,036	47,906
2068	20,423	12,215	6,278	38,916	36,241	1,120	12,702	50,063

Appendix Table A21: Medium-variant family and household projections for Matamata-Piako District, 2018-2068

Year	Families				Households			
	Couples without children	Two-parent families	One-parent families	Total families	Family households	Other multi-person households	One-person households	Total households
2018	4,726	3,596	1,489	9,811	9,500	457	3,248	13,205
2019	4,826	3,597	1,491	9,914	9,590	454	3,328	13,372
2020	4,945	3,635	1,512	10,092	9,753	457	3,425	13,635
2021	5,032	3,637	1,521	10,191	9,840	453	3,505	13,798
2022	5,118	3,632	1,527	10,277	9,914	448	3,582	13,944
2023	5,195	3,621	1,530	10,346	9,970	443	3,655	14,068
2024	5,266	3,608	1,534	10,408	10,021	439	3,726	14,186
2025	5,328	3,604	1,537	10,470	10,071	434	3,799	14,304
2026	5,387	3,605	1,542	10,534	10,123	429	3,870	14,421
2027	5,450	3,604	1,548	10,603	10,179	423	3,942	14,545
2028	5,514	3,605	1,557	10,676	10,240	423	4,020	14,684
2029	5,572	3,600	1,562	10,734	10,286	420	4,089	14,795
2030	5,629	3,604	1,571	10,805	10,344	419	4,160	14,922
2031	5,678	3,608	1,578	10,864	10,392	414	4,228	15,034
2032	5,726	3,614	1,586	10,926	10,441	412	4,301	15,154
2033	5,781	3,625	1,593	10,998	10,500	412	4,376	15,288
2034	5,829	3,625	1,598	11,052	10,541	408	4,443	15,393
2035	5,875	3,634	1,607	11,116	10,593	406	4,514	15,513
2036	5,918	3,639	1,614	11,171	10,635	405	4,582	15,622
2037	5,958	3,644	1,624	11,226	10,678	402	4,657	15,737
2038	5,999	3,657	1,635	11,292	10,730	398	4,729	15,858
2043	6,204	3,653	1,669	11,526	10,902	382	5,063	16,347
2048	6,436	3,613	1,687	11,737	11,101	376	5,349	16,827
2053	6,693	3,579	1,709	11,980	11,332	373	5,571	17,276
2058	6,989	3,549	1,726	12,263	11,600	370	5,737	17,707
2063	7,333	3,521	1,746	12,600	11,918	366	5,846	18,130
2068	7,664	3,502	1,769	12,936	12,236	362	6,010	18,608

Appendix Table A22: Low-variant family and household projections for Matamata-Piako District, 2018-2068

Year	Families				Households			
	Couples without children	Two-parent families	One-parent families	Total families	Family households	Other multi-person households	One-person households	Total households
2018	4,726	3,596	1,489	9,811	9,500	457	3,248	13,205
2019	4,810	3,577	1,484	9,871	9,548	451	3,317	13,317
2020	4,913	3,595	1,496	10,003	9,668	451	3,404	13,522
2021	4,996	3,592	1,503	10,091	9,743	446	3,480	13,670
2022	5,075	3,577	1,506	10,157	9,798	441	3,552	13,791
2023	5,142	3,555	1,504	10,200	9,830	434	3,618	13,882
2024	5,202	3,528	1,502	10,233	9,852	429	3,681	13,962
2025	5,252	3,509	1,499	10,261	9,870	423	3,746	14,038
2026	5,298	3,493	1,498	10,289	9,888	415	3,807	14,110
2027	5,347	3,476	1,497	10,320	9,908	408	3,870	14,186
2028	5,396	3,459	1,499	10,354	9,932	406	3,937	14,275
2029	5,439	3,436	1,496	10,371	9,939	401	3,995	14,335
2030	5,480	3,422	1,499	10,401	9,958	398	4,054	14,409
2031	5,512	3,407	1,498	10,418	9,965	392	4,110	14,467
2032	5,544	3,394	1,498	10,436	9,972	388	4,171	14,531
2033	5,581	3,386	1,497	10,464	9,990	387	4,233	14,610
2034	5,612	3,367	1,494	10,473	9,989	381	4,287	14,657
2035	5,638	3,358	1,496	10,492	9,998	377	4,344	14,719
2036	5,662	3,344	1,495	10,501	9,997	374	4,398	14,769
2037	5,683	3,330	1,497	10,509	9,996	370	4,458	14,824
2038	5,703	3,324	1,500	10,528	10,005	364	4,516	14,884
2043	5,794	3,228	1,493	10,515	9,946	339	4,767	15,052
2048	5,893	3,101	1,471	10,465	9,899	323	4,961	15,183
2053	6,001	2,984	1,452	10,437	9,872	311	5,080	15,264
2058	6,134	2,876	1,429	10,439	9,874	301	5,135	15,309
2063	6,305	2,775	1,409	10,489	9,921	290	5,123	15,334
2068	6,456	2,687	1,392	10,535	9,965	280	5,159	15,404

Appendix Table A23: High-variant family and household projections for Matamata-Piako District, 2018-2068

Year	Families				Households			
	Couples without children	Two-parent families	One-parent families	Total families	Family households	Other multi-person households	One-person households	Total households
2018	4,726	3,596	1,489	9,811	9,500	457	3,248	13,205
2019	4,842	3,616	1,499	9,957	9,632	457	3,338	13,427
2020	4,978	3,675	1,528	10,180	9,839	462	3,447	13,748
2021	5,069	3,683	1,539	10,291	9,937	459	3,530	13,925
2022	5,162	3,686	1,549	10,397	10,030	455	3,613	14,097
2023	5,248	3,687	1,556	10,491	10,111	451	3,691	14,253
2024	5,330	3,688	1,566	10,584	10,190	449	3,770	14,409
2025	5,405	3,699	1,575	10,679	10,272	446	3,852	14,570
2026	5,477	3,716	1,586	10,779	10,358	442	3,932	14,732
2027	5,554	3,733	1,599	10,885	10,451	438	4,015	14,904
2028	5,632	3,751	1,615	10,998	10,549	440	4,104	15,093
2029	5,705	3,764	1,627	11,096	10,634	439	4,184	15,256
2030	5,778	3,787	1,644	11,209	10,732	439	4,266	15,436
2031	5,843	3,809	1,659	11,312	10,819	436	4,346	15,602
2032	5,909	3,834	1,674	11,416	10,909	436	4,432	15,777
2033	5,981	3,864	1,688	11,533	11,011	438	4,519	15,968
2034	6,048	3,883	1,701	11,631	11,094	436	4,600	16,130
2035	6,112	3,911	1,718	11,741	11,189	435	4,684	16,308
2036	6,174	3,935	1,734	11,843	11,275	436	4,767	16,477
2037	6,234	3,958	1,751	11,944	11,361	435	4,856	16,652
2038	6,296	3,991	1,770	12,057	11,457	433	4,944	16,833
2043	6,616	4,078	1,846	12,540	11,861	426	5,359	17,647
2048	6,981	4,128	1,905	13,014	12,310	430	5,739	18,479
2053	7,388	4,177	1,968	13,534	12,801	435	6,064	19,300
2058	7,848	4,227	2,026	14,102	13,339	440	6,344	20,122
2063	8,367	4,276	2,087	14,729	13,932	443	6,574	20,949
2068	8,881	4,329	2,152	15,362	14,530	446	6,868	21,844

Appendix Table A24: Medium-variant family and household projections for Hamilton City, 2018-2068

Year	Families				Households			
	Couples without children	Two-parent families	One-parent families	Total families	Family households	Other multi-person households	One-person households	Total households
2018	15,886	16,687	9,357	41,930	40,600	4,140	12,739	57,479
2019	16,258	17,088	9,560	42,906	41,506	4,209	12,972	58,687
2020	16,696	17,631	9,835	44,162	42,681	4,304	13,257	60,241
2021	17,011	18,071	10,023	45,106	43,552	4,305	13,521	61,377
2022	17,286	18,485	10,195	45,966	44,341	4,297	13,766	62,403
2023	17,571	18,894	10,363	46,828	45,130	4,284	14,001	63,415
2024	17,827	19,281	10,530	47,639	45,868	4,301	14,231	64,400
2025	18,060	19,680	10,706	48,446	46,601	4,328	14,446	65,375
2026	18,268	20,077	10,876	49,221	47,302	4,361	14,671	66,334
2027	18,453	20,467	11,040	49,961	47,967	4,387	14,900	67,254
2028	18,677	20,871	11,212	50,760	48,689	4,426	15,135	68,250
2029	18,903	21,252	11,386	51,541	49,392	4,457	15,375	69,224
2030	19,133	21,633	11,568	52,334	50,105	4,486	15,613	70,204
2031	19,367	21,999	11,757	53,123	50,813	4,520	15,863	71,196
2032	19,596	22,349	11,934	53,880	51,488	4,557	16,109	72,154
2033	19,848	22,714	12,129	54,690	52,214	4,578	16,374	73,166
2034	20,099	23,070	12,318	55,486	52,924	4,591	16,635	74,150
2035	20,360	23,411	12,495	56,267	53,618	4,603	16,903	75,125
2036	20,645	23,737	12,672	57,054	54,318	4,612	17,174	76,104
2037	20,944	24,039	12,843	57,826	55,002	4,625	17,441	77,068
2038	21,236	24,352	13,011	58,598	55,684	4,623	17,727	78,035
2043	22,787	25,713	13,716	62,216	58,848	4,579	19,156	82,583
2048	24,598	26,656	14,206	65,460	61,917	4,569	20,656	87,142
2053	26,662	27,205	14,577	68,445	64,740	4,544	22,189	91,473
2058	28,767	27,522	14,889	71,178	67,326	4,492	23,725	95,543
2063	30,955	27,638	15,113	73,706	69,717	4,426	25,233	99,375
2068	33,084	27,521	15,238	75,843	71,738	4,351	26,874	102,962

Appendix Table A25: Low-variant family and household projections for Hamilton City, 2018-2068

Year	Families				Households			
	Couples without children	Two-parent families	One-parent families	Total families	Family households	Other multi-person households	One-person households	Total households
2018	15,886	16,687	9,357	41,930	40,600	4,140	12,739	57,479
2019	16,192	17,010	9,516	42,718	41,324	4,182	12,931	58,437
2020	16,562	17,470	9,744	43,776	42,308	4,248	13,174	59,729
2021	16,859	17,886	9,919	44,664	43,125	4,243	13,425	60,794
2022	17,104	18,258	10,069	45,431	43,824	4,225	13,651	61,700
2023	17,349	18,613	10,209	46,171	44,496	4,200	13,859	62,555
2024	17,559	18,937	10,343	46,838	45,097	4,201	14,057	63,355
2025	17,739	19,264	10,481	47,484	45,675	4,211	14,237	64,123
2026	17,891	19,583	10,610	48,084	46,208	4,226	14,424	64,858
2027	18,017	19,889	10,730	48,636	46,695	4,233	14,611	65,539
2028	18,179	20,203	10,856	49,238	47,229	4,253	14,803	66,285
2029	18,341	20,490	10,982	49,814	47,736	4,265	14,997	66,999
2030	18,506	20,773	11,115	50,394	48,247	4,275	15,187	67,709
2031	18,672	21,039	11,252	50,963	48,746	4,291	15,387	68,424
2032	18,832	21,284	11,377	51,493	49,207	4,309	15,582	69,098
2033	19,013	21,542	11,517	52,072	49,714	4,312	15,793	69,819
2034	19,191	21,789	11,650	52,630	50,200	4,306	15,997	70,503
2035	19,378	22,018	11,771	53,167	50,665	4,299	16,208	71,172
2036	19,585	22,231	11,890	53,706	51,130	4,290	16,418	71,839
2037	19,806	22,417	12,002	54,225	51,577	4,284	16,623	72,484
2038	20,017	22,613	12,110	54,741	52,019	4,263	16,845	73,128
2043	21,119	23,376	12,503	56,997	53,912	4,123	17,918	75,953
2048	22,397	23,709	12,668	58,774	55,593	4,019	19,000	78,612
2053	23,839	23,655	12,714	60,208	56,950	3,907	20,051	80,907
2058	25,238	23,386	12,704	61,328	58,009	3,776	21,043	82,827
2063	26,644	22,942	12,613	62,199	58,832	3,638	21,946	84,416
2068	27,933	22,294	12,427	62,654	59,263	3,498	22,929	85,690

Appendix Table A26: High-variant family and household projections for Hamilton City, 2018-2068

Year	Families				Households			
	Couples without children	Two-parent families	One-parent families	Total families	Family households	Other multi-person households	One-person households	Total households
2018	15,886	16,687	9,357	41,930	40,600	4,140	12,739	57,479
2019	16,324	17,165	9,604	43,093	41,687	4,237	13,013	58,937
2020	16,831	17,792	9,926	44,548	43,054	4,360	13,340	60,753
2021	17,163	18,257	10,127	45,548	43,979	4,366	13,616	61,960
2022	17,469	18,712	10,321	46,502	44,857	4,368	13,882	63,107
2023	17,794	19,175	10,517	47,486	45,763	4,369	14,143	64,275
2024	18,096	19,626	10,718	48,440	46,639	4,401	14,405	65,445
2025	18,381	20,096	10,932	49,409	47,527	4,446	14,655	66,627
2026	18,645	20,572	11,143	50,359	48,396	4,496	14,919	67,811
2027	18,890	21,047	11,350	51,287	49,240	4,541	15,189	68,970
2028	19,175	21,540	11,569	52,284	50,151	4,599	15,468	70,217
2029	19,465	22,015	11,790	53,271	51,049	4,649	15,753	71,452
2030	19,762	22,493	12,023	54,277	51,965	4,697	16,040	72,702
2031	20,063	22,961	12,263	55,287	52,882	4,750	16,340	73,972
2032	20,362	23,414	12,493	56,269	53,771	4,806	16,638	75,215
2033	20,684	23,887	12,741	57,312	54,717	4,845	16,957	76,519
2034	21,008	24,353	12,986	58,347	55,652	4,876	17,274	77,803
2035	21,345	24,806	13,221	59,371	56,577	4,907	17,600	79,084
2036	21,706	25,246	13,455	60,407	57,510	4,935	17,931	80,377
2037	22,084	25,663	13,686	61,433	58,433	4,967	18,261	81,660
2038	22,456	26,093	13,913	62,462	59,356	4,983	18,611	82,950
2043	24,460	28,055	14,931	67,446	63,795	5,036	20,398	89,230
2048	26,807	29,608	15,748	72,164	68,258	5,121	22,319	95,697
2053	29,497	30,764	16,446	76,707	72,555	5,184	24,335	102,075
2058	32,314	31,670	17,081	81,065	76,677	5,213	26,421	108,311
2063	35,288	32,351	17,623	85,263	80,648	5,218	28,537	114,403
2068	38,266	32,769	18,062	89,097	84,274	5,209	30,841	120,325

Appendix Table A27: Medium-variant family and household projections for Waipā District, 2018-2068

Year	Families				Households			
	Couples without children	Two-parent families	One-parent families	Total families	Family households	Other multi-person households	One-person households	Total households
2018	7,142	6,089	2,389	15,620	15,089	677	4,396	20,163
2019	7,320	6,125	2,404	15,848	15,296	678	4,515	20,490
2020	7,537	6,213	2,441	16,192	15,612	684	4,662	20,958
2021	7,721	6,251	2,462	16,434	15,831	688	4,790	21,309
2022	7,884	6,280	2,479	16,643	16,017	684	4,912	21,614
2023	8,039	6,300	2,494	16,833	16,185	681	5,021	21,887
2024	8,190	6,293	2,499	16,982	16,312	679	5,127	22,119
2025	8,322	6,301	2,504	17,128	16,437	676	5,241	22,354
2026	8,467	6,315	2,513	17,295	16,582	675	5,350	22,608
2027	8,592	6,330	2,526	17,448	16,713	672	5,463	22,848
2028	8,718	6,344	2,539	17,601	16,844	671	5,576	23,091
2029	8,863	6,334	2,547	17,743	16,964	672	5,682	23,319
2030	8,984	6,341	2,559	17,884	17,083	672	5,785	23,540
2031	9,115	6,358	2,572	18,045	17,221	670	5,884	23,775
2032	9,232	6,376	2,589	18,197	17,349	671	5,981	24,000
2033	9,345	6,392	2,602	18,338	17,467	670	6,074	24,211
2034	9,471	6,389	2,611	18,471	17,577	668	6,171	24,416
2035	9,589	6,400	2,626	18,615	17,698	668	6,274	24,639
2036	9,709	6,411	2,634	18,754	17,814	666	6,377	24,856
2037	9,823	6,427	2,647	18,896	17,932	664	6,472	25,068
2038	9,933	6,436	2,656	19,026	18,038	661	6,568	25,267
2043	10,468	6,478	2,707	19,653	18,546	651	7,009	26,207
2048	10,952	6,512	2,759	20,224	19,085	642	7,383	27,110
2053	11,406	6,542	2,800	20,749	19,581	636	7,705	27,922
2058	11,863	6,561	2,831	21,256	20,059	632	7,962	28,652
2063	12,369	6,566	2,857	21,792	20,565	630	8,179	29,375
2068	12,880	6,558	2,879	22,317	21,060	628	8,419	30,107

Appendix Table A28: Low-variant family and household projections for Waipā District, 2018-2068

Year	Families				Households			
	Couples without children	Two-parent families	One-parent families	Total families	Family households	Other multi-person households	One-person households	Total households
2018	7,142	6,089	2,389	15,620	15,089	677	4,396	20,163
2019	7,292	6,094	2,392	15,779	15,229	674	4,500	20,403
2020	7,480	6,152	2,417	16,049	15,475	676	4,631	20,782
2021	7,657	6,181	2,434	16,272	15,675	679	4,754	21,108
2022	7,806	6,196	2,446	16,448	15,830	674	4,868	21,373
2023	7,944	6,197	2,454	16,596	15,957	668	4,967	21,593
2024	8,075	6,168	2,451	16,694	16,036	665	5,062	21,763
2025	8,185	6,152	2,447	16,784	16,107	659	5,163	21,929
2026	8,305	6,140	2,446	16,891	16,195	656	5,258	22,108
2027	8,403	6,127	2,449	16,979	16,264	650	5,355	22,269
2028	8,502	6,113	2,451	17,065	16,331	646	5,452	22,429
2029	8,618	6,073	2,448	17,138	16,385	645	5,541	22,571
2030	8,709	6,049	2,449	17,207	16,436	642	5,626	22,704
2031	8,809	6,035	2,450	17,295	16,505	637	5,707	22,849
2032	8,894	6,022	2,456	17,372	16,562	635	5,785	22,982
2033	8,974	6,006	2,456	17,436	16,608	631	5,859	23,098
2034	9,067	5,972	2,453	17,492	16,646	626	5,936	23,208
2035	9,150	5,950	2,457	17,557	16,692	624	6,017	23,333
2036	9,234	5,930	2,453	17,616	16,733	619	6,099	23,451
2037	9,312	5,913	2,453	17,678	16,776	615	6,172	23,563
2038	9,384	5,890	2,451	17,725	16,805	609	6,245	23,660
2043	9,712	5,773	2,440	17,924	16,915	585	6,564	24,064
2048	9,959	5,652	2,430	18,041	17,026	561	6,800	24,387
2053	10,151	5,532	2,411	18,095	17,076	541	6,970	24,587
2058	10,324	5,407	2,383	18,114	17,094	524	7,062	24,680
2063	10,531	5,273	2,350	18,154	17,132	511	7,105	24,747
2068	10,729	5,132	2,315	18,176	17,153	497	7,161	24,811

Appendix Table A29: High-variant family and household projections for Waipā District, 2018-2068

Year	Families				Households			
	Couples without children	Two-parent families	One-parent families	Total families	Family households	Other multi-person households	One-person households	Total households
2018	7,142	6,089	2,389	15,620	15,089	677	4,396	20,163
2019	7,348	6,155	2,416	15,918	15,363	682	4,530	20,576
2020	7,593	6,275	2,466	16,334	15,750	692	4,693	21,135
2021	7,785	6,321	2,489	16,596	15,987	696	4,826	21,509
2022	7,961	6,365	2,511	16,837	16,204	695	4,956	21,855
2023	8,134	6,403	2,534	17,071	16,413	693	5,075	22,181
2024	8,305	6,418	2,547	17,269	16,589	694	5,193	22,475
2025	8,460	6,450	2,561	17,471	16,767	693	5,319	22,780
2026	8,630	6,490	2,580	17,700	16,970	695	5,443	23,108
2027	8,781	6,533	2,603	17,917	17,162	694	5,571	23,427
2028	8,934	6,576	2,627	18,137	17,357	696	5,700	23,753
2029	9,108	6,595	2,646	18,349	17,543	700	5,823	24,066
2030	9,259	6,633	2,670	18,562	17,730	703	5,944	24,376
2031	9,422	6,680	2,694	18,796	17,937	703	6,061	24,702
2032	9,570	6,730	2,723	19,023	18,137	707	6,177	25,020
2033	9,716	6,777	2,747	19,240	18,326	708	6,290	25,324
2034	9,876	6,807	2,768	19,451	18,510	709	6,407	25,626
2035	10,029	6,849	2,795	19,674	18,704	712	6,530	25,947
2036	10,185	6,893	2,815	19,893	18,896	712	6,655	26,263
2037	10,336	6,941	2,840	20,117	19,090	714	6,772	26,576
2038	10,484	6,982	2,862	20,328	19,272	714	6,890	26,877
2043	11,227	7,184	2,975	21,386	20,182	718	7,456	28,356
2048	11,949	7,376	3,090	22,414	21,152	724	7,968	29,843
2053	12,667	7,558	3,192	23,416	22,098	731	8,443	31,273
2058	13,410	7,723	3,283	24,416	23,041	740	8,866	32,648
2063	14,219	7,870	3,369	25,457	24,024	751	9,260	34,035
2068	15,045	7,999	3,449	26,493	25,002	760	9,685	35,446

Appendix Table A30: Medium-variant family and household projections for Otorohanga District, 2018-2068

Year	Families				Households			
	Couples without children	Two-parent families	One-parent families	Total families	Family households	Other multi-person households	One-person households	Total households
2018	1,225	1,106	443	2,774	2,686	104	841	3,632
2019	1,245	1,106	444	2,795	2,704	103	856	3,663
2020	1,266	1,123	449	2,838	2,743	103	878	3,724
2021	1,283	1,133	454	2,869	2,771	102	893	3,766
2022	1,303	1,136	462	2,901	2,799	102	913	3,814
2023	1,319	1,138	464	2,921	2,816	101	928	3,845
2024	1,335	1,134	468	2,937	2,828	101	942	3,872
2025	1,346	1,137	473	2,956	2,845	101	959	3,904
2026	1,358	1,144	481	2,983	2,868	101	971	3,939
2027	1,373	1,151	487	3,011	2,892	102	988	3,981
2028	1,386	1,156	497	3,039	2,916	102	1,006	4,024
2029	1,399	1,153	500	3,053	2,926	103	1,029	4,058
2030	1,414	1,158	509	3,081	2,950	104	1,047	4,102
2031	1,430	1,168	518	3,116	2,981	106	1,063	4,150
2032	1,446	1,177	525	3,148	3,009	106	1,081	4,196
2033	1,457	1,187	529	3,173	3,030	106	1,092	4,229
2034	1,473	1,189	535	3,196	3,050	107	1,108	4,265
2035	1,489	1,193	536	3,218	3,067	106	1,119	4,293
2036	1,505	1,202	541	3,248	3,093	107	1,133	4,333
2037	1,518	1,210	548	3,276	3,117	106	1,150	4,374
2038	1,525	1,221	553	3,299	3,136	105	1,163	4,404
2043	1,584	1,252	560	3,396	3,213	98	1,218	4,529
2048	1,645	1,269	574	3,488	3,301	95	1,248	4,644
2053	1,712	1,279	587	3,578	3,385	96	1,296	4,777
2058	1,800	1,284	605	3,689	3,491	100	1,340	4,931
2063	1,905	1,288	617	3,810	3,605	101	1,399	5,104
2068	2,006	1,297	624	3,927	3,716	99	1,470	5,285

Appendix Table A31: Low-variant family and household projections for Otorohanga District, 2018-2068

Year	Families				Households			
	Couples without children	Two-parent families	One-parent families	Total families	Family households	Other multi-person households	One-person households	Total households
2018	1,225	1,106	443	2,774	2,686	104	841	3,632
2019	1,240	1,101	442	2,783	2,693	102	853	3,647
2020	1,257	1,112	444	2,813	2,719	102	872	3,693
2021	1,273	1,120	448	2,841	2,744	100	886	3,731
2022	1,292	1,120	456	2,868	2,767	100	905	3,772
2023	1,305	1,119	457	2,881	2,777	99	918	3,794
2024	1,318	1,111	459	2,888	2,781	99	930	3,810
2025	1,326	1,109	462	2,898	2,788	98	944	3,831
2026	1,334	1,112	469	2,915	2,802	98	954	3,853
2027	1,346	1,113	472	2,932	2,816	98	968	3,882
2028	1,355	1,114	480	2,948	2,829	98	983	3,910
2029	1,364	1,105	481	2,951	2,828	99	1,004	3,930
2030	1,375	1,104	488	2,967	2,841	100	1,018	3,959
2031	1,387	1,109	495	2,990	2,861	101	1,031	3,993
2032	1,399	1,112	500	3,010	2,877	101	1,046	4,023
2033	1,404	1,116	502	3,022	2,886	100	1,054	4,041
2034	1,416	1,112	505	3,033	2,893	101	1,067	4,061
2035	1,427	1,110	504	3,041	2,899	100	1,074	4,073
2036	1,438	1,113	507	3,058	2,912	100	1,085	4,096
2037	1,446	1,116	512	3,073	2,924	99	1,098	4,120
2038	1,447	1,120	515	3,082	2,930	97	1,107	4,134
2043	1,476	1,121	508	3,106	2,939	88	1,141	4,168
2048	1,502	1,110	510	3,121	2,953	83	1,148	4,184
2053	1,528	1,090	511	3,129	2,960	82	1,169	4,211
2058	1,572	1,068	516	3,155	2,985	84	1,184	4,253
2063	1,629	1,044	515	3,189	3,017	82	1,211	4,310
2068	1,680	1,027	509	3,216	3,042	80	1,247	4,369

Appendix Table A32: High-variant family and household projections for Otorohanga District, 2018-2068

Year	Families				Households			
	Couples without children	Two-parent families	One-parent families	Total families	Family households	Other multi-person households	One-person households	Total households
2018	1,225	1,106	443	2,774	2,686	104	841	3,632
2019	1,249	1,112	446	2,807	2,716	103	859	3,678
2020	1,274	1,134	454	2,862	2,767	104	885	3,756
2021	1,292	1,146	459	2,897	2,798	103	900	3,801
2022	1,315	1,151	468	2,935	2,832	103	921	3,856
2023	1,333	1,157	472	2,962	2,855	103	938	3,897
2024	1,352	1,157	477	2,986	2,876	103	955	3,933
2025	1,366	1,165	484	3,015	2,901	103	973	3,978
2026	1,381	1,177	494	3,052	2,934	104	988	4,026
2027	1,400	1,188	502	3,091	2,968	105	1,008	4,081
2028	1,417	1,199	513	3,129	3,003	106	1,028	4,137
2029	1,434	1,202	519	3,155	3,024	107	1,055	4,186
2030	1,453	1,212	530	3,195	3,059	109	1,076	4,244
2031	1,474	1,227	541	3,242	3,102	111	1,095	4,308
2032	1,494	1,242	550	3,287	3,142	111	1,115	4,369
2033	1,509	1,258	557	3,324	3,175	112	1,130	4,417
2034	1,530	1,266	564	3,360	3,206	113	1,150	4,469
2035	1,551	1,276	568	3,395	3,236	113	1,164	4,513
2036	1,572	1,290	576	3,438	3,274	114	1,182	4,570
2037	1,590	1,305	585	3,480	3,311	114	1,203	4,627
2038	1,603	1,322	592	3,517	3,343	113	1,219	4,675
2043	1,692	1,383	611	3,686	3,487	108	1,296	4,891
2048	1,789	1,429	638	3,857	3,649	107	1,349	5,106
2053	1,896	1,468	664	4,029	3,812	111	1,424	5,346
2058	2,030	1,502	695	4,227	3,999	116	1,497	5,613
2063	2,183	1,534	720	4,438	4,199	119	1,589	5,906
2068	2,335	1,571	741	4,646	4,396	120	1,695	6,211

Appendix Table A33: Medium-variant family and household projections for South Waikato District, 2018-2068

Year	Families				Households			
	Couples without children	Two-parent families	One-parent families	Total families	Family households	Other multi-person households	One-person households	Total households
2018	2,603	2,280	1,503	6,386	6,118	331	2,366	8,815
2019	2,612	2,264	1,496	6,372	6,099	329	2,379	8,807
2020	2,628	2,261	1,500	6,389	6,109	328	2,405	8,841
2021	2,639	2,250	1,495	6,384	6,098	322	2,425	8,845
2022	2,649	2,234	1,491	6,374	6,083	317	2,442	8,842
2023	2,654	2,220	1,489	6,364	6,068	313	2,458	8,838
2024	2,664	2,206	1,488	6,358	6,056	311	2,471	8,838
2025	2,666	2,189	1,483	6,338	6,031	309	2,487	8,828
2026	2,662	2,178	1,480	6,320	6,009	307	2,501	8,817
2027	2,659	2,166	1,477	6,302	5,986	303	2,518	8,807
2028	2,661	2,164	1,483	6,308	5,987	304	2,534	8,825
2029	2,667	2,162	1,491	6,319	5,991	304	2,551	8,846
2030	2,667	2,158	1,500	6,325	5,991	303	2,567	8,861
2031	2,666	2,157	1,509	6,332	5,992	303	2,582	8,877
2032	2,666	2,153	1,514	6,334	5,988	303	2,600	8,891
2033	2,670	2,161	1,527	6,358	6,005	302	2,616	8,923
2034	2,671	2,171	1,538	6,381	6,021	300	2,632	8,954
2035	2,676	2,177	1,547	6,399	6,033	298	2,649	8,980
2036	2,682	2,182	1,557	6,421	6,048	297	2,665	9,011
2037	2,689	2,185	1,568	6,441	6,062	296	2,686	9,043
2038	2,699	2,195	1,577	6,471	6,084	294	2,704	9,082
2043	2,733	2,226	1,610	6,569	6,147	283	2,791	9,221
2048	2,774	2,248	1,651	6,673	6,245	279	2,879	9,402
2053	2,844	2,260	1,696	6,800	6,363	280	2,966	9,609
2058	2,976	2,264	1,732	6,972	6,525	281	3,049	9,854
2063	3,153	2,262	1,762	7,177	6,716	282	3,158	10,156
2068	3,329	2,257	1,800	7,386	6,912	281	3,312	10,504

Appendix Table A34: Low-variant family and household projections for South Waikato District, 2018-2068

Year	Families				Households			
	Couples without children	Two-parent families	One-parent families	Total families	Family households	Other multi-person households	One-person households	Total households
2018	2,603	2,280	1,503	6,386	6,118	331	2,366	8,815
2019	2,605	2,252	1,489	6,346	6,074	327	2,372	8,772
2020	2,614	2,238	1,484	6,336	6,058	324	2,390	8,772
2021	2,622	2,223	1,478	6,324	6,041	318	2,409	8,767
2022	2,630	2,203	1,470	6,303	6,015	312	2,422	8,750
2023	2,631	2,182	1,464	6,277	5,985	307	2,434	8,726
2024	2,636	2,160	1,458	6,254	5,957	304	2,442	8,703
2025	2,632	2,135	1,447	6,214	5,914	302	2,453	8,669
2026	2,623	2,115	1,438	6,176	5,872	298	2,461	8,631
2027	2,614	2,094	1,429	6,137	5,829	293	2,472	8,594
2028	2,610	2,082	1,429	6,121	5,809	293	2,482	8,583
2029	2,609	2,070	1,430	6,109	5,792	291	2,492	8,575
2030	2,603	2,055	1,433	6,092	5,770	289	2,501	8,560
2031	2,595	2,045	1,435	6,075	5,749	288	2,509	8,546
2032	2,588	2,031	1,433	6,052	5,722	287	2,519	8,528
2033	2,585	2,028	1,439	6,052	5,716	285	2,528	8,529
2034	2,579	2,028	1,443	6,050	5,709	282	2,536	8,527
2035	2,576	2,023	1,445	6,043	5,698	279	2,545	8,521
2036	2,573	2,018	1,447	6,039	5,688	277	2,553	8,518
2037	2,572	2,011	1,451	6,033	5,678	274	2,565	8,517
2038	2,574	2,011	1,452	6,037	5,675	271	2,574	8,521
2043	2,560	1,989	1,447	5,995	5,610	254	2,613	8,477
2048	2,545	1,958	1,447	5,950	5,568	244	2,645	8,458
2053	2,550	1,920	1,452	5,922	5,541	239	2,671	8,451
2058	2,610	1,875	1,448	5,933	5,552	235	2,684	8,471
2063	2,709	1,827	1,436	5,972	5,589	231	2,717	8,536
2068	2,801	1,779	1,432	6,012	5,626	225	2,788	8,639

Appendix Table A35: High-variant family and household projections for South Waikato District, 2018-2068

Year	Families				Households			
	Couples without children	Two-parent families	One-parent families	Total families	Family households	Other multi-person households	One-person households	Total households
2018	2,603	2,280	1,503	6,386	6,118	331	2,366	8,815
2019	2,620	2,275	1,504	6,399	6,124	330	2,386	8,841
2020	2,643	2,284	1,515	6,442	6,160	331	2,419	8,910
2021	2,655	2,276	1,513	6,444	6,155	326	2,442	8,923
2022	2,669	2,266	1,512	6,446	6,152	321	2,462	8,935
2023	2,678	2,258	1,514	6,450	6,150	318	2,482	8,950
2024	2,692	2,251	1,518	6,462	6,155	317	2,499	8,972
2025	2,699	2,243	1,519	6,461	6,149	317	2,521	8,987
2026	2,701	2,242	1,521	6,464	6,146	315	2,541	9,002
2027	2,704	2,239	1,525	6,467	6,143	313	2,564	9,020
2028	2,712	2,246	1,538	6,496	6,165	315	2,587	9,067
2029	2,724	2,254	1,551	6,529	6,191	316	2,610	9,117
2030	2,732	2,260	1,568	6,559	6,213	316	2,633	9,162
2031	2,737	2,270	1,584	6,590	6,236	317	2,656	9,209
2032	2,744	2,276	1,596	6,616	6,255	319	2,681	9,254
2033	2,756	2,294	1,615	6,664	6,295	319	2,704	9,318
2034	2,764	2,315	1,634	6,713	6,334	318	2,728	9,381
2035	2,776	2,331	1,650	6,757	6,370	317	2,753	9,441
2036	2,790	2,347	1,667	6,804	6,409	318	2,778	9,505
2037	2,806	2,360	1,685	6,851	6,447	317	2,808	9,572
2038	2,824	2,381	1,701	6,906	6,493	317	2,834	9,644
2043	2,907	2,464	1,774	7,146	6,687	312	2,970	9,969
2048	3,006	2,539	1,856	7,401	6,926	315	3,114	10,354
2053	3,141	2,603	1,942	7,686	7,193	321	3,265	10,778
2058	3,345	2,657	2,021	8,023	7,508	327	3,418	11,253
2063	3,601	2,703	2,093	8,398	7,859	334	3,604	11,796
2068	3,862	2,744	2,174	8,780	8,217	338	3,842	12,397

Appendix Table A36: Medium-variant family and household projections for Waitomo District, 2018-2068

Year	Families				Households			
	Couples without children	Two-parent families	One-parent families	Total families	Family households	Other multi-person households	One-person households	Total households
2018	1,066	965	496	2,528	2,415	133	955	3,503
2019	1,072	961	492	2,526	2,411	129	961	3,502
2020	1,080	969	496	2,545	2,427	128	973	3,528
2021	1,088	962	492	2,541	2,421	127	981	3,529
2022	1,093	954	485	2,533	2,410	127	989	3,526
2023	1,097	949	483	2,529	2,405	126	995	3,526
2024	1,098	940	479	2,517	2,391	125	999	3,516
2025	1,101	936	478	2,515	2,387	125	1,006	3,517
2026	1,102	934	479	2,515	2,384	123	1,011	3,518
2027	1,102	931	479	2,512	2,380	120	1,019	3,519
2028	1,100	930	482	2,512	2,377	119	1,031	3,528
2029	1,101	922	480	2,503	2,367	118	1,043	3,527
2030	1,103	920	481	2,504	2,365	118	1,057	3,541
2031	1,100	922	480	2,502	2,361	118	1,068	3,547
2032	1,098	924	477	2,499	2,356	118	1,074	3,548
2033	1,093	929	480	2,503	2,358	117	1,084	3,559
2034	1,093	925	481	2,500	2,352	118	1,096	3,565
2035	1,093	929	484	2,506	2,356	117	1,106	3,579
2036	1,090	931	488	2,509	2,356	116	1,118	3,590
2037	1,089	932	491	2,512	2,357	116	1,128	3,601
2038	1,085	937	495	2,517	2,360	115	1,140	3,615
2043	1,092	942	498	2,533	2,363	111	1,180	3,654
2048	1,109	946	499	2,554	2,383	109	1,218	3,710
2053	1,150	946	499	2,595	2,422	107	1,241	3,769
2058	1,208	945	505	2,658	2,480	107	1,262	3,848
2063	1,273	947	506	2,726	2,544	107	1,303	3,954
2068	1,339	943	516	2,799	2,611	107	1,353	4,071

Appendix Table A37: Low-variant family and household projections for Waitomo District, 2018-2068

Year	Families				Households			
	Couples without children	Two-parent families	One-parent families	Total families	Family households	Other multi-person households	One-person households	Total households
2018	1,066	965	496	2,528	2,415	133	955	3,503
2019	1,069	956	490	2,515	2,400	129	958	3,487
2020	1,073	959	490	2,522	2,405	127	966	3,498
2021	1,080	950	486	2,516	2,396	126	973	3,496
2022	1,084	940	479	2,503	2,382	125	980	3,487
2023	1,086	932	475	2,493	2,370	124	984	3,478
2024	1,084	921	470	2,474	2,350	123	986	3,459
2025	1,085	913	467	2,465	2,339	122	990	3,451
2026	1,084	907	466	2,456	2,329	119	993	3,441
2027	1,082	900	464	2,445	2,316	117	998	3,431
2028	1,076	895	465	2,437	2,306	115	1,007	3,428
2029	1,075	883	461	2,419	2,287	114	1,016	3,416
2030	1,073	877	461	2,411	2,277	114	1,027	3,418
2031	1,068	875	457	2,399	2,264	113	1,035	3,412
2032	1,062	873	453	2,388	2,251	112	1,038	3,401
2033	1,055	874	454	2,382	2,244	111	1,045	3,400
2034	1,051	866	452	2,369	2,229	111	1,053	3,393
2035	1,048	865	453	2,366	2,225	110	1,060	3,394
2036	1,042	863	455	2,359	2,216	109	1,068	3,393
2037	1,036	861	456	2,353	2,208	108	1,074	3,390
2038	1,029	861	459	2,349	2,202	107	1,083	3,392
2043	1,016	846	451	2,313	2,158	100	1,102	3,361
2048	1,009	830	441	2,280	2,128	96	1,117	3,341
2053	1,025	809	431	2,265	2,114	92	1,116	3,322
2058	1,054	789	427	2,270	2,118	90	1,111	3,319
2063	1,090	771	418	2,279	2,127	89	1,124	3,339
2068	1,125	749	417	2,291	2,138	86	1,143	3,367

Appendix Table A38: High-variant family and household projections for Waitomo District, 2018-2068

Year	Families				Households			
	Couples without children	Two-parent families	One-parent families	Total families	Family households	Other multi-person households	One-person households	Total households
2018	1,066	965	496	2,528	2,415	133	955	3,503
2019	1,076	967	495	2,538	2,422	130	965	3,517
2020	1,087	980	501	2,568	2,448	130	980	3,558
2021	1,096	973	498	2,567	2,445	129	989	3,563
2022	1,103	968	492	2,563	2,439	129	998	3,566
2023	1,108	965	492	2,565	2,439	128	1,006	3,573
2024	1,111	960	489	2,560	2,432	127	1,013	3,572
2025	1,117	959	489	2,566	2,435	127	1,022	3,584
2026	1,121	961	492	2,573	2,440	126	1,030	3,595
2027	1,123	962	494	2,579	2,443	124	1,040	3,607
2028	1,124	965	499	2,588	2,449	123	1,055	3,627
2029	1,128	961	499	2,588	2,446	122	1,070	3,639
2030	1,132	963	502	2,598	2,453	123	1,087	3,664
2031	1,133	969	502	2,604	2,458	124	1,101	3,682
2032	1,133	976	502	2,611	2,462	123	1,111	3,696
2033	1,132	985	507	2,624	2,472	123	1,124	3,719
2034	1,135	985	510	2,630	2,475	124	1,139	3,737
2035	1,139	993	515	2,646	2,488	124	1,153	3,764
2036	1,139	999	520	2,658	2,497	123	1,168	3,788
2037	1,141	1,005	525	2,671	2,506	123	1,182	3,812
2038	1,141	1,013	532	2,687	2,519	123	1,198	3,840
2043	1,169	1,039	545	2,753	2,569	121	1,258	3,949
2048	1,209	1,063	557	2,829	2,640	122	1,319	4,080
2053	1,277	1,083	568	2,927	2,732	122	1,366	4,219
2058	1,363	1,103	584	3,049	2,845	124	1,414	4,382
2063	1,458	1,124	596	3,178	2,965	126	1,484	4,575
2068	1,556	1,140	617	3,312	3,091	127	1,565	4,784

Appendix Table A39: Medium-variant family and household projections for Taupō District, 2018-2068

Year	Families				Households			
	Couples without children	Two-parent families	One-parent families	Total families	Family households	Other multi-person households	One-person households	Total households
2018	5,068	3,552	1,889	10,509	10,153	554	3,648	14,356
2019	5,153	3,544	1,892	10,588	10,220	553	3,716	14,489
2020	5,262	3,562	1,909	10,733	10,350	558	3,809	14,717
2021	5,356	3,556	1,913	10,825	10,429	554	3,890	14,873
2022	5,432	3,541	1,907	10,880	10,472	549	3,971	14,992
2023	5,495	3,531	1,908	10,933	10,513	544	4,050	15,108
2024	5,559	3,509	1,905	10,972	10,540	544	4,125	15,210
2025	5,624	3,489	1,905	11,018	10,575	542	4,198	15,316
2026	5,675	3,482	1,906	11,062	10,607	539	4,270	15,416
2027	5,721	3,473	1,905	11,099	10,632	536	4,337	15,505
2028	5,771	3,472	1,914	11,157	10,678	537	4,410	15,625
2029	5,815	3,463	1,917	11,196	10,705	536	4,481	15,723
2030	5,866	3,456	1,922	11,244	10,742	537	4,554	15,833
2031	5,903	3,461	1,932	11,296	10,780	536	4,625	15,942
2032	5,934	3,460	1,940	11,334	10,807	535	4,690	16,032
2033	5,969	3,466	1,953	11,388	10,849	534	4,762	16,145
2034	5,994	3,467	1,959	11,420	10,868	530	4,822	16,219
2035	6,022	3,469	1,964	11,456	10,892	527	4,889	16,309
2036	6,050	3,478	1,976	11,503	10,927	524	4,954	16,405
2037	6,079	3,483	1,985	11,547	10,959	523	5,009	16,490
2038	6,111	3,490	1,991	11,592	10,991	518	5,065	16,575
2043	6,227	3,511	2,003	11,740	11,080	489	5,320	16,889
2048	6,310	3,527	2,021	11,857	11,190	470	5,528	17,189
2053	6,450	3,522	2,043	12,014	11,339	458	5,681	17,478
2058	6,684	3,476	2,066	12,226	11,539	453	5,826	17,818
2063	6,988	3,421	2,070	12,480	11,778	452	5,973	18,203
2068	7,277	3,389	2,078	12,743	12,027	447	6,163	18,637

Appendix Table A40: Low-variant family and household projections for Taupō District, 2018-2068

Year	Families				Households			
	Couples without children	Two-parent families	One-parent families	Total families	Family households	Other multi-person households	One-person households	Total households
2018	5,068	3,552	1,889	10,509	10,153	554	3,648	14,356
2019	5,136	3,526	1,882	10,544	10,177	549	3,704	14,430
2020	5,227	3,526	1,889	10,642	10,263	551	3,785	14,598
2021	5,317	3,516	1,890	10,723	10,331	546	3,862	14,738
2022	5,385	3,491	1,881	10,757	10,354	539	3,937	14,830
2023	5,438	3,471	1,876	10,784	10,370	533	4,009	14,911
2024	5,490	3,436	1,866	10,791	10,367	530	4,075	14,973
2025	5,542	3,403	1,859	10,804	10,369	527	4,138	15,034
2026	5,578	3,380	1,853	10,811	10,366	521	4,200	15,087
2027	5,609	3,356	1,843	10,809	10,354	516	4,255	15,125
2028	5,644	3,339	1,844	10,826	10,362	515	4,316	15,192
2029	5,672	3,314	1,839	10,824	10,350	511	4,375	15,236
2030	5,706	3,290	1,835	10,830	10,346	510	4,436	15,291
2031	5,725	3,277	1,836	10,838	10,343	507	4,493	15,343
2032	5,738	3,259	1,835	10,832	10,328	503	4,545	15,376
2033	5,756	3,247	1,838	10,841	10,328	500	4,603	15,431
2034	5,762	3,230	1,835	10,827	10,305	493	4,647	15,445
2035	5,771	3,215	1,832	10,817	10,285	489	4,700	15,475
2036	5,778	3,206	1,834	10,818	10,277	484	4,749	15,509
2037	5,787	3,194	1,833	10,815	10,264	480	4,788	15,532
2038	5,798	3,184	1,831	10,812	10,252	473	4,828	15,554
2043	5,798	3,118	1,796	10,712	10,109	433	4,995	15,537
2048	5,747	3,052	1,767	10,567	9,973	403	5,103	15,479
2053	5,739	2,969	1,745	10,453	9,865	382	5,145	15,393
2058	5,812	2,850	1,724	10,387	9,803	368	5,171	15,342
2063	5,946	2,725	1,685	10,356	9,774	358	5,191	15,324
2068	6,060	2,625	1,649	10,334	9,753	347	5,246	15,345

Appendix Table A41: High-variant family and household projections for Taupō District, 2018-2068

Year	Families				Households			
	Couples without children	Two-parent families	One-parent families	Total families	Family households	Other multi-person households	One-person households	Total households
2018	5,068	3,552	1,889	10,509	10,153	554	3,648	14,356
2019	5,170	3,561	1,901	10,632	10,263	557	3,728	14,548
2020	5,297	3,598	1,929	10,823	10,437	566	3,833	14,836
2021	5,395	3,597	1,935	10,928	10,528	563	3,918	15,008
2022	5,479	3,590	1,934	11,003	10,591	558	4,005	15,154
2023	5,552	3,591	1,940	11,083	10,657	556	4,091	15,304
2024	5,628	3,581	1,943	11,152	10,714	557	4,176	15,447
2025	5,707	3,575	1,951	11,233	10,781	558	4,258	15,597
2026	5,771	3,583	1,960	11,314	10,849	557	4,341	15,746
2027	5,832	3,590	1,967	11,389	10,910	556	4,419	15,885
2028	5,898	3,605	1,984	11,487	10,994	560	4,504	16,057
2029	5,959	3,613	1,996	11,568	11,061	561	4,587	16,210
2030	6,027	3,623	2,010	11,659	11,138	564	4,673	16,375
2031	6,081	3,644	2,029	11,754	11,218	566	4,757	16,541
2032	6,129	3,662	2,046	11,837	11,286	567	4,836	16,690
2033	6,183	3,685	2,068	11,936	11,370	568	4,922	16,861
2034	6,227	3,703	2,083	12,013	11,433	566	4,996	16,995
2035	6,275	3,723	2,097	12,095	11,501	566	5,079	17,146
2036	6,322	3,750	2,118	12,190	11,580	565	5,159	17,304
2037	6,372	3,773	2,136	12,281	11,656	566	5,230	17,451
2038	6,424	3,798	2,152	12,374	11,733	563	5,302	17,599
2043	6,658	3,905	2,211	12,774	12,056	545	5,647	18,248
2048	6,875	4,005	2,276	13,155	12,416	538	5,956	18,910
2053	7,165	4,079	2,344	13,588	12,824	536	6,221	19,581
2058	7,563	4,109	2,413	14,085	13,293	540	6,486	20,319
2063	8,039	4,128	2,462	14,629	13,807	547	6,762	21,116
2068	8,509	4,165	2,514	15,188	14,334	550	7,090	21,974

Appendix III

Appendix Table A42: Medium-variant Labour Force Projections, 2018-2068

Year	Thames-Coromandel District	Hauraki District	Waikato District	Matamata-Piako District	Hamilton City
2018	14,849	10,268	43,465	19,150	92,473
2019	14,775	10,266	44,250	19,348	94,832
2020	14,823	10,340	45,344	19,671	97,899
2021	14,750	10,309	46,116	19,818	99,941
2022	14,624	10,282	46,824	19,931	101,789
2023	14,523	10,249	47,437	20,061	103,690
2024	14,389	10,220	48,045	20,155	105,589
2025	14,270	10,184	48,607	20,281	107,478
2026	14,169	10,155	49,163	20,373	109,403
2027	14,067	10,139	49,748	20,469	111,268
2028	14,010	10,124	50,334	20,618	113,233
2029	13,911	10,113	50,907	20,719	115,215
2030	13,823	10,106	51,508	20,854	117,197
2031	13,773	10,143	52,104	20,974	119,233
2032	13,723	10,167	52,745	21,083	121,245
2033	13,706	10,189	53,363	21,229	123,209
2034	13,661	10,221	53,942	21,336	125,133
2035	13,620	10,259	54,545	21,466	127,082
2036	13,609	10,308	55,161	21,602	129,046
2037	13,601	10,361	55,793	21,723	131,000
2038	13,604	10,408	56,396	21,864	132,869
2043	13,657	10,695	59,256	22,612	142,096
2048	13,269	10,673	60,716	22,960	149,099
2053	13,100	10,713	62,119	23,432	155,400
2058	13,103	10,832	63,542	23,952	160,442
2063	13,210	11,040	65,046	24,379	163,877
2068	13,405	11,316	66,682	24,757	165,877

Appendix Table A42: Medium-variant Labour Force Projections, 2018-2068 ctd.

Year	Waipā District	Otorohanga District	South Waikato District	Waitomo District	Taupō District
2018	30,664	5,742	12,445	5,367	21,092
2019	31,087	5,782	12,469	5,354	21,280
2020	31,707	5,877	12,560	5,401	21,619
2021	32,208	5,933	12,557	5,388	21,757
2022	32,583	5,993	12,530	5,386	21,867
2023	32,941	6,048	12,558	5,374	22,005
2024	33,275	6,080	12,590	5,355	22,117
2025	33,556	6,138	12,606	5,361	22,229
2026	33,891	6,204	12,621	5,351	22,338
2027	34,204	6,265	12,627	5,345	22,433
2028	34,504	6,313	12,685	5,344	22,577
2029	34,802	6,367	12,745	5,341	22,663
2030	35,123	6,427	12,794	5,360	22,772
2031	35,454	6,509	12,857	5,370	22,899
2032	35,776	6,575	12,912	5,383	23,025
2033	36,067	6,621	12,990	5,401	23,156
2034	36,359	6,670	13,056	5,407	23,236
2035	36,673	6,721	13,117	5,425	23,325
2036	36,999	6,784	13,198	5,439	23,442
2037	37,318	6,836	13,273	5,456	23,557
2038	37,632	6,885	13,361	5,480	23,679
2043	39,209	7,134	13,800	5,617	24,237
2048	39,907	7,300	14,082	5,708	24,395
2053	40,675	7,507	14,511	5,832	24,754
2058	41,441	7,728	14,975	5,976	25,196
2063	42,180	7,949	15,413	6,103	25,629
2068	42,918	8,148	15,818	6,221	26,061

Appendix Table A43: Low-variant Labour Force Projections, 2018-2068

Year	Thames-Coromandel District	Hauraki District	Waikato District	Matamata-Piako District	Hamilton City
2018	14,849	10,268	43,465	19,150	92,473
2019	14,695	10,213	44,031	19,250	94,350
2020	14,662	10,233	44,900	19,471	96,911
2021	14,571	10,190	45,617	19,595	98,826
2022	14,413	10,142	46,228	19,665	100,452
2023	14,270	10,079	46,712	19,740	102,062
2024	14,086	10,016	47,167	19,768	103,614
2025	13,912	9,943	47,558	19,821	105,116
2026	13,752	9,874	47,930	19,835	106,621
2027	13,589	9,816	48,320	19,847	108,039
2028	13,469	9,757	48,702	19,910	109,533
2029	13,304	9,702	49,063	19,922	111,027
2030	13,150	9,650	49,447	19,965	112,502
2031	13,033	9,640	49,820	19,991	114,017
2032	12,915	9,617	50,232	20,005	115,493
2033	12,830	9,591	50,619	20,053	116,911
2034	12,715	9,575	50,957	20,060	118,265
2035	12,603	9,562	51,311	20,086	119,628
2036	12,519	9,560	51,673	20,115	120,992
2037	12,438	9,560	52,047	20,129	122,335
2038	12,368	9,555	52,387	20,161	123,582
2043	12,043	9,564	53,849	20,332	129,494
2048	11,314	9,275	53,902	20,110	133,063
2053	10,819	9,050	53,867	20,001	135,789
2058	10,514	8,910	53,852	19,939	137,188
2063	10,333	8,868	53,940	19,791	136,996
2068	10,259	8,905	54,194	19,607	135,450

Appendix Table A43: Low-variant Labour Force Projections, 2018-2068 ctd.

Year	Waipā District	Otorohanga District	South Waikato District	Waitomo District	Taupō District
2018	30,664	5,742	12,445	5,367	21,092
2019	30,933	5,754	12,410	5,329	21,175
2020	31,394	5,821	12,441	5,349	21,406
2021	31,857	5,870	12,423	5,330	21,518
2022	32,163	5,918	12,371	5,319	21,583
2023	32,431	5,957	12,367	5,293	21,662
2024	32,656	5,970	12,360	5,258	21,704
2025	32,817	6,008	12,333	5,247	21,738
2026	33,023	6,051	12,302	5,219	21,764
2027	33,198	6,088	12,261	5,193	21,772
2028	33,354	6,112	12,269	5,172	21,824
2029	33,503	6,141	12,277	5,149	21,815
2030	33,671	6,174	12,273	5,147	21,827
2031	33,843	6,229	12,282	5,135	21,855
2032	34,005	6,268	12,281	5,126	21,879
2033	34,132	6,286	12,303	5,122	21,908
2034	34,254	6,306	12,311	5,105	21,882
2035	34,394	6,327	12,311	5,099	21,861
2036	34,542	6,360	12,330	5,089	21,867
2037	34,680	6,381	12,342	5,082	21,869
2038	34,810	6,397	12,367	5,082	21,877
2043	35,417	6,479	12,466	5,090	21,834
2048	35,154	6,474	12,406	5,052	21,399
2053	34,940	6,501	12,482	5,045	21,156
2058	34,715	6,539	12,587	5,056	20,996
2063	34,466	6,577	12,661	5,049	20,834
2068	34,232	6,593	12,704	5,030	20,687

Appendix Table A44: High-variant Labour Force Projections, 2018-2068

Year	Thames-Coromandel District	Hauraki District	Waikato District	Matamata-Piako District	Hamilton City
2018	14,849	10,268	43,465	19,150	92,473
2019	14,855	10,319	44,468	19,447	95,314
2020	14,983	10,447	45,789	19,870	98,888
2021	14,928	10,428	46,615	20,042	101,057
2022	14,835	10,423	47,421	20,196	103,126
2023	14,776	10,418	48,163	20,382	105,320
2024	14,692	10,423	48,923	20,542	107,564
2025	14,628	10,425	49,656	20,741	109,841
2026	14,586	10,436	50,396	20,911	112,187
2027	14,546	10,462	51,176	21,090	114,500
2028	14,553	10,490	51,966	21,326	116,935
2029	14,518	10,524	52,750	21,516	119,407
2030	14,497	10,563	53,569	21,743	121,896
2031	14,514	10,646	54,388	21,958	124,454
2032	14,532	10,718	55,258	22,163	127,003
2033	14,583	10,787	56,108	22,406	129,515
2034	14,608	10,869	56,929	22,615	132,010
2035	14,639	10,957	57,780	22,849	134,546
2036	14,701	11,058	58,650	23,091	137,113
2037	14,766	11,163	59,542	23,321	139,681
2038	14,844	11,264	60,407	23,572	142,172
2043	15,277	11,830	64,669	24,900	154,728
2048	15,233	12,076	67,539	25,826	165,182
2053	15,396	12,386	70,383	26,889	175,082
2058	15,713	12,768	73,250	28,003	183,789
2063	16,114	13,229	76,174	29,018	190,881
2068	16,583	13,748	79,199	29,975	196,462

Appendix Table A44: High-variant Labour Force Projections, 2018-2068 ctd.

Year	Waipā District	Otorohanga District	South Waikato District	Waitomo District	Taupō District
2018	30,664	5,742	12,445	5,367	21,092
2019	31,242	5,809	12,529	5,380	21,385
2020	32,020	5,933	12,680	5,453	21,832
2021	32,559	5,995	12,691	5,445	21,996
2022	33,003	6,068	12,689	5,454	22,151
2023	33,452	6,139	12,750	5,455	22,348
2024	33,893	6,189	12,821	5,452	22,529
2025	34,294	6,268	12,879	5,475	22,719
2026	34,760	6,356	12,939	5,484	22,912
2027	35,211	6,441	12,994	5,497	23,096
2028	35,654	6,514	13,102	5,516	23,331
2029	36,102	6,594	13,214	5,534	23,512
2030	36,576	6,679	13,316	5,574	23,718
2031	37,065	6,788	13,434	5,605	23,944
2032	37,549	6,883	13,544	5,640	24,172
2033	38,004	6,957	13,679	5,680	24,406
2034	38,466	7,035	13,804	5,709	24,593
2035	38,955	7,116	13,925	5,751	24,791
2036	39,460	7,210	14,068	5,789	25,021
2037	39,961	7,293	14,207	5,831	25,250
2038	40,459	7,373	14,359	5,880	25,487
2043	43,013	7,791	15,141	6,148	26,653
2048	44,683	8,131	15,770	6,368	27,413
2053	46,446	8,519	16,559	6,626	28,387
2058	48,218	8,926	17,392	6,905	29,447
2063	49,963	9,335	18,203	7,171	30,492
2068	51,696	9,721	18,983	7,427	31,526

Peer review of Hamilton City growth projections produced by the University of Waikato

3 May 2021

Prepared by Brian Osborne, Senior Statistical Analyst

Research and Evaluation Unit (RIMU)

Auckland Council

Attachment 2

Item 9

Executive Summary

At the Hamilton City Council meeting on 25 February 2021 Council meeting, staff were requested to commission an independent peer review of updated growth projections for Hamilton City prepared by NIDEA (National Institute of Demographic and Economic Analysis).

This document provides that peer review, as requested of Auckland Council's Research and Evaluation Unit (RIMU) by Hamilton City Council.

The purpose is to provide a 'common-sense' review of the NIDEA projections, with a focus on the reasonableness of the model outputs and approaches used. A full interrogation of the model and associated systems is out of scope.

The review considers the contents of the NIDEA report and undertakes comparisons between NIDEA projections and the most recent Stats NZ projections.

It is acknowledged that NIDEA did not have access to the 2018-base Stats NZ population projections used in this review. I have chosen to use the 2018-base projections however as a comparator, as this is the most relevant, practical, and up to date alternative to the NIDEA population projections. For households and families, the most recent available projections from Stats NZ are 2013-base.

Key findings of the peer review are that:

i) The overall methodology, as described in the NIDEA report, appears sound.

ii) Comparisons made between NIDEA and Stats NZ population projections, the primary means of assessing the reasonableness of the NIDEA projections in this review, show that projected total populations are very similar between the two sources. For example, in the medium growth scenario, percentage differences are within +/- 0.9% throughout the period 2018-2048.

iii) There is an unexpected difference between the NIDEA and Stats NZ projections in terms of projected age distribution that merits further investigation. Specifically — and while still within the bounds of reasonableness — there is a smaller increase over time in the proportion of the population aged 65 years and over in the NIDEA projections, as detailed in Section 2.1.2.

iv) There are differences in trends between some of the NIDEA and Stats NZ household type and family type projections that would be worth exploring further. However, it would be beneficial to wait until the new (2018-base) household and family projections from Stats NZ are produced, before undertaking this analysis.

v) The NIDEA projections consider only demographic factors. Land use considerations are excluded. Marked changes in local or regional infrastructure development, housing availability, land supply and/or planning rules have the potential to make any projections less accurate predictors of reality.

In conclusion, in the context of demographic projections where the future cannot be known with certainty and acknowledging NIDEA's caveat in the report (Page 89) that "…these projections are simply one tool that should be used in evaluating possible futures for the region", and without having access to more detailed data, I consider that the NIDEA growth projections are reasonable.

A small number of recommendations are provided in Section 5.0.

Attachment 2

Item 9

Contents

1.0 Introduction

Auckland Council's Research and Evaluation Unit (RIMU) has been commissioned by Hamilton City Council (HCC) to conduct a peer review of the growth projections for Hamilton City prepared by NIDEA (National Institute of Demographic and Economic Analysis) at the University of Waikato[1].

As per the objectives of the peer review Terms of Reference (see Appendix 1), I will not be providing a full interrogation of the NIDEA demographic model and associated systems. Instead, I have approached the review task by considering the reasonableness of the model outputs, and where practical, commenting on the methodology, inputs and assumptions used, as outlined in the NIDEA report.

I first consider the population projections and then the household and family projections which are derived from these.

2.0 Population Projections

In this section, I compare the NIDEA outputs with Stats NZ projections, and then focus on the methodology, inputs and assumptions used.

Without access to the underlying software used for the model, comparisons with Stats NZ projections is the most practical way to assess the reasonableness of outputs. Stats NZ projections are widely assessable and used by many New Zealand councils for planning purposes — including Auckland Council — and therefore the most appropriate comparator to use.

It is important to note that NIDEA population projections are provided to 2068, a 50-year time horizon out from the base year of 2018, whereas Stats NZ limits published sub-national projections to 30 years from the base year (latest release 2018-2048)[2].

Auckland Council's own growth model[3] provides projections, by way of comparison, from 2018 to 2051.

In light of the above,

i) the NIDEA time horizon of 2068 is considerably further into the future compared to other sub-regional projections. Users should be aware that levels of uncertainty related to projections typically become greater the further into the future they extend[4], and

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[1] As reported in Cameron, Michael P. and Cochrane, William: "2018-base Population, Family and Household, and Labour Force Projections for the Waikato Region, 2018-2068", Commissioned Research Report (Final Draft), Prepared for Waikato Regional Council, April 2021.

[2] Stats NZ do publish national level projections out to 53 years from the base year (2020-2073). They are able to extend custom-ordered projections sub-nationally on request, to assumptions agreed by the client; these have not been requested for this peer review.

[3] Auckland Council's growth model uses Stats NZ projections at TLA level as input, and then allocates population sub-regionally considering land use planning and other factors.

[4] See for example Table 8.2 in Stat NZ's report assessing the accuracy of their projections over time "https://www.stats.govt.nz/methods/how-accurate-are-population-estimates-and-projections"

ii) comparisons with Stats NZ population projections in this review will be limited to 2018-2048.

2.1 Comparison of NIDEA population projections with Stats NZ

As Stats NZ publish population projections at 5-year intervals, in the comparisons that follow I consider only those years for which Stats NZ figures are available.

2.1.1 Total Population

Looking first at the medium growth scenario as per the highlighted row in Table 1 below, the percentage differences between NIDEA and Stats NZ population projections are +/- 0.9% or less throughout the period 2018-2048, as shown in Table 1 (together with other projection scenarios).

This is quite a remarkable outcome given the different methodology used. While the similar results should not be interpreted as increasing the likelihood that the future population will match these projections, it does gives us the first indication that the NIDEA model is returning plausible results.

The percentage differences across the 2018-2048 period for the low and high growth scenarios are within +/- 1.5% and +/-2.3% respectively. In 2048 in the high growth scenario, the NIDEA population is projected to be 260,106, some 6,194 or 2.3% lower than that projected by the Stats NZ high growth scenario.

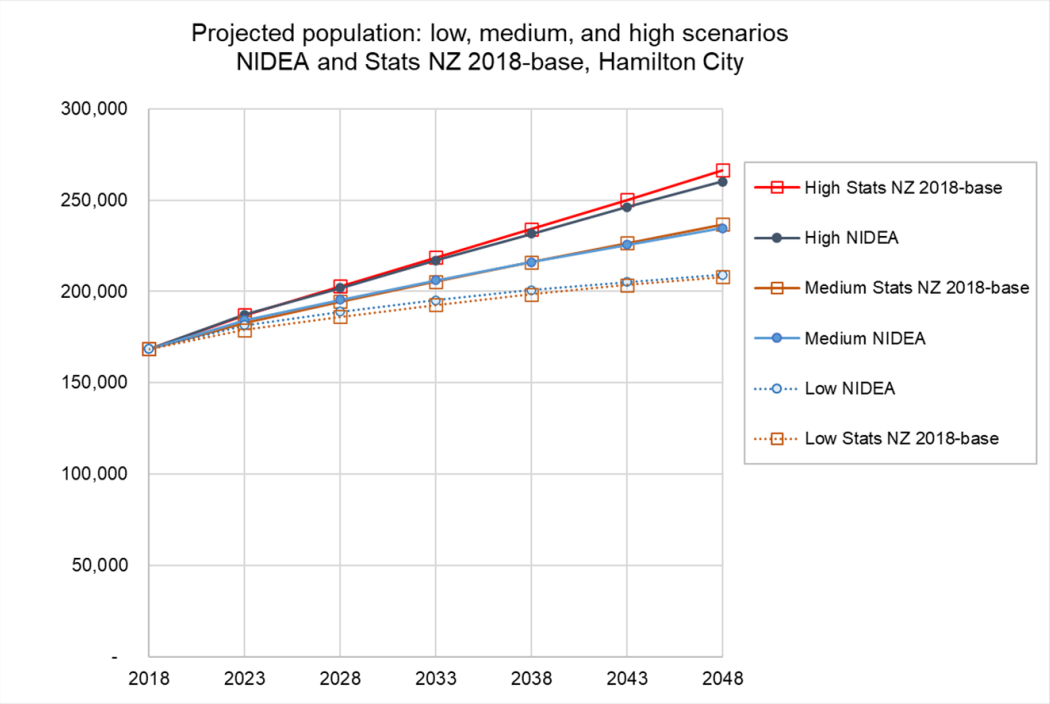
All these percentage differences are reasonable.

Furthermore, considering the projections in graph form in Figure 1, the three different NIDEA scenario populations always fall within the envelope formed by the low and high Stats NZ scenario populations.

Table 1: Comparison table for the NIDEA and Stats NZ (2018-base) population projections for low, medium and high scenarios, for Hamilton City. The medium scenario percentage differences are highlighted.

Scenario	Source	2018	2023	2028	2033	2038	2043	2048
Low	NIDEA	168,600	181,451	188,953	195,232	200,653	205,245	209,039
Low	Stats NZ 2018-base	168,600	179,000	186,200	192,700	198,400	203,500	207,900
Low	Difference	0	2,451	2,753	2,532	2,253	1,745	1,139
Low	% Difference	0.0%	1.4%	1.5%	1.3%	1.1%	0.9%	0.5%
Medium	NIDEA	168,600	184,374	195,445	206,038	216,116	225,598	234,490
Medium	Stats NZ 2018-base	168,600	183,000	194,400	205,400	216,000	226,500	236,600
Medium	Difference	0	1,374	1,045	638	116	-902	-2,110
Medium	% Difference	0.0%	0.8%	0.5%	0.3%	0.1%	-0.4%	-0.9%
High	NIDEA	168,600	187,302	201,955	216,888	231,656	246,069	260,106
High	Stats NZ 2018-base	168,600	187,000	202,800	218,500	234,200	250,200	266,300
High	Difference	0	302	-845	-1,612	-2,544	-4,131	-6,194
High	% Difference	0.0%	0.2%	-0.4%	-0.7%	-1.1%	-1.7%	-2.3%

Figure 1: Projected population comparisons, low, medium, and high scenarios, NIDEA and Stats NZ 2018-base, for Hamilton City. A version of this graph with the vertical axis minimum set to 150,000 to show more detail is provided as Figure A2.1 in Appendix 2.



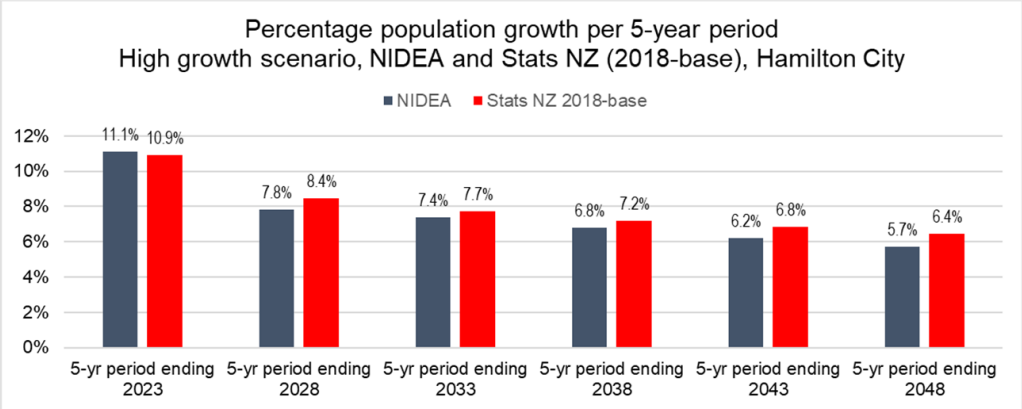
For completeness, a comparison table including the 'Stats NZ 2013(base)–2043 update' projections released in February 2017[5] (those to which NIDEA had access prior to generating their projections) is given in Appendix 2 (Table A2.1), for the medium scenario. The percentage differences between NIDEA projections and these Stats NZ 2013-base projections are also within +/- 1%.

The greatest differences over time between the NIDEA and Stats NZ (2018-base) projections occur in the high growth scenario. A comparison of percentage growth over each 5-year period is shown in Figure 2, which confirms that Stats NZ is projecting slightly higher growth rates than NIDEA for all periods except between 2018 and 2023.

As mentioned above, these differences between the NIDEA and Stats NZ projections are small.

[5] https://www.stats.govt.nz/information-releases/subnational-population-projections-2013base2043-update. These were released in February 2017 and will subsequently be referred to as "2013-base".

Figure 2: Comparison of the percentage growth over each 5-year period for the high growth scenarios, NIDEA and Stats NZ (2018-base).



2.1.2 Age distribution

The Executive Summary of the NIDEA report (page vii) notes that Hamilton City is projected to maintain a relatively young population age structure.

While there are a few different metrics that could be used to quantify and assess this, the statement is consistent with the 2018-base Stats NZ population projections (medium scenario) which show that Hamilton City has the lowest median age of all New Zealand TLAs in 2018. This is also projected to be the case in 2048[6].

In addition, Stats NZ projections show that Hamilton City in 2048:

i) is projected to have the highest percentage (51%) of 0-39 year olds, of all New Zealand TLAs, and

ii) is projected to have the second lowest percentage (19%) of those 65 years and over, of all NZ TLAs (after Wellington City).

The statement about the relatively young age structure in the NIDEA report is therefore sound.

While the age distributions for 2018 and 2043 are shown in the NIDEA report in Figure 27, the accompanying data in table format has not been provided for this review, so I did not look in detail at the age distribution.

However, the proportion of those 65 years and over at 2018 and 2043 between NIDEA and Stats NZ projections can be compared, since the former is given in the text of Page 50 of the report. The comparison is shown in Table 2.

[6] Subnational population projection characteristics, 2018(base)-2048, NZ.Stat table reference http://nzdotstat.stats.govt.nz/wbos/Index.aspx?DataSetCode=TABLECODE7989

Table 2: Proportion of the population aged 65years and over, NIDEA projections compared with Stats NZ 2018-base, for Hamilton City.

	2018	2043
NIDEA (medium) (page 50 of the NIDEA report)	11.6%	12.5%
Stats NZ (medium)	11.6%	17.8%

While NIDEA projects an increase of 0.9 percentage points from 11.6% to 12.5%, the Stats NZ projections show an increase of 6.2 percentage points, from 11.6% to 17.8%.

The range across all TLAs in New Zealand, according to the medium scenario Stats NZ projections is between a minimum of 5.4 percentage points increase between 2018 to 2043 (Christchurch City) and a maximum of 14.5 percentage points increase (Tasman District).

The proportion of the population aged 65 years and over for 2043 in conclusion therefore seems unexpectedly low, when compared with the 2018 figures[7], with the Stats NZ 2043 figures, and my own expectations.

It is recommended that this situation be looked into further, to check that the model is working optimally with regards to age distribution projections.

2.2 Population Projection methodology, inputs, and assumptions

2.2.1 Methodology overview

The general approach used by NIDEA for projecting population is that of a cohort component model.

This is a well-established technique, used by both Stats NZ and the Australian Bureau of Statistics (ABS), among others. The ABS summarises this approach well, specifically, as one which "begins with a base population for each sex by single year of age and advances it year by year by applying assumptions regarding future fertility, mortality and migration"[8].

The basic formula used by NIDEA, as outlined on Page 4 of the report, is therefore sound[9].

2.2.2 Overview of Inputs

Inputs to the model are listed on page 3 of the NIDEA report and include the following data from Stats NZ:

- Census of Population and Dwellings (1991 through 2018)
- Population estimates
- Period life tables
- Vital statistics data (i.e., births and deaths)

[7] 2018 figures for NIDEA and Stats NZ projections are identical, as they both start with the Stats NZ 2018 Population Estimate information released in 2020.

[8] https://www.abs.gov.au/methodologies/population-projections-australia-methodology/2017-base-2066

[9] A minor suggestion to check for clarity in the report on Page 4, in the methodology discussion: The current text "the population at the end of a year" and "…beginning of the year" sound like calendar years, whereas I assume the projections give the population at year ending June 30, in line with published population estimates? This could be clarified if my assumption is correct.

- Demographic projections, and the reported assumptions underlying those projections.

One of the objectives of this peer review, as per the Terms of Reference, is to assess "whether the NIDEA growth projections consider (in the inputs and assumptions) recent spatial planning, initiatives and strategies (e.g. Hamilton-Auckland Corridor, Hamilton-Waikato Metro Spatial Plan, etc)".

This question can be addressed by considering the inputs listed in the report and reviewing the methodology used. This confirms that the NIDEA projections do not explicitly consider land use planning or other strategies, such as those listed above. This is understandable for TLA-level projections such as these, as typically land use considerations would be factored in when projecting populations at finer spatial geographies (e.g., Statistical Area 2 or SA2 areas).

Land use information would generally be input together with the outputs of the NIDEA demographic projection model into a separate model specifically designed for this task. I understand that the WISE model (the Waikato Integrated Scenario Explorer) described as "a dynamic, spatially-explicit computer simulation model that integrates economic, demographic, environmental (climate, hydrology, water quality, biodiversity) and land use (suitability, accessibility, local influence, zoning) information"[10] can be used for this purpose by Waikato Region TLAs.

Regardless, it is acknowledged that considerations such as the cost of housing, the availability of residential land for future development, and relative attractiveness of the different TLAs in the Waikato Region may be sensitive to different regional and local policies and strategies. These consequently impact future population trends through migration patterns, but those factors are outside the scope of the NIDEA migration module and therefore the output projections.

2.2.3 Base populations

The technique to derive base populations for a 2018-base projection series, i.e., the use of 2018 population estimates from Stats NZ, is sound. The interpolation using census data to derive the single-year age groups as used by NIDEA may not have been ideal in previous years (when there was a variation in the magnitude of undercount across demographics, in particular a considerable undercount for young men), but with the addition of administrative data for the 2018 Census this is not likely to be a factor.

2.2.4 Fertility and mortality assumptions

Fertility assumptions used in the NIDEA projections were based on those used by Stats NZ and then modified as part of the calibration process to ensure projected births for the June 2018-2020 period matched those observed.

Mortality assumptions used Stats NZ's TLA-level subnational abridged life tables in conjunction with the national level life tables by single-year-of-age.

The data and approaches used as described in the report for fertility and mortality seem reasonable. It would have been helpful for the purpose of the peer review to compare the natural increase component of growth over time, as shown in Figure 36 of the report (page 49), with that from the Stats NZ projections. Undertaking such a comparison requires access

[10] http://www.creatingfutures.org.nz/wise/what-is-wise/

to the numbers underlying Figure 36 and while these were requested, they were not provided. This comparison has therefore not been undertaken.

2.2.5 Migration

The NIDEA projections produce separate net internal and net international migration figures, as shown in Figure 36 of the report (page 49).

In the published information on components of growth in the Stats NZ projections, these two migration components are integrated, and cannot be separated.

It would have been helpful for the purpose of the peer review to compare NIDEA's total net migration component of growth over time, with that from Stats NZ. Undertaking such a comparison requires access to the numbers underlying Figure 36 and while these were requested, they were not provided. This comparison has therefore not been undertaken.

2.2.5.1 Internal migration

The report provides a good level of detail on the gravity model used by NIDEA for projecting internal migration. The assumptions that drive it make logical sense, i.e., as stated in the NIDEA report, that "migration flows (in both directions) between larger origins and destinations, and between places that are closer together, are substantially larger (holding other factors constant) than migration flows between smaller origins and destinations, and between places that are further apart".

Clearly the 'holding other factors constant' caveat is a complication in the real world. For two hypothetical source TLAs with the same size and distance from Hamilton, factors such as differences in house prices or the availability of local tertiary education opportunities or jobs, would result in different migration patterns from each, but this would not be reflected by the gravity model.

As shown below, however, the migration module within the NIDEA model appears to be giving results consistent with expectations and historic observed data.

2.2.5.1.1 Age-specific in-migration profile

I first consider the age-specific in-migration profile produced within the model (Figure 1 in the report, page 10; also reproduced below as Figure 3) and how it compares with two other sources:

i) experimental data from Stats NZ using linked administrative data (2017) to estimate internal migration (illustrated in Figure 4); and

ii) estimates of internal migration derived from the 'where did you live 5 years ago' 2013 Census question (Figure 5).

Comparisons show the age-specific profile is reasonable, as follows.

The prominent peak in migrants centred around age 18, and the dip prior (around age 11) shown in Figure 1 of the NIDEA report (Figure 3 in this peer review document) is reflected well in the linked administrative data (Figure 4), even though the latter's peak is of lower relative magnitude.

In Figure 5, although the Census age-based migration data I have access to has coarser age bands and thus cannot be directly comparted, it is not inconsistent with the NIDEA graph.

Figure 3: Figure 1 of the NIDEA report, page 10. The figure caption in the NIDEA report is "Figure 1: Age-specific in-migration profile for Hamilton City". This has been reproduced to assist the reader in making comparisons with Figures 4 and 5 below.

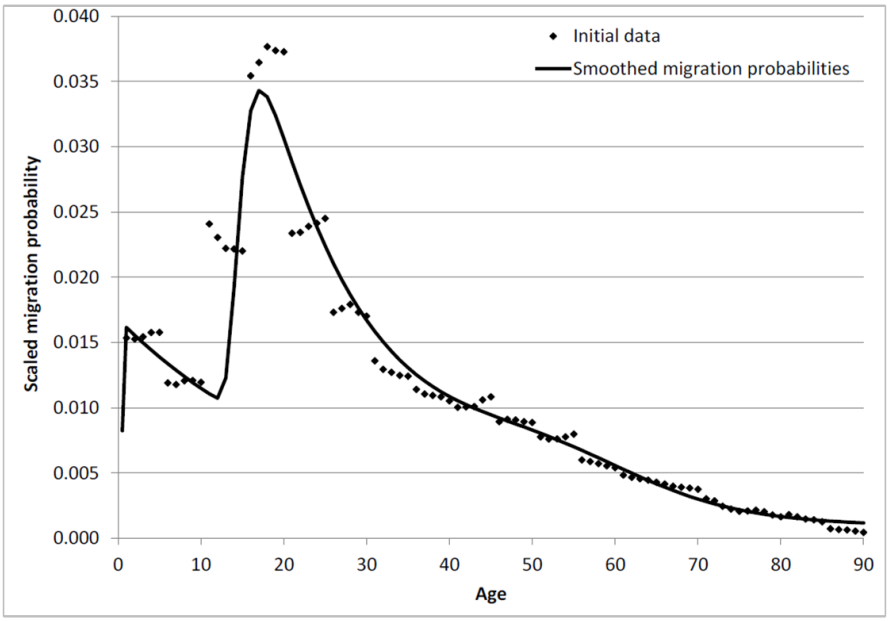
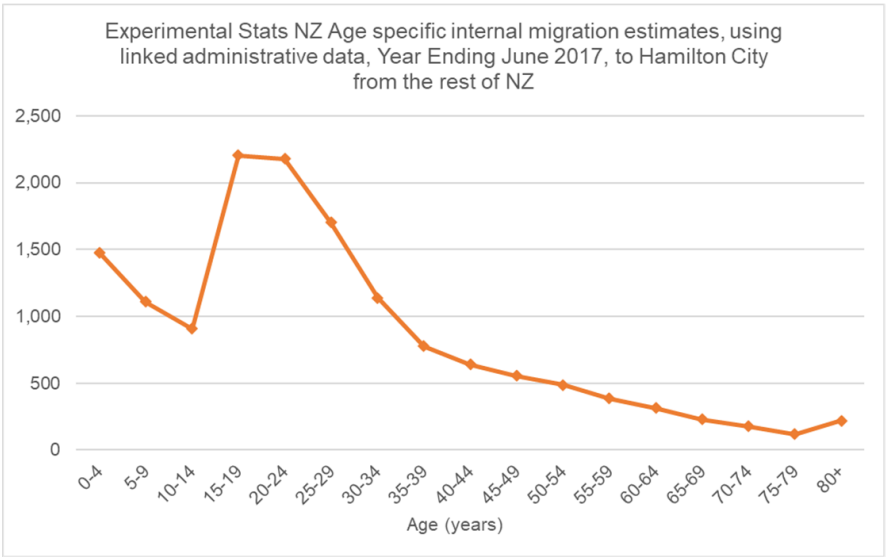
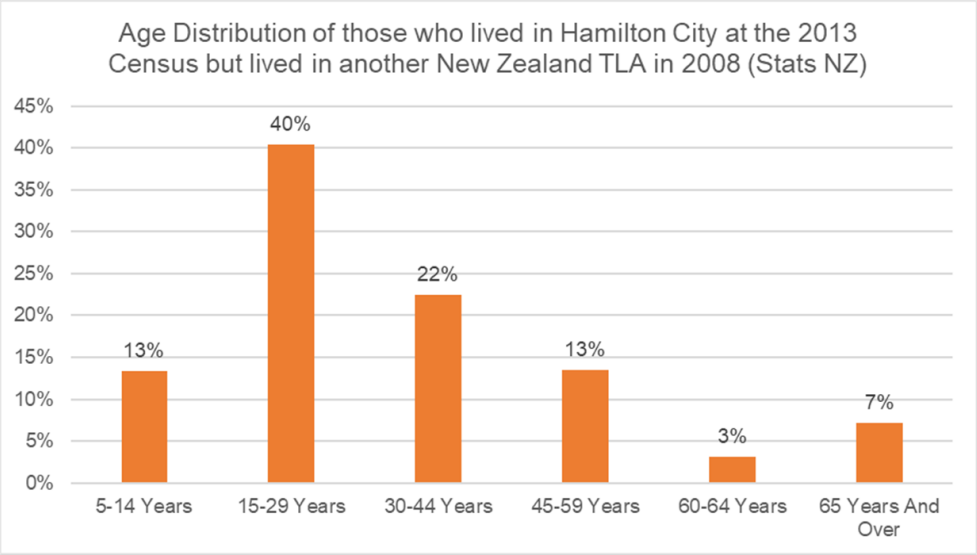


Figure 4: Stats NZ age-specific internal migration estimates to Hamilton City from the rest of NZ, using linked administrative data, for year ending June 2017[11].



[11] https://www.stats.govt.nz/reports/internal-migration-estimates-using-linked-administrative-data-201417

Figure 5. Stats NZ age-specific internal migration estimates to Hamilton City from the rest of NZ derived from 2013 Census data[12].



The NIDEA report mentions tertiary education as a factor in Hamilton being somewhat youthful in Section 5 (page 88) "possibly due to the presence of two large tertiary education institutions". This factor should not be underestimated – the Ministry of Education figures for 2019 showed over 20,000 students enrolled between the two largest institutions combined (University of Waikato and Wintec).[13] This is quite a significant number in the context of the 2019 total population estimate for the Hamilton City of 172,300. I also note for context that the 15-29 year peak for in-migration is more pronounced for Hamilton City (40% of all in-bound migrants, as shown in Figure 5) than the equivalent situation for Auckland (33%).

2.2.5.1.2 Top sources and destinations of internal migration

The list of the top 10 source TLAs for Hamilton City's in-bound domestic migration (i.e., excluding Hamilton City itself), according to the NIDEA projections in 2043, is shown in Table 6 (page 50) of the NIDEA report.

To assess whether the list (and ranking) of source TLAs seems reasonable, I compare with historic internal migration patterns shown by the 2013 Census 'usual residence 5 years ago' question. Although NIDEA used 2018 Census data in addition, I have focussed the analysis using primarily data from the 2013 Census to give an independent check. It should be noted that the 2018 Census data has a relatively high rate of missing data (14.7%) compared with the 2013 Census, for which the equivalent metric is 3.5%[14].

[12] Analysis of custom 2013 Census data obtained by Auckland Council, Stats NZ reference JOB-06247

[13] Provider-based enrolments, 2011-2020, Table ENR.46, https://www.educationcounts.govt.nz/__data/assets/excel_doc/0006/76659/Provider-based-Enrolments-2011-2020.xlsx

[14] https://www.stats.govt.nz/methods/data-quality-ratings-for-2018-census-variables

Table 3 lists the top 10 source TLAs as measured by the 'address 5 years ago' question asked in the 2013 Census[15],[16]. Each of the Census-based top six source TLAs' ranking, from high to low, match their respective ranking in the top six in the NIDEA migration counts, giving confidence that the gravity model NIDEA has developed for internal migration is producing reasonable results. (I would expect that over time, the set of TLAs in the top 5-10 would generally be fairly consistent over time, and thus comparing Census 2013 rankings with the NIDEA projected set of top TLAs in 2043 is an acceptable test for reasonableness).

The fact that Christchurch City appears in the Census 2013 top 10 but not in the NIDEA 2043 list is consistent with larger than usual out-migration from Christchurch between the 2008 and 2013 Censuses due to the February 2011 earthquake that would not be expected to continue far into the future.

When comparing the actual magnitudes of the migration (i.e., in numbers of migrants) between the two data sources, those from the 2013 Census are over a 5-year period. It is not 100% clear in the NIDEA report, but it appears the numbers are for "for 2043". The differences are neither unexpected nor unreasonable, given the uncertainty of future migration patterns.

Table 3: Comparison of the top 10 sources of internal migration to Hamilton City from elsewhere in NZ: 2013 Census data, looking at migration over the period 2008-2013; and NIDEA, 2043.

Source TLA	Population living in Hamilton City in 2013 that lived in the given TLA in 2008 (2013 Census)	Population living in Hamilton City in 2013 that lived in the given TLA in 2008 (2013 Census) **DIVIDED BY 5**	Number from NIDEA Report Table 6 for "Source", 2043 (page 50)	Ranking high to low, Stats NZ, looking at migration from 2008 to 2013	Ranking high to low, NIDEA, 2043
Auckland	4044	809	3288	1	1
Waikato District	3435	687	1114	2	2
Waipa District	2049	410	1089	3	3
Tauranga City	1281	256	409	4	4
Matamata-Piako District	1023	205	254	5	5
Rotorua District	948	190	202	6	6
Christchurch City	849	170	Not in top 10	7	Not in top 10
Thames-Coromandel District	564	113	Not in top 10	8	Not in top 10
Whangarei District	528	106	107	9	9
South Waikato District	495	99	Not in top 10	10	Not in top 10

[15] As an aside, an assessment of the 2018 Census data for completeness shows that the rankings are identical for each of the top seven TLAs as that shown in the 2013 Census data (Table 3), suggesting the set of primary source TLAs remains relatively consistent over time (2018 data sourced from http://nzdotstat.stats.govt.nz/wbos/Index.aspx?DataSetCode=TABLECODE8325).

[16] Those living in Hamilton City in 2008 are excluded from this table

Table 4 shows the equivalent comparison for destination TLAs. While there is less alignment in the exact ranking of the top four, the fact that the set of four match in each projection further supports confidence in the performance of the gravity model used for internal migration modelling[17].

Table 4: Comparison of the top 10 destinations of internal migration for Hamilton City between 2013 Census data (2008-2013 period migration) and NIDEA, 2043

Destination TLA	Population living in Hamilton City in 2008 that lived in the given TLA in 2013 (2013 Census)	Population living in Hamilton City in 2008 that lived in the given TLA in 2013 (2013 Census) **DIVIDED BY 5**	Number from NIDEA Report Table 6 for "Source", 2043 (page 50)	Ranking high to low, Stats NZ, looking at migration from 2008 to 2013	Ranking high to low, NIDEA, 2043
Waikato District	4407	881	1051	1	3
Auckland	4266	853	1887	2	1
Waipa District	2082	416	1254	3	2
Tauranga City	1296	259	513	4	4
Wellington City	747	149	Not in top 10	5	Not in top 10
Matamata-Piako District	657	131	290	6	5
Christchurch City	600	120	149	7	8
Rotorua District	462	92	217	8	6
Thames-Coromandel District	369	74	Not in top 10	9	Not in top 10
New Plymouth District	315	63	Not in top 10	10	Not in top 10

2.2.5.2 International migration (general)

The NIDEA report notes that international migration flows "…represent the most challenging component of population change to project, due to the extensive uncertainty over their future trajectory." (page 9 of the report).

This is certainly true and is well illustrated by the green shaded area of Figure 6, produced by Stats NZ.

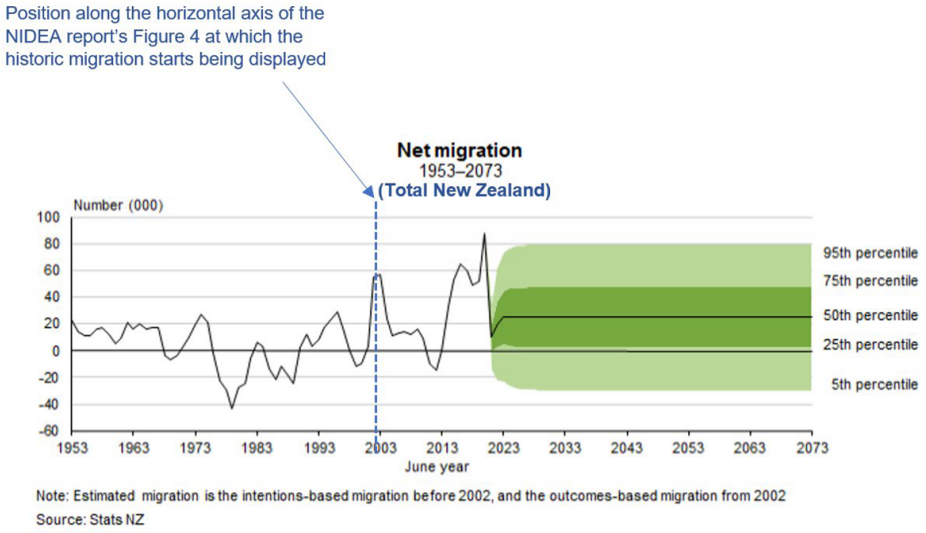
To the left of the green shaded area is the historic net migration. The green area illustrates the likelihood of various future migration values.

Specifically, Stats NZ notes that "…there is an estimated 50 percent chance that [future] net migration will fall within the dark shaded area. The light shaded area below and above the dark shaded area represents the range between 5th and 25th percentiles, and between the 75th and 95th percentiles. This means there is an estimated 90 percent chance that net migration will fall within the [combined] light and dark shaded areas".

I will return to Figure 6, in the context of adjustments made to consider COVID-19, in Section 2.2.5.3.

[17] The 2018 Census data has the same exact rankings for the first four TLAs as that shown in the 2013 Census data.

Figure 6: Net estimated (through June 2020) and projected (post June 2020, 2020-base projections) international migration to New Zealand as a whole, according to Stats NZ[18]. Blue text has been added, together with a dotted vertical line to aid comparison with Figure 4 in the NIDEA report – this is the point at which the NIDEA net migration line appears on the chart (the comparison with NIDEA migration in relation to COVID-19 will be described in more detail in Section 2.2.5.3).



International migration is also the most challenging part of the report to understand and comment on, due to the specialised nature of the modelling used.

As such, this peer review will primarily limit its consideration of international migration to the outputs and how they compare with other demographic projections[19].

The long-term net international migration for New Zealand as a whole, according to the NIDEA projections, is shown in Figure 4 of the report (page 12). Without the accompanying numbers it is not possible to determine the long-term figure shown precisely, but by inspection it appears to be around 23,000.

This is very similar in magnitude to the long-term figures used in the latest Stats NZ national population projections (2020-base, released December 2020) of 25,000[20].

The slightly lower long-term net migration assumption for NIDEA is consistent with NIDEA's use of the long-term historic average to help produce future assumptions, whereas Stats NZ uses slightly heavier weighting on migration observations from the recent past (together with assessment of long-term historic numbers) when assessing figures to use for their long-term future average migration rates.

Something that could benefit from clarification in the NIDEA report is the specific source of the figures 106,947 (long-term trend level of immigration) and 83,842 (long-term trend level

[18] Sourced from https://www.stats.govt.nz/information-releases/national-population-projections-2020base2073.

[19] The exception to this is a recommendation about documenting the source of the long-term average (1990-2020) for immigration and emigration, which I will discuss shortly.

[20] https://www.stats.govt.nz/information-releases/national-population-projections-2020base2073

of emigration) on Page 11 of the report. The report, in the paragraph prior, states that the long-run average for both immigration and emigration was taken "as the average annual level over the period from 1990-2020".

I have been unable to replicate these figures from either:

i) the Stats NZ Infoshare table "Estimated migration by direction, 12/16-month rule (Annual-Jun)[21]" — which goes back only to year end June 2002, or

ii) "Permanent & long-term migration key series (Annual-Jun)[22]" — which do not include departures after year end June 2018, or

iii) a hybrid of the two, following the approach used in Figure 6 above, i.e., "intentions-based migration before 2002 and the outcomes-based migration from 2022.

Average annual arrival and departure figures from the 'Estimated migration' table (these are outcome-based statistics) over the dates for which both arrivals and departures were available, i.e., for year end June 1990 to 2018 were 81,867 for arrivals and 62,722 for departures.

Average annual arrival and departure figures from the 'Permanent & long-term migration key series' table (these are intentions based statistics[23]) over the dates for which both arrivals and departures were available, i.e., for year end June 2002 to 2020 were 121,591 for arrivals and 90,663 for departures.

There is most likely a simple explanation in terms of a different source being used, but this would be good to clarify.

2.2.5.3 International migration — considering the impact of COVID-19

The NIDEA report includes in Section 2.7 the potential impacts of the COVID-19 pandemic on various drivers of the population projections and how this has been factored into the projections — an important section.

The assumptions that mortality, fertility, and internal migration are broadly unaffected are totally reasonable.

In considering the reasonableness of NIDEA's assessment of the impact of COVID-19 on international migration, I look at examples from two other developers of population projections in terms of what they think may happen to migration because of COVID-19, one for New Zealand and one for Australia.

2.2.5.3.1 Stats NZ – COVID-19 impacts on migration to New Zealand

Stats NZ has considered the impacts of COVID-19 on the population projections in their latest national-level projections. This included seeking input through a survey of a range of

[21] Stats NZ Infoshare table reference ITM406AA. A reproduction of this table together with the average calculation used in provided as Table A2.2 in Appendix 2 for reference.

[22] Stats NZ Infoshare table reference ITM312AA. A reproduction of this table together with the average calculation used in provided as Table A2.3 in Appendix 2 for reference.

[23] For more information about the difference between outcomes-based and intentions-based migration statistics, see https://www.stats.govt.nz/assets/Reports/Outcomes-versus-intentions-measuring-migration-based-on-travel-histories/outcomes-versus-intentions-measuring-migration-based-on-travel-histories.pdf

people with experience in migration patterns and statistics across central government agencies, central and regional forecasting networks, as well as population specialists.

The resultant assumptions for international net migration per year (migrant arrivals minus migrant departures) inherent in the Stats NZ national population projections are:

- 10,000 in 2021
- 20,000 in 2022
- 25,000 in 2023 and beyond.

It is worth noting that:

i) the long-term (2023-onwards) projected annual figure of 25,000 is higher than the 15,000 used in the 2016-base national projections (for the period 2023-2068) published in October 2016[24]. This is due to higher levels of net migration observed between 2016-2020, than in years prior to 2014 (see e.g., Table A2.2 in Appendix 2), and

ii) the return from the reduced migration due to COVID to a stable long-term projected average value happens over a fairly short time frame (within 3 years), as illustrated in Figure 6[25].

2.2.5.3.2 .id Projections, Australia – COVID-19 impacts

Although COVID-19 affects each country differently with regard to migration, it is worth considering some of the thinking from Australia, given the country's similarities to New Zealand in its handling of the pandemic in terms of border controls, and the recent trans-Tasman bubble opening.

I consider here the observations made by one of the commercial developers of population projections in Australia, .id[26], as the Australian Bureau of Statistics does not appear to have published anything outlining their views on the impact of COVID-19 on future migration. .id considered a range of factors[27] to update their assumptions on international migration for growth forecast updates. The transparency with which they've published year-on-year figures allows us to look at the percentage of the long-term pre-COVID average they consider reasonable over time, for comparison with the NIDEA and Stats NZ projections.

Under the .id assumptions, shown in Figure 7 and Table 5, the long-term average net migration to Australia (from 2024/25 to 2050/51) is reduced to approximately 89% that of the non-COVID scenario.

[24] https://www.stats.govt.nz/assets/Uploads/National-population-projections/National-population-projections-2016base-2068/Download-data/npp16-table2.xlsx

[25] It is not suggested in charts of this nature that there will be no variability around (in this case) the long term 25,000 straight line; this is where Stats NZ have placed the average. Fluctuations are expected around this value.

[26] The inclusion of content from .id does not represent an endorsement of .id or its products by Auckland Council. The information shown here was visible on the website in October 2020 but date of first publication is not known.

[27] e.g., the possibility of a trans-Tasman travel bubble, development of a vaccine, the relative attractiveness of Australia for migrants, and the strength and resilience of the Australian economy compared with that of other countries.

Figure 7: Net Overseas Migration for Australia, with post-2020 assumptions for the base (i.e., no COVID) case (solid) and a scenario considering COVID-19 (dotted), as produced by the Australian demographic company .id.

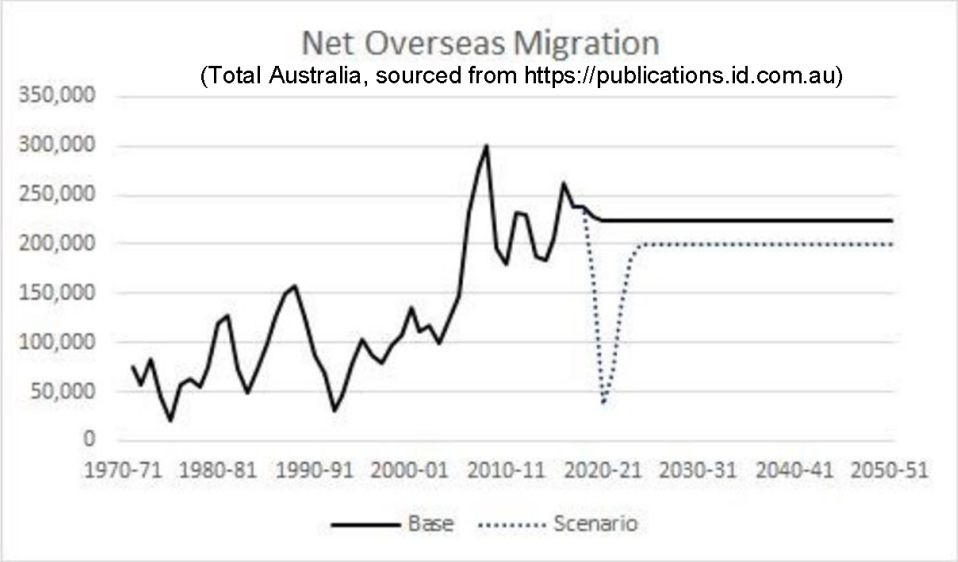


Table 5: Detailed year-on-year migration assumptions produced by id., Australia, together with the percentage of non-COVID-19 ("Base") scenario. Source: https://publications.id.com.au/covid-19-the-local-impact/forecast-australia-2031/overlay/national-forecast-assumptions/

	Net overseas migration to Australia from elsewhere in the world	Percentage of base case long-term average assumption prior to COVID-19 (i.e., 225,000)
.id base case, long-term average assumption prior to COVID-19	225,000	100%
2019/2020 (border closing mainly affects last quarter)	166,000	74%
2020/21	36,000	16%
2021/22	71,250	32%
2022/23	135,250	60%
2023/24	186,500	83%
2024/25	200,000	89%
2025/26	200,000	89%
2026/27	200,000	89%
2027/28 through 2049/50	200,000	89%
2050/51	200,000	89%

Comparing the general patterns of migration over time in the NIDEA projections for international migration (as shown in Figure 4 of the report) with those of Stats NZ and .id, I note that:

i) NIDEA is generally projecting a slower return to a long-term average, post the onset of COVID-19, than either Stats NZ (reaching it by 2023) or .id (reaching it by 2024/25). Figure 4 in the NIDEA report (medium projection) suggests the COVID-scenario figures won't fully return to pre-COVID long-term migration numbers until after 2040 (though they do closely approach each other prior to this date).

ii) NIDEA is not projecting a decrease in the long-term future average migration (with COVID-19) compared with the case without COVID-19. This is consistent with Stats NZ's assessment that the long-term future average under the 2020-base projections are no lower than they would have been without COVID-19. That is, the dip in the shorter term is only temporary and a 'full recovery' to the non-COVID-19 long term average is expected. (This contrasts with the .id projections, which see a reduction in migration persisting long term (to 89% of the non-COVID-19 case).

Given the above considerations, the assumptions about the impact of COVID-19 made by NIDEA, while showing a slightly longer time for 'recovery' post-COVID than the other two projection sources shown here, seem reasonable.

Given the Coronavirus pandemic, Stats NZ's caveat in their projections, "The projections do not take into account non-demographic factors (for example, war, catastrophes, or major government and business decisions) that may invalidate the projections[28]" seems more relevant today than it would have prior to COVID-19, and it may be that a similar comment is useful to include in the documentation for the NIDEA projections.

2.3 Conclusion: Population Projections

Considering the above comparison of the NIDEA projection outputs with Stats NZ projections and an assessment of the methodology used, together that of inputs and assumptions where applicable, the NIDEA population projections for the total age group seem reasonable.

It is recommended that the unexpected difference in the 65 year and over proportions in 2048 between the NIDEA and Stats NZ projections should be investigated further, however, to ensure the model is working optimally regarding age distribution.

3.0 Household and Family Projections

In this section, I first look at the way in which NIDEA assigns the projected population, derived as described above, to households and families. I then compare the outputs with the Statistics NZ projections and census trends.

The reason I have reversed the order in which I look at comparisons and methodology, compared with the population projections section above, is that Stats NZ is still to produce its 2018-base projections for families and households; the most recently available is the "2013(base) – 2038 update"[29].

This complicates comparisons somewhat, as will be outlined further below, and as they are also fairly dated, they are considered of secondary importance in assessing the NIDEA projections.

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[28] http://datainfoplus.stats.govt.nz/item/nz.govt.stats/728b04b1-c460-4729-a311-b02f1117795b/64/#

[29] These will be referred to as "2013-base" from now on.

3.1 Household and Family Projections methodology and assumptions

Fundamental to the family and household projections are assumptions about the living arrangements that people are likely to be in at a given age, as defined by Living Arrangement Type Rates (LATRs). LATRs can, as the NIDEA report explains, "be thought of as the probability of an individual being in a particular living arrangement".

This approach is consistent with that used by Stats NZ to derive household and family numbers from population projections; moreover, the NIDEA report states that the same LATR assumptions as Stats NZ's were used as a starting point (together with other assumptions from Stats NZ on the average number of families per family household, and the average household size for other multi-person households)[30].

In a similar approach to that used by NIDEA for fertility assumptions, NIDEA made some adjustments during the calibration process to the LATR assumptions to ensure outputs for 2018 were consistent with observed patterns, this time from census data — this is a positive indication of attention to quality control during the model development process.

The concept of LATRs is illustrated in Figure 8 below, which shows the LATRs for total New Zealand used in Stats NZ's 2013-base medium scenario projections[31]. The Hamilton City specific LATRs, in terms of patterns by age, are broadly similar to those for New Zealand as a whole[32].

Note that the "Type 1, 2, 3,…,7" designations on Figure 8, and associated numbers in the key, have been added solely to assist in identifying each curve, and are not part of the official classification.

One of the most prominent features is the 'bell curve' shape shown for the partner/parent in two-parent family classification ("Type 2"); the graph also shows the likelihood of being in a one-person household increases with age ("Type 6").

In their derivation of 2013-base projections for families and households, Stats NZ considered two different LATR assumption patterns:

i) remaining constant over time, and

ii) changing linearly over the period 2013 to 2038.

The latter was determined to be "the most suitable for assessing future family and household changes" and was the only one formulated to produce demographically plausible results.

It should be realised that living arrangements are driven by a wide range of factors, many of which are subject to change over the lifetime of projections. These include factors such as the propensity of young adults to stay in the parental home (which can be affected by the state of the job market or cost of housing), timing of childbearing, and the presence of extended family or non-related individuals in a household[33]. As such, LATR assumptions

[30] One area where the report could be clearer, is on Page 19: in the sentence "LATRs were assumed to follow the SNZ projections to 2038, then continue to improve in a linear fashion through until 2068", it is unclear to me what improvements in this context mean, it may be worth clarifying this.

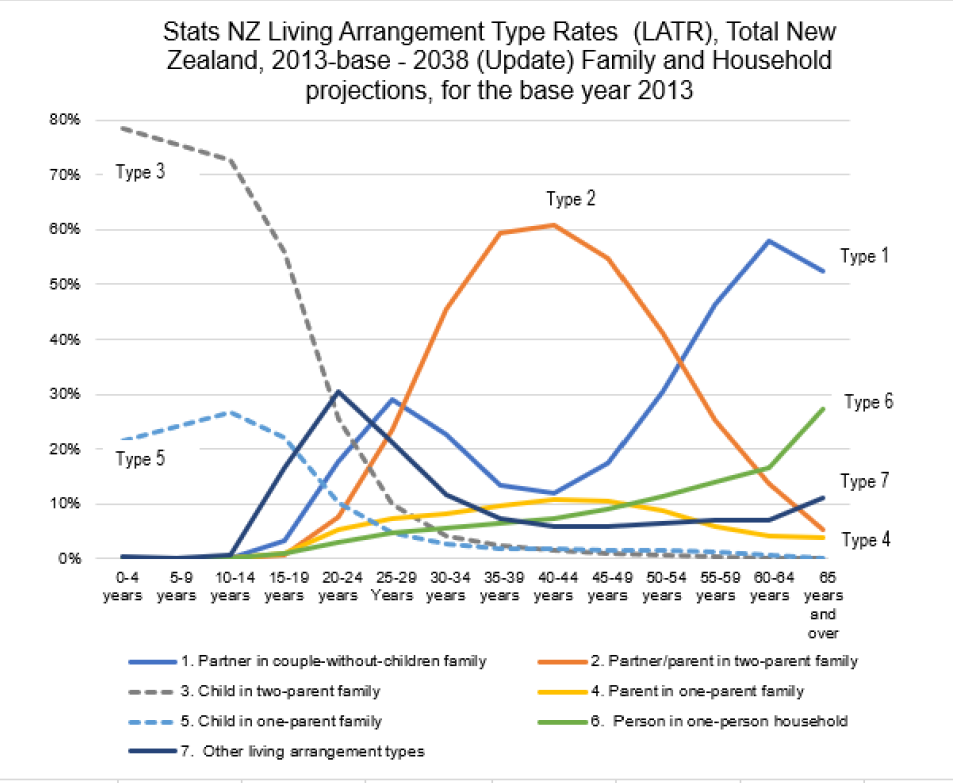
[31] http://nzdotstat.stats.govt.nz/wbos/Index.aspx?DataSetCode=TABLECODE7974

[32] A comparison table of the LATR distribution by broad age group for 2013 for Hamilton City and New Zealand appears as Table A2.4 in Appendix 2.

[33] These and more examples are given at http://datainfoplus.stats.govt.nz/item/nz.govt.stats/728b04b1-c460-4729-a311-b02f1117795b/64/

and how they might change over time is primary source of uncertainty in family and household projections.

Figure 8: Living Arrangement Type Rates (LATR), Total NZ



Comparison of the LATR from Stats NZ for Hamilton City between 2013 and 2038 show that the LATRs are quite stable over the projection period.

Looking at percentage point and relative percent point changes across all living type categories between 2013 and 2038, the three categories with the most change across the total population (i.e., all ages added together) for Hamilton City are:

i) Increases in the proportion of people likely to be a partner in couple without children families, from 20.8% in 2013 to 22.9% in 2038,

ii) Decreases in the proportion of people likely to be a child in two-parent family (note: this is also accompanied by a decrease in the proportion of child in one-parent families), and

iii) Increases in the proportion of people in one person households from 8.3% to 9.7%.

Considering now just the 65 years and over group, the assumptions show that the LATR for the partner in couple without children family increases over time (50.6% to 53.0%), as did that for the total population (20.1% to 22.9%).

However, the proportion in one person households 65 year and over decreases from 29.2% to 27.7% (compared to an increase from 8.3% to 9.7% for the total population). This is consistent with a likely closing of the gap between male and female life expectancy over time.

The above all seem reasonable assumptions.

3.2 Comparison of NIDEA household and family projections with Stats NZ projections

There is some difficulty comparing NIDEA and Stats NZ projections for households and families because the Stats NZ series has 2013 as a base, and NIDEA projections have 2018 as a base. This explains why the numbers in the NIDEA projections for the 2018 year are identical regardless of the scenario (low, medium, or high), but the numbers in the Stats NZ projections have different values for the 2018 year depending on the scenario.

Another difficulty in assessing the households and family projections is that while Stats NZ provides sub-national population estimates annually, they do not publish household or family estimates sub-regionally on an annual basis.

Two comparisons, described below, suggest the Stats NZ household projections show slightly higher levels of growth than has been observed over recent years. It is not clear whether this would continue into the future or not, however.

First, the national level household estimates for 2018 that Stats NZ provides[34] are compared with the 2013-base Stats NZ projections for the 2018 year (Table 6). I note that the estimates indicate a lower percentage increase in household numbers has occurred over the 2013-2018 period than that projected by the 2013-base projections.

Table 6: A comparison of the projected total NZ households (2013-base projections, projected households as at 2018) and estimated total NZ households at 2018.

Projected households, NZ Total, June 2018 (2013-base projections)	Estimated households, NZ Total, June 2018	Difference	Percentage difference
1,823,300	1,744,600	-78,700	-4.3%

Second, a comparison I can make at the Hamilton City level is the percentage growth between the Stats NZ 2013-base household projections for the 2013 to 2018 period and Census households over the same period. This is illustrated in Table 7, in the right-most column. Again, observed growth is less than that suggested by the Stats NZ projections over the 2013-2018 period[35].

It is not clear whether this trend would continue over time, but may explain part of the lower household numbers in the NIDEA projections (i.e., this factor may have been taken into account) when compared with Stats NZ's.

[34] Estimates are from Table 2 in the file this URL: https://www.stats.govt.nz/information-releases/dwelling-and-household-estimates-march-2021-quarter

[35] The difference observed between the 2013 Census figure (50,388) and that from the base year of the 2013-base projections (54,200) arises because the household estimates are derived by allocating to households the estimated resident population, rather than the Census population, which is smaller.

This will also have an impact on families which are a subset of households.

Table 7: A comparison of the percentage change in the number of Hamilton City households measured in the 2013 and 2018 Censuses with that projected by the 2013-base Stats NZ household projections.

	2013	2018	Change, 2013 to 2018	% Change, 2013 to 2018
Households, Census, Hamilton City	50,388	54,858	4,470	8.9%
Projected households, 2013-base household Stats NZ projections, Hamilton City	54,200	61,500	7,300	13.5%

3.2.1. Household Projections

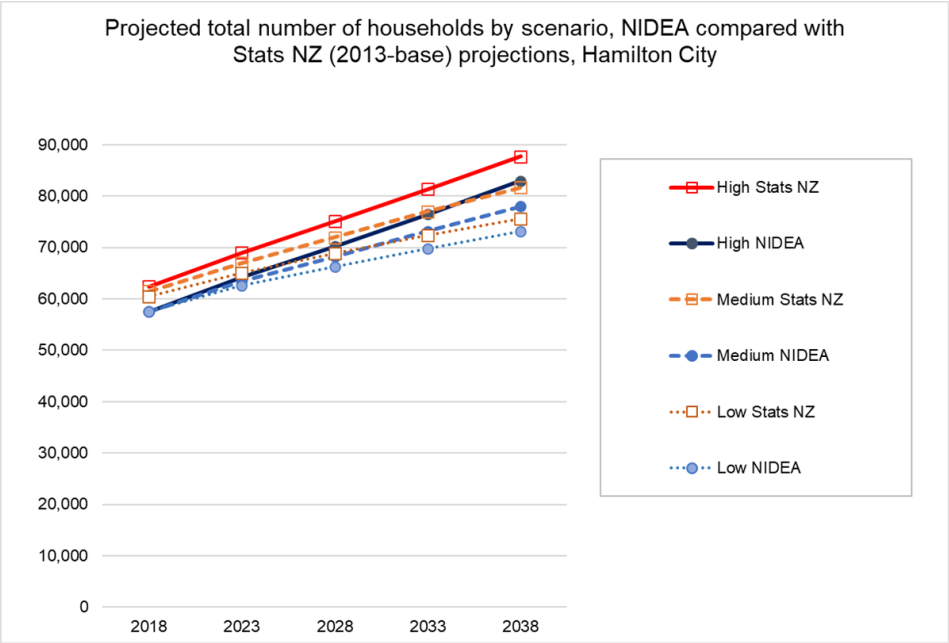
3.2.1.1 Number of households by scenario and type

The comparison between Stats NZ 2013-base household projections and those from NIDEA for years 2018, 2028 and 2038 is shown in Table 8 and graphed for each 5-year period in Figure 9.

Table 8: A comparison of the number of households by scenario, for NIDEA and Stats NZ (2013-base) projections.

Scenario	Source	2018	2028	2038
Low	NIDEA	57,479	66,285	73,128
Low	Stats NZ	60,500	68,800	75,600
Low	Difference	-3,021	-2,515	-2,472
Low	% Difference	-5.0%	-3.7%	-3.3%
Medium	NIDEA	57,479	68,250	78,035
Medium	Stats NZ	61,500	72,000	81,700
Medium	Difference	-4,021	-3,750	-3,665
Medium	% Difference	-6.5%	-5.2%	-4.5%
High	NIDEA	57,479	70,217	82,950
High	Stats NZ	62,400	75,100	87,700
High	Difference	-4,921	-4,883	-4,750
High	% Difference	-7.9%	-6.5%	-5.4%

Figure 9: Comparison chart showing the number of households by scenario, for NIDEA and Stats NZ (2013-base) projections. An alternative version of this graph, with the vertical axis minimum set to 50,000 to show more detail, is provided as Figure A2.2 in Appendix 2.



An observation from the above is that for all projection series, total household numbers are lower for NIDEA than for the equivalent Stats NZ projection. The percentage differences at 2018 range from -5.0% to -7.9%, depending on the projection scenario (low, medium or high). The relative differences from Stats NZ projections then reduce over time for all scenarios.

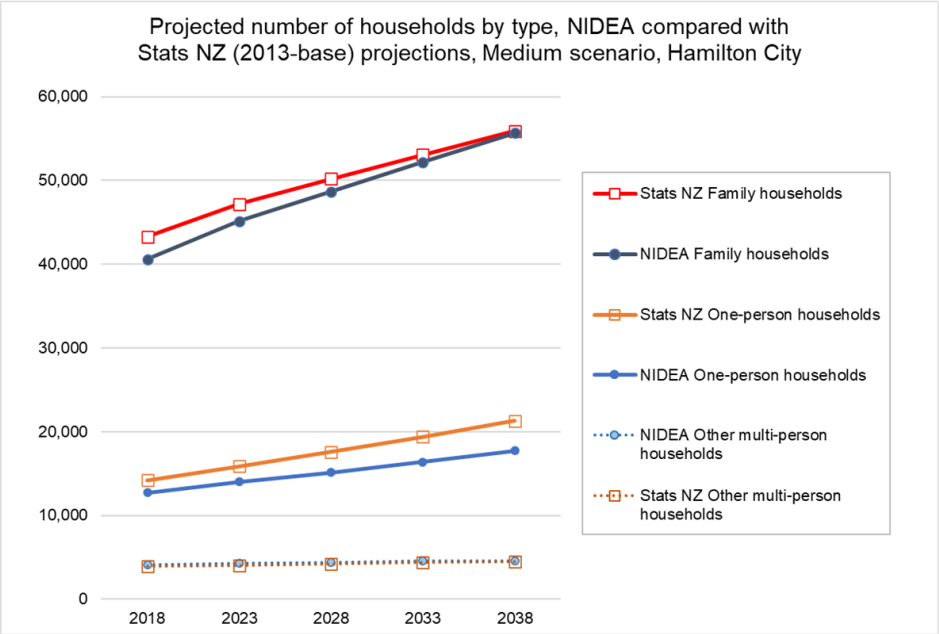
A comparison of the number of households by type between Stats NZ (2013-base) and NIDEA projections is summarised in Table 9 below and illustrated in Figure 10.

The most significant difference between the NIDEA and Stats NZ projections is in the "one person households" category. By 2038, in the medium projection, NIDEA has 3,573 fewer one person households than Stats NZ (a difference of some -16.8%), even though the percentage difference for total households is only -4.5%).

Table 9: Number of households by type, Medium Scenario, NIDEA compared with Stats NZ projections.

Scenario	Source	Household type	2018	2028	2038
Medium	NIDEA	Family households	40,600	48,689	55,684
Medium	Stats NZ	Family households	43,300	50,200	55,900
Medium	Difference	Family households	-2,700	-1,511	-216
Medium	% Difference	Family households	-6.2%	-3.0%	-0.4%
Medium	NIDEA	Other multi-person households	4,140	4,426	4,623
Medium	Stats NZ	Other multi-person households	3,900	4,200	4,500
Medium	Difference	Other multi-person households	240	226	123
Medium	% Difference	Other multi-person households	6.1%	5.4%	2.7%
Medium	NIDEA	One-person households	12,739	15,135	17,727
Medium	Stats NZ	One-person households	14,200	17,600	21,300
Medium	Difference	One-person households	-1,461	-2,465	-3,573
Medium	% Difference	One-person households	-10.3%	-14.0%	-16.8%
Medium	NIDEA	Total households	57,479	68,250	78,035
Medium	Stats NZ	Total households	61,500	72,000	81,700
Medium	Difference	Total households	-4,021	-3,750	-3,665
Medium	% Difference	Total households	-6.5%	-5.2%	-4.5%

Figure 10: Number of households by type, Medium Scenario, NIDEA compared with Stats NZ projections



3.2.1.2 Household type distribution

Setting aside the actual difference in numbers of households, a comparison of the household type distribution for the NIDEA and Stats NZ projections is shown in Figures 11 and 12.

The most obvious differences are:

i) the proportion of one person households in the NIDEA projections holds fairly steady over the projection period (from 22.2% in 2018 to 22.7% in 2038), whereas the Stats NZ projections show a steadily increasing proportion of one person households, from 23.1% in 2018 to 26.1% in 2038; and

ii) the NIDEA projections show a slight increase in the proportion of family households over time, whereas the Stats NZ projections show a slight decrease.

Meanwhile, a decreasing proportion of other multi-person households over time is a trend common to both projections.

Figure 11: Household type distribution (NIDEA projections, medium scenario)

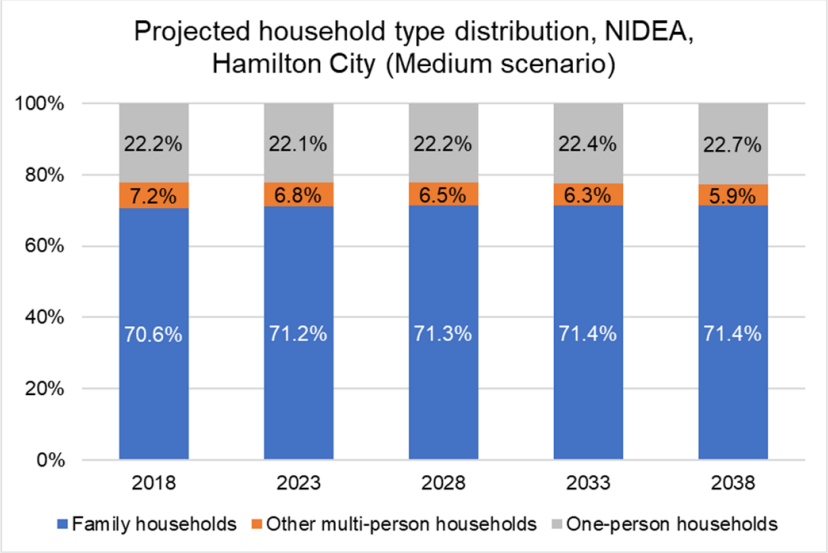
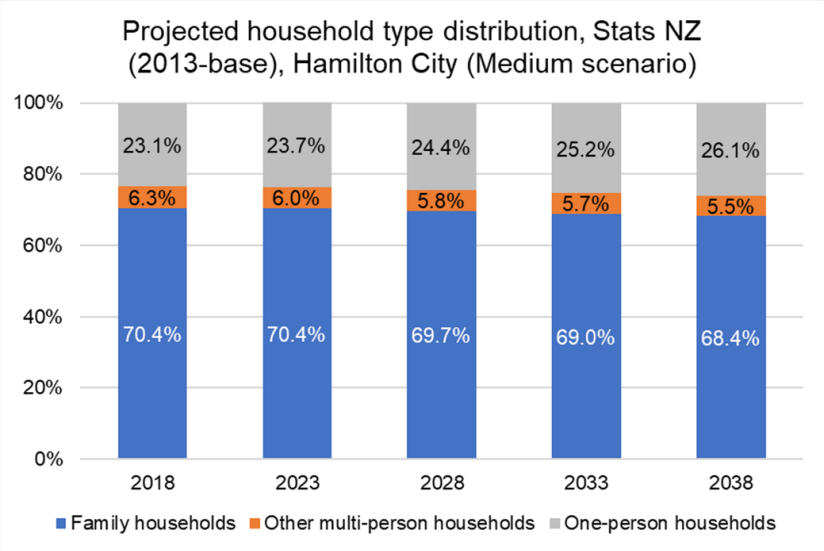


Figure 12: Household type distribution (Stats NZ (2013-base) projections, medium scenario)



Since the biggest difference between the NIDEA and Stats NZ 2013-base projections shown in both comparisons above is that for one person households, it is worth considering additional data on trends in household type shown by the 2006, 2013 and 2018 Censuses.

The distribution of households by type at each year is provided in Table 10. I observe that the proportion of one-person households changed very little between 2006 and 2018; this would suggest that the NIDEA projection showing a stable percentage in one-person households may not be unreasonable.

Table 10: Distribution of households, by household type, 2006, 2013 and 2018 Censuses.

	2006	2013	2018
One-family household (with or without other people)	67.2%	66.7%	67.0%
Two-family household (with or without other people)	2.7%	3.3%	3.4%
Three or more family household (with or without other people)	0.2%	0.2%	0.2%
Other multi-person household	7.6%	7.0%	7.2%
One-person household	22.3%	22.7%	22.2%
Total households stated	100.0%	100.0%	100.0%

3.2.1.3 Conclusion: Household projections

Considering the above comparison of the NIDEA projections with those of Stats NZ, I note that there was quite a difference in trends between the NIDEA and Stats NZ household projections for one person households. By 2038, NIDEA had significantly fewer households of that type than Stats NZ.

It is possible that this is related to the observation made in Section 2.2.1 of this review, i.e., that the proportion of those 65 years and over in 2043 in the NIDEA projections seemed lower than expected — since there is a correlation between those 65 years and over and one person households. This is worth further investigation.

It should be taken into account, however, that there are limitations inherent in the comparator dataset being used; that is, the 2013-base Stats NZ projections are now quite out of date. As such, it is hard to know to what degree, if any, one should be concerned about these differences.

The methodology used by NIDEA, on the other hand, appears sound, being based on Stats NZ's Living Arrangement Type Rates (LATR). The lower numbers of households projected by NIDEA may be partly explained by the observation that the Stats NZ household projections for the 2013-2018 period seem slightly too high, when compared with observations using the latest available information.

In conclusion, the NIDEA household projections seem reasonable.

3.2.2 Family Projections

Families are a subset of households and are also derived from the Living Arrangement Type Rate assumptions.

3.2.2.1 Number of families by scenario and type

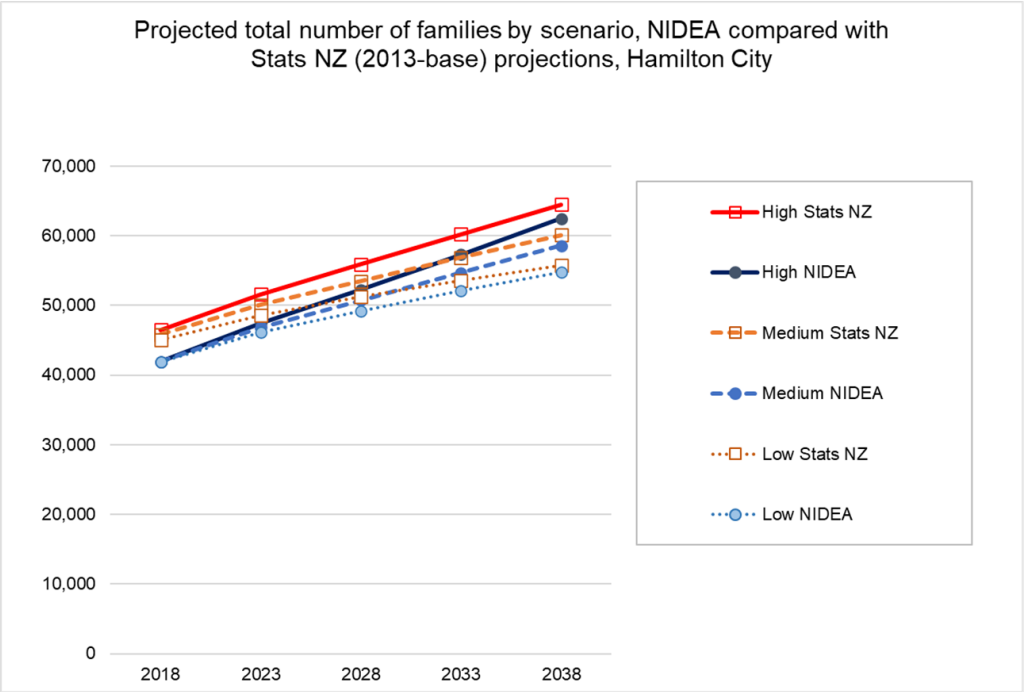
The comparison between Stats NZ 2013-base family projections and those from NIDEA over the period 2018-2038 is shown in Table 11 and Figure 13.

The NIDEA projections start out in 2018 with lower numbers of total families in all categories and all scenarios, and they remain lower than the Stats NZ projections through 2038, although the difference becomes less. At 2018 for example, in the medium scenario, the Stats NZ projections have 45,800 families compared with 41,930 in the NIDEA projections, a percentage difference of -7.0%. By 2038 the difference has reduced to -1.7%.

Table 11: A comparison of the number of families by scenario, for NIDEA and Stats NZ (2013-base) projections

Scenario	Source	2018	2028	2038
Low	NIDEA	41,930	49,238	54,741
Low	Stats NZ	45,100	51,200	55,700
Low	Difference	-3,170	-1,962	-959
Low	% Difference	-7.0%	-3.8%	-1.7%
Medium	NIDEA	41,930	50,760	58,598
Medium	Stats NZ	45,800	53,500	60,100
Medium	Difference	-3,870	-2,740	-1,502
Medium	% Difference	-8.5%	-5.1%	-2.5%
High	NIDEA	41,930	52,284	62,462
High	Stats NZ	46,500	55,900	64,500
High	Difference	-4,570	-3,616	-2,038
High	% Difference	-9.8%	-6.5%	-3.2%

Figure 13: Comparison graph showing the number of families by scenario, for NIDEA and Stats NZ (2013-base) projections. An alternative version of this graph, with the vertical axis minimum set to 40,000 to show more detail, is provided as Figure A2.3 in Appendix 2.



When considering the breakdown by family type, over time, in Table 11 (also shown in Figure 14), I note that:

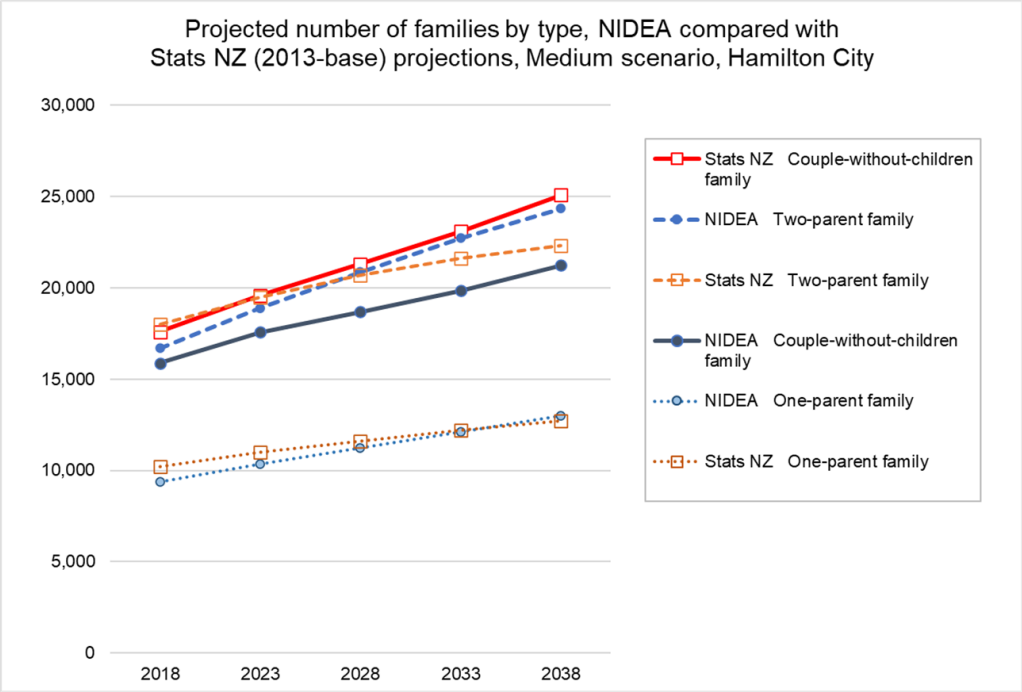
i) the numbers for the couple without children family category start in 2018 considerably lower than those for Stats NZ (-9.7%) and the divergence gets larger and larger over time, such that by 2038 the NIDEA counts (dark blue line in Figure 14) are 3,864 lower than the Stats NZ counts, a percentage difference of -15.4%.

ii) on the other hand, the magnitude of the gap between the NIDEA and Stats NZ for one and two-parent families reduces over time in the first part of the projection time-series, and then the number of these families actually surpass the numbers projected by Stats NZ.

Table 11: Number of families by type, Medium Scenario, NIDEA compared with Stats NZ projections

Scenario	Source	Family Type	2018	2028	2038
Medium	NIDEA	Couple-without-children family	15,886	18,677	21,236
Medium	Stats NZ	Couple-without-children family	17,600	21,300	25,100
Medium	Difference	Couple-without-children family	-1,714	-2,623	-3,864
Medium	% Difference	Couple-without-children family	-9.7%	-12.3%	-15.4%
Medium	NIDEA	Two-parent family	16,687	20,871	24,352
Medium	Stats NZ	Two-parent family	18,000	20,700	22,300
Medium	Difference	Two-parent family	-1,313	171	2,052
Medium	% Difference	Two-parent family	-7.3%	0.8%	9.2%
Medium	NIDEA	One-parent family	9,357	11,212	13,011
Medium	Stats NZ	One-parent family	10,200	11,600	12,700
Medium	Difference	One-parent family	-843	-388	311
Medium	% Difference	One-parent family	-8.3%	-3.3%	2.4%
Medium	NIDEA	Total Families	41,930	50,760	58,598
Medium	Stats NZ	Total Families	45,800	53,500	60,100
Medium	Difference	Total Families	-3,870	-2,740	-1,502
Medium	% Difference	Total Families	-8.5%	-5.1%	-2.5%

Figure 14: Number of families by type, Medium Scenario, NIDEA compared with Stats NZ projections



3.2.2.2 Family type percentage distribution

Setting aside the actual difference in numbers of families and focussing solely on the patterns of family type distribution in the Stats NZ and NIDEA projections, Figures 15 and 16 show that, taking the medium projection as an example:

i) the proportion of two-parent families increases slightly over time in the NIDEA projections, but decreases slightly over time in the Stats NZ projections,

ii) for couple without children families, the reverse applies.

Figure 15: Family type percentage distribution (NIDEA projections, medium scenario) for Hamilton City

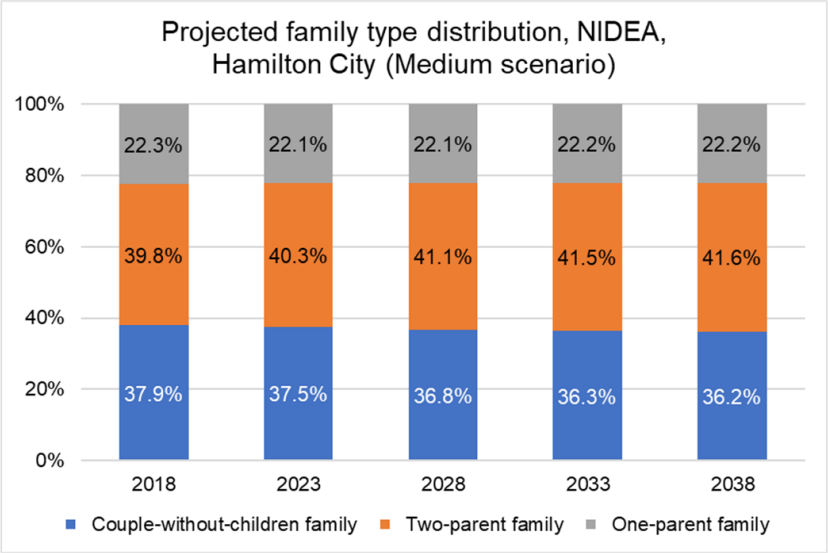
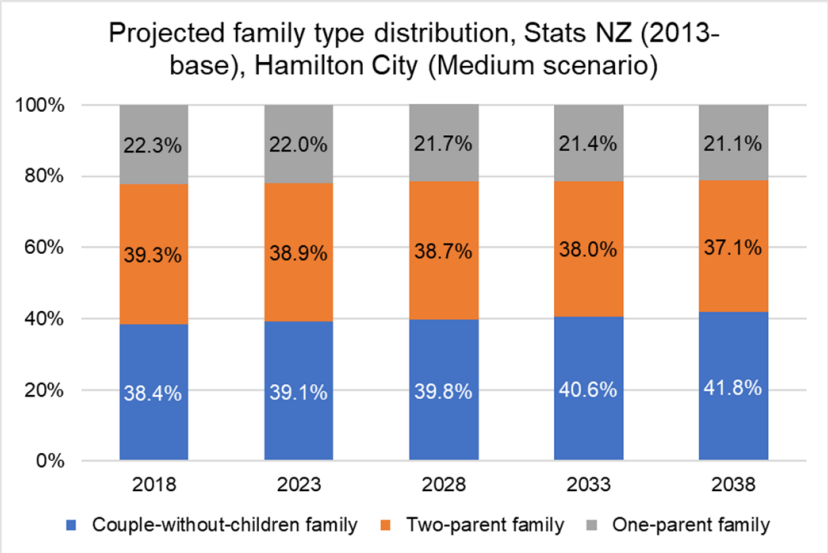


Figure 16: Family type percentage distribution (Stats NZ (2013-base) projections, medium scenario) for Hamilton City.



As in the assessment done for households, it is worth considering trends seen in the 2006, 2013 and 2018 Census data[36]. In the comparison to follow I assume that "Two-parent family"

[36] http://nzdotstat.stats.govt.nz/wbos/Index.aspx?DataSetCode=TABLECODE8402

(NIDEA) and "Couple with child(ren)" (Stats NZ) can be treated as equivalent for the purposes of the general trends in family type distribution considered here.

Table 12: Family type for Hamilton City, 2006, 2013 and 2018 Censuses.

	2006	2013	2018
Couple without children	38.2%	37.3%	36.5%
Couple with child(ren)	40.2%	40.7%	42.8%
One parent with child(ren)	21.6%	22.0%	20.7%

The Census data shows

i) a small decrease in the proportion of couple without children families over time,

ii) a small increase in the proportion of couples with children over time

iii) no clear sense of an increase or decrease in terms of the proportion of one parent with child(ren) families.

If the Census trends were to be extrapolated into the future,

a) trend (i) is consistent with the NIDEA projections but counter to the trend shown in the Stats NZ projections,

b) trend (ii) is consistent with the NIDEA projections but counter to the trend shown in the Stats NZ projections, and

c) it is difficult to make any conclusive remarks about the proportion of one parent with children families.

3.2.2.3 Conclusion: Family Projections

Considering the above comparison of the NIDEA projections with those of Stats NZ, there was quite a difference in trends between the NIDEA and Stats NZ family projections for couples with and without children. As noted in the conclusion for household projections, however, given that the 2013-base Stats NZ projections are now quite out of date, it is hard to know to what degree, if any, one should be concerned about these differences.

As for household projections, it is recommended that the NIDEA projections for family type be compared with the 2018-base household and family Stats NZ projections when released in 2022, to see how the areas of divergence between the 2013-base projections identified above are tracking.

In the meantime, noting that the methodology seems sound, being based on Stats NZ Living Arrangement Type Rates (LATRs), and the Stats NZ household projections (of which families are a subset) for the 2013-2018 period seem slightly too high compared with observations from the latest available information, the NIDEA family projections seem reasonable.

4.0 Overall conclusions

Differences between NIDEA projections and those from Stats NZ over the 30-year period 2018-2048 (or the 20-year period 2018-2038 for households and family projections) have formed the primary means of assessing the reasonableness of the NIDEA projections in this review. The NIDEA report — which gives a good amount of insight into the processes used in deriving the projections — has also proven very helpful for the review.

This peer review has found that:

i) growth trends for the total population are remarkably similar between the NIDEA and Stats NZ projections.

ii) when it comes to the age distribution of the population over time, the data provided has not allowed a full review of age-based projections to be made. However, the trend shown in the NIDEA projections for the percentage of those 65 years and over is quite different from that produced by the Stats NZ projections, suggesting that further investigation into the NIDEA projections by age group would be appropriate.

iii) While growth trends for some household and family types are somewhat divergent (in particular, trends in one person households, and families comprising couples with- and without-children), from Stats NZ projections, differences are not of a large enough magnitude to suggest any fundamental shortcomings with the NIDEA projections, particularly since the 2013-base Stats NZ projections are now quite dated.

It must be kept in mind that demographic projections have always involved a significant degree of uncertainty, and the recent COVID-19 pandemic has introduced yet another element of uncertainty on top of this.

In conclusion, and in the above context, after working through the contents of the NIDEA report and data tables, I consider that the methods, assumptions, inputs and outputs of the NIDEA projections, to the degree that they are practical to check, are reasonable.

5.0 Recommendations

I recommend that:

i) The situation outlined in Section 2.1.2., where the proportion of those 65yrs and over at 2043 is lower than that projected by Stats NZ, is investigated further to help justify or explain the differences seen here. It would be useful to check also if this is related to the projections for one person households being lower than that shown in Stats NZ and whether this part of the model is working optimally.

ii) Comparisons of the type performed in this review for households and families be repeated against the 2018-base projections from Stats NZ when they are released in 2022, to help assess the reasonableness of the trends for these, given the limitations in using old 2013-base projections for comparisons as performed in this review.

iii) The source of the international migration long-term figures be reviewed to check that the figures are consistent with Stats NZ figures, or explained otherwise if not, as per observations made in Section 2.2.5.2.

Appendix 1: Objectives of the Peer Review, from the Terms of Reference[37]

"The objectives of the Peer Review include:

- Conduct a common-sense check of the material covered in the report relating to the NIDEA population projection methodology, inputs, assumptions and outputs for Hamilton City. This will include, where appropriate and feasible, a comparison with those for the Stats NZ 2018-base population projections (e.g., components of population growth, population outputs). Comparisons with Stats NZ projections will be limited to the period 2018 to 2048 (the latter being the time horizon of Stats NZ subnational projections).

- Conduct a common-sense check of the material covered in the report relating to NIDEA Family and Household projections for Hamilton City. This will include, where appropriate and feasible, a comparison with the Stats NZ 2013-base family and household projection outputs (2018-base projections will not be available until 2022). The time period for comparisons will be restricted to 2018 to 2038, the latter being the time horizon of the Stats NZ sub-national family and household projections. Consideration of quantitative assumptions and inputs is out of scope for Family and Household projections.

- Provide a practical assessment as to whether the NIDEA growth projections consider (in the inputs and assumptions) recent spatial planning, initiatives and strategies (e.g. Hamilton-Auckland Corridor, Hamilton-Waikato Metro Spatial Plan, etc)

- Provide any recommendations or critiques of the NIDEA growth projections.

The peer review will not:

- Conduct a full interrogation of the NIDEA demographic model and associated systems."

[37] Terms of Reference NIDEA 2021 Growth Projections – Peer Review. [Hamilton City Council] Trim document number: D-3705612

Appendix 2: Additional figures and tables

Table A2.1: Showing NIDEA projections together with the Stats NZ medium scenario 2013-base and 2018-base projections (2048 excluded as the 2013-base projection horizon was 2043).

	2018	2023	2028	2033	2038	2043
NIDEA	168,600	184,374	195,445	206,038	216,116	225,598
Stats NZ (2013-base)	168,700	182,100	193,500	204,400	214,700	224,800
Stats NZ (2018-base)	168,600	183,000	194,400	205,400	216,000	226,500
% Difference (NIDEA minus Stats NZ 2013-base)	-0.1%	1.2%	1.0%	0.8%	0.7%	0.4%
% Difference (NIDEA minus Stats NZ 2018-base)	0.0%	0.8%	0.5%	0.3%	0.1%	-0.4%

Figure A2.1: An alternative version of Figure 1, identical except for setting the start point of the vertical axis to 150,000 to show detail.

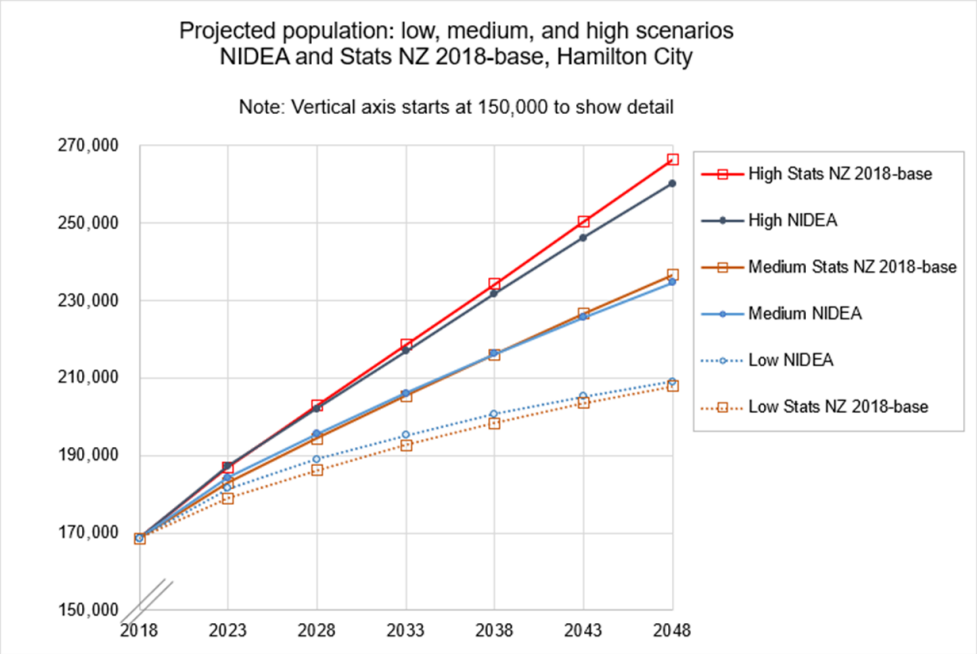


Figure A2.2: An alternative version of Figure 9, identical except for setting the start point of the vertical axis to 50,000 to show detail.

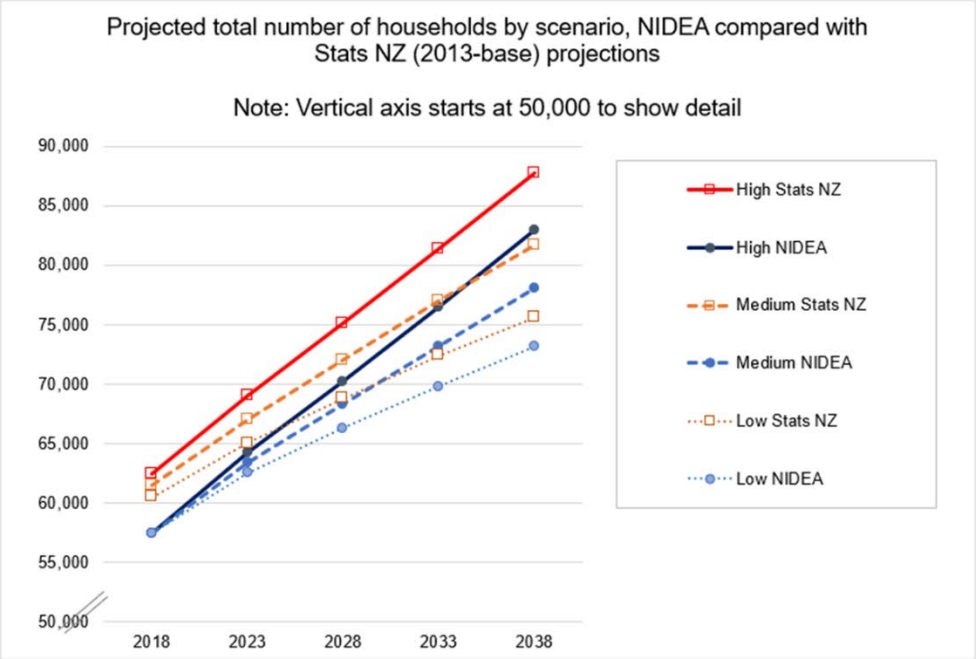


Figure A2.3: An alternative version of Figure 13, identical except for setting the start point of the vertical axis to 40,000 to show detail.

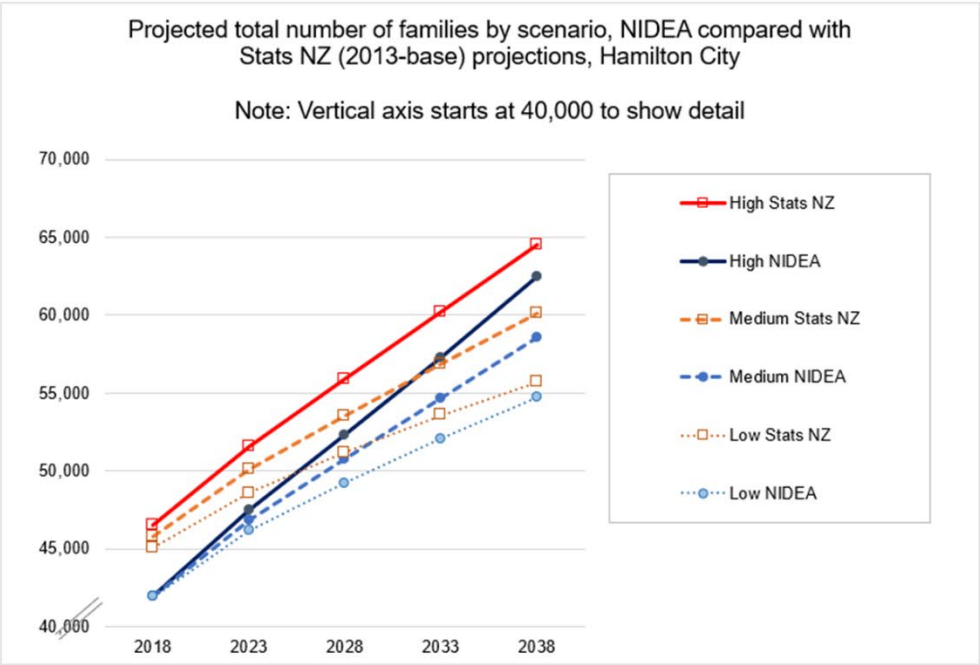


Table A2.2: Estimated migration by direction, 12/16-month rule (Annual-Jun), Stats NZ Infoshare Table Reference ITM406AA, Last updated 14 April 2021 10:45am

Estimated migration by direction, 12/16-month rule (Annual-Jun) Estimates		
	Arrivals	**Departures**
2002	127,609	72,529
2003	130,685	73,738
2004	109,331	84,775
2005	103,639	92,540
2006	105,398	91,927
2007	113,532	99,013
2008	117,659	105,619
2009	115,723	99,455
2010	101,756	92,787
2011	100,885	110,289
2012	100,734	115,717
2013	104,368	103,559
2014	118,274	84,812
2015	133,917	80,490
2016	144,182	79,569
2017	142,257	82,724
2018	138,055	89,060
2019	141,517	89,416
2020	160,715	74,572
Annual average, YE 2002 through YE 2020	**121,591**	**90,663**

Table A2.3 Permanent & long-term migration key series (Annual-Jun), Stats NZ Infoshare Table reference ITM312AA

Permanent & long-term migration key series (Annual-Jun) Total All Countries of Residence Total All Citizenships Actual Counts		
	Arrivals	**Departures**
1990	54,545	51,960
1991	55,948	43,526
1992	47,925	44,334
1993	50,811	42,109
1994	59,670	42,855
1995	69,572	46,843
1996	81,965	52,459
1997	74,492	57,722
1998	61,246	60,794
1999	56,252	67,621
2000	61,285	71,045
2001	69,489	78,755
2002	92,663	59,848
2003	97,250	54,733
2004	84,285	62,277
2005	79,139	70,546
2006	80,076	69,388
2007	82,700	72,622
2008	85,239	80,507
2009	88,251	75,736
2010	82,305	65,801
2011	84,016	80,149
2012	84,402	87,593
2013	88,235	80,328
2014	100,784	62,446
2015	115,655	57,396
2016	125,055	55,965
2017	131,355	59,050
2018	129,536	64,541
2019	111,969	Not available
2020	91,080	Not available
Annual average, 1990 through 2018	**81,867**	**62,722**

(For an explanation of why the figures differ considerably between these two series, see https://www.stats.govt.nz/assets/Reports/Outcomes-versus-intentions-measuring-migration-based-on-travel-histories/outcomes-versus-intentions-measuring-migration-based-on-travel-histories.pdf).

Table A2.4: A comparison of the differences in LATRs by broad age group for 2013 (medium scenario) between New Zealand and Hamilton City (Stats NZ).

Total New Zealand - LATR by broad age	0-14 years	15-39 years	40-64 years	65 years and over	Total people, all ages
Partner in couple-without-children family	0.0%	16.8%	31.2%	52.6%	23.1%
Partner/parent in two-parent family	0.0%	26.0%	40.9%	5.4%	22.7%
Child in two-parent family	75.7%	20.7%	0.7%	0.0%	22.5%
Parent in one-parent family	0.0%	6.0%	8.2%	3.7%	5.2%
Child in one-parent family	24.0%	8.7%	1.3%	0.1%	8.2%
Person in one-person household	0.0%	4.0%	11.3%	27.3%	8.8%
Other living arrangement types	0.3%	17.8%	6.4%	10.9%	9.5%
Total people	100.0%	100.0%	100.0%	100.0%	100.0%
Hamilton City - LATR by broad age	0-14 years	15-39 years	40-64 years	65 years and over	Total people, all ages
Partner in couple-without-children family	0.0%	17.2%	27.4%	50.6%	20.1%
Partner/parent in two-parent family	0.0%	24.2%	40.2%	5.4%	21.4%
Child in two-parent family	70.3%	15.3%	0.5%	0.0%	21.2%
Parent in one-parent family	0.0%	7.2%	10.2%	4.2%	6.1%
Child in one-parent family	29.4%	8.3%	1.4%	0.0%	10.0%
Person in one-person household	0.0%	3.7%	12.5%	29.2%	8.3%
Other living arrangement types	0.6%	24.0%	7.6%	10.7%	12.8%
Total people	100.0%	100.0%	100.0%	100.0%	100.0%
Percentage point difference (Hamilton minus NZ)	0-14 years	15-39 years	40-64 years	65 years and over	Total people, all ages
Partner in couple-without-children family	0.0%	0.4%	-3.7%	-2.0%	-3.0%
Partner/parent in two-parent family	0.0%	-1.9%	-0.7%	0.0%	-1.2%
Child in two-parent family	-5.4%	-5.4%	-0.2%	0.0%	-1.2%
Parent in one-parent family	0.0%	1.1%	1.9%	0.5%	0.9%
Child in one-parent family	5.4%	-0.3%	0.1%	-0.1%	1.8%
Person in one-person household	0.0%	-0.2%	1.2%	1.9%	-0.6%
Other living arrangement types	0.3%	6.2%	1.2%	-0.2%	3.3%
Total people	0.0%	0.0%	0.0%	0.0%	0.0%

Item 10

Council Report

Committee: Strategic Growth Committee **Date:** 20 May 2021

Author: Tyler Gaukrodger **Authoriser:** Becca Brooke

Position: Governance Advisor **Position:** Governance Manager

Report Name: Open Information only reports

Report Status	*Open*

1. The following reports are for information only purposes only:
   - General Manager's Report;
   - Future Proof Update Report;
   - Peacocke Programme Update;
   - Hamilton-Waikato Wastewater Detailed Business Case Project Update; and
   - Development contributions Remissions Quarter 3

Staff Recommendation - *Tuutohu-aa-kaimahi*

2. That the Strategic Growth Committee receives the following information only reports:
   a) General Manager's Report;
   b) Future Proof Update Report;
   c) Peacocke Programme Update;
   d) Hamilton-Waikato Wastewater Detailed Business Case Project Update; and
   e) Development contributions Remissions Quarter 3.

Attachments - *Ngaa taapirihanga*

Attachment 1 - General Manager's Report

Attachment 2 - General Manager Report Attachment 1 - Waikato Plan summary update May 2021

Attachment 3 - General Manager Report Attachment 2 - WDC/HCC Governance Group minutes 15 March 2021

Attachment 4 - General Manager Report Attachment 3 - Waipa DC/HCC Governance Group minutes 22 March 2021

Attachment 5 - Future Proof Update Report

Attachment 6 - Peacocke Programme Update

Attachment 7 - Peacocke Programme Update - Report Attachement 1 - Peacocke Programme Status Map - March 2021

Attachment 8 - Peacocke Programme Update - Report Attachement 2 - Peacocke Development Activity Map - April 2021

Attachment 9 - Peacocke Programme Update - Report Attachement 3 - Peacocke Bikes on Pipes

Attachment 10 - Hamilton-Waikato Wastewater Detailed Business Case Project Update

Attachment 11 - Hamilton-Waikato Wastewater Detailed Business Case Project Update Attachement 1 - Draft Submission Points on Waipa District Council 2021 – 2031 Long Term Plan

Attachment 12 - Development contributions Remissions Quarter 3

Attachment 13 - Development contributions Remissions Quarter 3 Attachment 1 - Development Contributions Remission 2021 Quarter 3

Attachment 1

Item 10

Council Report

Committee: Strategic Growth Committee **Date:** 20 May 2021

Author: Jen Baird **Authoriser:** Jen Baird

Position: General Manager City Growth **Position:** General Manager City Growth

Report Name: General Manager's Report

Report Status	*Open*

Purpose - *Take*

1. To inform the Strategic Growth Committee of topical issues, areas of concern and items which need to be brought to the member's attention, but which do not necessitate a separate report.

Staff Recommendation - *Tuutohu-aa-kaimahi*

2. That the Strategic Growth Committee receives the report.

Discussion - *Matapaki*

3. This report provides updates to Committee Members on activities, actions or projects contained within the following plans or strategies for which this Committee and the relevant General Managers have responsibility over and for which significant progress has been made:

   i. Infrastructure Strategy
   ii. Hamilton Urban Growth Strategy
   iii. Access Hamilton
   iv. Waikato Plan
   v. Upper North Island Strategic Alliance
   vi. Waikato Mayoral Forum.

4. Having considered the Significance and Engagement Policy, staff have assessed that the matters in this report have low significance.

Strategic Regional Collaboration (Executive Director Special Projects)

Waikato Mayoral Forum

5. The last Waikato Mayoral Forum was held on 1 March 2021 and a verbal update was given at the last Strategic Growth Committee. The minutes of that meeting are included in the Public Excluded portion of this agenda.

6. The next Mayoral Forum is scheduled for 31 May 2021.

Waikato Plan

7. The last Waikato Plan Leadership Committee was held on 22 February 2021. The unconfirmed minutes can be viewed here. The next meeting is on 14 May 2021. A verbal update will be given at this meeting.

8. A summary of the Waikato Plan workstreams is attached to this report (Attachment 1). Deserae Frisk is the new Waikato Plan Project Manager and will attend this Committee on 29 July 2021 to discuss the Waikato Plan and its workstreams.

Cross Boundary Council Discussion

Waikato District Council

9. The WDC/HCC Governance Group met on 15 March 2021. The minutes of that meeting are at Attachment 2.

10. The next meeting is scheduled for 4 June 2021.

Waipa District Council

11. The Waipa/HCC Governance Group met on 22 March 2021. The minutes of that meeting are at Attachment 3.

12. The next meeting was scheduled for 9 June 2021, however due to the Waipa members now not being available, a new date will be sought.

13. Council is represented at both of these Governance Groups by Mayor Southgate, Deputy Mayor Taylor, Councillors Macpherson and Hamilton, Richard Briggs and Blair Bowcott.

Infrastructure Funding and Financing

14. Staff are continuing to investigate a potential agreement to transfer a portion of the Housing Infrastructure Facility (HIF) into an off balance sheet Infrastructure Funding and Financing (IFF) arrangement. A workshop was scheduled for 6 May with Ministry of Housing and Urban Development, Treasury, Department of Internal Affairs and Crown Infrastructure Partners to further explore the opportunity.

Ratepayer Financing Scheme

15. The Ratepayer Financing Scheme (RFS) is an off-balance sheet financing tool for councils currently in development by Cameron Partners, the financial consultancy firm who worked to establish the LGFA. Staff from LGNZ, LGFA, and Hamilton, Tauranga, Auckland and Wellington councils have provided input into RFS to date. The Council is scheduled to be briefed on the RFS, the pathway to implementation and development costs at its Monday 17 May 2021 briefing.

Local Government Reform

16. There are a number of work programmes the Government is advancing that will reshape the system of local government, specifically in the three waters sector and the resource management reform. Due to this, the Minister of Local Government is establishing a Ministerial review into the Future for Local Government.

17. A comprehensive review of local government roles and functions is supported by the local government sector, led by Local Government New Zealand and Taituarā – Local Government Professionals Aotearoa, and central government agencies.

18. The overall purpose of the Review is to identify how local democracy and governance needs to evolve over the next 30 years, to improve the wellbeing of New Zealand communities and the environment, and actively embody the Treaty partnership.

19. The Minister is seeking recommendations from the Review that look to achieve:

    i. a resilient and sustainable local government system that is fit for purpose and has the flexibility and incentives to adapt to the future needs of local communities;

    ii. public trust/confidence in local authorities and the local regulatory system that leads to strong leadership;

iii. effective partnerships between mana whenua, and central and local government in order to better provide for the social, environmental, cultural, and economic wellbeing of communities; and

iv. a local government system that actively embodies the Treaty partnership, through the role and representation of iwi/Māori in local government and seeks to uphold the Treaty of Waitangi (Te Tiriti o Waitangi) and its principles through its functions and processes.

20. The scope of this matter comprises what local government does, how it does it, and how it pays for it.

21. The Review will report to the Minister on this matter:

i. 30 September 2021: An interim report presented to the Minister signalling the probable direction of the review and key next steps;

ii. 30 September 2022: Draft report and recommendations to be issued for public consultation;

iii. 30 April 2023: Review presents final report to the Minister and Local Government New Zealand.

Financial Considerations - *Whaiwhakaaro Puutea*

There are no financial implications in relation to the information provided in this report.

Legal and Policy Considerations - *Whaiwhakaaro-aa-ture*

23. This report is for information purposes only.

Wellbeing Considerations - *Whaiwhakaaro-aa-oranga tonutanga*

24. The purpose of Local Government changed on the 14 May 2019 to include promotion of the social, economic, environmental and cultural wellbeing of communities in the present and for the future ('the 4 wellbeings').

25. The subject matter of this report has been evaluated in terms of the 4 wellbeings during the process of developing this report.

26. The recommendations set out in this report are consistent with that purpose.

27. There are no known social, economic, environmental or cultural considerations associated with this matter.

Risks - *Tuuraru*

28. There are no known risks associated with this matter.

Significance & Engagement Policy - *Kaupapa here whakahira/anganui*

29. Having considered the Significance and Engagement Policy, staff have assessed that the report has a low significance and no engagement is required.

Attachments - *Ngaa taapirihanga*

Attachment 1 - Waikato Plan summary update May 2021

Attachment 2 - WDC/HCC Governance Group minutes 15 March 2021

Attachment 3 - Waipa DC/HCC Governance Group minutes 22 March 2021

Date:	30.04.2021
To:	Strategic Growth Committee
From:	Waikato Plan Project Manager, Deserae Frisk
Subject:	**Updates for Strategic Growth Committee**

Regional Collaboration – The Waikato Plan

The Waikato Plan is the vehicle for the Waikato region to collaborate on regional issues, to advocate for the Waikato region, and to harness the resources and opportunities of the Waikato as a collective.

The Waikato Plan involves strategic partners in the region including iwi, local and central government, business, and the community (current membership list included with this letter). The four wellbeings of the Local Government Act provide strong foundation for our focus on advocacy for social impact and community wellbeing.

The Waikato Plan was an initiative of the Waikato Mayoral Forum and is currently housed and supported by Waikato Regional Council as a Committee of Council. Currently the Waikato Plan has four priority workstreams.

- Waikato Housing Initiative
- Youth, Training, and Employment
- Climate Change
- Community Connectivity

The Waikato Plan Leadership Committee meet formally four times per year. These are open meetings and we welcome your attendance at the new Waikato Regional Council building in the Hamilton City Centre.

Friday 14, May 2021, 10am-1230pm (current Waikato Regional Council Building at 401 Grey Street)
Monday 16, August 2021, 10am-1230pm
Monday 22, November 2021, 2pm-430pm

Below we have provided the regularly occurring reports from our four workstreams which will give you some insight to our priority areas and their activities. These reports are from the February 2021 WPLC meeting. You can find further information on our website at www.Waikatoplan.co.nz.

For regular updates we are sending out a quarterly newsletter which we would be happy to add you to the newsletter list by emailing waikatoplan@waikatoregion.govt.nz, and just let us know you would like to be on the newsletter mailing.

We appreciate your continued support in the Waikato Plan and are happy to answer any inquiries.

Ngaa mihi,
Deserae Frisk

2021 Waikato Plan Leadership Committee Membership

Member Name	Representing
Deputy Mayor Aksel Bech	Waikato District Council and Future Proof Sub-region
Mayor Ash Tanner	Matamata Piako District Council and Eastern Sub-region
Charlotte Muggeridge	Community
Derek Wooster	Maniapoto (iwi)
Eugene Berryman-Kamp	Te Arawa (iwi)
Hamish Bell	Te Waka, Business
Katie Mayes	Waka Kotahi
Kelvyn Eglinton	Chair of Strategic Partners Forum
Lale Ieremia	Community
Manaaki Nepia	Waikato Tainui (iwi)
Professor Margaret Wilson	Waikato DHB and Co-Chair Waikato Plan
Maria Nepia	Tūwharetoa (iwi)
Councillor Martin Gallagher	Hamilton City Council
Mayor Max Baxter	Otorohanga District Council and Southern Sub-Region
Michelle Paki	Ministry of Business, Innovation, and Employment
Paul Majurey	Pare Hauraki (iwi)
Peter Nation	Community
Rachel Jones	Te Puni Kokiri
Chairman Russ Rimmington	Waikato Regional Council
Shane Ngātai	Ministry of Education
Te Rehia Papesch	Ministry of Social Development

Workstream Leads

Lale Ieremia	Waikato Housing Initiative
Max Baxter and Shane Ngātai	Youth, Training, and Employment
Eugene Berryman-Kamp	Climate Change
Hamish Bell and Kelvyn Eglinton	Community Connectivity

Waikato Housing Initiative

Status from last update	The focus of the WHI for the last quarter of 2020 was the finalisation of the Action Plan for all six work-stream areas. The majority of the work-streams have been progressing as expected with working groups established and action plans confirmed. The only work-stream to not progress as planned is the 'Enable the affordable housing pipeline' where we have identified a need for technical resource to lead and inform this work-stream. We're currently working with Momentum Waikato and the Wellbeing Project to identify how we might resource, to address this.
What has been achieved	• Our members participated in a workshop to further contribute and define the overall action plan for each area as well as identify areas of opportunity to support in the delivery of the WHI goals. • A *WHI Action Plan* has been confirmed that includes all six workstreams. • Conversations have progressed with Ministry of Housing and Urban Development and Kainga Ora to establish a relevant and direct link to central government. • Communications Identity - the WHI has a independent website that provides information on the initiative and how others can become involved. This is particularly important as a point of validation for Central Government. • Toolkit has been developed on the website to include tools that enable our local providers to navigate the housing system, such as funding information, housing models etc. We have also identified, from our wider membership, a number of other tools that can enable and educate our membership group. • Housing Quality have developed a robust action plan to define an area of focus and delivery, The New Zealand Greens Council have also joined the membership group to support this work. • Policy, Regulation and Planning have identified key areas of focus and action to advocate. Communication support will be provided to craft an advocate positioning statement.
What is coming up	Our focus for the first quarter of 2021 will be to build on the workstream momentum to solidify the action plans, identify and secure resources, confirm our engagement plan and as a priority, progress discussions with central government to understand level of support, establish a co-ordinated response and contacts. • Completion of the Engagement and Stakeholder Plan. • Develop 'positioning statements'/fact sheets for use by stakeholders that outlines the WHI position in addressing the regional housing challenge. • Resourcing: Tania Jones will be transitioning out of the PM role - January 2021. • Meeting to be scheduled with Harvey Brookes (WWP), Kelvyn, Esmae and co-chairs to review resourcing needs, in January. (underway)
What is needed from WPLC	Identification of potential opportunities and connections for enabling delivery of workstream projects.

	How to utilize knowledge and networks to inform connections with central government and protocols to continue collaboration with central government.

Youth, Training and Employment

Status from last update	At the WPLC meeting held on 16 November, the committee agreed with the following recommendations from this workstream: 1. Re-title the workstream and define priority populations within the overall intent to focus on youth, training and employment. 2. Continue the existing work programme where activities are in progress and merge future work under this workstream with the efforts happening under the Waikato Wellbeing Project target around NEETs. 3. Engage with the community connectivity workstream. 4. Explore a 'data home' within the existing Waikato Plan website to host and make available the wealth of information about providers and key players for this workstream.
What has been achieved	Since the last report, the workstream group have: • Concluded workplace/employment trials with two groups of rangatahi at risk of disengaging from education. • Attended hui around the NEETs target with stakeholders and leaders from the Waikato Wellbeing Project, offering resources to help digest the learnings from the hui and create an action plan. • Shared the matrix of youth and employment providers with key stakeholders, pending the revision of the Waikato Plan website. A significant achievement before the end of 2020 was the successful conclusion of two workplace trials with students from Ngaa Taiatea Wharekura and Paeroa College Alternative Education Unit. Both schools reported positive outcomes for the rangatahi who were chosen to take part in the trial. The relationships established by Ngaa Taiatea with the employers from this experience will be kept and utilised by the kura in the future as well - also benefiting other rangatahi. The kura might not otherwise have connected with these employers - any undertaking like this has potential long term positive impacts. Feedback from rangatahi and whaanau was also gathered and reflected increases in motivation and engagement in the way young people viewed their futures and the role of education. In some cases, rangatahi have secured employment as a result of this trial, or are actively exploring further study to lead them into employment. Whaanau appreciated the contribution towards transport costs and the recognition of their role in supporting young people to take up this opportunity. Learnings at a programme level are yet to be fully understood, but early indications suggest that the level of funding was appropriate and the autonomy to determine how it was spent was hugely important for these kura. A sum of

	$6,000 was granted to each school, to support three COVID impacted, disengaged rangatahi to experience a barrier-less taste of employment over two weeks.
What is coming up	In 2021 the workstream will look to implement a more structured project framework and involve more streamlined reference groups. Of the work that is already underway, the following activities are planned: • Workplace trials with at least four more groups of rangatahi will be progressed around the region in term one with a continued COVID response priority, the focus will remain with youth populations who are most affected by economic downturns: Maaori, pacific, differently abled, ethnic and marginalised young people. • A weekend noho marae will be held in February for represetatives from local youth providers to connect, revive and support one another's wellbeing. This continues the work of the region's Youth Collab group. • Revised plans will be agreed with Zeal Hamilton to design and launch a story-sharing platform for youth voice to be heard and celebrated online. The workstream steering group will guide the engagement with the Waikato Wellbeing Project and further work that can progress objectives under both our visions. Meeting with the Strategic Partners Forum in April will be key, as the link to the community connectivity workstream develops. In conjunction with the Waikato Plan Project Manager, the pressing need for data-sharing will be scoped as a potential website project.
What is needed from WPLC	The workstream vision is that everyone can access opportunities for employment, education, or training in our diverse Waikato. The way we see this being achieved is by connecting the players, listening to communities and clearing the path in the right way. The leadership committee can influence and lead in this space. Partnerships between key players and support for community ambitions will make this work programme a success. Predicted drops in new job opportunities are not forecast to hit New Zealand and our region until this year and 2022. This will likely be the most important time for new and collective action in the youth, training and employment space. We have an opportunity to support the region now, for the challenges ahead.

Climate Change

Status from last update	• At its meeting on 16 November 2020, the committee was briefed on the 2018/19 Waikato Region Greenhouse Gas Emissions inventory and plans to conduct a stakeholder survey. • The inventory is a key part of the evidence base to guide the climate change workstream. It provides an understanding of regional greenhouse gas emissions and CO_2 sequestration performance at sector and territorial authority level and identifies the sectors upon which to focus climate change

	mitigation actions within each territorial boundary. It also refers to the national context and makes suggestions to assist future reporting and areas to concentrate mitigation activity. • To identify current climate change activities and opportunities for collaborative responses, a stakeholder survey was undertaken in November/December 2020 on behalf of the Waikato Plan and the Waikato Regional Council Climate Action Committee.
What has been achieved	• The results of the survey have been analysed and will be considered by the climate change workstream to help inform recommendations for action to the next committee meeting. • A high level summary of the survey findings are included in this update. See attachment 1.
What is coming up	• The climate change workstream will consider the findings from the survey and opportunities to help inform recommendations to the next committee meeting. • Reviewing the Climate Change Commissions Report. • Attending Dr. Paul Winton's presentation on February 23rd on reducing transportation emissions.
What is needed from WPLC	The workstream seeks feedback back from the committee on the 3 key areas identified in the regional climate change survey completed as priorities of focus for the workstream. • Planning • Engagement • Sharing of information

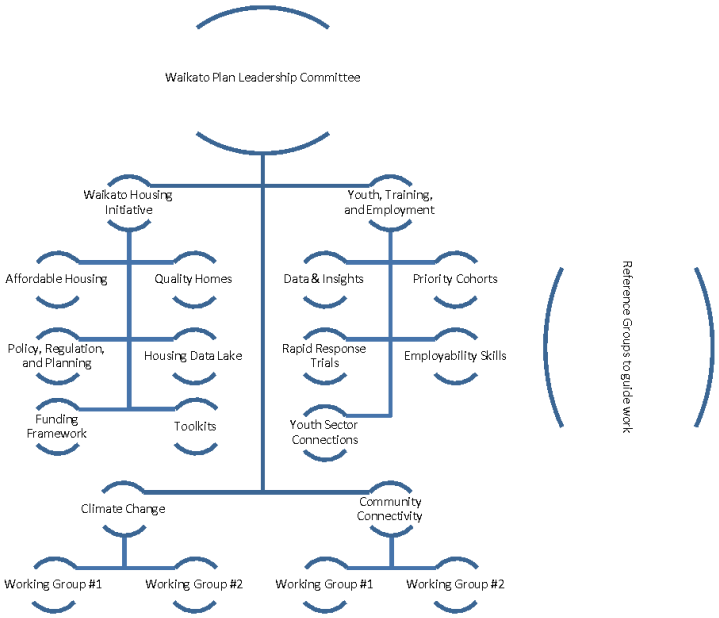
Community Connectivity

Status from last update	Community connectivity has yet had a chance to meet at the time of this report, although have been working towards goals set. Verbal updates will be provided to the committee from the 16 February 2021 Community Connectivity Workstream meeting in addition to this written report.
What has been achieved	• Meetings scheduled with each workstream, following SPF meetings, for 2021. • Identification of new members has began (older people, emergency services, police).
What is coming up	• Filling in gaps in membership. • Working with each workstream to identify enablers.
What is needed from WPLC	Continued collaboration, broker and advocacy role from the Waikato Plan members.

Strategic Partners Forum

We also house the Strategic Partners Forum under the Waikato plan which Kelvyn Eglinton chairs. They act as a steering committee for the Waikato Plan leadership committee.

Draft Structure



D-3692018

WDC/HCC GOVERNANCE GROUP MEETING
MINUTES

Monday, 15 March 2021
11.00am to 1.00pm
Waikato District Council, Ngaruawahia

Attendees: WDC - Mayor Allan Sanson, Deputy Mayor Aksel Bech, Cr Noel Smith, Cr Janet Gibb
HCC - Mayor Paula Southgate, Cr Dave Macpherson, Cr Ryan Hamilton

Staff: WDC - Gavin Ion, Tony Whittaker, Vishal Ramduny, Terri Tong (Minutes)
HCC - Richard Briggs, Blair Bowcott

Apologies: HCC - Deputy Mayor Geoff Taylor

- **Welcome and Apologies**

- **Minutes of last meeting**
  - The minutes of 1 September 2020 were accepted.
  - No matters arising.

- **Action List**
  - Taken as read.
  - **3 Waters**
    - There has been a change in direction based on the revised metro wastewater business case. HCC are holding a Council workshop this week to discuss implications.
    - Need to ensure that whatever we do next, in terms of investment, allows for growth at the pressure points around the edge of the city, in the south and in the north where we're already committed to supporting both councils' growth.
    - Still in discussions with Waipa District Council regarding the joint proposition.
    - Blair Bowcott advised that in terms of the Wastewater Project, the Governance Group is due to reconvene early April. All partners need to stay focused on the solutions that the project is seeking, because we are all trying to find the best outcomes for the wider metro area.
    - Councillor Smith advised that developers had been approaching him with the idea of installing their own MBR plant rather than waiting 7 years for the planned infrastructure.
  - **District Plan Review**
    - Councillor Hamilton suggested mapping developer aspirations in both districts and aligning this while working on District Plan Reviews. He felt it would be helpful to have some alignment around boundary areas and a

collective agreement on principles around areas on the boundary. HCC is about to start a District Plan Review (linked to NPS UD).

- **3 Waters Reform**
  - Mayor Paula feels the 3 Waters Reform 'opt-out' option comes with considerable risk and that it should come with objectives criteria/ thresholds and one should only be able to opt out by demonstrating scale, efficiency & cost benefits to rate payers.
  - Blair Bowcott advised that councils across the Waikato /Bay of Plenty had been working together in a proactive way to prepare for the reform. A second stage of that work is about to start. There were a few councils in the Waikato /Bay of Plenty that weren't part of the initial combined group, but work is being done to include them. Following the 3 Waters Reform Workshop on 26 March in Rotorua, the government is expected to announce their final decisions on the reform in the middle of the year. Then the 'opt-out' consultation process will occur in the second part of the year.
  - It's important that both councils are as prepared as possible for this reform, the case for change at our councils is critical.
- **University Indoor Recreation project**
  - University is unlikely to be ready to go in the near future. HCC has budget in Yr. 2 & 3. Looking at potential arrangements with Melville Campus and Girls High School. In the north east, Hamilton Christian School has now become an integrated school and received some funds for zoning and is required to build a recreation centre facility. HCC are looking at a land arrangement with them that may help and also provide the community access.
- **Waters Board of Inquiry (Watercare)** – WDC will not make a submission because there is a conflict of interest.

- **LTP Sharing**
  - **WDC**
    - PowerPoint presentation from Tony Whittaker. *Presentation was previously circulated with Agenda.*
      Questions/ Comments
    - Timing of Revaluation (for rates) – Councillor Hamilton mentioned HCC is currently working on a 'value capture' piece regarding future growth developments. He proposed the two councils consider whether there were opportunities where they could collectively purchase land on the boundaries together and share the uplift.
  - **HCC**
    - PowerPoint presentation from Blair Bowcott. *Presentation was previously circulated with Agenda.*

- **Hamilton Urban Growth Strategy Review: Draft early thinking**
  - The current strategy was developed in 2008/2009. Time for an update/refresh.
  - One of the keys early parts of this strategy is to develop some principles/parameters on how to work with the development community to deliver the community outcomes needed.
  - Need to link opportunities through to the Strategic Land Agreement that we have in place, the MSP & the 'value capture' piece spoken about earlier in the meeting.
  - HCC want to ensure that WDC is part of the process and that decisions line up with the collective vision for the metro area.

D-3692018

- Councillor MacPherson felt there was a risk of some developers potentially getting frustrated with the process if it needs to link to so many strategies.
- It was agreed that a principle orientated approach is best, rather than constraining it based on geographical outcome.
- It was agreed that developers need to contribute to the building of the community.

- **Next Meeting**
  - 4 June 2021

D-3666961

WAIPA DC/HCC GOVERNANCE MEETING
MANAGING OUR RESPONSE TO GROWTH PRESSURES
MINUTES

Monday, 22 March 2021
Hamilton City Council, Committee Room 1
10am to 11.30am

Attendees: Mayor Paula Southgate, Cr Dave Macpherson, Cr Ryan Hamilton, Blair Bowcott
Mayor Jim Mylchreest, Garry Dyet (CE), Kirsty Downey

Apology: Cr Susan O'Regan, Deputy Mayor Geoff Taylor, Deputy Mayor Liz Stolwyk, Richard Briggs, James Clarke

AGENDA ITEMS	
1.	**Welcome and Introductions** Apologies of Geoff Taylor, Susan O'Regan, Liz Stolwyk and Richard Briggs noted.
2.	**Minutes of previous meetings** • 19 June 2020 accepted. No matters arising
3.	**Action List** This list has been created out of the minutes of the 19 June 2020 meeting. Note that Cr Ryan asked if we could discuss value capture and the Waikato Community Lands Trust later in the agenda.

4.	**LTP Sharing**
	Waipa
	• Consulted extensively with the community during 2020
	• $126.8m on growth projects through this LTP
	• High capex spend, building off a high programme over last 3-5 years
	• Growth assumption 3%
	• Capex funded by aggressive DC policy ($70,000 per 500sqm section in Cambridge (between C1, C2 and C3 growth cells)
	• Peaks at 250% Debt to Revenue ratio
	• Credit rating maintained at AA-
	• Much of the growth is from Auckland and Hamilton – section prices in Cambridge/Te Awamutu comparable to Hamilton
	• Lack of affordable housing in Cambridge
	• Need for stronger bus services to Cambridge
	• Transport links
	  ○ Hamilton to Cambridge (immediate focus) in addition to Future Proof transport work programme
	  ○ Southern links advocacy

	○ 130,000 vehicle movements over Hamilton boundary per day (2019 figures). Mostly Hamilton-Cambridge. • Operating surplus of $2m • Opportunity to align community/recreational spend (Waipa pool opens April 2021) It was noted that consulting on Maori Wards at same time as LTP has potential to overshadow LTP feedback. In summary, Garry described this LTP as very much a "hold the course" this time, with the 2024-34 LTP to be transformational. ***HCC*** • Transformational 2021-31 • 5 priorities, building from the ground up • Maintaining levels of service for existing services • Looking after infrastructure and assets • Provision for a growing city • Meeting community expectations for a sustainable and affordable city • 8.9% rates increase in Year 1, with 4.9% thereafter • Big programmes to progress – Peacockes, 3 Waters Reform, Government Compliance, Planning and the NPS-UD • Highlight community wellbeing in the consultation – 1000 submissions received to date • Future Proof, Metro Spatial Plan and Metro Wastewater have informed the LTP Both councils noted the need to align on recreation facilities in order to meet the future needs of sport across the region. Garry mentioned that the Regional Facilities Funding Framework had been raised at the recent CEO Forum. This Framework originally failed to progress at WRC but CE Chris McLay has indicated he will review this. WRC support is critical in this area.
5.	**Government Engagement and Reform** It has been confirmed that three ministers have been appointed to Future Proof – Ministers Mahuta (Local Government), Woods (Housing) and Wood (Transport). This is pleasing as other partnerships such as SmartGrowth have only two ministerial representatives. **Housing reform** announcement by Minster Robertson on 23 March 2021 *Subsequent to this meeting, the Government announced an extensive ($3.8 billion) housing reform package on 23 March 2021.* Discussion at the meeting still has relevance to the subsequent reform announcement: • Supply – Kainga Ora will have a big role in the future, to ensure typology, mix of ownership/rental, delivering housing solutions faster • HW-MSP – there will be a need for Future Proof partners to work together to progress/respond and also to engage with Government officials early • Intention of the reform to reduce the cost of housing or stem the rate of increase and stop the speculation aspect.

	• The work on our Shovel Ready applications from last year may influence the announcement for the region – perhaps last years opportunity may come to fruition • Cr Dave noted that multiple government agencies will be involved in such reform and the ability to package like projects together under the umbrella of one agency could be beneficial • Cr Ryan mentioned the role of the Waikato Community Lands Trust – to ensure some land is held in perpetuity (and not exposed to housing market prices). Mayor Jim is meeting with the Land Trust this week and is open to discussion, noting that we want to encourage people to be owners in their own right – freehold over an extended period time for land and buildings. • Value capture – needs to be factored into any model. **Three Waters Reform** Blair gave a brief update on the Reform, particularly noting the Zone 2 workshop in Rotorua on 26 March 2021 is a time to raise all questions for officials to hear. Of particular interest to this groups is: • the criteria for opting out – there must be fundamental, strategic reasons demonstrated • the cost of opt in vs opting out • what the entities will look like and how to engage for growth • communication and the case for change – we need to know what to debate Blair advised that the Waikato/BOP consortium has agreed to work together on the next phase.
6.	**Metro Wastewater Business Case** This item was not discussed but note that HCC is taking a report to Strategic Growth Committee on 30 March 2021.
7.	**Watercare Board of Inquiry** HCC and Waipa are working together on this. Garry noted that allocation is based on population growth and with that in mind it makes sense to protect our allocation and source. It is also essential that water supply be protected for our economies.
8.	**Updates on**: • Waipa Spatial Plan – not discussed • NPS UD implications – included in item 9
9.	**Growth Update** Discussion on growth issues centred on the need to develop a Strategic Land Agreement (the framework was provided in the agenda), inclusion of Waipa in reviewing the Hamilton Urban Growth Strategy (HUGS) and managing interest from developers on the Waipa/HCC boundary. The outcome of the discussion can be summarised as: • Essential for Waipa and Hamilton to work together on the HUGS study. Waipa are very keen to be involved. • Agree the principles for informed discussion with developers and then

	move to progress a Strategic Land Agreement (SLA). The framework models that which has been agreed between WDC and HCC and works well by addressing process matters. • Include in the SLA framework reference to value capture that provides benefit to both parties • NPS UD – reference this a core requirement for SLA flexibility Key points arising from the discussion: • We cannot ignore developer interest in land on/around the boundary. • Land will be needed for both residential and industrial growth, at the right time and in the right sequence. • Councils cannot be in control if a developer goes to the Environment Court. • HCC must be ready to use land when it comes in to the city. • Some landowners in the boundary area have engaged the same professional firm to liaise with councils. • How we do the consultation on this will be important – risk of land value inflating. • Both the HUGS and the SLA will provide a process/framework for working with landowners/developers. • Principles need to take in to consideration aspects such as the airport, peat land (cannot build on peat).
10.	**Next Meetings** • 9 June 2021 at Waipa DC

Meeting closed: 11.45am

Council Report

Item 10

Committee: Strategic Growth Committee **Date:** 20 May 2021

Author: Luke O'Dwyer **Authoriser:** Blair Bowcott

Position: City Planning Manager **Position:** Executive Director Special Projects

Report Name: Future Proof Update Report

Report Status	*Open*

Purpose - *Take*

1. To inform the Strategic Growth Committee of recent activities and progress associated with the Future Proof Urban Growth Partnership.

Staff Recommendation - *Tuutohu-aa-kaimahi*

2. That the Strategic Growth Committee receives the report.

Executive Summary - *Whakaraapopototanga matua*

3. The Future Proof Partnership has changed to focus from policy and planning initiatives to a greater emphasis on infrastructure investment and strategy implementation. This broadened focus couples with the recent appointment of Peter Winder as the new Implementation Advisor.
4. Key recent actions since the last report to this Committee include the following:
   i. Ongoing work related to the Future Proof Strategy review;
   ii. Completion of tender documents to procure consultants to develop a Programme Business Case for the Hamilton-Waikato Metropolitan Spatial Plan (HW-MSP) area.
5. In addition to the above, work progresses in the Three Waters sub-regional study and separate Metro Wastewater business case area and these matters are the subject of a separate report.
6. Having considered the Significance and Engagement Policy, staff have assessed that the matters in this report have low significance and that the recommendation complies with Council's legal requirements.

Recent Future Proof Activities

7. Since the last update to this committee, the Future Proof Partnership has been focused on the ongoing update of the Future Proof Strategy and working with our Government Partners on the Housing Acceleration Fund.
8. Through 2020, FPIC considered and adopted two key strategies: the Hamilton-Auckland Corridor Plan and Implementation Programme and Hamilton-Waikato Metropolitan Spatial Plan.

Attachment 5

9. Both plans provide a bold approach to the long-term planning of the Hamilton-Auckland Corridor and the integration of land use and transport. The Future Proof local authorities need to give effect to both the National Policy Statement on Urban Development and the National Policy Statement for Freshwater Management. Both have a timetable for implementation that is unchanged by the government's RMA reform process. Other national policy statements are still under consideration.

10. The next steps to implement these plans and respond to national policy statements are to:

    i. translate the implementation actions into the Future Proof Work Programme;

    ii. combine and translate both plans to form a single Future Proof Strategy for the whole sub-region;

    iii. publicly consult on the combined strategy – providing important public input and giving the resulting strategy standing under the RMA;

    iv. prepare and implement changes to the Regional Policy Statement to reflect the combine Future Proof Strategy and to implement the National Policy Statement on Urban Development (and others);

    v. prepare and implement changes to District Plan to give effect to the RPS, and national policy statements.

11. Further work is still progressing to consider how Future Proof best deals with housing issues and social and community facilities and infrastructure. The Chief Executives Advisory Group (CEAG) is progressing engagement with both the Auckland Council (and associated entities) and Matamata-Piako District Council on how they can effectively engage across the revised work programme.

12. CEAG has considered an indicative budget for the revised (and expanded) work programme. Specific, dedicated funding has been secured for the key initiatives that drive most of the projected increase in expenditure. Further work is required to confirm the budget.

13. Government partners have been asked to consider how they support the ongoing work of Future Proof. CEAG is optimistic that the increased programme can be delivered with only a modest increase in the ongoing funding contribution from partners. All partners will need to confirm their funding commitment in order to finalise a budget.

The Housing Acceleration Fund

14. On 23 March 2021 the Government announced the creation of a Housing Acceleration Fund. The key components of the $3.8B Housing Acceleration Fund are:

    i. an infrastructure fund (to unlock a mix of private sector led and Government led developments);

    ii. additional funding for the Government's Land for Housing Programme to accelerate development of vacant or underutilised Crown owned land, operate in more regions, and deliver a broader range of affordable housing options for rental and home ownership;

The Housing Acceleration Fund will be complemented by:

    i. a Kāinga Ora Land Programme for strategic land purchases to increase the pace, scale and mix of housing developments (including more affordable housing).

    ii. A refocused $350 million Residential Development Response Fund. This Fund was originally established to cushion the impact of COVID-19 on construction sector activity and jobs, but has not been required. The fund will focus on increasing affordable housing provision (rental and home ownership) on land owned by iwi and Māori groups, councils, community groups and private developers, through the Crown sharing some of the cost and risk.

iii. Extension of the bright line test from 5 to 10 years, excluding new builds, for property acquired on or after 27 March 2021 (Main homes and inherited property remain exempt).

iv. An in-principle decision to limit deductions for interest expenses on loans used to generate income from residential property. New builds will be exempt, and the design of the exemption will be consulted on.

v. An increase in First Home Products (First Home Grants and Loans) income and house price caps for both new and existing properties in some locations, to enable more first home buyers to purchase homes. With the tax changes this provides a significant boost for first home buyers.

vi. A proposal to consult on limiting rent increases to once every 12 months per rental property (Link to page (rather than once every 12 months per tenancy), to help mitigate potential negative impacts on tenants from the tax changes.

15. The starting point for the Housing Acceleration Fund will be the existing Urban Growth Partnerships (UGP), and in particular the joint spatial plans and the work done by us all collectively on understanding the constraints and opportunities for achieving increased pace and scale in the agreed, joint priority development or growth areas.

16. The process for developing proposals for the fund with be a joint one using the existing partnerships processes through the Future Proof workstreams.

17. Staff will continue to liaise closely with our Government partners and report back as information on how the fund can be accessed is known.

The Update of the Future Proof Strategy

18. The Future Proof Strategy is undergoing a two-phased update. The first phase has been completed. The Future Proof Strategy: Planning for Growth was adopted by the Strategy partners in November 2017 and replaces the 2009 version of the Strategy. The Strategy underwent a full Special Consultative Procedure under the Local Government Act 2002.

19. The second phase of the Update began in 2018 and a draft Strategy, with gaps, was submitted to the Ministry for the Environment in December 2018 to meet the Future Development Strategy requirements of the then National Policy Statement (NPS) on Urban Development Capacity. The update has since been on hold to allow various projects to further progress such as the Hamilton to Auckland Corridor (H2A) initiative, the HW-MSP, the Waikato District Growth and Economic Development Strategy (Waikato 2070), and the new National Policy Statement on Urban Development (NPS UD).

20. The Implementation Advisor has recommended that staff continue working on the Strategy and complete a second draft by early/mid 2021, ahead of full public consultation.

21. It is envisioned that the Strategy will bring all current works in progress together into one document, providing a good framework to feed into the Waikato Regional Policy Statement. Key focus areas for the strategy updated include

    i. Ensuring that relevant National policy Statement for Urban Development (NPS-UD) matters can be included in the document;

    ii. Articulating the extent of urban and rural environments;

    iii. Identifying key centres in the Future Proof area;

    iv. Completing the Housing and Business Land Capacity Assessment;

    v. Identifying principles to be applied at a regional level for out of sequence developments.

22. Engagement with elected members from across the partnership is being arranged and will occur before the strategy is reported to FPIC later in 2021. At the time of writing this report, HCC elected member workshops have been tentatively arranged for May and July 2021.

Hamilton-Waikato Metro Spatial Plan Transport Programme Business Case (and other Future Proof Transport tasks)

23. Consultant procurement for the Hamilton-Waikato Metro Spatial Plan Transport Programme Business Case ("the PBC") will be completed by late-April 2021. This is a collaborative process undertaken under the auspices of the Future Proof partnership. Subsequently, the technical part of the PBC will commence in the first week of May 2021 and is expected to last approximately 12 months.

24. The HW-MSP is a long-term strategic vision for the HW-MSP area based on a Terms of Reference for the HW-MSP developed by the HW-MSP partnership and endorsed by the Future Proof Implementation Committee (FPIC) in 2019. It will inform our land use and infrastructure decisions in the future and provide an evidence base for further investigations (including this PBC), funding approvals and decision-making. The Future Proof Implementation Committee (FPIC) in their meeting 10 September 2020 approved the draft MSP and appendices for finalisation and publication subject to any feedback from FPIC.

25. Broadly the PBC in collaboration with all project partners, will develop a preferred programme of business cases, which can either be at a broad programme level (similar to the UFTI initiative in Smart Growth for Tauranga) or for specific elements e.g. for the proposed rapid and frequent transit network. This work will identify medium-long term phasing, costs, trade-offs, benefits, opportunities, integrate transport and land use planning and give direction on how partners can implement the most appropriate transport interventions at the right time, for the long-term transport and growth needs of the metropolitan region.

26. In April, in addition to the procurement exercise, the continuing focus has been to refamiliarize Members across the Future Proof partnership with the MSP project, discuss this new transport phase and how individual Councils want to be engaged on the PBC, and most importantly, to discuss the goals and objectives of the PBC.

27. This early engagement is being done differently, dependent on the wishes of the partner Council Elected Members. To date, a workshop and presentation has been undertaken with Waikato District Council and Waipa District Council Elected Members. A similar workshop was going to be held with Waikato Regional Council 27 April 2021. The session planned with Hamilton City Council is now due to take place 10 May 2021. Presentations are also likely to take place with the Regional Connections Committee, RATA, the One Network Steering Group and potentially Matamata-Piako District Council.

28. An online survey to all Elected Members of the Future Proof partner Councils is circulated once the workshops have been undertaken to gain additional feedback on MSP goals and objectives. We have had a good response rate from Waikato and Waipa District Council Elected Members to date.

29. The workshops held to date have been constructive, well received and very helpful in guiding staff on developing the goals and objectives for the MSP Transport work and re-engaging with elected members as this project recommences.

30. A full project programme will be developed once the consultant team is on-board and will give better direction on key points the projects needs direction from elected members across the

partner Councils. However, the team will be liaising regularly with all partners across the course of the project including at key project milestones, such as option long and short-listing and selecting a recommended package of projects.

31. Concurrently with the above, a "Transport Working Group" is being established to work on the technical matters related to the Future Transport workstreams and in particular the development of the MSP Programme Business Case.

32. The role and purpose the group is essentially to:

    i. Complete the MSP Transport Programme Business Case to support decisions on the viability, timing and scope of rapid transit as anticipated in the MSP.

    ii. Provide advice and support for the Future Proof Councils to develop and implement a governance, delivery and funding framework that can ensure the aligned multi-year, multi-party delivery on major investment in public transport infrastructure and services, some of which will cross regional boundaries. It is intended that this would be run in parallel with the MSP Transport Programme Business Case.

    iii. Engage in and support all future work on the potential High Speed Rail Connections between Auckland and Hamilton and Hamilton and Tauranga. This is currently a business case being led by central government that may or may not continue in 2021.

33. There are key interrelationships between this group and the MSP Transport Programme Business Case and the on-going operation and development of existing public transport services and facilities.

34. In regard to the High Speed Rail Business Case, this has now morphed into a Intercity Connectivity Indicative Business Case (IBC) led by the Ministry of Transport and we are currently requesting further scoping information from the Ministry on what this revised business case process is now looking to achieve.

35. Gavin Ion from Waikato District Council is the CEAG sponsor for the transport workstream. The Project Director role for the Transport Working Group is currently being recruited and should be in place by early May. In the interim this role is shared between Phil Haizelden from Hamilton City Council and a representative from the Ministry of Transport. Hamilton City Council representatives on the Transport Working Group will be Melissa Clark and Phil Haizelden.

36. A regular progress update report for this workstream will be presented at each Strategic Growth Committee meeting in 2021.

Financial Considerations – *Whaiwhakaaro Puutea*

37. There are no financial implications in relation to the information provided in this report.

Legal and Policy Considerations – *Whaiwhakaaro-aa-ture*

38. There are no legal or policy considerations in relation to this report.

Wellbeing Considerations - *Whaiwhakaaro-aa-oranga tonutanga*

39. The purpose of Local Government changed on the 14 May 2019 to include promotion of the social, economic, environmental and cultural wellbeing of communities in the present and for the future ('the 4 wellbeings').

40. The subject matter of this report has been evaluated in terms of the 4 wellbeings during the process of developing this report.

41. The recommendations set out in this report are consistent with that purpose.

Risks - *Tuuraru*

42. There are no known risks associated with the decisions required for this matter.

Significance & Engagement Policy – *Kaupapa here wakahira/anganui*

43. Staff have considered the key considerations under the Significance and Engagement Policy and have assessed that the recommendations in this report have low significance and no engagement is required.

Attachments - *Ngaa taapirihanga*

There are no attachments for this report.

Council Report

Committee: Strategic Growth Committee **Date:** 20 May 2021

Author: Karen Saunders **Authoriser:** Jen Baird

Position: Growth Programmes Manager **Position:** General Manager City Growth

Report Name: Peacocke Programme Update

Report Status	*Open*

Purpose - *Take*

1. To inform the Strategic Growth Committee on progress of the Peacocke Programme of work for March 2021 – May 2021.
2. A separate public excluded report for the Peacocke Plan Change is also being presented to the Strategic Growth Committee on 20 May 2021. The report is seeking Council approval for the proposed approach to the development of the Plan Change 5 – Peacocke Structure Plan.

Staff Recommendation - *Tuutohu-aa-kaimahi*

3. That the Strategic Growth Committee receives the report.

Executive Summary - *Whakaraapopototanga matua*

4. Overall, the programme is currently still on time for delivery. However, this may change if we move between Covid-19 Alert levels in future months. Staff will continue to monitor and report on any impacts to the Strategic Growth Committee.
5. Activities and achievements since the previous report on 30 March 2021 include:
   i. Staff continue to work on the Weston Lea Ltd consent for Amberfield. The Environment Court Judge issued an interim decision on 6 November 2020 providing guidance to the parties to finalise the ecological consent conditions. The parties reported back to the Court on the condition changes in April 2021 and the Court has issued directions that a further hearing is required (date to be confirmed).
   ii. Staff have also continued to work with Weston Lea Ltd to reach settlement of the Amberfield appeal matter for the southern sports park. It is now likely there will be an advance agreement in relation to the sports park for Council to consider in June 2021.
   iii. A subdivision consent for Aurora Ltd for 110 residential lots and 5 super lots in Peacocke Stage 1 was granted on 25 March 2021.
   iv. A land use consent for a retirement village at 37 Weston Lea Drive was lodged with the Council on 2 February 2021, the application has been placed on hold while staff await a response to the formal request for further information.
   v. Engagement has continued for the Peacocke Plan Change with staff working with landowners and developers.

vi. Staff participated in an open day held by Kainga Ora at Melville High School on 15 April 2021 for the Te Mauri Paihere ki Mangakootukutuku housing development on Collins Road.

vii. As part of Council's commitment to the partnership with Waikato-Tainui, on the 18 March 2021 Council approved the revocation of the Historic Reserve status for Whatukoruru Reserve. The final approval process is now with the Department of Conservation (DOC). Once approved by DOC, a Gazette notice will be published to formally revoke the reserve status meaning the transfer to Waikato-Tainui can be completed.

viii. Contractors are on site for transport and wastewater infrastructure packages and physical works are well under way. Upcoming planned work includes more substantial traffic management as a result of road closures. Staff are working with key stakeholders and residents affected by road closures and construction traffic.

ix. The land acquisition process is on track. The Council has secured property rights for 36 of the 39 properties within the designation footprint. Only one s23 objection (relating to the Shaw property) remains and is progressing through an Environment Court process set down for May 2021.

x. Staff are responding to requests from some landowners to upsize or extend infrastructure to enable development. A number of PDAs are currently being developed.

xi. Work is ongoing to implement the Ecological Monitoring and Management Plan (EMMP). This includes significant gully and stream restoration work (e.g., more than 10ha within the catchment), pest control, and bat roost protection and enhancement (e.g. providing artificial bat roosts).

xii. Work has continued on a regional bat management plan through the Waikato Bat Alliance. A draft of the strategy is expected in June 2021. Staff will take a report to the relevant committee for approval.

xiii. Pest and predator control is underway. The lizard restoration work has started with 5000 plants in the ground and another 6500 to be planted this coming season.

xiv. The Mangakootukutuku Integrated Catchment Management Plan (ICMP) has been submitted to Waikato Regional Council for certification.

xv. The Ministry of Education (MOE) acquisition team is continuing with securing sites for two new schools in Peacocke.

xvi. Staff continue to work with Crown Infrastructure Partners, Treasury, Ministry of Housing and Urban Development and Department of Internal Affairs to investigate a potential arrangement to transfer a portion of the HIF loan into an off-balance sheet Infrastructure Funding and Financing arrangement.

6. A map showing projects and their progress as at March 2021 is attached in **Attachment 1.**

7. Overall, the programme is running to schedule, in particular:

i. The HIF network infrastructure project is on track with some components ahead of the programme.

ii. Currently pre-application discussions, consenting and construction activity totals approximately 2,900 homes, (approximately 79% of the projected 10-year developer uptake of 3,750 homes in Peacocke). However, it should be noted the economic impacts of Covid-19 are likely to affect the timing of this uptake, particularly the construction of housing. This will continue to be monitored over the coming months and staff will provide updates in future Peacocke reports to the Strategic Growth Committee.

8. Having considered the Significance and Engagement Policy, staff have assessed that the matters in this report have low significance and that the recommendation complies with Council's legal requirements.

Background - *Koorero whaimaarama*

9. This report covers the period from March 2021 – May 2021. The previous Peacocke Programme update was presented to the Strategic Growth Committee on 30 March 2021 for the period February 2021 – March 2021.

10. The Peacocke Programme financial report as of 31 March 2021 was included as part of the Capital Portfolio reporting presented to the Finance Committee meeting on 13 May 2021.

11. The programme commenced in July 2018, following Council approval of the Housing Infrastructure Fund (HIF) detailed business case and subsequent adoption in the 2018-28 10-Year Plan. Since then, the Peacocke team has been working on delivery of physical works.

12. In 2018, the Council commenced a programme of investigations, stakeholder engagement, Member engagement, concept design development and land acquisition work for the projects.

13. Activity during 2019 included continuing the 2018 activities, plus commencing detailed design, continuing property acquisition, and enabling works including diversion of some utility services.

Peacocke Programme Vision and Objectives

14. The vision for the Peacocke Programme is to enable the development of an attractive and sustainable community in the Peacocke Growth Cell and surrounds. Ko te whakakitenga moo te whenua Peacocke - Ko te aaheinga o te hanga he waahi ataahua, he waahi toiora ki Peacocke.

15. Over the next 10 years, the Peacocke Programme is projected to deliver a third of Hamilton's medium-term housing needs.

16. The Peacocke programme includes the delivery of the strategic network infrastructure, community facilities and infrastructure, resource consenting and building consenting activities, ecological protection and enhancement, funding, monitoring, and reporting and commercial activities.

17. The Programme supports the delivery of the 2018-28 10-Year Plan and the following community outcomes:

    i. **A city that embraces growth** – we have the infrastructure that meets our current demands, supports growth and helps build a strong economy.

    ii. **A great river city** – we embrace our natural environment and have green spaces, features and community facilities that make Hamilton a great place to live, work, play and visit.

    iii. **A Council that is best in business** – we are customer focused, financially sustainable and have the best people delivering the best outcomes for the city.

18. As per the HIF Detailed Business Case, the investment objectives of the Peacocke programme are to:

    i. support Hamilton to be the third City Economy in New Zealand,

    ii. increase the amount of developer-ready land to meet the National Policy Statement-Urban Development Capacity,

    iii. support the provision of affordable housing,

    iv. build a vibrant community that integrates with Hamilton,

    v. enable coordinated land use and strategic infrastructure,

vi. ensure financial sustainability for Hamilton City Council and the community.

Discussion – *Matapaki*

Commercial, planning, and consenting activities

Pre-application discussions

19. Commercial infrastructure negotiations and planning consent pre-application discussions are underway with five major developers in Peacocke.

20. The focus for the infrastructure negotiations is to progress property acquisition and to integrate development proposals with the Council's programme of works; to achieve better whole-of-life asset outcomes or create more efficient integrated assets such as joint stormwater treatment devices.

Development activity

21. The majority of Peacocke Stage 1 has been consented or is seeking consent to subdivide.

22. A subdivision resource consent by Aurora Ltd (formally known as Northview Capital Ltd) for 110 residential allotments inclusive of 5 'super lots' at 3019 Ohaupo Road in Peacocke Stage 1 was granted 25 March 2021. The super lots will be the subject of future land use proposals for higher-density development such as duplexes and apartment units.

23. The Amberfield/Weston Lea Ltd subdivision consent application in Peacocke Stage 2 for 833 residential allotments was granted by independent hearing commissioners on 1 November 2019, subject to relevant consent conditions. The applicant and DOC appealed the consent conditions relating to sports parks and ecological conditions.

24. An Environment Court hearing was held from 31 August 2020 to 8 September 2020. The Environment Court Judge issued an interim decision on 6 November 2020 providing guidance to the parties to finalise the ecological consent conditions. The parties reported back to the Court on the condition changes in April 2021 and the Court has issued directions that a further hearing is required (date to be confirmed).

25. The appeal relating to the southern sports park is subject to mediation discussions between Weston Lea Ltd and the Council. If settlement is not reached, the matter will be set down for an Environment Court hearing for some time in 2021.

26. Amberfield is the first major subdivision consent application in Stage 2 and the initial application was for 862 dwellings. Through the consenting process, this was reduced to 833 dwellings. Information relating to the consent and hearing is available for viewing on the Council website here.

27. Qestral Corporation has lodged two applications regarding their proposed retirement village in Peacocke. These include:

    i. A land use consent for bulk earthworks at 55 Weston Lea Drive, which was lodged with the Council on 27 February 2020. The bulk earthworks comprise a total 5,000m^3 of cuts and 40,000m^3 of fills over 4ha land area. The bulk earthworks will enable some interim works with the aim of re-lodging a land use consent for establishing a retirement village over a 19-ha area by Qestral Corporation Ltd in due course. This application was granted on 1 September 2020.

    ii. A land use consent for a retirement village at 37 Weston Lea Drive was lodged with the Council on 2 February 2021. The development includes establishing a 230-unit retirement village, a care centre, a manor, a pavilion, and dementia facility, together with internal roading and landscaping. This application has been placed on hold by the applicant to work on further information requested by Council in November 2020, following a review of the

draft application documents. The Council issued a formal request for further information on 19 April 2021. Until the applicant provides a response the application remains on hold.

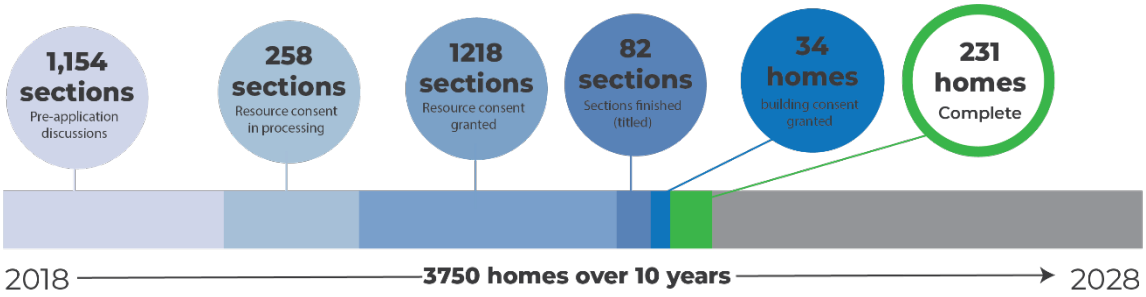
28. A map showing the location of development activity in Peacocke can be seen in **Attachment 2**.

Progress towards the Housing Infrastructure Fund housing yield

29. As per the detailed business case, the HIF investment is to implement strategic infrastructure to enable the development of 3,750 homes over 10 years from 1 July 2018.

30. Currently pre-application discussions, consenting and construction activity totals approximately 2,900 homes (approximately 79% of the projected 10-year developer uptake of 3,750 homes in Peacocke) (refer **Figure 1**). However, it should be noted that the economic impacts of Covid-19 are likely to affect the timing of this uptake, in particular the construction of housing. This will continue to be monitored and staff will provide Peacocke specific updates to the Strategic Growth Committee as more is known.

Figure 1. Pipeline showing development activity since 1 January 2018 in the Peacocke HIF funded area (Peacocke Stage 2 and remaining capacity Stage 1), as at May 2021



31. Pending Covid-19 impacts, development is expected to accelerate once the bridge and the wastewater infrastructure solutions are in place from 2023/24.

Peacocke District Plan Change 5

32. Plan Change 5, which will refresh the Peacocke Structure Plan, is a public policy process where Elected Members have the final say. Only the Council can resolve to notify a plan change to formally initiate RMA processes that are essential for altering the planning provisions in Peacocke. Therefore, it is important that Members are briefed in a timely and detailed manner to not only understand the key opportunities and risks associated with the project, but to feel a level of comfort and ownership with what is occurring, given their unique political role in the process.

33. The review of the Peacocke Structure Plan provides an opportunity to consider and address several key issues that will impact the outcomes of the Peacocke Programme. To support the review, background studies are continuing to be prepared. Along with this work, several Council briefings will be held over the next six months on the plan change process.

34. To date, staff have held four briefings with Elected Members on 27 May 2020, 30 September 2020, 04 November 2020 and 17 March 2021. The purpose of these briefings was to outline the progress to date on the plan change and provide opportunity for Members to input into the plan change process. To develop a structure plan that meets best practice and the Council's strategic organisational objectives, staff sought Members' support on the following matters:

    i. creating the opportunity to build a modern suburb with high ecological and transport outcomes

    ii. increasing density to support public transport and a vibrant community

iii. protecting the natural environment and ensuring development is compatible with the natural environment, and

iv. the development of the Peacocke Local Centre.

35. Staff continue to undertake engagement with key stakeholders. Following the initial workshops on 22-23 of July 2020, additional one-on-one meetings and workshops continue to be held with key developers and community groups. Developer and community co-design workshops/webinars were also held in mid-August 2020 and 7-8 September 2020, respectively. Staff have also engaged with Kāinga Ora a number of times to discuss potential concerns they may have.

36. Community engagement on the Peacocke Structure Plan took place in late 2020 and staff continue to engage with key stakeholders. A second round of targeted consultation begins in May 2021 with landowners to discuss the draft Peacocke structure plan and associated District Plan provisions in more detail.

37. Staff are taking a separate public excluded report for the Peacocke Plan Change to the Strategic Growth Committee on 20 May 2021. The report is seeking Council approval for the proposed approach to the development of the Plan Change 5 – Peacocke Structure Plan.

38. The current milestones for the Structure Plan are set out in **Table 1**: **High level Plan Change 5 Project time frames.**

Milestone	Description	Planned date
Key stakeholder pre-notification engagement	Workshops, documentation circulation	March – June 2021
Final Iwi review prior to public notification	Sign-off by Waikato-Tainui	February – August 2021
Final structure plan documents and District Plan provisions	Present to Council	June 2021
Notify plan change (subject to interaction with current infrastructure, procurement and acquisition processes)	Council Meeting	August 2021
Prepare s42A report		September - December 2021
Hearing of submissions	Hearing Commissioners	February 2022
Decisions released and appeal period	Commissioners/Environment Court	March 2022

Network Infrastructure

39. Overall, the network infrastructure programme is on track and progressing well in accordance with the HIF facility agreement obligations.

Land acquisition

40. Thirty-six properties have been acquired of the 39 affected landowners. The risk to the programme for construction is decreasing; with access secured for all the areas required for the current construction contracts.

41. Of the remaining three properties, all are progressing through Public Works Act processes and are on schedule, including the Shaw property which is progressing through an Environmental Court appeal process. The two others are now advancing towards acquisition agreements which would resolve access for the works.

42. Acquisition and settlement processes will continue for all properties, as well as work to resolve objections and valuation matters for properties where we do not have a full and final agreement in place. The acquisition process will transition over the next few months into the final phases to conclude property transactions and compensation.

43. A high-level summary is set out below in **Table 2:**

Table 2. Property Status Summary

Property process steps	Properties at each step
Negotiation in good faith to reach agreement. Full and final if possible, otherwise an advanced agreement to secure access.	28 secured by negotiation.
Use the PWA and Proclamation process to secure access where agreement cannot be reached.	8 secured by Proclamation. 2 still in progress.
Mediation followed by Environment Court if required following objections	1 in the mediation process.
Land Valuation Tribunal (LVT) to resolve compensation issues	Zero but a couple of owners considering moving to LVT soon
Final survey following construction completion	zero

44. Where there are property related opportunities to work with neighbouring developments to achieve efficiencies and mutual benefits, these will be considered subject to PWA disposal obligations.

Strategic Wastewater

45. Works through the East Town Belt are now complete with re-grassing and landscaping undertaken as the work site is disestablished.

46. Current works include preparing for drilling under the railway line and a directional drill operation under Wairere Drive near Carrs Road.

47. Planning is still under way for the works along Tramway Road which will involve significant construction traffic management.

48. Procurement of the wastewater transfer pump station, the next major construction package, is under way. A contractor shortlisting process is now complete with tender proper beginning in May with a contract award recommendation planned to be brought to this Committee later in 2021.

Strategic Water

49. On 20 August 2020, this committee approved inclusion of strategic bulk water mains into the scope of Contract 142/2019 – Peacocke Waikato River Bridge, and requested the Chief Executive include the cost for these pipes in the 2021-31 10-Year Plan.

50. A variation has now been issued to HEB Construction under Contract 142/2019 for these bulk water mains.

Waikato River Bridge and Associated Works

51. Bulk earthworks are into the final month before winter which will see large parts of the site close until October. Structural work on the bridge and underpasses at the new roundabout will continue over winter along with and utility services and installation of Council's new strategic water and wastewater pipes.

52. Piling works are under way on the northern riverbank which is challenging work because of how close it is to the steep riverbank. Ground condition risks as well as environmental protection considerations are particularly high during this stage of works. In May, piling activity is expected to shift to the southern side of the river.

53. Fabrication of the first bridge beam is under way at a specialist company in Gisborne. Installation on site, starting with the central "Y" pier begins late 2021, once piling and concrete foundation works are complete.

54. Weston Lea Drive is now partially closed as drainage and utility services are installed and parts of the road pavement for the new urban road is constructed.

55. A closure of Peacockes Road near the Glenview Club has been confirmed with timing now likely to be after the National Fieldays to minimise disruption over that period. A six-to-nine-month closure is necessary due to the complexity of works in the short section between Waiora Terrace and Weston Lea Drive. Detours will be communicated before being implemented.

56. Council has sought to manage construction traffic through requiring the contractor to develop a construction traffic management plan. This plan establishes access to and from the site and includes specific consideration of the materials, supply location, and destination as well as safe construction methodology. As far as practicable, construction traffic remains on the most appropriate route.

57. The construction traffic management plan was a specific response during the Southern Links designation process to give Council visibility over construction traffic activity so that good planning and coordination could occur across other major projects and developments occurring simultaneously in the area.

58. Construction traffic relating to earthworks and utility works has been under way since Christmas in accordance with the certified construction traffic management plan and is predominantly using Waterford/Dixon Road and Peacockes Road (south). Activity will continue at lower levels over winter before ramping up for the next construction season over the summer months beginning in October 2021. Council works are not in isolation and coordination will be needed to align with Waka Kotahi and District Council capital works programmes, which contribute to traffic distribution patterns.

59. As part of maintaining a safe cartage operation, HEB Construction recently completed a training session facilitated by Cycle Action Network NZ. It was attended by all heavy truck drivers as part of a Share the Road campaign.

SH3 Ohaupo Road Roundabout

60. The physical works contract for construction of the roundabout is practically complete. This means that works have finished, and only minor finishing touches are being completed in response to asset owner reviews as part of accepting the finished asset.

61. The works were adapted to include substantial value add items including three pedestrian underpasses, future proofing for bus priority, and the ability to retrofit a signalised roundabout if ever deemed necessary.

62. Total approved budgets within the 2018-28 10-Year plan available for this project are $19.53M, which is mainly HIF funded. This funding is to deliver all phases including investigation, design, enabling works and construction. The final cost to complete the project is estimated to be $19.3M which includes delivering PDA outcomes. The $19.3M includes allowance for some minor costs still to come over the next 12 months for maintenance and final planting.

63. The $19.3M construction expenditure is within approved contract sums set by committee resolutions. Part of the construction expenditure will be offset by payment to Council from Northview Capital Ltd for wetland construction works completed under the PDA. Council will receive this revenue in 2022.

64. The $19.3M does not include payment Council will receive from Northview Capital Ltd for wetland construction works completed under the PDA. Council will receive this revenue in 2022 and will offset implementation costs.

65. Assumed land acquisition costs are based on valuation and legal advice and include betterment. Council is still in the PWA process which will eventually confirm land acquisition costs (including extent of betterment) and is likely to be contested through the Land Valuation Tribunal.

66. Budget under and overs continue to be managed as contingency at a programme level.

67. The completed roundabout asset will be transferred to Waka Kotahi as the ultimate asset owner. An asset write off has been budgeted with the current 10-Year plan.

Opportunity – Bikes on Pipes

68. An opportunity has been identified for delivering a section of off-road walking and cycling path that was not otherwise anticipated to be built for over a decade. This is currently unfunded.

69. The current HIF scope includes land acquisition and construction of a wastewater service south along the North South Arterial alignment to the East West Arterial, ahead of actual road construction. Actual road construction is outside the ten-year period. Optioneering work to for extending the wastewater pipes across the significant gully network is now showing a pipe bridge as the preferred crossing. This was weighed up against options such as drilling deep underneath or taking other inferior alignments.

70. The extra over costs are in the order of $3-5M to widen and strengthen the two pipe bridges sufficient to provide a 3m wide shared walking and cycling path and to connect the path to existing or planned walking and cycling infrastructure. This is currently unfunded and unbudgeted; however, staff are exploring whether subsidy would be available.

71. This route has been identified in the micro-mobility business case and would connect significant development areas directly with the path network delivered under the Peacocke Strategic Transport project, the new Waikato river bridge and path network. See **Attachment 3** for a location plan.

72. Staff will continue to explore this opportunity and keep this committee informed on progress.

Parks and Open Spaces

73. A Notice of Requirement for the approximately 14.5ha northern sports park has been lodged. The Notice of Requirement was limited notified to adjoining landowners, the Department of Conservation (DOC) and Tangata Whenua. Submissions closed on 10 August 2020. Four submissions were received from The Adare Company Ltd (landowner), Rex Hannam (landowner), Kevin and Kathy Sanders (adjoining landowner) and DOC. The hearing was to be held on 21-23 September 2020 but has now been postponed until 3 months after the final decision for the Amberfield consent has been issued. The new hearing date will likely be in mid-2021.

74. The decision by the independent commissioners for Amberfield included the southern sports park and this has been appealed by the applicant. Staff have continued to work with Weston Lea Ltd to reach settlement of the Amberfield appeal matter for the southern sports park. It is now likely that there will be an advance agreement relating to the Sports Park for Council to consider in June 2021.

75. The acquisition of neighbourhood parks and gully land where required will be undertaken as new developments commence.

Wellbeing considerations - *Whaiwhakaaro-aa-oranga tonutanga*

76. The purpose of Local Government changed on 14 May 2019 to include promotion of the social, economic, environmental and cultural wellbeing of communities in the present and for the future ('the 4 wellbeings').

77. The subject matter of this report has been evaluated in terms of the 4 wellbeings during the process of developing this report as outlined below.

78. The recommendations set out in this report are consistent with that purpose.

79. The Peacocke programme is underpinned by Sustainability Principle 1: Council includes environmental, economic, social, and cultural considerations in its decision-making criteria.

Social

80. The vision of the Peacocke programme is to enable the development of an attractive and sustainable community. This aligns closely with the definition of social wellbeing – the extent to which individuals feel a sense of belonging and social inclusion.

Education and community facilities

81. The MOE acquisition team is continuing with securing sites for two new schools in Peacocke.

82. The MOE growth team is also reviewing Melville High and Melville Intermediate schools. The MOE is leading the consultation. The first round of consultation was completed late 2020 and the Ministry of Education team is now preparing a report for the Minister to consider.

Economic

83. The key economic benefit the Peacocke HIF investment for strategic infrastructure will deliver is the bringing forward of residential development in Peacocke as outlined in economic case of the Housing Infrastructure Fund detailed business case.

Environmental

Peacocke-wide environmental activities

84. Environmental wellbeing – the extent the sustainability of the environment is protected now and into the future – is a major consideration for the Peacocke programme. The intent is to return the land to a better state.

85. Peacocke is not only the Council's biggest investment into a new growth area, but also our biggest-ever environmental investment.

86. Work on a regional bat management plan has continued as part of the steering group now known as the Waikato Bat Alliance. The intent is for this to be a multi-agency/cross-Council plan that is being facilitated by Waikato Regional Council. The second steering group meeting was held in December 2020 and agreement reached on engaging a consultant to prepare a draft high-level strategy for pekapeka/bat habitat protection in the Waikato region based on work already completed by the Waikato Bat Alliance and on additional consultation and engagement with the partners.

87. The high-level strategy is proposed to include essential background information; vision, values and principles; and workstreams with long-term outcomes. At this stage, the strategy would not include detailed actions, which will be a subsequent stage.

88. Staff will bring a draft high-level strategy through to the relevant committee for consideration once prepared in June 2021. Following support for the high-level strategy from all partner organisations, engagement with the wider community will be undertaken on behalf the Waikato Bat Alliance.

89. Several developers in the area have indicated that they would like to commence monitoring of Long-Tail bats on their land this monitoring season. In the absence of a Bat Management Plan (which may take some time to prepare), staff have prepared monitoring methodology advice that landowners can use to support quality and consistent information across the area. It is envisaged that this methodology will eventually align with any methodology recommended under the Regional Bat Management Plan and the data will be shared across other monitoring

activities in the city, for example the Project Echo annual survey and the Southern Links monitoring.

90. Project Echo has been undertaking its annual bat survey monitoring in the city, including the Peacocke area. Council makes a financial contribution to the survey and will have access to the results once available later in the year.

Southern Links and transport corridor-related environmental activities

91. Work is underway to implement the Ecological Monitoring and Management Plan (EMMP). This includes significant gully and stream restoration work (e.g., more than 10ha within the catchment), pest control, and bat roost protection and enhancement (e.g., providing artificial bat roosts).

92. Key current and upcoming activities include:

    i. 80 artificial bat roosts (bat boxes) have been installed in the Peacocke area to date as part of implementing the EMMP. An additional 20 bat boxes will be installed once access to various sites has been secured.

    ii. Significant restoration work has started. Planting plans have been prepared for the first 8ha of gully and lizard habitat restoration over the next 3-4 years. Detailed design and consenting work for the associated maintenance track is nearly complete.

    iii. Restoration work on the first 1.6ha lizard habitat restoration work has started with 5000 plants in the ground and another 6500 to be planted this coming season. Baseline lizard surveys for this site were completed in the end of 2020, confirming the presence of copper skinks. Gorse removal and fencing has been completed; pest plant and predator control is continuing.

    iv. Gully restoration work expected to commence this planting season on a 1ha site adjoining the lizard habitat site.

93. Other ongoing monitoring required by the EMMP has been scheduled as follows:

    i. Seasonal acoustic bat monitoring and bat box monitoring surveys are complete.

    ii. Seasonal thermal imaging bat monitoring at the Waikato river bridge site for are complete.

94. All tree and vegetation removal for Southern Links-related projects to date have followed the protocols in the EMMP to protect bats, lizards, and birds from harm.

95. The Ohaupo Rd/SH3 Roundabout project has planted 17,000 plants to date. Additional planting of the stormwater wetland area will be undertaken this planting season, with final planting being undertaken as part of the completion works of the adjoining developer.

Mangakootukutuku Integrated Catchment Management Plan (ICMP)

96. The Mangakootukutuku ICMP has been under development since 2017 and has been submitted to Waikato Regional Council for certification.

Cultural

97. Effective partnership with Iwi is integral to the success of many projects across the Peacocke programme. We respect the special status of Tangata Whenua, are committed to the principles of Te Tiriti O Waitangi and further Maaori aspirations through building mana-enhancing partnerships.

98. Our Iwi partners, Waikato-Tainui, are engaged under the Joint Management Agreement (JMA), with a shared responsibility to achieve the vision and strategy for the Waikato River.

99. Staff place a high level of importance on the Vision and Strategy for the Waikato River when planning projects that impact the river and tributaries within the Peacocke catchment.

100. Staff recognise and consider relevant sections of the Waikato-Tainui and Ngaati Hauaa Environmental Plans when planning projects within the Peacocke catchment.

101. Maangai Maaori provide a political voice for Maaori within the decision-making of select Council committees.

102. The Council continues to meet its legislative responsibilities under the RMA by providing opportunities for Iwi and hapuu to contribute to local government decision-making processes and exercise of kaitiakitanga over the natural and physical aspects within Peacocke.

103. Iwi and hapuu contributions in Peacocke have included the Southern Links road corridor projects; private plan changes; ICMPs; and processing of resource consents.

104. There is an agreement in place between the Council and Waikato-Tainui to resolve first rights of refusal for designated land that was originally derived from the Crown.

105. The programme team continues to engage with the Tangata Whenua Working Group (TWWG) to enable the construction of network infrastructure in Peacocke in partnership with local iwi. Cultural inductions and training have helped educate the wider team and contractors on the importance of keeping cultural considerations at the forefront of everything we do.

106. Cultural symbolism is woven into the scope of construction projects. Actual details are being developed through various stages of the design development and through working with HEB Construction, and in close partnership with the TWWG. A 'cultural blueprint' process will help ensure cultural opportunities within placemaking and wayfinding are identified and aligned with the overall cultural history of the area.

107. Kaiarahi and Kaitiaki contracts are now in place which include specific Iwi representatives embedded within the construction contracts to guide and provide cultural guardianship during construction works.

108. Iwi/Mana whenua have been engaged for the Peacocke Plan Change (Peacocke District Plan Change 5).

109. Iwi/Mana Whenua have completed and endorsed the cultural section of the Mangakootukutuku ICMP.

110. Iwi/Mana Whenua support to Council in resolving the protest in Peacocke by Te Wakaminenga o Maniapoto and others is continuing. Iwi and Mana Whenua are clear that these protest groups have no mandate and advise Council to dismiss the protest claims of mana whenua made by the groups.

111. Amorangi Maaori continues to provide cultural advice and support to project management teams and works in Peacocke.

112. Reports on the Peacocke Programme is provided to both Iwi and Mana Whenua through the monthly Te Ngaawhaa Whakatupu Ake Council hui.

113. As part of Council's commitment to the partnership with Waikato-Tainui, on the 18 March 2021, Council approved the revocation of the Historic Reserve status for Whatukoruru Reserve. The final approval process is now with the Department of Conservation (DOC). Once approved by DOC a Gazette notice will be published to formally revoke the reserve status meaning that the transfer to Waikato-Tainui can be completed.

Communications and Engagement Activities

114. As part of the Peacocke engagement strategy, there has been a focus on engaging with the existing communities in south-west Hamilton, as well as wider Hamilton, to make sure we

bring the whole community on the journey with us. A focus of the next few months will be engaging our landowners and other key stakeholders around the Peacocke Structure Plan and communication around the Strategic Wastewater and Transport project construction.

115. Staff are continuing to engage with environmental and cultural groups, key developers, and Government agencies including Heritage New Zealand Pouhere Taonga, Kāinga Ora and Department of Conservation, as well as our project partners through the Housing Infrastructure Fund including Waka Kotahi NZ Transport Agency.

116. Staff attended a Kāinga Ora information session at Melville High School on 14 April 2021 to support engagement around their new residential development, in proximity to Peacocke.

117. Construction is now well under way on the new wastewater pipelines and Waikato River bridge and surrounding transport network. Neighbouring residents and landowners have been kept up to date with the works through letter drops, newsletters and one-on-one meetings.

118. Communication around construction traffic is being managed on a case-by-case basis. Contractors are actively engaging with Bike Waikato and other stakeholders to educate drivers using the area.

119. Proactive media around bridge construction achieved front page coverage in the Waikato Times / Stuff.co.nz: Uniquely Hamilton bridge in leading lane to cross Waikato River. Construction updates on social media achieved strong reach: Facebook, LinkedIn.

120. Preparations are continuing to undertake landowner engagement around the Peacocke Structure Plan.

Financial Considerations - *Whaiwhakaaro Puutea*

121. The approved overall budget for 2018-28 10YP Peacocke growth cell remains unchanged at $413.5 million. The programme remains on track and on budget as per the business case. While overall this total remains unchanged, there is a need to forecast movements in annual amounts to re-phase budgets between years, allowing timing to be amended to reflect actual expenditure needs (not reflective of project progress).

122. The Peacocke growth cell is in part being funded by the New Zealand Government through the Housing Infrastructure Fund (HIF). The HIF relates to provision of essential infrastructure. The total value of these works is $290.4m, funded by NZTA subsidy of $110.1m and HIF of $180.3m.

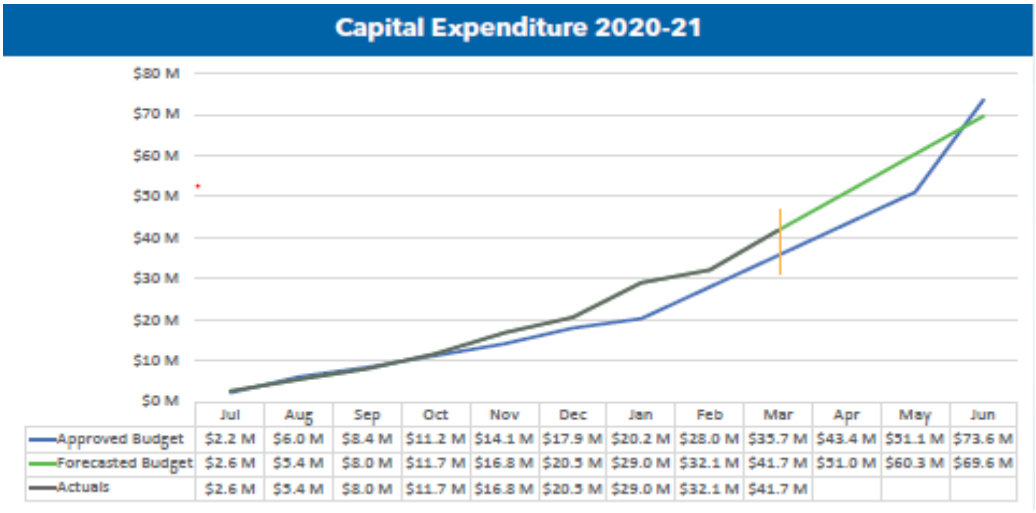
123. The 2020-21 Approved Annual Plan budget for the total Peacocke growth cell is $73.6m. The associated capital revenue from NZTA is $14.4M.

124. This has been amended through the forecast. The total expenditure is $69.6m and the associated capital revenue is $12.5m. The forecast does not change the overall value of the programme but simply reflects timing changes to reflect actual progress.

125. The following table identifies the HIF and Non-HIF budget elements:

2020-21	Expenditure	NZTA Subsidy	Total
HIF Related	$39,031,620	$11,329,103	$27,702,517
Non HIF	$30,612,945	$1,125,278	$29,487,667
Total	$69,644,565	$12,454,381	$57,190,184

126. The cashflow for 2020-21 can be seen in the following graph.



127. This cashflow reflects that expenditure increases as we move into the construction season. The three main contracts being the bridge, wastewater pipe and the wastewater pump station are now in progress.

128. Total actual expenditure as at 31 March 2021 was $41.7m. Associated revenue from NZTA was $13.2m.

129. To date there have been 12 HIF funding drawdowns, totalling $22.3M. Nine have been claimed. The final quarter for the previous financial has been claim and funds paid to Council.

130. The following summary table has the actual financial performance for the HIF, by financial year. Also included is the remaining value.

Financial Year	HIF Facility	NZTA Subsidy	Total
2017-18	$176,000	$91,000	$267,000
2018-19	$5,737,000	$5,094,000	$10,831,000
2019-20	$16,395,526	$10,021,241	$26,416,767
Total	$22,308,526	$15,206,241	$37,514,767
Remaining	$157,991,474	$94,893,759	$252,885,233
Total	$180,300,000	$110,100,000	$290,400,000

131. The first, second and third drawdowns for current financial year (2020-21) are in progress. They have a combined HIF facility value of $22.9m. The following table breaks down the value of each quarter.

Drawdown	Period	HIF Facility	NZTA Subsidy	Total
#12	Quarter 3, 2020/21	$12,374,101	$6,567,175	$18,941,276
#11	Quarter 2, 2020/21	$6,400,619	$3,323,302	$9,723,921
#10	Quarter 1, 2020/21	$4,122,478	$1,789,780	$5,912,258

Risks - *Tuuraru*

132. The Peacocke Programme has adopted the Council's risk management framework with further alignment with the Waka Kotahi NZ Transport Agency risk register format.

133. As part of the assurance framework implemented into the Peacocke Programme, the Council's Risk Manager provides support to the Peacocke Programme Manager.

134. Construction phase risk workshops have been held with the successful contractors, which has led to updated risk registers.

Emerging risks

135. The rate of developer uptake is being closely monitored following some delays experienced with the first major resource consent application, Amberfield, largely due to biodiversity requirements. Staff will continue to monitor this as an emerging risk, noting that most consenting activity is largely dependent on the network infrastructure being in place (from 2023/24).

136. The PWA process obligates the Council to purchase whole properties in a limited number of cases. The approved project budget is based on the cost of the land within the designated footprint only. This cost risk will be mitigated through the eventual sale of land at market price and the proceeds recycled back into the relevant HIF budget for physical works.

137. Cost over- and under-runs are likely on individual project components; however, this risk will be mitigated within the overall funded network infrastructure budget for Peacocke.

138. In reviewing the Mangakootukutuku ICMP, Waikato Regional Council has asked that the ICMP include two phases of stormwater treatment for all roads in Peacocke to provide retention of stormwater. This would commonly mean installing both stormwater wetlands and raingardens. The ICMP team considers that the cost benefit of the second phase of treatment is extremely low (except for busy roads) and that other environmental interventions (such as additional restoration planting) are likely to be more impactful and more cost effective. Should Waikato Regional Council insist on two phases of stormwater treatment for all roads, this would increase costs and land requirements over what has been anticipated within existing planning and budgeting with Peacocke.

139. There is a risk that due to the scale of work required in Peacocke (by Council and private developers) that the level of construction activity and disruption results in community complaints. While steps are in place to ensure planning minimises effects as far as practicable, complaints from residents or other parts of the community relating to noise, dust, travel delays and construction traffic may occur. This risk is being managed through the Construction Communication Plan.

140. Normal construction risks exist relating to large-scale physical works contracts. During the earthwork stages of works, these risks relate to unforeseen ground conditions, underground services, and ecological and environmental controls during major earthworks operations adjacent to sensitive receiving environments e.g., gullies, river etc.

Covid-19 Risks

141. The Government's response to Covid-19 has resulted in reduced alert levels; however, there remains a risk going forward both locally and internationally as the likelihood and consequence of ongoing impacts remains difficult to predict. Movement within alert levels could disrupt the supply chain or workforce availability or result in increased time and cost for projects. Staff are monitoring the situation and working with Ministry of Housing and Urban Development on options to manage risks.

142. The economic impacts of Covid-19 may also affect the timing of developments in Peacocke, particularly the timing of housing construction which may affect projected developer uptake of 3,750 homes over 10 years. Staff will continue to monitor and report on the situation and will be seeking more ways to enable development in the area while ensuring wellbeing outcomes for the community.

143. Covid-19 may also impact planned community engagement activities, meaning potential delays to some projects or changes in the delivery of engagement. The project teams are actively monitoring the situation and will respond as more information arises.

144. Construction market volatility resulting from Covid-19 and the associated alert levels is currently an unknown risk, particularly in relation to international supply chains. Options for

early procurement of some overseas items is being explored to help mitigate this risk, although some uncertainty will remain.

Significance & Engagement Policy - *Kaupapa here whakahira/anganui*

145. Having considered the Significance and Engagement Policy, staff have assessed that the matters in this report have low significance.

The next six months: May 2021 – October 2021

146. The next six months will include high levels of engagement and consultation as several key projects in the programme progress. The focus will be on:

a) understanding and monitoring impacts of the various Covid-19 alert levels on the programme
b) progressing the Peacocke Structure Plan review (Plan Change 5)
c) continuing work on key infrastructure including the wastewater transfer pump station procurement
d) construction of key infrastructure projects including the bridge and wastewater pipeline
e) progressing land acquisition
f) developing further the environmental workstream and implementation of the EMMP
g) continuing the consenting processes
h) progressing commercial PDA negotiations with developers
i) looking for more ways to enable development
j) investigating active recreation reserves
k) continuing sports park acquisition and designations
l) continuing to form partnerships
m) progressing investigations into HIF to IFF arrangements
n) continuing stakeholder engagement.

Attachments - *Ngaa taapirihanga*

Attachment 1 - Peacocke Programme Status Map - March 2021

Attachment 2 - Peacocke Development Activity Map - April 2021

Attachment 3 - Peacocke Bikes on Pipes

Peacocke
Progress Update
– MARCH 2021

Northern wastewater pipelines
Construction under way

Bridge over Waikato River and surrounding transport network
Construction under way

Amberfield consent court hearing mid-year

Wastewater Strategic Pump Station
Procurement under way

Lizard habitat restoration. 50% planted, next 50% this season.

Sports park designation process under way. Hearing mid-year.

80 bat boxes installed. Bat monitoring under way

Gully habitat restoration this season

Peacockes Road urban upgrade
Design procurement under way

North-south arterial land and wastewater
Land secured for construction, pipeline and design

Whatukoruru Paa
Transfer to Waikato-Tainui in progress

Internal water network not part of road package

Te Inuwai Park opened

Landscape 17,000 plants

East-west arterial road
Design under way

Ohaupo Road (SH3) roundabout
Completed

Hall Road gully habitat restoration

Mangakootukutuku Integrated Catchment Management Plan
Awaiting certification

COBHAM DR
SH1
HAMILTON GARDENS
WESTON LEA DRIVE
PEACOCKES LANE
PEACOCKES ROAD
DIXON ROAD
HALL ROAD
OHAUPO RD
SH3

Peacocke wide activities

1. District plan changes - notification mid-year.
2. Developer conversations for up to 2700 homes.
3. Ministry of Education looking for two school sites and reviewing Melville high school and intermediate.
4. Parks and open spaces land acquisition and development.
5. Investigating public transport, walking and biking.

N

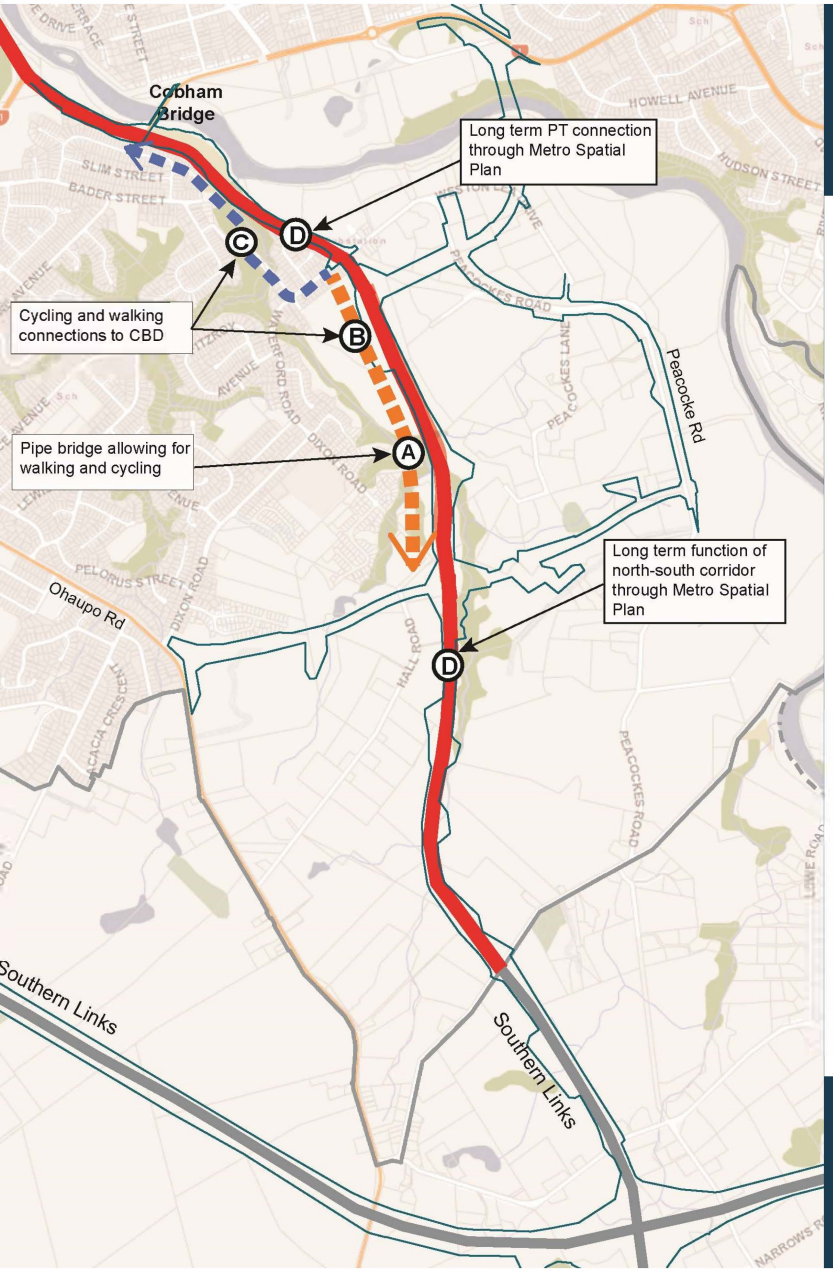
March 2021| map is conceptual only

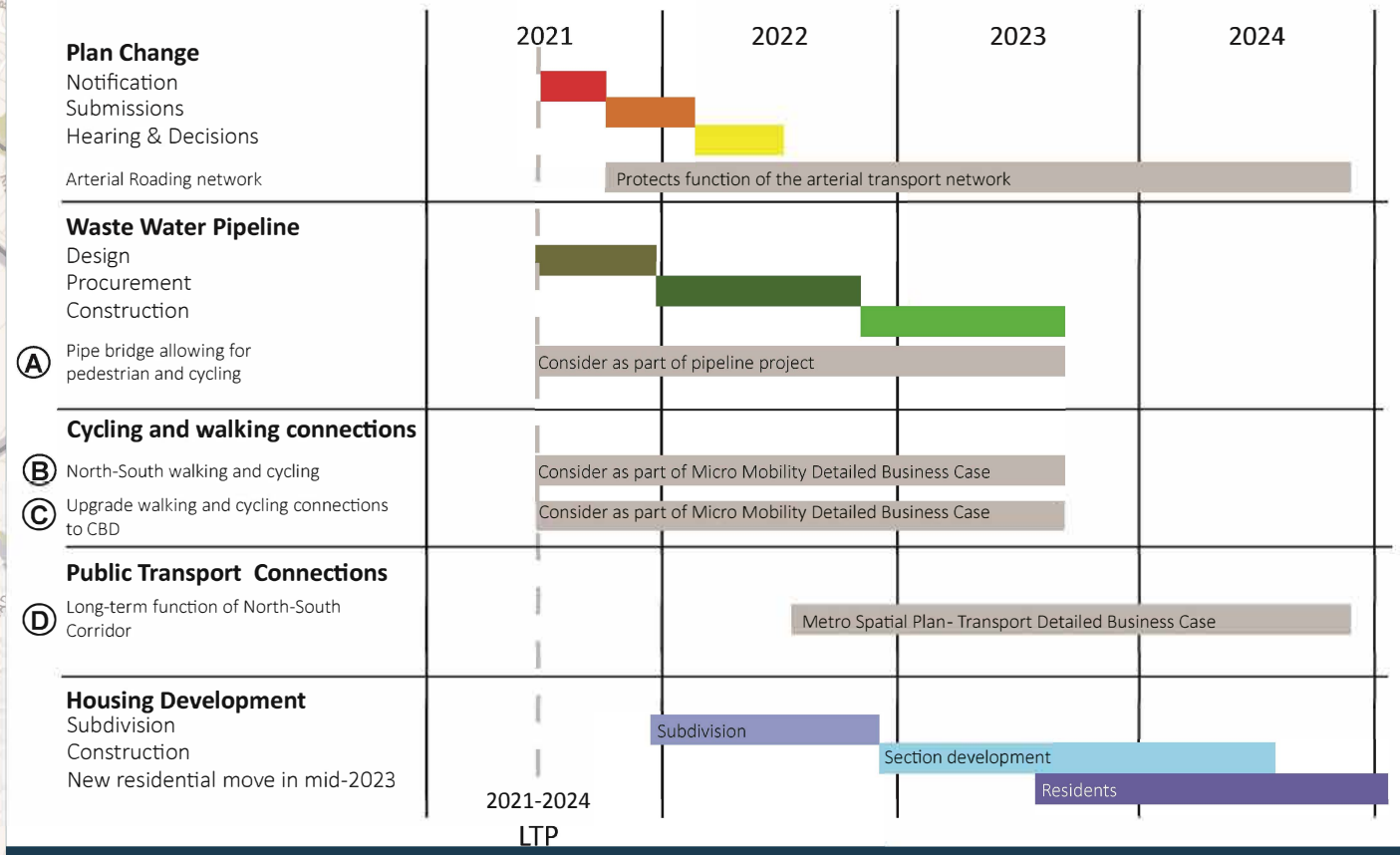
KEY

- Paa site — *A historic Maaori fortified site*
- Borrow pit — *An area with rich underlying gravel historically used to help grow food including kumara*
- Hamilton boundary
- Existing road
- Funded new road
- Non-funded new/upgraded road
- Parks and gullies
- River and streams
- Property boundaries
- Bridges over Waikato River

Hamilton City Council
Te kaunihera o Kirikiriroa


Peacocke
New section applications
COBHAM DR
SH1
HAMILTON GARDENS
New bridge
BADER ST
PEACOCKES RD
Retirement Village 230 units
76 Sections
142 Residents 60 Apartments 54 Care Rooms
22 Sections
49 Sections
27 Sections
73 Sections
112 Sections
39 Sections
6 Sections
75 Sections
250 Sections (110 approved)
SPLITT AVE
DIXON RD
PEACOCKES LN
PEACOCKES RD
833 Sections (appealed)
OHAUPO RD
HALL RD
SH3
A vibrant new community
N
April 2021 | map is conceptual only
KEY
Subdivision complete
Subdivision consent approved
Subdivision lodged, in processing
Hamilton boundary
Existing road
Funded new road
Non-funded new/upgraded road
Bridges over Waikato River
Parks and gullies
River and streams
Property boundaries
Hamilton City Council
Te kaunihera o Kirikiriroa





Hamilton City Council
Te kaunihera o Kirikiriroa

Council Report

Item 10

Committee: Strategic Growth Committee **Date:** 20 May 2021

Author: Jackie Colliar **Authoriser:** Blair Bowcott

Position: Strategic Manager - Infrastructure City Development **Position:** Executive Director Special Projects

Report Name: Hamilton-Waikato Metro Wastewater Detailed Business Case Project Update

Report Status	*Open*

Attachment 10

Purpose - *Take*

1. To update the Committee on progress on the Hamilton-Waikato Metro Wastewater Detailed Business Case (DBC) Project.

Staff Recommendation - *Tuutohu-aa-kaimahi*

2. That the Strategic Growth Committee receives the report.

Executive Summary - *Whakaraapopototanga matua*

3. In March 2021, the Strategic Growth Committee noted Option 4A (Five Plant Option) as the preferred staff-recommended wastewater servicing option to take forward for refinement, and to inform completion of the Southern Metro Wastewater DBC.

4. The Strategic Growth Committee requested the Hamilton City Council (HCC) Governance Group members indicate that any support for Option 4A, is subject to the Waipa District and Waikato District commitment to invest in securing land and discharge consents for the new southern plant.

5. The Governance Group met on 16 April 2021 and approved the recommendation that Option 4A be taken forward as the preferred option for further refinement and completion of the Southern Metro.

6. In addition to confirming the preferred option, the Governance Group agreed to develop a Memorandum of Understanding (MOU) to secure commitments to implement the preferred option from the DBC. The Governance Group directed the Project Team to provide advice on:

    i. A MOU or other similar mechanism to secure commitments to implement the preferred option from the Business Case.

    ii. How to reflect the preferred option in 2021 - 2031 Long Term Plans.

    iii. Growth thresholds and triggers that will match the sequence of growth with the staged development of the new Southern Wastewater Plant.

7. The project team are working through the actions from the March Committee meeting and the April Governance Group Meeting, as well as the activities needed to complete the Southern and Northern Metro Area DBCs.

8. The decisions in this report have low significance and that the recommendations comply with the Council's legal requirements.

Background - *Koorero whaimaarama*

9. This is the fourth project update report to the Strategic Growth Committee. This report covers the period from late March 2021 – April 2021. Previous reports to the Strategic Growth Committee were provided at the 1 October 2020, 12 November 2020 and 30 March 2021 meetings.

10. At the 30 March 2021 meeting, the Strategic Growth Committee noted the staff recommendation to take Option 4A forward as the preferred option for refinement as part of the DBC. The Committee also requested several actions, including that:

    i. the HCC Governance Group members to indicate that any support for Option 4A to take forward for refinement and completion of the Southern Metro Wastewater Business Case, is subject to the Waipa District and Waikato District commitment to invest in securing land and discharge consents for the new southern plant.

    ii. staff include in the Hamilton City Council submissions on the Waipa District and Waikato District Council Long Term Plans a request to include necessary budgetary provision to support an equitable contribution to future-proof the delivery of a new southern plant.

    iii. that further investigation will be undertaken as part of the Northern Detailed Business Case to consider the servicing solution for the Northern Metro Area communities.

    iv. that further investigation will be undertaken as part of the Southern Metro Wastewater Detailed Business to consider wastewater servicing solutions for Southern Metro Area communities and areas, including those immediately adjacent to the current Hamilton City boundary.

11. The March Committee meeting preceded a Project Governance Group meeting scheduled to consider and (if appropriate) approve the preferred wastewater servicing option to take forward for the DBC.

Discussion - *Matapaki*

12. On 16 April 2021, the Project Governance Group (made up of elected representatives from the partner organisations) confirmed Option 4A (5 plant option) as the preferred wastewater servicing option for refinement and completion of the Southern Metro area DBC.

13. In addition to confirming the preferred option for the Southern Metro area, the Governance Group agreed to the development of a MOU (or other similar mechanism) to secure commitments to implement the preferred option from the DBC. Specifically, the Governance Group directed the Project Team to provide advice on:

    i. A Memorandum of Understanding or other similar mechanism to secure commitments to implement the preferred option from the Business Case, and

    ii. How to reflect the preferred option in 2021 - 2031 Long Term Plans

    iii. Growth thresholds and triggers that will match the sequence of growth with the staged development of the new Southern Wastewater Plant.

14. The Governance Group also requested an independent peer review of the DBC documents prior to endorsement and approval being sought.

15. A strawman of a MOU will be discussed, and direction sought from the Project Control and Governance Group members in May. Initial thoughts on the key terms an MOU could detail include:

    a) Defining who the lead Council will be for each project within the preferred option

    b) Confirming the minimum treatment performance standards

    c) Confirming approaches to land acquisition for the new Southern WWTP including potential funding split between councils for land acquisition costs.

    d) Confirming just funding arrangements that will apply to each project

    e) Agreement on approach to dealing with servicing provision across council boundaries

    f) Confirming approaches to asset ownership for each project

    g) Agreeing future governance structure.

16. The items included in the MOU could fall into one of the following three categories:

    a) An agreement between parties to work together to agree a position/commitment

    b) Agreement of the principles that are to apply

    c) An agreed firm position / commitment.

17. As requested at the 30 March 2021 Committee meeting, staff have prepared submissions to the Waipa and Waikato District Council 2021-31 Long-Term Plans. Refer to Attachment 1 of this report for the submission points associated with the Metro WW Project.

Project Update & Next Steps

18. Key project activities underway and planned to be completed through May and June 2021 include:

    a) Development and refinement of the preferred servicing solution, including completion of site selection investigations, consenting strategies, cost estimates and staging of development for the new wastewater plant.

    b) Sensitivity assessments on the preferred servicing solution to inform staging and associated triggers for implementation. This work will assist with refining the preferred option. This work will also help inform the growth thresholds and triggers that will match the sequence of growth with staged development of the new Southern Metro Wastewater Plant.

    c) Closer assessment of servicing options for areas south of the Hamilton boundary. This work is in response to the Committee request at the March meeting.

    d) Stakeholder workshop on 13 May 2021 to seek input into the refined preferred option.

    e) Project Control and Governance Group Meetings to seek input into and direction on:

        i. refined servicing option,

        ii. MOU to secure commitment to implementing the preferred option,

        iii. Feedback on draft financial and management cases.

    f) Delivery of the draft Southern Metro WW DBC for feedback.

    g) Completing project management documentation and planning for the Northern Metro Area DBC.

    h) Initiating technical investigations for the Northern Metro Area DBC.

19. As noted in the March report, the project is behind programme with the Governance Group meeting planned for December 2020 to consider the recommended preferred option to take forward deferred to April 2021.

20. The original completion date was late May 2021. The forecast completion date for the Southern Metro WW DBC is now August 2021 with the draft DBC to be presented to the Committee in July 2021.

Financial Considerations - *Whaiwhakaaro Puutea*

21. There are no financial implications in relation to this current report, however implementing the DBC recommendations is likely to have significant financial implications for the 2021–31 LTPs if adopted by the partner Councils.

22. As noted in the 30 March 2021 Committee meeting, staff from HCC have prepared submissions to the Waikato DC and Waipa DC 2021-31 LTP to seek funding or an unbudgeted funding provision is included for at least the initial planning and land acquisition elements of a new Southern WW facility.

Legal and Policy Considerations - *Whaiwhakaaro-aa-ture*

Staff confirm that this project complies with the Council's legal and policy requirements.

Wellbeing Considerations - *Whaiwhakaaro-aa-oranga tonutanga*

24. The purpose of Local Government changed on the 14 May 2019 to include promotion of the social, economic, environmental and cultural wellbeing of communities in the present and for the future ('the 4 wellbeings').

25. The Metro WW DBC(s) will adopt the Treasury Better Business Case Programme Business Case model. The 4 wellbeing's are core considerations in delivering the business case in addition to Te Ture Whaimana o te Awa Waikato – The Vision and Strategy for the Waikato River and relevant Iwi Management Plans.

Risks - *Tuuraru*

26. There are no known risks associated with the decisions sought in this report. However there are a series of significant risks associated with the successful delivery of the overall project. A project risk register and mitigation strategy has been prepared for the project. The significant risks relate to:

    a) lack of alignment across partner organisations leading to conflicting aspirations, inconsistent messaging, partner disagreement at key decision points; and

    b) funding and affordability challenges.

    c) timing constraints arising for Cambridge Wastewater short-term consent conditions.

27. Detailed implementation risk management plans will be developed as part of completing the DBC.

Significance & Engagement Policy - *Kaupapa here whakahira/anganui*

Significance

28. Staff have considered the key considerations under the Significance and Engagement Policy and have assessed that the recommendation(s) in this report has/have a low level of significance.

Engagement

29. Given the low level of significance determined, the engagement level is low. No engagement is required.

Attachments - *Ngaa taapirihanga*

Attachment 1 - Draft Submission Points on Waipa District Council 2021 – 2031 Long Term Plan

DRAFT SUBMISSION POINTS ON WAIPA DISTRICT COUNCIL 2021 – 2031 LONG TERM PLAN

1. The Hamilton – Waikato Metro Wastewater Detailed Business Case (DBC) Project is being delivered through a partnership between Hamilton City Council, Waikato District Council, Waipa District Council, Waikato-Tainui and Mana Whenua.
2. The preferred wastewater servicing option for the Southern Metro area was confirmed by the Project Governance Group (made up of elected representatives from the partner organisations) on 16th April 2021. The preferred option includes the development of a new wastewater treatment plant located south of Hamilton as well as significant upgrades at Pukete and Cambridge wastewater treatment plants. Timing to deliver and implement the new southern plant is being considered as part of finalising the Southern Metro Wastewater detailed business case.
3. Successful implementation of the new southern plant included in the preferred option requires financial contribution and multi-partner co-ordination to complete land acquisition and (potentially) designation and consenting processes over the next three years and beyond. This financial contribution is needed in addition to the significant investment needed at the Cambridge and Pukete plants.
4. In addition to confirming the preferred option for the Southern Metro area on the 16th April 2021, the Project Governance Group agreed to the development of a Memorandum of Understanding (or other similar mechanism) to secure commitments to implement the preferred option from the DBC. Specifically, the Governance Group directed the Project Team to provide advice on:
    - A Memorandum of Understanding or other similar mechanism to secure commitments to implement the preferred option from the Business Case, and
    - How to reflect the preferred option in 2021 - 2031 Long Term Plans
    - Growth thresholds and triggers that will match the sequence of growth with the staged development of the new Southern Wastewater Plant.
5. HCC endorses the decisions of the Governance Group and is encouraged by the direction to enter into an agreement to secure commitments to implementing the business case recommendations.
6. HCC has funded $9M in years 1 – 3 of its draft 2021-31 Long Term Plan as a contribution toward land purchase, designation and consenting processes for a new southern plant. HCC has also noted significant (unfunded) investment to commence construction of a new southern plant from Year 10 of its draft 2021 – 31 Long Term Plan. Waikato District Council has noted an unbudgeted provision of $4M in their draft 2021-31 Long Term Plan to signal a contribution toward land purchase, designation and consenting processes for a new southern plant.
7. While details of a MOU are being worked through HCC encourage the Waipa District Council to include the necessary budgetary provision or note an unbudgeted provision in its final approved 2021-31 Long Term Plan to support an equitable contribution to future-proof the delivery of a new southern wastewater plant. Including a budget provision or noting an unbudgeted provision will inform the Waipa community of future funding needed to implement the new southern treatment plant, and reinforce the decision made to formulate a MOU (or other mechanism) as a clear recognition that all partners are committed to delivering the sub regional solutions the DBC is indicating.
8. HCC, as part of the project collective, is focussed on the successful conclusion of the Southern Metro Area Wastewater DBC and commencing the Northern Metro Area DBC.

DRAFT SUBMISSION POINTS ON WAIKATO DISTRICT COUNCIL 2021 – 2031 LONG TERM PLAN

1. The Hamilton – Waikato Metro Wastewater Detailed Business Case (DBC) Project is being delivered through a partnership between Hamilton City Council, Waikato District Council, Waipa District Council, Waikato-Tainui and Mana Whenua.
2. The preferred wastewater servicing option for the Southern Metro area was confirmed by the Project Governance Group (made up of elected representatives from the partner organisations) on 16th April 2021. The preferred option includes the development of a new wastewater treatment plant (WWTP) located south of Hamilton as well as significant upgrades at Pukete and Cambridge wastewater treatment plants. Upgrades to the Matangi and Tauwhare Pa systems will also be needed in the short term. Timing to deliver and implement the new southern plant is being considered as part of finalising the Southern Metro Wastewater detailed business case.
3. One of the benefits of the new southern treatment plant is the ability to divert flow away from the Pukete WWTP and enabling Northern Metro area communities (i.e. Taupiri, Hopuhopu, Ngaruawahia, Horotiu, Te Kowhai) to be serviced via an upgraded and expanded Pukete WWTP in the long term. The preferred solution for the Northern Metro area will be confirmed via the Northern Metro DBC.
4. Successful implementation of the new southern plant included in the preferred option requires financial contribution and multi-partner co-ordination to complete land acquisition and (potentially) designation and consenting processes over the next three years and beyond. This financial contribution is needed in addition to the significant investment needed at the Cambridge and Pukete plants and the investments needed at Matangi and Tauwhare Pa.
5. In addition to confirming the preferred option for the Southern Metro area on the 16th April 2021, the Project Governance Group agreed to the development of a Memorandum of Understanding (or other similar mechanism) to secure commitments to implement the preferred option from the DBC. Specifically, the Governance Group directed the Project Team to provide advice on:
    - A Memorandum of Understanding or other similar mechanism to secure commitments to implement the preferred option from the Business Case, and
    - How to reflect the preferred option in 2021 - 2031 Long Term Plans
    - Growth thresholds and triggers that will match the sequence of growth with the staged development of the new Southern Wastewater Plant.
6. HCC endorses the decisions of the Governance Group and is encouraged by the direction to enter into an agreement to secure commitments to implementing the business case recommendations. HCC, as part of the project collective, is focussed on the successful conclusion of the Southern Metro Area Wastewater DBC and commencing the Northern Metro Area DBC.
7. HCC has funded $9M in years 1 – 3 of its draft 2021-31 Long Term Plan as a contribution toward land purchase, designation and consenting processes for a new southern plant. HCC has also noted significant (unfunded) investment to commence construction of a new southern plant from Year 10 of its draft 2021 – 31 Long Term Plan.
8. HCC support Waikato District Council (DC) unbudgeted provision of $4M in their draft 2021-31 Long Term Plan to signal a contribution toward land purchase, designation and consenting processes for a new southern plant. Noting an unbudgeted provision will inform the Waikato community of future funding needed to implement the new southern treatment plant, and

reinforce the decision made to formulate a MOU (or other mechanism) as a clear recognition that all partners are committed to delivering the sub regional solutions the DBC is indicating.

9. HCC has prepared a submission to the Waipa DC to encourage the Waipa DC to include the necessary budgetary provision or note an unbudgeted provision in its final approved 2021-31 Long Term Plan to support an equitable contribution to future-proof the delivery of a new southern wastewater plant.

Council Report

Item 10

Committee:	Strategic Growth Committee	**Date:**	20 May 2021
Author:	Ashwini Pillay	**Authoriser:**	Jen Baird
Position:	Development Contributions Analyst	**Position:**	General Manager City Growth

Report Name: Development Contributions Remission Quarter 3 2021

Report Status	*Open*

Attachment 12

Purpose - *Take*

1. To inform the Strategic Growth Committee on Development Contribution (DC) remissions during the period 1 January 2021 to 31 March 2021 (Q3 2021).

Staff Recommendation - *Tuutohu-aa-kaimahi*

2. That the Strategic Growth Committee receives the report.

Executive Summary - *Whakaraapopototanga matua*

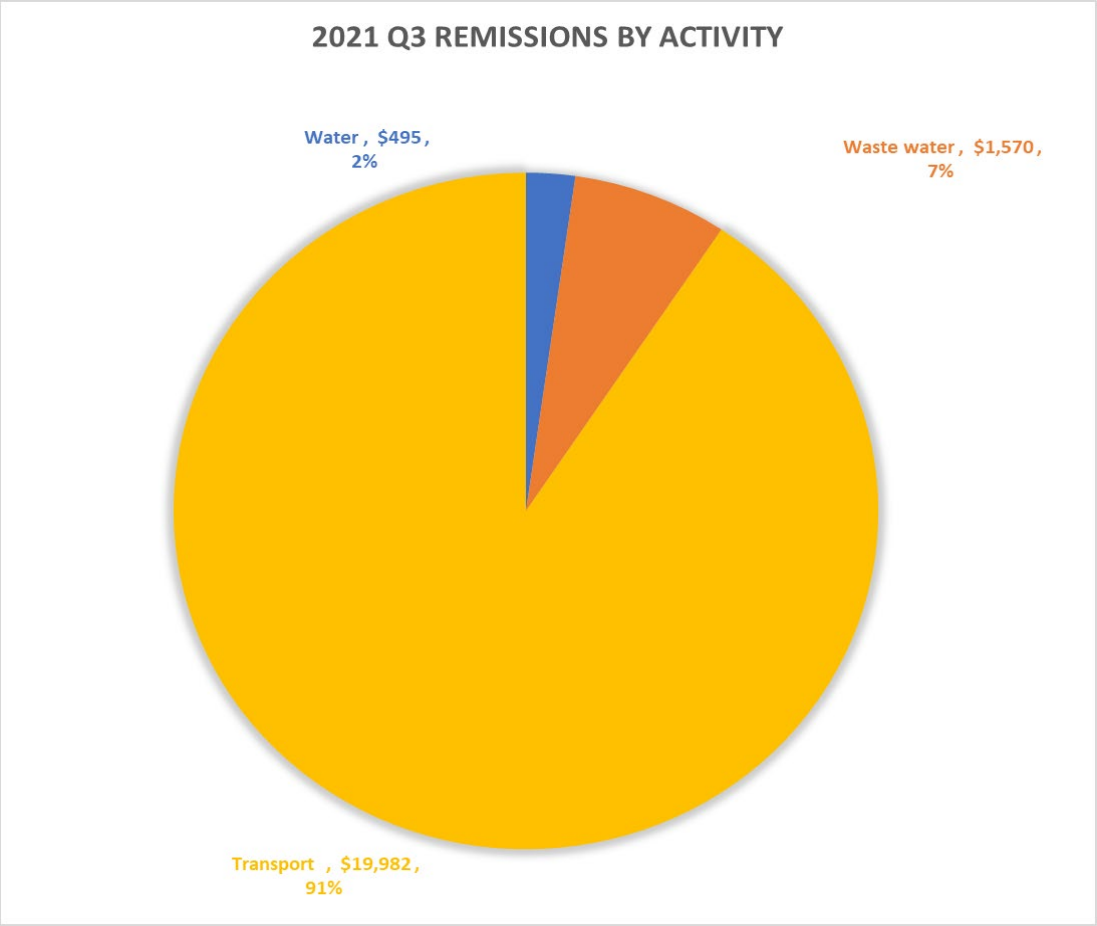
3. As its 20 June 2019 meeting, the Council approved the proposed Development Contributions Policy 2019/20 (DC Policy), with an operative date of 1 July 2019.
4. The DC Policy allows for three types of remission:
   a) Actual demand remissions;
   b) Private Developer Agreement (PDA) remissions; and
   c) CBD remissions.
5. The DC Policy includes a 66% remission that applies for developments located in the CBD until 30 June 2021.
6. Actual demand remissions and PDA remissions rely on developer supplying appropriate evidence of reduction in the impact of actual demand as compared to modelled demand.
7. All remissions in this report have been determined in accordance with the DC Policy and delegated authority.
8. All DC amounts in this report are exclusive of GST.
9. Staff consider the matters in this report have low significance and that the recommendations comply with the Council's legal requirements.

Discussion - *Matapaki*

10. In Q3 2021, the Council approved two DC remissions with a total value of $22,048.00 consisting of:
    a) 1 x CBD remission totalling $2,065; and

b) 1 x actual demand remission totalling $19,982.

11. DC remissions are calculated by individual activity components. The graph below shows the percentage of the total remissions granted attributed to each DC activity.



Financial Considerations - *Whaiwhakaaro Puutea*

12. The financial implications of Council's DC Policy on remissions was considered during the last DC Policy review and accounted for in the Council's financial planning.

Legal and Policy Considerations - *Whaiwhakaaro-aa-ture*

13. The approved remissions presented in this report satisfy the requirements for a reduction in DCs payable as set out in the DC Policy.

14. The Council's DC Policy complies with relevant legislation.

Wellbeing Considerations - *Whaiwhakaaro-aa-oranga tonutanga*

15. The purpose of Local Government changed on the 14 May 2019 to include promotion of the social, economic, environmental and cultural wellbeing of communities in the present and for the future ('the 4 wellbeings').

16. The remission in this report have been evaluated in relation to the 4 wellbeings as outlined below, noting that the decision themselves are directed by the Policy itself without staff discretion.

17. No social, cultural, or environmental considerations were identified in relation to the reported remissions.

Economic

18. Development contributions play an important part in the Council's overall funding and financial strategy.

19. CBD remissions provided for through the DC Policy and set out in this report contribute to the Council's desire to support a vibrant CBD.

20. Actual demand remissions provided for through the DC Policy and set out in this report create a better match between the demand for services with the assessed DC charge, for developments of scale with applications supported by appropriate evidence.

Risks - *Tuuraru*

21. No specific risks have been identified in relation to the remissions in this report. However, remissions and how they are provided for in the DC Policy and applied are a subject of recent challenge by developers. This more general risk is being closely monitored and the Council will be kept informed of any new developments.

Significance & Engagement Policy - *Kaupapa here whakahira/anganui*

Significance

Having considered the Significance and Engagement Policy, staff have assessed that the recommendation in this report has a low level of significance. **Engagement**

23. Given the low level of significance, and community views and preferences being known to Council, no engagement is required.

Attachments - *Ngaa taapirihanga*

Attachment 1 - Development Contributions Remission 2021 Quarter 3

Item 10

Attachment 12

Attachment 1: 2021 Q3 Remissions Report

Actual demand remission

					Amount remitted ($ excl. GST)						
Address	**Developer**	**Development description & Development Contributions Officer details/comments**	**Consent Number**	**Applicable policy**	**Original DC assessment**	**Water**	**Waste water**	**Storm water**	**Transport**	**Reserves**	**Final DC assessment**	**Remission granted**
181 Maui Street	Downey Projects Ltd	Proposed warehouse, retail store and commercal offices for Backdoor Surf	007.2020.00041367.001	2019/2020	$ 20,391	$ -	$ -	$ -	$ 19,982	$ -	$ 409	$ 19,982
					$ 20,391	**$ -**	**$ -**	**$ -**	**$ 19,982**	**$ -**	**$ 409**	**$ 19,982**

CBD remission

					Amount remitted ($ excl. GST)						
Address	**Developer**	**Development description & Development Contributions Officer details/comments**	**Consent Number**	**Applicable policy**	**Original DC assessment**	**Water**	**Waste water**	**Storm water**	**Transport**	**Reserves**	**Final DC assessment**	**Remission granted**
10 Garden Place	Panama NZ Ltd	Proposal for offices fitout on ground floor/first floor of an existing retail building. Change of use from retail to commercial.	007.2020.00041363.001	2020/2021	$ 3,129	$ 495	$ 1,570	$ -	$ -	$ -	$ 1,064	$ 2,065
					$ 3,129	**$ 495**	**$ 1,570**	**$ -**	**$ -**	**$ -**	**$ 1,064**	**$ 2,065**

Resolution to Exclude the Public

Section 48, Local Government Official Information and Meetings Act 1987

The following motion is submitted for consideration:

That the public be excluded from the following parts of the proceedings of this meeting, namely consideration of the public excluded agenda.

The general subject of each matter to be considered while the public is excluded, the reason for passing this resolution in relation to each matter, and the specific grounds under section 48(1) of the Local Government Official Information and Meetings Act 1987 for the passing of this resolution follows.

General subject of each matter to be considered	Reasons for passing this resolution in relation to each matter	Ground(s) under section 48(1) for the passing of this resolution
C1. Confirmation of the Strategic Growth Committee Public Excluded Minutes of 30 March 2021 C2. Plan Change 5 - Peacocke Structure Plan C3. Public Excluded Information only reports C4. General Managers Report - Public Excluded	) Good reason to withhold) information exists under) Section 7 Local Government) Official Information and) Meetings Act 1987)	Section 48(1)(a)

This resolution is made in reliance on section 48(1)(a) of the Local Government Official Information and Meetings Act 1987 and the particular interest or interests protected by Section 6 or Section 7 of that Act which would be prejudiced by the holding of the whole or relevant part of the proceedings of the meeting in public, as follows:

Item C1.	to prevent the disclosure or use of official information for improper gain or improper advantage	Section 7 (2) (j)
Item C2.	to maintain legal professional privilege	Section 7 (2) (g)
	to enable Council to carry out commercial activities without disadvantage	Section 7 (2) (h) Section 7 (2) (i)
	to enable Council to carry out negotiations	Section 7 (2) (j)
	to prevent the disclosure or use of official information for improper gain or improper advantage	
Item C3.	to prevent the disclosure or use of official information for improper gain or improper advantage	Section 7 (2) (j)
Item C4.	to enable Council to carry out negotiations	Section 7 (2) (i)