# AUCKLAND PLAN



### Auckland Plan 2050

Annual Monitoring Report | July 2019



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## Executive Summary

The Auckland Plan 2050 was adopted in June 2018 and is an overarching strategy prepared in response to the statutory requirement for Auckland Council to prepare a spatial plan to guide Auckland's future development over the next 30 years. It provides broad direction for Auckland's growth and development through the six outcomes and Development Strategy contained within the Plan.

The Auckland Plan Annual Monitoring Report uses 33 measures for tracking progress against the Auckland Plan 2050. Progress is reported as:

^	Increasing positive trend	The trend is tracking on the desired trajectory
<b>^</b>	Increasing negative trend	The trend is tracking opposite to the desired trajectory
-	No significant change	Over the period measured there has been little or no change
$\checkmark$	Decreasing positive trend	The trend is tracking on the desired trajectory
$\checkmark$	Decreasing negative trend	The trend is tracking opposite to the desired trajectory
•••	Insufficient data to determine a trend at the time of reporting	There are not enough data sets across the time periods to establish a trend
?	A trend cannot be determined	The trend is defined through modelled data which can vary across time periods making comparisons problematic

A brief analysis of the trends is provided but this report does not aim to explain why results may be moving in a particular direction. That explanation will be considered as part of the Three Yearly Progress Report.

The breadth of the Auckland Plan 2050 outcomes requires the monitoring report to use various metrics and data sources which vary in terms of their availability and frequency. Five of the 33 measures included in this report (housing, transport and business land) are drawn from the Development Strategy monitoring framework which is reported separately in August/September each year. The Development Strategy report provides a more comprehensive overview of growth, housing and land supply across the region.

As the availability of data-sets increases the ability to report trends will improve. The Three Yearly Progress Report will also provide additional data to help analyse trends.

Based on the data and subsequent trends initial findings suggest the following across the six outcomes:

Belonging and Participation	In general belonging and participation based on people's sense of community, safety, health and overall quality of life is the same or improving.
Māori identity and Wellbeing	On balance, improvement for Māori has been minimal across the employment, education and training metrics as well as in the number of co-governance/co- management arrangements. The Whānau wellbeing measure when finalised will provide a more improved understanding of this outcome.
Homes and Places	The metrics against this outcome are either the same or improving except for Homelessness. Further analysis is required to determine whether the scale and rate of change is sufficient to meet Auckland's housing needs (to be provided through both the Development Strategy Report and Three Yearly Progress Report).
Transport and Access	Three of the five transport measures are drawn from the Auckland Regional Transport model which uses a combination of real data and various assumptions to predict the level and rate of change across different areas and components of the transport network. It is intended that the modelled data/measures be replaced with actual data to measure the performance of the network. To that end a working group consisting of Auckland Council/ Auckland Transport, Ministry of Transport, New Zealand Transport Agency has been established. Whilst transport costs as a percentage of household income have remained generally stable, serious injuries remain a negatively increasing trend.
Environment and Cultural Heritage	At the regional scale, landcover of native ecosystems has been relatively stable. However the loss of small habitat fragments is occurring in more intensively developed areas. Just like for plants, the most modified parts of the region retain a higher percentage of exotic birds. Stream water quality is declining across the region whilst lake water quality and beach swimability is showing signs of improvement. Air quality is improving across several monitored sites, however greenhouse gas emissions although decreasing on a per-capita basis are still increasing overall. Based on volunteer numbers Aucklanders still actively value their natural environment.
Opportunity and Prosperity	Auckland's labour productivity and average wages have continued to rise generally over the monitoring period in this report. Employment in advanced industries having dipped to negative three percent growth in 2010 has returned to between two and four percent growth since 2012. Total unemployment has fluctuated between 3.6 to 7.4% since 1998 settling at 4.3% in June 2018. All four groups (20 - 24-years old, Māori, Pacific People, and Female) specifically recognised in the measure with the exception of females consistently exceed the unemployment total average. Those aged 20 – 24 with a level 4 qualification based on the New Zealand Qualifications Framework (NZQF) has also decreased slightly since 2014.

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## Summary of measures

The following table provides a summary for each measure in terms of how they are tracking. Further detail on each measure is provided in the body of the report.

#### **Belonging and Participation**

AUCKI	AND PLAN MEASURE	BASELINE	TREND	DATA SOURCE (DATE)
1	Aucklander's sense of community in their neighbourhood Proportion of respondents to the Quality of Life Survey who strongly agree or agree feeling a sense of community in their local neighbourhood (%)	50% (2018)	-	Quality of Life survey
2	Aucklanders' sense of safety in their homes and neighbourhood Proportion of respondents to the Quality of Life Survey who rate their feelings of personal safety as safe or very safe (%)	62% (2018)	^	Quality of Life survey
3	Aucklanders' quality of life Proportion of respondents to the Quality of Life Survey who rated their overall quality of life positively (%)	83% (2018)	^	Quality of Life survey
4	<b>Relative deprivation across Auckland</b> Population-Weighted Average Deprivation Index Score by local board	Pending census data release	•••	Census (2018)
5	Aucklanders' health Proportion of respondents to the Quality of Life Survey who rated their personal health positively (%)	78% (2018)	-	Quality of Life survey
6	<b>Treaty of Waitangi awareness and understanding</b> Respondents to council's resident survey who rate their knowledgeof te Tiriti o Waitangi   the Treaty of Waitangi either very well or a fair amount (%)	49% (2018)	•••	Auckland Council Resident Survey

#### Māori Identity and Wellbeing

AUCKL	AND PLAN MEASURE	BASELINE	TREND	DATA SOURCE (DATE)
1	Whānau wellbeing	Under development	•••	Under development
2	<b>Māori in employment, education and training</b> Proportion of Māori youth in education, employment or training (%)	81% (2018)	^	Household Labour Force Survey
3	Māori decision making Number of co-governance/co-management arrangements	9 co-governed/ co-managed arrangements in place (2018)	-	Auckland Council
4	<b>Te reo Māori across Tāmaki Makaurau</b> Ability to understand te reo Ability to speak te reo	Pending census data release Current data: Understand 30.4% (2013) Speak 20.6% (2013)	•••	Te Kupenga – Stats NZ

#### **Homes and Places**

AUCKI	AND PLAN MEASURE	BASELINE	TREND	DATA SOURCE (DATE)
1	New dwellings consented by location and type (Development Strategy) Number of dwellings consented by location and type	12,368 (2018)	~	Stats NZ Building Consent data
2	Net new dwellings consented and completed (Development Strategy) Number of dwellings issued with Code of Compliance Certificate	9,433 (2018)	^	Auckland Council Code of Compliance Certificate data
3	Housing costs as a percentage of household income Ratio of housing costs to total household income (%)	18.1% (2018)	-	Household Economic Survey
4	<b>Homelessness</b> Number of people living without shelter and in temporary accommodation	20,296 (2013)	^	Stats NZ
5	<b>Resident satisfaction with built environment at a</b> <b>neighbourhood level</b> Respondents to the Quality of Life Survey who agree they feel a sense of pride in their local area (%)	61% (2018)	-	Quality of Life

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#### **Transport and Access**

AUCKI	AND PLAN MEASURE	BASELINE	TREND	DATA SOURCE (DATE)
1	Access to jobs (Development Strategy) Proportion of jobs accessible to the average Aucklander in the morning peak within 30 minutes by car and 45 minutes by public transport (%)	35% of jobs in Auckland are accessible within 30 minutes by car 8% of jobs in Auckland are accessible within 45 minutes by public transport (2018)	?	Auckland Regional Transport Model
2	<b>Delay from congestion (Development Strategy)</b> Per capita additional delay (minutes) per annum	841 minutes (2018)	?	Auckland Regional Transport Model
3	Use of public transport, walking and cycling Proportion of trips made by public transport, walking and cycling during the morning peak (%)	7.4% Public transport 15.10% Walking and cycling (2018)	?	Auckland Regional Transport Model
4	Household transport costs Average household transport costs (\$/wk)	\$214 per week (2016)	-	Household Economic Survey
5	<b>Deaths and injuries from transport network</b> Number of serious and fatal injuries	595 serious injuries 54 fatalities (2018)	^	NZTA

AUCKL	AND PLAN MEASURE	BASELINE	TREND	DATA SOURCE (DATE)
	State and quality of locally, regionally and nationally significant environments 1a. Native vegetation cover and habitat loss Landcover Index Value (%)	Hauturu (LBI) - 100 Aotea (GBI) - 93 Waitakere - 90 Inner Gulf Islands - 69 Hunua - 60 Rodney - 48 Kaipara - 42 Awhitu - 39 Otamatea - 38 Urban north & south - 32 Manukau - 27 (2012)	-	New Zealand Landcover Database
1 (Overall)	1b. Average native plant diversity within plots for Auckland's ecological neighbourhoods	Waitakere - 44.39 Hauturu/ LBI - 44.18 Hunua - 42 Aotea/ GBI - 38.25 Awhitu - 37.08 Rodney - 36.33 Otamatea - 32.88 Urban north - 29.95 Inner Gulf Islands - 22.5 Kaipara - 21.5 Urban south - 19.77 Manukau - 19.3 (2012)	•••	New Zealand Landcover Database
	1c. Total number of bird species found in bird counts grouped by landscape type	All Sites - 60 Islands - 23 Rural - 42 Urban - 34 Mainland with Pest Control - 30 (2016)	•••	Auckland Council
2 (Overall)	Marine and fresh water quality 2a. Stream water quality	Native forest - Good Exotic forest - Fair Rural - Fair Urban - Poor (2016)	>	Auckland Council
	2b. Lake water quality (Trophic level)	Kereta – Eutrophic Kuwakatai – Supertrophic Ototoa – Mesotrophic Pupuke – Mesotrophic Spectacle – Supertrophic Tomarata – Eutrophic Wainamu – Eutrophic (2012)	~	Auckland Council
	2c. Beach swimming safety (% time Safeswim marine beaches are suitable for contact recreation during the summer swimming season Nov 1 to April 30)	77% (2018)	^	Safeswim
3 (Overall)	Air quality and greenhouse gas emissions 3a. Concentration of air pollutants (NO <sub>2</sub> $\mu$ g/m <sup>3</sup> )	AC Penrose NO2 [µg/m³] - 10.5 AC Queen Street NO2 [µg/m³] - 35.5 AC Takapuna NO2 [µg/m³] - 10.7 (2016)	~	Auckland Council
	3b. Greenhouse gas emission (tonne of CO <sub>2</sub> e accounting for CO2e removed by forests)	6.5 tonne (2015)	^	Auckland Council

#### **Environment and Cultural Heritage**

#### **Environment and Cultural Heritage**

AUCKL	AND PLAN MEASURE	BASELINE	TREND	DATA SOURCE (DATE)
4 (Overall)	Protection of the environment 4a. Relative weediness of Auckland's forest ecosystem index (100 = good)	Hauturu - 100 Waitakere - 95 Hunua - 94 Rodney - 89 Great Barrier (Aotea) - 80.5 Kaipara - 75 Otamatea - 71 Inner Gulf islands - 69 Awhitu - 68.5 Urban north - 56 Manukau - 55 Urban south - 40 (2016)	•••	Auckland Council
	4b. Chewcards damaged by pest animals (% of cards chewed)	Refer to graph (2016)	•••	Auckland Council
5	Resilience to natural threats	Under development	•••	Under development
6 (Overall)	<b>Treasuring of the environment</b> 6a. Statutory Provision	Under development	•••	Under development
	6b. Number of volunteer hours worked in regional park per year	81,342 (2018)	-	Auckland Council

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#### **Opportunity and Prosperity**

AUCKI	AND PLAN MEASURE	BASELINE	TREND	DATA SOURCE (DATE)
1	<b>Labour productivity</b> Real GDP per filled job (\$)	\$103,438 (2018)	^	Auckland Economic Profile
2	Aucklanders' average wages Average weekly wages (\$)	\$1,036 (2018)	^	Labour market statistics
3	<b>Employment in advanced industries</b> Number of people employed in Knowledge Intensive industries	3.0% growth in Knowledge Intensive industries 3.6% growth in total employment (2018)	-	Auckland Economic Profile
4	<b>Zoned industrial land</b> Zoned industrial land (hectare)	6,336 hectare (2018)	-	Auckland Unitary Plan
5	<b>Level of unemployment</b> Unemployment level (%)	4.2% (2018)	$\checkmark$	Household Labour Force Survey
6	Internet usage based on income Proportion of respondents under 65 years of age by internet user status by household income bracket (%)	98.9% users 1.1% non-users (2017)	•••	World Internet Proj- ect New Zealand (WIPNZ)
7	<b>Educational achievement of young people</b> Percentage of those aged 20-24 with a Level 4 qualification or above (%)	39% (2018)	~	Household Labour Force Survey

## Future work and next steps

As at July 2019 the Belonging and Participation, Homes and Places, Opportunity and Prosperity outcomes had generally completed data sets available for reporting.

The ability to provide a regional view for the Transport and Access outcome is currently limited to modelled data making trend analysis difficult. This should be addressed in part through work underway between Auckland Council, AT, MoT and NZTA in the development of actual measures more suited to gauging network performance.

Data sets for the Māori Identity and Wellbeing outcome will remain a work in progress. At present there are limited data sets specific to Māori outside of generic measures broken down by ethnicity i.e. health, employment, education etc.

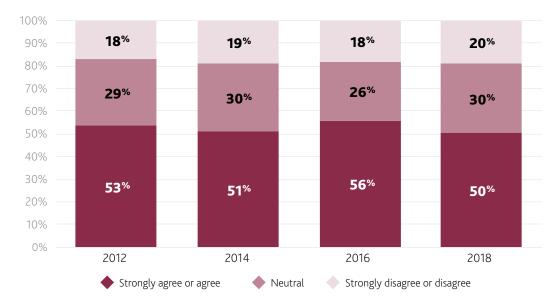
Stats NZ through their work, "Indicators Aotearoa New Zealand – Ngā Tūtohu Aotearoa" are currently looking to develop a measure for 'intergenerational transfer of knowledge" which could help in part to measure a component of whanua wellbeing.

The data for the Environment and Cultural Heritage outcome is not as frequent or available relative to some of the other outcomes and also has limited coverage across the region. The future monitoring of the Unitary Plan should help provide more timely data across this outcome and others in the Auckland Plan.

Three Yearly Progress Report – Due in 2020 will include the annual monitoring report and provide detailed analysis of the trends. It will draw on additional data as necessary to explain trends.

#### Measure 1 Aucklanders' sense of community in their neighbourhood

Respondents to the Quality of Life Survey who rated their sense of community in their local neighbourhood (%)



#### Data

Proportion of respondents to the Quality of Life Survey who report feeling a sense of community in their local neighbourhood.

#### Source

Auckland Council, Quality of Life Survey 2012, 2014, 2016 and 2018.

#### Frequency

Every 2 years.

#### **Availability**

The reports are available on Knowledge Auckland (www.knowledgeauckland.org.nz).

#### Note

From 2012, the Quality of Life survey method changed from a Computer-Assisted Telephone Interviewing (CATI) survey to an online self-complete survey. The 2018 survey used a sequential mixed-method methodology, enabling respondents to complete the survey either online or via a hard copy of the questionnaire.

#### Relevance

A sense of community is an important component of the liveability of a city, as it enables the establishment of social networks and builds social capital.

#### Baseline (2018)

In 2018, 50% of Auckland respondents agreed that they felt a sense of community with others in their neighbourhood. **Analysis** 

#### Analysis

Between 2012 and 2018 there was a decrease from 53 percent to 50 percent of respondents feeling a sense of community with others in their neighbourhood.

Sense of community peaked at 56 percent in 2016.

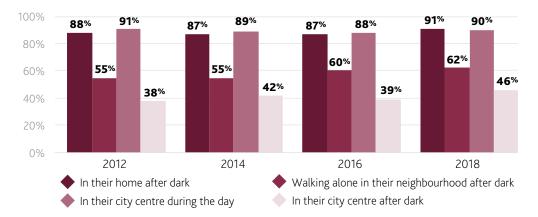
#### (—) Trend

From 2012 to 2018 there has been no significant change.

#### Measure 2

#### Aucklanders' sense of safety in their homes and neighbourhood

Respondents to the Quality of Life Survey who rated their sense of safety in their neighbourhood and city centre (%)



#### Data

Proportion of respondents to the Quality of Life Survey who rate their feelings of personal safety as very safe or fairly safe.

#### Source

Auckland Council, Quality of Life Survey 2012, 2014, 2016 and 2018.

#### Frequency

Every 2 years.

#### Availability

The reports are available on Knowledge Auckland (www.knowledgeauckland.org.nz).

#### Note

The Quality of Life Survey asks respondents whether they feel very unsafe, a bit unsafe, fairly safe, or very safe in different situations, including walking alone in their neighborhood after dark.

From 2012, the Quality of Life survey method changed from a Computer-Assisted Telephone Interviewing (CATI) survey to an online self-complete survey. The 2018 survey used a sequential mixed-method methodology, enabling respondents to complete the survey either online or via a hard copy of the questionnaire.

#### Relevance

Perceptions of safety impact on the health and well-being of the individual, family and the wider community. If people feel unsafe, they are less likely to talk to their neighbours, use public transport, go out in the evening, use public amenities and generally participate in their communities.

#### Baseline (2018)

91% of Auckland respondents felt safe in their home after dark.

62% of Auckland respondents felt safe walking alone in their neighbourhood after dark.

90% of Auckland respondents felt safe in their city centre during the day.

46% of Auckland respondents felt safe in their city centre after dark.

#### Analysis

Between 2012 and 2018 there was a general increase in respondents feelings of safety across three of the four categories measured.

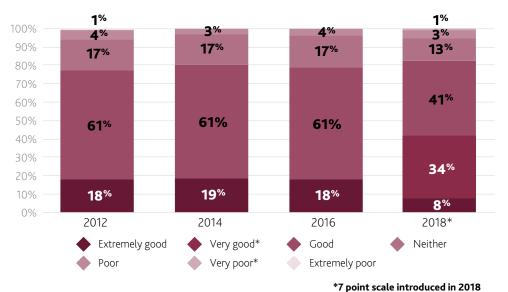
While a high proportion of Auckland respondents reported feeling 'very safe' or 'fairly safe' (91%) in 2018, this proportion dropped to 46 per cent when considering their sense of safety in their city centre after dark, and 62 per cent when thinking about walking alone in their neighbourhood. Both these numbers however had increased by 7% and 2% respectively on their 2016 comparative measures.

#### (🔨) Trend

From 2012 to 2018 increasing positive trend.

#### Measure 3 Aucklanders' rating of their quality of life

Respondents to the Quality of Life Survey who rate their overall quality of life positively (%)



#### Data

Proportion of respondents to the Quality of Life Survey who rated their overall quality of life positively. **Source** 

Auckland Council, Quality of Life Survey 2012, 2014, 2016 and 2018.

#### Frequency

Every 2 years.

#### Availability

The reports are available on Knowledge Auckland (www.knowledgeauckland.org.nz).

#### Note

Respondents were asked to rate their overall quality of life and to also indicate the extent to which they felt their quality of life had changed from 12 months prior.

The Quality of Life survey changed from a five scale rating to a seven scale rating reducing direct comparability. The 2012 Quality of Life survey method changed from a Computer-Assisted Telephone Interviewing (CATI) survey to an online self-complete survey. The 2018 survey used a sequential mixed-method methodology, enabling respondents to complete the survey either online or via a hard copy of the questionnaire.

#### Relevance

Aucklanders' perception of their quality of life is central to their health and well-being. Satisfaction with overall quality of life is a measure of subjective wellbeing. A number of factors contribute to satisfaction with quality of life, which are further explored in the Quality of Life survey.

#### Baseline (2018)

42% of Auckland respondents rated their quality of life as extremely or very good.

41% of Auckland respondents rated their quality of life as good.

13% of Auckland respondents rated their quality of life as neither good nor poor.

4% of Auckland respondents rated their quality life as poor or very poor.

No Auckland respondents rated their quality of life as extremely poor.

#### Analysis

Due to the change to a 7-point scale for the 2018 survey, the 2018 Quality of Life survey is difficult to compare against previous surveys

Generally, there is an improving trend in Aucklanders' quality of life, as there is a reduction in Aucklanders who rate their quality of life as poor / very poor, as well as Aucklanders who rate their quality of life as neither good nor bad. There is also an increase in Aucklanders who rate their quality of life as good, very good or extremely good.

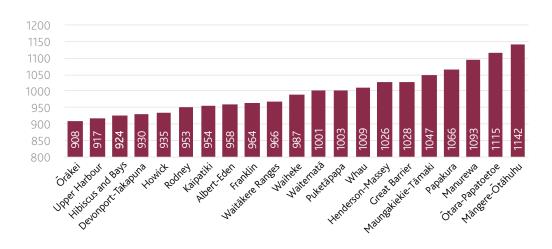


From 2012 to 2018 increasing positive trend.

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#### Measure 4 Relative deprivation across Auckland

Population-Weighted Average Deprivation Index Score (2013 Census)



#### Data

Socioeconomic Deprivation Index (NZDep).

#### Source

Department of Public Health, University of Otago, Wellington.

#### Frequency

The Deprivation Index is produced after each census, generally every 5 years.

#### Availability

Deprivation Index data can be downloaded from the "New Zealand Indices of Deprivation" section of the project website, where more technical details about the index can also be found.

#### Note

The Deprivation Index assigns a value to Census Area Units (CAUs) across New Zealand as a way to indicate relative socioeconomic deprivation. The index is not a measure of absolute deprivation (The lower the number the lower the relative deprivation).

The index is calculated via a number of census variables from the following themes: access to communications; income, employment, qualifications, home ownership, single-parent family status, living space and access to private transport.

#### Relevance

The deprivation index allows investigation of spatial patterns of relative socioeconomic deprivation, which can be used in planning both council and community projects.

#### Baseline (2018)

The 2018 baseline is pending subject to the release of census data (expected 2020).

#### Analysis

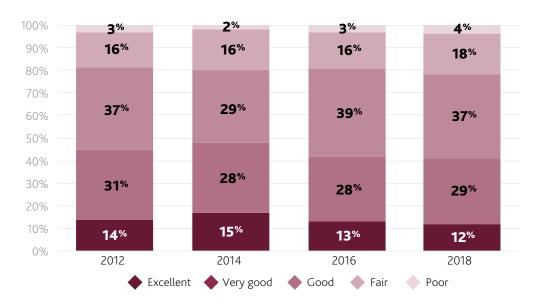
Analysis subject to release of census data.

#### (•••) Trend

Insufficient data to determine a trend at the time of reporting.

#### Measure 5 Aucklanders' health

Respondents to the Quality of Life Survey who rate their personal health (%)



#### Data

Proportion of respondents to the Quality of Life Survey who rated their health positively.

#### Source

Auckland Council, Quality of Life Survey 2012, 2014, 2016 and 2018.

#### Frequency

Every 2 years.

#### Availability

The reports are available on Knowledge Auckland (www.knowledgeauckland.org.nz).

#### Note

Respondents were asked to rate their general overall health.

From 2012, the Quality of Life survey method changed from a Computer-Assisted Telephone Interviewing (CATI) survey to an online self-complete survey. The 2018 survey used a sequential mixed-method methodology, enabling respondents to complete the survey either online or via a hard copy of the questionnaire.

#### Relevance

Good health is critical to wellbeing as it enables people to participate in society and the economy. Without good health, people are less able to enjoy their lives to the fullest extent, and their options may be limited. Self-rated health is a widely used indicator of health status and has been shown to have a strong relationship with objective measures of health status.

#### Baseline (2018)

78% of Auckland respondents rated their health as good, very good or excellent. 18% of Auckland respondents rated their health as fair.

4% of Auckland respondents rated their health as poor.

#### Analysis

Between 2012 and 2018 there was no significant change in how Aucklanders rate their personal health.

In 2018 there was a small decrease in the number of Aucklanders who rate their personal health as good, very good and extremely good. There was also a small increase in the number of Aucklanders who rate their personal health as either fair or poor.

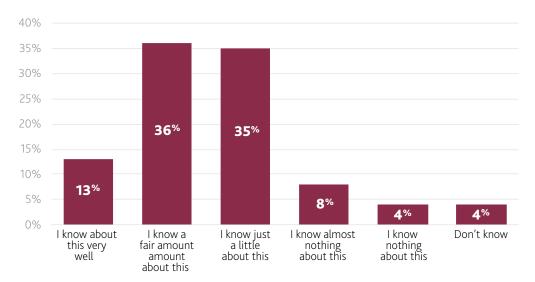
#### ) Trend

From 2012 to 2018 no significant change.

#### Measure 6

#### Treaty of Waitangi awareness and understanding

Respondents to the Council's Resident Survey who rate their knowledge of te Tiriti o Waitangi - the Treaty of Waitangi



#### Data

Respondents in council's resident survey who rate their knowledge of Te Tiriti o Waitangi - the Treaty of Waitangi.

#### Source

Auckland Council - Citizen Engagement and Insights.

#### Frequency

Annual.

#### Availability

On request from Auckland Council.

#### Note

The survey primarily measures respondents' use of, and satisfaction with, a range of council services. It is conducted using a mix of online, phone and face-to-face interviews among Auckland Residents aged 15 years and over. In 2018, 4,475 respondents took part in the survey.

#### Relevance

Te Tiriti o Waitangi - the Treaty of Waitangi is important as a 'living document', central to New Zealand's present and future, as well as its past. It provides the basis for all people to belong, while recognising Māori as tangata whenua. Valuing and better understanding the Treaty contributes to our shared identity and sense of belonging.

#### Baseline (2018)

In 2018 respondents in Council's resident survey rate their knowledge of Te Tiriti o Waitangi - the Treaty of Waitangi with: 13% considered they knew it very well.

36% considered they had a fair amount of knowledge.

35% considered they knew just a little.

8% considered they knew almost nothing.

4% considered they knew nothing about the Treaty of Waitangi.

4% said they didn't know their knowledge level.

#### Analysis

New survey data will be available post June 2019 that will provide a basis for comparison.

#### (•••) Trend

Insufficient data to determine a trend at the time of reporting.



## Māori Identity and Wellbeing

Measure 1

#### Whānau wellbeing – based on principles of whanaungatanga

#### **Explanation of measure:**

The general principles of whanaungatanga have been used as the basis for determining whanau wellbeing. For the purpose of defining whanaungatanga various sources including the Māori dictionary, Te Puawaitanga o ngā whānau – six markers of flourishing whanau, Māori Plan 2017 Glossary (IMSB).

Common across the different definitions for whanaugatanga were the important themes of whanau relationships and connectedness as described in the notes below.

Identification of data sets that measure whanau relationships and connectedness is on hold pending the outcome of work currently underway by Stats NZ. The "Ngā Tūtohu Aotearoa indicators" work is looking specifically to develop measures for 1) Intergenerational transfer of knowledge and 2) whānau connectedness.

**Graph under development** 

#### Data

Ngā Tūtohu Aotearoa indicators - Proposed – Intergenerational transfer of knowledge, whānau connectedness

#### Source

Statistics New Zealand.

#### Frequency

To be determined.

#### Availability

To be determined.

#### Note

Statistics New Zealand.

#### Relevance

Whanau Relationships - "Whānau will flourish when they are cohesive, practice whānaungatanga, and are able to foster positive intergenerational transfers.' Whānau cohesion includes: the quality of relationships within households and within the wider whānau; the use of on-line communication systems; opportunities for whānau living elsewhere to participate in whānau life; whānau leadership; whänau events and participation in those events; involvement in whānau 'traditions'; whānau wānanga." - Te Puawaitanga o ngā whanau.

Whanu connectedness - Whānau will flourish when their connections beyond the whānau lead to empowerment.' Whānau Connectedness includes: whānau utilisation of societal institutions (e.g. schools, health care) and facilities (e.g. sport grounds, gymnasium), whānau participation in sport and/or recreation; whānau engagement in community affairs; whānau exercise of citizenship rights; whānau utilisation of banking and other financial institutions; whānau contributions to community committees, boards, voluntary efforts. - Te Puawaitanga o ngā whanau.

#### Baseline

To be determined.

**Analysis** To be determined.

#### (•••) Trend

To be determined.

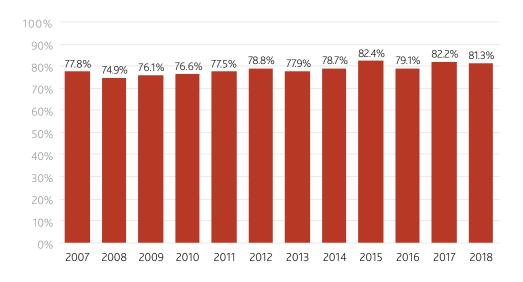
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## Outcome Māori Identity and Wellbeing

#### Measure 2 Māori in employment, education and training

#### Measure 2a.

Proportion of Māori youth in education, employment or training (%)



#### Data

Derived from youth (aged 15-24) NEET rates (not in employment education or training) by ethnicity and age (15-19, 20-24). **Source** 

Statistics New Zealand, Household Labour Force Survey (HLFS); Auckland Council, RIMU calculations.

#### Frequency

Quarterly and moving annual average (to avoid seasonality).

#### Availability

High level data available from Statistics NZ website http://archive.stats.govt.nz/infoshare/?url=/infoshare/ - Work income and spending. Detailed Auckland breakdowns from RIMU custom dataset.

#### Note

Education and training data is available only for youth (ages 15-24). Employment here is number of individuals in paid employment (including self-employed and working proprietors and part-timers). People not working or studying include those who are not available (eg full-time parents and other caregivers), as well as unemployed and other jobless people (not just the workforce). All data is subject to sampling errors, which increases for smaller sub-samples. Quarterly data is seasonal, so annual averages are recommended.

#### Relevance

Employment generates wealth for society, and income and job experience for the individual; education and training enables youth in particular to improve their prospects. In the labour market, young people are often the first to lose their jobs and the last to gain employment. Youths who are in employment, education or training are less at risk of long-term unemployment, have better health outcomes and are less likely to be socially or economically disadvantaged in the future.

#### Baseline (2018)

In 2018, 81% of Māori youth aged 15 – 24 were in employment, education or training.

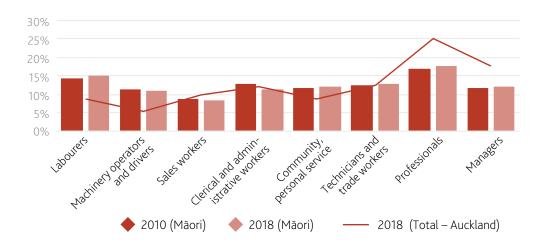
#### Analysis

Between 2007 and 2018 the proportion of Māori youth aged 15 – 24 in employment, education or training increased slightly from 78% to 81%.

#### ( A) Trend

From 2007 to 2018 increasing positive trend.

Measure 2b. Type of employment for Māori (%)



#### Data

Employment (filled jobs) of Māori and all-ethnicities by occupation (ANZSCO I digit), modelled by Infometrics from Statistics NZ data (census and quarterly HLFS).

#### Source

Infometrics, Auckland regional economic profile – Māori – skills – occupation.

#### Frequency

Annual

#### Availability

High level data available from Statistics NZ website http://archive.stats.govt.nz/infoshare/?url=/infoshare/ - Work income and spending. Detailed Auckland breakdowns from RIMU custom dataset.

#### Note

Employment here is number of filled jobs (including self-employed and working proprietors and part-timers). Infometrics model Māori occupation data using their Regional Industry-Occupational matrix.

#### Relevance

Modern economies tend to shift employment out of lower skilled occupations such as labourers and machinery operators, and into higher skilled ones such as managers and professionals. Higher skilled occupations generally tend to be more productive and rewarding, and to offer better opportunities. Skills require education and training.

#### Baseline (2018)

Employment by occupation for Māori in 2018 relative to the total population:

- Labourers 15% (Total population 8.7%)
- Machinery operators and drivers 11% (Total population 5.2%)
- Sales workers 8.4% (Total population 10%)
- Clerical and administrative workers 11.2% (Total population 11.9%)
- Community, personal service workers 11.9% (Total population 8.9%
- Technicians and Trade workers 12.7% (Total population 12.5%)
- Professionals 17.6% (Total population 25.3%)
- Managers 12.1% (Total population 17.5%)

#### Analysis

As at 2018, Māori employed as labourers, machinery operators and drivers, community and personal service workers were above the regional average. Māori employed as clerical and administrative workers, technicians and trade workers were approximately the same as the Auckland population. Māori employed in sales dropped below the general population whilst professionals and managers also remained below the general population.

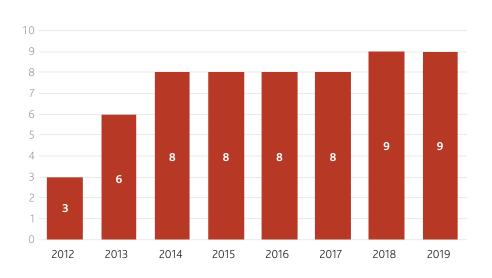
#### 🗕 ) Trend

From 2010 to 2018 no significant change.

## Outcome Māori Identity and Wellbeing

#### Measure 3 Māori decision making

Number of co-governance/co-management arrangements



#### Data

Number of co-governance/co-management arrangements

#### Source

Auckland Council, Te Waka Angamua.

#### Frequency

Annual.

#### Availability

Auckland Council, Te Waka Angamua.

- All years excludes Rangihoa and Tawaiparera Committee, which is not currently in operation
- All years excludes new governance structure over the Ōnehunga Portage, which is not yet fully operational.
- All years includes 2 co-management agreements Pūkaki and Wai-o-maru
- 2018 list reclassifies Pukekiwiriki Pā Joint Management Committee as co-governance rather than co-management.

#### Relevance

Reciprocal decision-making is a significant issue concerning Māori and is a primary pillar for Māori well-being and capacity.

#### Baseline (2018)

There are nine co-governance arrangements, some of which were initiated by Treaty of Waitangi Settlement legislation

#### Analysis

As at May 2019:

- Tūpuna Maunga Authority.
- Wai-o-maru.
- Te Motu a Hiaroa (Puketutu Island) Governance Trust.
- Mutukaroa (Hamlins Hill) Management Trust.
- Ngāti Whātua Ōrākei Reserves Board.
- Pukekiwiriki Pā Joint Management Committee.
- Te Poari o Kaipātiki ki Kaipara.
- Rangihoa and Tawaiparera Committee.
- Te Pūkaki Tapu o Poutukeka Historic Reserve and associated Māori lands co-management Committee (Pukaki).

#### (-) Trend

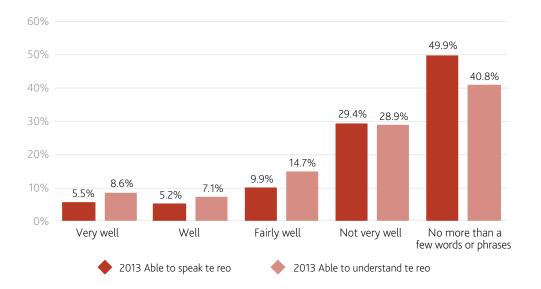
From 2014 to 2019 no significant change.

Outcome **Maori Identity and Wellbeing** 

#### Measure 4

#### Te reo Māori across Tāmaki Makaurau

#### Te reo Māori proficiency (self-rated) (%)



#### Data

Self-rated te reo Māori proficiency.

#### Source

Te Kupenga, Stats NZ (Te Kupenga is Stats NZ's survey of Māori well-being. It was first run in 2013).

#### Frequency

5 yearly.

#### Availability

Available from the Stats NZ website.

#### Relevance

Language is intrinsic to expressing and sustaining culture as a means of communicating values, beliefs, and customs. As the indigenous culture of New Zealand, Māori culture is unique to New Zealand and forms a fundamental part of the national identity. Māori language is central to Māori culture and an important aspect of cultural participation and identity.

#### Baseline (2018)

Data collected August 2018 but yet to be released.

#### Analysis

Analysis subject to release of Te Kupenga data.

#### (•••) Trend

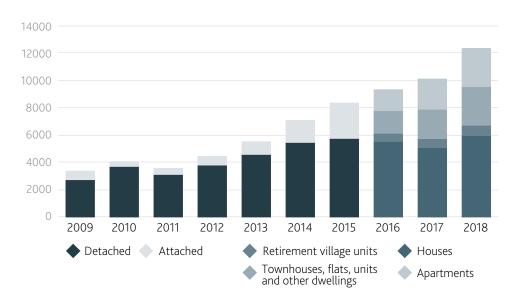
Insufficient data to determine a trend.

## Outcome Outcome Homes and Places

#### Measure 1

## New dwellings consented by location and type (Development Strategy)

#### Number of new dwellings consented by type



#### Data

Numbers of new residential dwellings consented (per annum) by location and type.

#### Source

Statistics New Zealand, building consent data.

#### Frequency

Annual (also available monthly)

#### Availability

Building consent data for Auckland is freely available on Statistics New Zealand's Infoshare website. Detailed data at subregional level is available on request from the Research and Evaluation Unit (RIMU) at Auckland Council.

#### Note

Statistics NZ building consent data is produced both for the number of consents issued and the number of dwellings consented – this analysis is for dwellings consented. Data is for calendar years, and is presented for the previous 9 years. A single building consent may allow for the building of more than one dwelling.

In 2015 Stats NZ revised the classification of data resulting in four categories: 1) Houses, 2) Apartments, 3)Townhouses, flats, units and other dwellings 4) Retirement village units.

#### Relevance

The housing preferences of Aucklanders are diverse. A broad range of housing types are required, in a variety of locations. These characteristics are also important measures of a quality compact urban form.

## This measure will also be used to track progress towards the aims of the Auckland plan 2050 Development Strategy.

#### Baseline (2018)

As at 1 July 2018: Houses – 5,917 new dwelling consents. Apartments – 2,811. Total – 12,368.

Townhouses, flats, units, and other dwellings – 2,823. Retirement village units - 817.

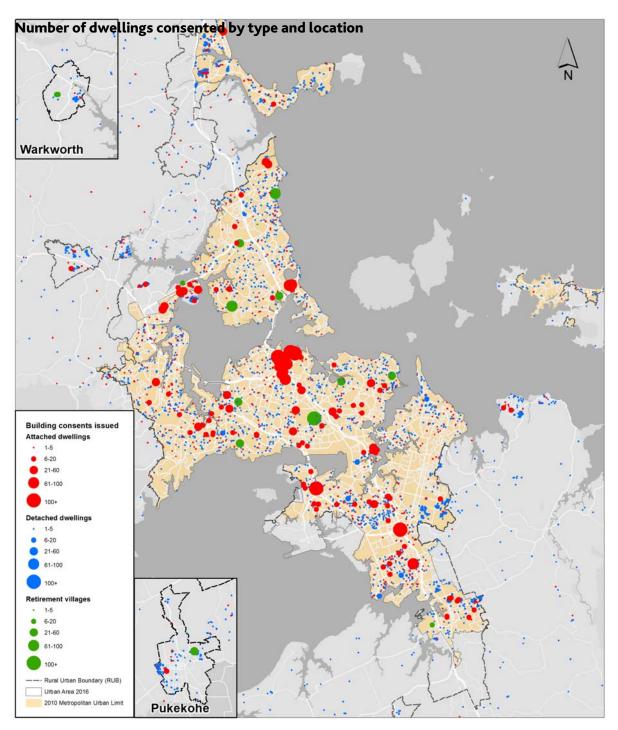
#### Analysis

Since 2010 there has been a continued increase in the number of new dwellings consented. Between 2013 and 2018 the number of new dwellings consented increased significantly from 6,310 to 12,862. The typology of housing also changed significantly in this period. In 2013, apartments, townhouses, flats, units, and other dwellings made up approximately 24% of new dwellings consented. In 2018 this had risen to 46%.

This change in typology has enabled most growth to occur within the existing urban area, particularly in and around centres (refer to Map - Number of dwellings consented by location).

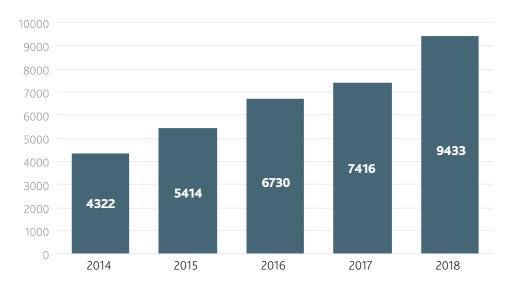
#### ( ) Trend

From 2010 to 2018 increasing positive trend.



#### Measure 2 New dwellings consented and completed (Development Strategy)

#### Number of new dwellings issued with code of compliance certificate



#### Data

Numbers of new residential dwellings that have a Code of Compliance Certificate (CCC) issued per annum.

#### Source

Auckland Council, CCC data.

#### Frequency

Annual (also available monthly).

#### Availability

Numbers of CCCs and the number of dwellings with CCCs are recoded as part of Auckland Council's building consenting processes. Detailed data at sub-regional level is available on request from the Research and Evaluation Unit (RIMU) at Auckland Council.

#### Note

'Dwellings with CCCs issued' is a metric that was developed by council's Building Control department in response to monitoring requirements for the Auckland Housing Accord. 'Dwellings with CCCs issued' data is only available from October 2013 onwards, and spatial matching of this data is only 93 per cent.

#### Relevance

CCCs provide a measure for when a dwelling is able to be occupied rather than a building consent that indicates an intention to build. There is no strict requirements to obtain a CCC, however they are a useful indicator of actual completions.

#### Baseline (2018)

As at 1 July 2018: 9,433.

#### Analysis

Between 2014 and 2018 the number of dwellings with a CCC issued has steadily increased. The largest year on year increase during the monitored time frame was for 2018 at 9,433 (an increase of 2,521 CCCs on the 2017 figure).

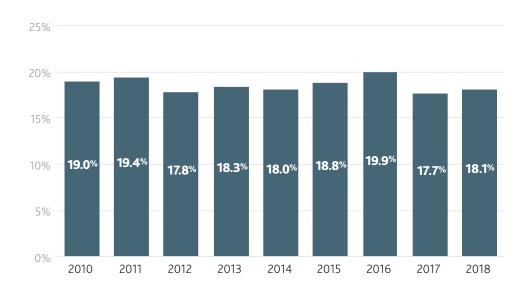
#### (🔨) Trend

From 2014 to 2018 increasing positive trend.

#### Measure 3

#### Housing costs as a percentage of household income

Housing costs to total household income (%)



#### Data

Auckland average household annual expenditure on housing costs and average household total (gross) annual income.

#### Source

Statistics New Zealand, HES Household Economic Survey and HES (Income).

Frequency

Annual.

#### Availability

Published on Statistics New Zealand website.

#### Note

All dollars are nominal (not adjusted for inflation), and include survey error margins of up to 10%. Values are averages (not medians) of households in the Auckland region. Household income includes wages and salary, self-employment, investments and government benefits, and superannuation. Housing costs include rent and mortgages, property rates and building-related insurance.

#### Relevance

Although this ratio is a common indicator of housing cost stress, the household income component depends on many things, including household size and number of income earners, which can sometimes change in response to financial pressures and compensate for them, but does not alleviate them. Also, housing affordability can be affected by the interplay of a wide range of factors including, taxation and fiscal policy, planning and regulatory requirements and costs; industry practice and productivity, migration and demographic changes. These factors affect housing costs for a very broad cross-section of society. It should also be remembered that people who already owned (or inherited) property prior to the price rises, were largely unaffected or even benefited from the price rises.

#### Baseline (2018)

In 2018 housing costs as a percentage of total household income was 18.1%.

#### Analysis

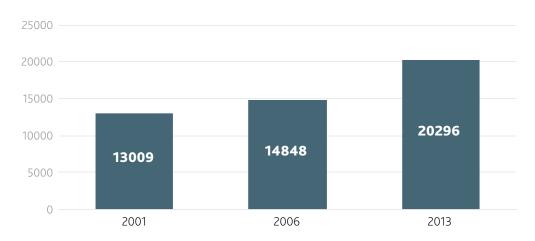
Between 2010 and 2018 expenditure on housing costs as a percentage of total household income remained stable at between 17 to 20%.

#### (-) Trend

From 2010 to 2018 no significant change.

#### Measure 4 Homelessness

#### Numbers of people living without shelter and in temporary accommodation



#### Data

Statistics New Zealand.

#### Source

Amore, K. (2016). Severe housing deprivation in Aotearoa/New Zealand 2001-2013. He Käinga Oranga / Housing and Health Research Programme, Department of Public Health, University of Otago, Wellington.

#### Frequency

Every five years.

#### Availability

http://www.healthyhousing.org.nz/wp-content/uploads/2016/08/Severe-housing-deprivation-in-Aotearoa-2001-2013-1.pdf

#### Note

Severe housing deprivation refers to people living in severely inadequate housing due to a lack of access to minimally adequate housing. This means not being able to access an acceptable dwelling to rent, let alone buy. It includes four main categories:

- Uninhabitable housing garages, sheds.
- Sharing temporarily Couch surfing in private residence.
- Temporary accommodation Emergency housing, refuges, camp grounds, boarding houses, hotels, motels, marae.
- Without shelter Rough sleeping, vehicles, improvised or makeshift shelter.

#### Relevance

Severe housing deprivation is an important social issue which requires an integrated approach at both the local and national level, to reduce poverty and increase opportunity as well as to develop effective interventions to meet the needs of homeless people.

#### Baseline (2013)

As at 2013: 20,296 Aucklanders were homeless.

#### Analysis

Between 2001 and 2013 the number of Aucklanders who were homeless increased significantly from (>) 13,009 to 20,296.

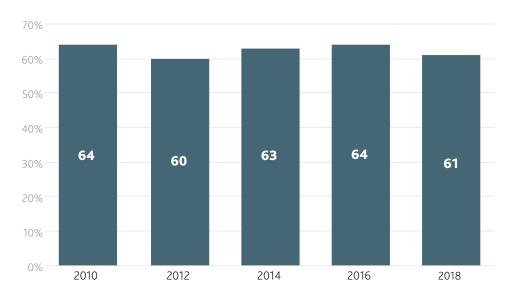
#### Trend

From 2001 to 2013 increasing negative trend.

#### Measure 5

## Resident satisfaction with their built environment at a neighbourhood level

Respondents to the Quality of Life Survey who agreed they feel a sense of pride in their local area (%)



#### Data

Proportion of respondents to the Quality of Life Survey who feel a sense of pride in the way that their local area or neighborhood looks and feels.

#### Source

Auckland Council, Quality of Life Survey 2010, 2012, 2014, and 2018.

#### Frequency

Every 2 years.

#### Availability

The reports are available on Knowledge Auckland (www.knowledgeauckland.org.nz).

#### Note

From 2012, the Quality of Life survey method changed from a Computer-Assisted Telephone Interviewing (CATI) survey to an online self-complete survey. The 2018 survey used a sequential mixed-method methodology, enabling respondents to complete the survey either online or via a hard copy of the questionnaire.

#### Relevance

How residents feel about their local area or neighbourhood can also be considered a reflection in part of how satisfied they are with the built environment. This measure will help to determine whether Auckland is creating a strong sense of place that resonates with its residents.

#### Baseline (2018)

In 2018, 61% of Auckland respondents agreed or strongly agreed that they felt a sense of pride in the way their city or local area feels.

#### Analysis

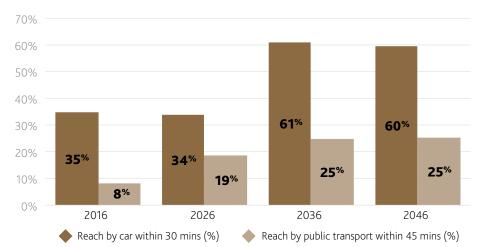
Between 2012 and 2018, respondents that felt a sense of pride in the built environment was relatively steady between 60% to 64%.

#### (-) Trend

From 2010 to 2018 no significant change.

#### Measure 1 Access to jobs (Development Strategy)

Proportion of jobs reached by car or public transport (%)



#### Data

Number of jobs accessible to the average Aucklander in the morning peak within 30 minutes by car and 45 minutes by public transport.

#### Source

ART model outputs, Auckland Forecasting Centre.

#### Frequency

Variable - An updated version of the model is dependent on 2018 census data not yet available.

#### Availability

Data can be sourced from the Auckland Forecasting centre.

#### Note

ART model uses a combination of real data and various assumptions to predict the level and rate of change across different areas and components of the transport network. The use of modelling enables targeted interventions to be made and understood within the context of the broader network now and into the future. The model output was prepared for the 2016 Auckland Transport Alignment project (ATAP). Further refinement to the model outputs was carried out through the revised ATAP in 2018.

As at May 2019 a real time measure was under development through the ATAP measures working group for monitoring access to jobs which could replace this measure.

#### Relevance

For Auckland to benefit from the region's growth, it is essential for people from all parts of Auckland to have good access to the employment, education and other opportunities that growth creates. Our continued prosperity is dependent on the convenient, affordable, safe and sustainable movement of people, goods and services within Auckland, and with the rest of New Zealand and the world. Improving access to employment and education is particularly critical to boosting Auckland's economic productivity and overall prosperity (Ministry of Transport, 2014). To be productive, businesses need a wide choice of potential employees. Similarly, workers need a wide choice of potential jobs within a reasonable commute time to best match their skills and to reduce their vulnerability to long-term unemployment in the event of job loss.

#### Baseline (2016)

34.6% of jobs are accessible to the average Aucklanders in the morning peak within 30 minutes by car.

8.3% of jobs are accessible to the average Aucklanders in the morning peak within 30 minutes by public transport. **Analysis** 

Job accessibility varies significantly by mode and distance. The number of jobs accessible by public transport is expected to significantly increase over the next 30 years. In 2016, 8 per cent of jobs were considered accessible to Aucklanders within a 45-minute trip on public transport. This figure is expected to increase to 25 per cent by 2036. Access by car is also expected to increase significantly especially between 2016 and 2036. In 2016 35 per cent of jobs were considered accessible to Aucklanders within a 30-minute trip by car. This figure should increase to 61 per cent by 2036.

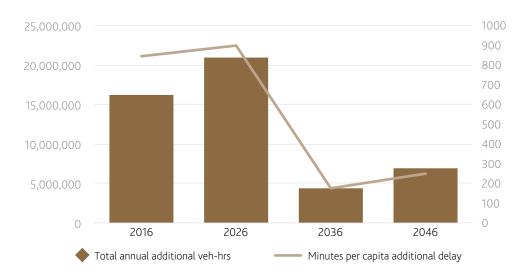
#### (?) Trend

A trend cannot be determined.

#### Measure 2

#### Delay from congestion (Development Strategy)

#### Per capita additional delay (minutes)



#### Data

Per capita annual delay from congestion (minutes).

#### Source

Auckland Regional Transport model outputs, Auckland Forecasting Centre.

#### Frequency

Variable – An updated version of the model is dependent on 2018 census data not yet available.

#### Availability

Data can be sourced from the Auckland Forecasting Centre.

#### Note

ART model uses a combination of real data and various assumptions to predict the level and rate of change across different areas and components of the transport network. The use of modelling enables targeted interventions to be made and understood within the context of the broader network now and into the future. The model output was prepared for the 2016 Auckland Transport Alignment project (ATAP). Further refinement to the model outputs was carried out through the revised ATAP in 2018.

As at May 2019 a real time measure that would monitor congestion levels on motorways and key arterials was under consideration by the ATAP measures working group which could replace this measure.

#### Relevance

Traffic delays constrain economic productivity so moving people and goods efficiently through Auckland is a key transport objective. This measure shows the total and per capita delay across the network based on the projected volume of traffic divided by its theoretical capacity (VC ratio).

Congestion is defined by combining the two worst levels of service measures for measuring network performance:

• Significant delay and low average speed (Level of service E).

• High delay and extremely low speeds (Level of service F).

#### Baseline (2016)

841 minutes per capita annual from congestion.

#### Analysis

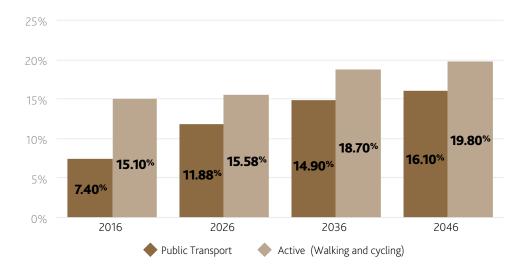
Delay from congestion, measured as per capita additional delay, is expected to peak in 2026 before reducing heavily from 2026 and rising gain from 2036.

#### (?) Trend

A trend cannot be determined.

#### Use of public transport, walking and cycling

Proportion of trips made by public transport, walking and cycling during the AM peak (%)



#### Data

Proportion of trips made by public transport, walking and cycling during the AM peak.

#### Source

Auckland Regional Transport model, Auckland Forecasting Centre.

#### Frequency

Measure 3

Variable - An updated version of the model is dependent on 2018 census data not yet available.

#### Availability

Data can be sourced from the Auckland Forecasting Centre.

#### Note

ART model uses a combination of real data and various assumptions to predict the level and rate of change across different areas and components of the transport network. The use of modelling enables targeted interventions to be made and understood within the context of the broader network now and into the future. The model output was prepared for the 2016 Auckland Transport Alignment project (ATAP). Further refinement to the model outputs was carried out through the revised ATAP in 2018.

As at May 2019 a real time measure that would monitor increases in public transport ridership and cycling were under consideration by the ATAP measures working group and could replace this measure.

#### Relevance

For Auckland to benefit from the region's growth, it is essential for people from all parts of Auckland to have good access to the employment, education and other opportunities that growth creates. People need access to a range of modes to ensure they can move easily throughout the region.

#### Baseline (2016)

7.4% of trips made by public transport during AM peak.

15.1% of trips made by active transport (walking and cycling during AM peak).

#### Analysis

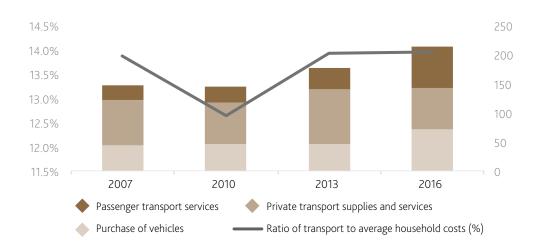
The proportion of trips taken in Auckland by public transport and active modes is expected to increase between 2016 to 2046. In 2016 it was calculated that just over 20 per cent of trips taken in Auckland were by public transport or active modes. In 2046 it is expected that over 30 per cent of trips taken in Auckland will be by public transport or active modes.

#### (?) Trend

A trend cannot be determined.

#### Measure 4 Household transport costs

#### Average weekly household transport costs (\$)



#### Data

Average weekly transport costs.

#### Source

Statistics New Zealand, HES Household Economic Survey and HES (Income).

#### Frequency

3 yearly.

#### Availability

#### Stats NZ.

#### Note

All dollars are nominal (not adjusted for inflation) and include survey error margins of up to 10%. Values are averages (not medians) of households in the Auckland region.

#### Relevance

Reducing household transport costs can help to improve equity across the region. It can also drive change in mode choice. Transport costs contain expenditure on vehicle purchases, private transport supplies and services, and passenger transport services. It includes spending on petrol, vehicle parts and servicing, and travel by rail, road, air and sea.

#### Baseline (2016)

As at 2016 the average cost per week as a percentage of average household costs were:

- Purchase of vehicles \$72.50 per week
- Private transport supplies and services \$70.50 per week
- Passenger transport services \$71.00 per week .
- Percentage of transport costs to average household costs (%) 14.0 %

#### Analysis

Between 2007 and 2016 the ratio of transport costs as a percentage of household costs has remained constant at between 13.9 to 14.0 %.

Between 2007 and 2016 passenger transport costs as a proportion of average household costs increased the most from \$26 to \$71. Purchase of vehicle costs showed the second highest increase from \$44 to \$72 whilst passenger transport supplies and services decreased slightly from \$78 to \$71.

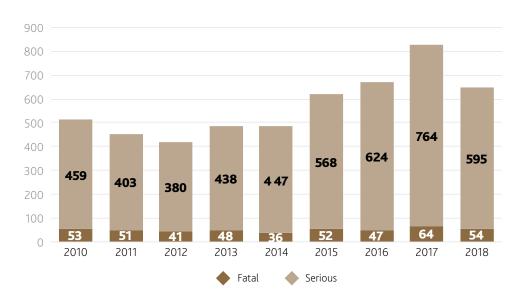
#### (—) Trend

From 2007 to 2016 no significant change.

#### Measure 5

#### Deaths and injuries from transport network

#### Number of serious and fatal injuries



#### Data

Serious and fatal traffic deaths and injuries.

#### Source

New Zealand Transport Agency.

#### Frequency

Weekly.

#### Availability

New Zealand Transport Agency website.

#### Note

Road crash 'fatal and serious injuries' (FSI) is an annual measure of the number of individual deaths and serious injuries recorded by NZ Police Traffic Crash Reports (TCRs) on all local roads, state highways and motorways within the Auckland Council boundary during a calendar year.

Reporting delays may cause numbers to change slightly between reporting cycles.

#### Relevance

This is a key indicator for understanding annual changes in the severity of road trauma across Auckland. The measure reflects the recent international and national shift to a Safe Road System increasingly free of death and serious injury. This approach acknowledges that while minor injury or non-injury crashes may still occur, road system designers have a responsibility to creating and operating a transport system where people are protected from death or serious injury.

#### Baseline (2018)

As at December 2018 there were:

- 595 serious injuries.
- 54 fatalities.

#### Analysis

Between 2010 to 2014 fatalities were declining whilst serious injuries remained consistent between 400 to 450 per year. While there was a reduction in 2018 combined serious injuries and fatalities have shown a rising trend from 2012.

#### ( **^**) Trend

From 2010 to 2018 increasing negative trend.

#### Outcome

## Environment and Cultural Heritage

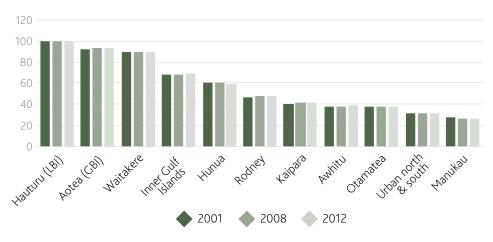
#### Measure 1

State and quality of locally, regionally and nationally significant environments

**Composite measure explanation** - New Zealand is internationally regarded as a 'biodiversity hotspot'. Our indigenous plants and animals, and the ecosystems they live in, are world treasures. When humans first discovered New Zealand it was a different world; adrift and isolated for 80 million years, and populated with many plant & animal species that seemed to belong to the age of dinosaurs. The Auckland Region, has an amazing diversity of species and ecosystems disproportionate to its size, including several species that are found nowhere else in the world. This composite measure covers:

- Native vegetation cover and habitat loss
- Native plant diversity
- Native bird species

#### Measure 1a. Native vegetation cover and habitat loss Landcover Index Value (%)



#### Data

Data landcover index value.

#### Source

New Zealand Landcover Database (NZLCDB), regionally acquired spatial data.

#### Frequency

NZLCDB – 5 to 10 years.

#### Availability

NZLCDB, managed and updated by Land Information New Zealand (LINZ). An update is expected in 2019.

#### Notes

Full regional cover is provided by LCDB, and council data, such as the Regional Ecosystem Layer, LiDAR runs or aerial photo analysis, provides higher spatial resolution for some areas and time stamps.

#### Relevance

This measure tracks key components of the ecological health and resilience of our native ecosystems and species including the total cover, extent and condition of native ecosystems, the loss or clearance of native ecosystems, and the quantity and variety of native species within these habitats. The combination of these programmes provides a comprehensive indication of the stability and resilience of ecological communities. This information feeds into policy changes, environmental management strategies and long-term plans.

#### Baseline (2012)

Due to the current unavailability of data the current baseline is drawn from 2012:

Hauturu (LBI) - 100	Aotea (GBI) - 93	Waitakere - 90
Inner Gulf Islands - 69	Hunua - 60	Rodney - 48
Kaipara - 42	Awhitu - 39	Otamatea - 38
Urban north & south - 32	Manukau - 27	

#### Analysis

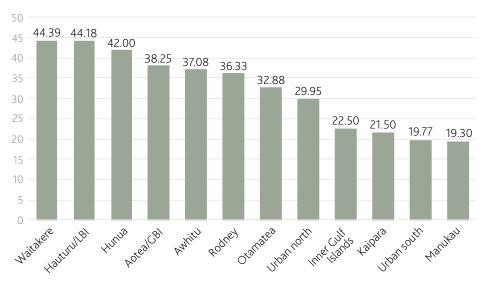
Measured at the regional scale; the per cent landcover of native ecosystems has been relatively stable over the last few decades (refer to graph); however, case-study data shows loss of small habitat fragments is occurring in the more intensively developed parts of the region.

#### (-) Trend

From 2001 to 2012 no significant change.

#### Measure 1b.

#### Average native plant diversity within plots for Auckland's ecological neighbourhoods



#### Data

Data landcover data base.

#### Source

New Zealand Landcover Database (NZLCDB), regionally acquired spatial data.

#### Availability

NZLCDB, managed and updated by Land Information New Zealand (LINZ). An update is expected in 2019.

#### Notes

Full regional cover is provided by LCDB, and council data, such as the Regional Ecosystem Layer, LiDAR runs or aerial photo analysis, provides higher spatial resolution for some areas and time stamps.

#### Relevance

This measure tracks a key component of the ecological health and resilience of our native ecosystems and through quantifying plant diversity across the region. The combination of these programmes provides a comprehensive indication of the stability and resilience of ecological communities. This information feeds into policy changes, environmental management strategies and long-term plans.

#### Baseline (2012)

Due to the current unavailability of data the current baseline is drawn from 2012:

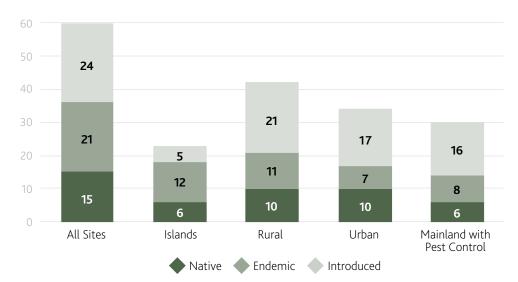
Waitakere - 44.39	Hauturu/ LBI - 44.18
Hunua - 42	Aotea/ GBI - 38.25
Awhitu - 37.08	Rodney - 36.33
Otamatea - 32.88	Urban north - 29.95
Inner Gulf Islands - 22.5	Kaipara - 21.5
Urban south - 19.77	Manukau - 19.3

#### Analysis

Forest ecosystems in landscapes that have been modified by high-intensity farming activity and urban growth have lower plant diversity and naturalness, as well as higher tree and sapling mortality.

#### (•••) Trend

Insufficient data to determine a trend at the time of reporting.



Measure 1c. Total number of bird species found in bird counts grouped by landscape type

#### Data

RIMU Terrestrial Monitoring programme.

#### Source

Field surveys as part of regular monitoring.

#### Availability

3 yearly.

#### Relevance

The feeding relationships among all the animals in an ecosystem help prevent any one species from becoming too numerous. Birds play a vital role in keeping this balance of nature. In addition to being important parts of food webs, birds play other roles within ecosystems as pollinators and are also a valued taonga.

#### Baseline (2016)

Due to the current unavailability of data the current baseline is drawn from 2016:

All Sites - 60 Islands - 23 Rural - 42 Urban - 34 Mainland with Pest Control - 30

#### Analysis

The highest numbers of endemic birds (that's birds only found in New Zealand), such as tui, grey warbler, New Zealand fantail, and New Zealand pigeon, were found on island sites, where native species outnumbered introduced species. There were similar numbers of introduced species across the rural, urban and other mainland sites with pest management in place (e.g. parkland), yet rural sites tended to have more endemic species. Just like for plants, the most modified parts of the region had a higher presence of exotic birds.

#### (-) Trend

Insufficient data to determine a trend at the time of reporting.

#### Measure 2

Marine and freshwater quality

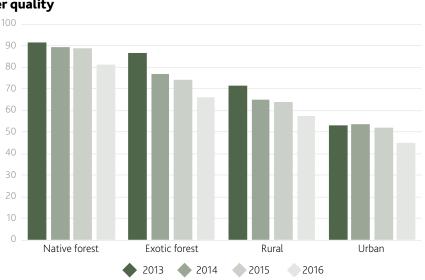
**Composite measure explanation** - The Auckland Region is surrounded by water and has a complex coastline with many harbours, estuaries and islands. The region is also home to many streams, natural and artificial lakes, and aquifers.

Water quality and quantity are both significant issues that will escalate as the population grows and the impacts of climate change become increasingly apparent.

In both urban and rural areas, water quality has declined, and freshwater environments have been compromised. This composite measure covers:

- Fresh water quality:
- Rivers
- Lakes
- Marine water quality

#### Measure 2a. Stream water quality



#### Data

Water quality index.

#### Source

Stream water quality monitoring programme.

#### Availability

Annually.

#### Frequency

monitored annually reported trend 5 yearly.

#### Notes

The average water quality index from 0 (worst) to 100 (best) for broad land cover types in the Auckland Region (2013-2016) and the 2016 water quality class. The data was gathered from across 36 sites.

#### Relevance

Stream water quality is largely influenced by catchment landuse. In general streams with an urban catchment are heavily impacted by contaminants and have poor water quality. Streams within rural catchments generally have good water quality but specific sites are impacted by nutrients and sediment. Streams with a native forest catchment generally have little to no human impact and thereby excellent water quality.

#### Baseline (2016)

The current baseline is set against 2016 data as per the analysis below:Native forest - GoodExotic forest - FairRural - FairUrban - Poor

#### Analysis

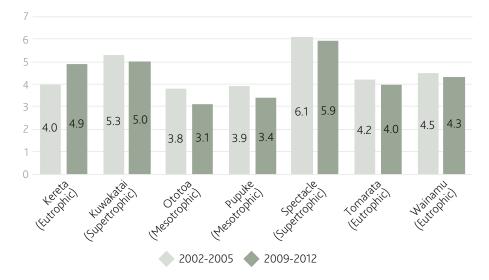
Over the time period monitored all catchments have demonstrated a decline in water quality. The water quality index gave the four catchments the following ratings: Native forest – Good, Exotic forest – Fair, Rural – Fair, Urban – Poor.

#### (💙) Trend

From 2013 to 2016 decreasing trend.

#### Measure 2b.

#### Lake water quality - trophic level



#### Data

Trophic level index (TLI).

#### Source

Lake water quality monitoring programme

#### Availability

Monitored monthly and reported periodically.

#### Frequency

Monitored annually reported trend 5 yearly.

#### Notes

The TLI is used to place lakes into nutrient-enrichment categories known as trophic states:

- microtrophic (TLI < 2; very good) lakes are very clean and often have snow or glacial sources.
- oligotrophic (TLI 2–3; good) lakes are clear and blue, with low concentrations of nutrients and algae.
- mesotrophic (TLI 3-4; average) lakes have moderate concentrations of nutrients and algae.
- eutrophic (TLI 4–5; poor) lakes are murky, with high concentrations of nutrients and alga.
- supertrophic or hypertrophic (TLI > 5; very poor) lakes have extremely high concentrations of phosphorus and nitrogen, and are overly fertile; they are rarely suitable for recreation and lack habitats for desirable aquatic species.

#### Relevance

When nitrogen and phosphorus accumulate in lakes (referred to as 'nutrient enrichment') above certain concentrations, they can stimulate the growth of algae and cyanobacteria. Chlorophyll-a is a measure of the phytoplankton (algae) biomass. Lakes with very high concentrations of nutrients and algae are rarely suitable for recreation and provide poor habitats for aquatic species, particularly through reduction in dissolved oxygen concentrations. Ammoniacal nitrogen and nitrate-nitrogen can be toxic to aquatic life if concentrations are high enough. Water clarity is a measure of underwater visibility in lakes.

#### Baseline (2012)

Kereta (Eutrophic) Pupuke (Mesotrophic) Wainamu (Eutrophic). Kuwakatai (Supertrophic) Spectacle (Supertrophic) Ototoa (Mesotrophic) Tomarata (Eutrophic)

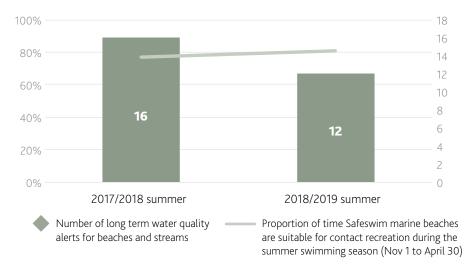
#### Analysis

The lakes monitored range from supertrophic/very poor (kuwakatai) to mesotrophic/average (Ototoa). Some of Auckland's monitored lakes have poor water quality, but showed improving trends over the period 1993 to 2012.

#### (>) Trend

From 2002 to 2012 decreasing positive trend.

### Measure 2c. Beach swimming safety



#### Data

Number of long term water quality alerts for beaches and streams. Proportion of time Safeswim marine beaches are suitable for contact recreation during the summer swimming season (Nov 1 to April 30).

#### Source

https://www.safeswim.org.nz

#### Frequency

Annually.

#### Availability

https://www.safeswim.org.nz

#### Notes

The Water Quality categories relate to the amount of bacteria in the water. Safeswim uses thresholds that are set by the Ministry for the Environment and Ministry of Health, and published in national Microbiological Water Quality Guidelines.

#### Relevance

Health risks are also evident at popular beaches, to varying degrees, where the majority of swimming takes place. In urban areas, this is typically the result of wastewater overflows and contaminated stormwater during rainstorms. Rural streams generally have better water quality, although they also face problems with elevated levels of nutrients, sediment and E. coli in some areas of more intensive agriculture and towns with aging or improperly maintained septic systems.

#### Baseline (2018)

The 2018 baseline for long-term water quality alerts was 12. The proportion of time safeswim marine beaches were suitable for contact recreation during the summer swimming season 2018/2019 was 77%.

#### Analysis

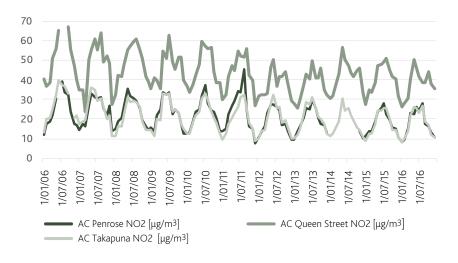
There has been a decrease in water quality beach alerts between summer swimming seasons from 16 to 12. The percentage of time that Safeswim marine beaches are suitable for contact recreation has also increased over this time.

#### (🔨) Trend

From 2017/2018 to 2018/2019 increasing positive trend.

## Measure 3 Air Quality & Greenhouse Gas Emissions

#### Measure 3a. Concentration of air pollutants



#### Data

Concentrations of following pollutants:

- Particulate matter (PM2.5 and PM10).
- Gaseous pollutants (oxides of nitrogen, carbon monoxide, sulphur dioxide, ozone).

#### Source

Auckland Council ambient air quality monitoring programme.

#### Frequency

Continuous data are collected every minute and averaged over 10 minutes, 1-hour and 24-hour periods. Most national and regional standards and targets are based on 1-hour and 24-hour periods. Diffusion tube and volatile organic compounds measurements can be obtained over weekly or monthly time periods.

#### Availability

Real-time and historical data are available from Auckland Council on request. Various technical and summary reports describing Auckland's air quality are available at Knowledge Auckland.

#### Notes

The following data are collected and used for air quality monitoring.

- PM<sub>10</sub> particulate data are currently collected at eight sites across the network. This size of particulate is emitted from natural sources such as oceanic sea salt and pollen. Anthropogenic sources include dust, transport emission and home heating.
- PM<sub>2.5</sub> is currently monitored at four sites. PM<sub>2.5</sub> measures the smallest size fraction of particulates that are most commonly anthropogenic in origin, including combustion sources, home heating, and secondary particulates emanating from gas emissions.
- Emissions from vehicles (especially diesel) also contribute nitrogen oxides (NOx), mainly nitric oxide (NO). Nitric oxide reacts with oxygen in the atmosphere to form  $NO_2$ , which can cause the brown haze that affects our health.
- Shipping traffic also has an impact, contributing mainly PM, NOx and Sulphur dioxide (SO<sub>2</sub>) to the air.
- Ozone ( $O_3$ ) is produced because of vehicle exhaust emissions interacting with sunlight in the presence of volatile organic compounds.

#### Relevance

There is a statistically significant increase in the number of admissions to hospital for respiratory disorders follow brown haze events over Auckland. This is because the brown haze is a stagnant pool of polluted air sitting over a large area of Auckland's airshed. These events tend to occur on clear calm mornings in winter when people tend to go out and exercise, unaware of the risks of exacerbating existing bronchial and respiratory disorders. This model will act as a warning for the public, advisory for the ADHBs, and as a mitigation tool for key polluters such as Auckland Transport

#### Baseline (2016)

The current baseline is set against 2016 data: AC Penrose NO2 [µg/m<sup>3</sup>] - 10.5 AC Queen Street NO2 [µg/m<sup>3</sup>] - 35.5 AC Takapuna NO2 [µg/m<sup>3</sup>] - 10.7

#### Analysis

The graphed NO<sub>2</sub> data is collected from 3 air quality monitoring stations across Auckland, Penrose, Takapuna and Queen Street. The dashed lines show the long-term trend in the data for each of the sites.

Key air quality information can be determined from this simple graph.

A long-term downward trend in measured NO<sub>2</sub> is evident. NO<sub>2</sub> is largely emitted from on-road vehicles. As vehicle numbers are known to be increasing, the data may seem surprising. However, improvements in engine efficiency and cleaner fuel have proved more influential on pollution emissions than the increasing traffic volume. This is more evident before 2012. Since then, traffic volume has started to mitigate gains in vehicle efficiency with trends levelling off, and in some locations, now increasing.

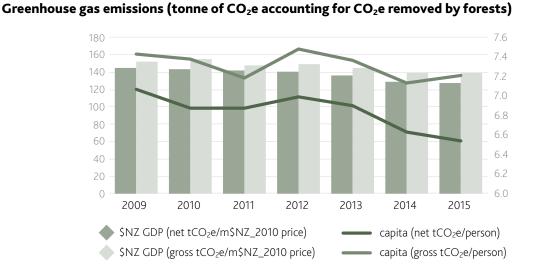
Penrose and Takapuna display almost identical concentrations, despite being almost 10km apart. This is due to similarities in their relative proximity to the S1 motorway. The similarity in data demonstrates that they are measuring the same emission source with similar emission rates.

Queen Street shows a marked drop in 2011. This was due to the reconfiguration of Queen-street, effectively reducing traffic, Interestingly, since 2012, the trend in NO<sub>2</sub> has been slowly increasing at this location due to an increasing number of vehicles, and buses. This demonstrates the importance and influence of policy and planning on Auckland's air quality.

#### (V) Trend

Measure 3b.

From 2011 to 2016 decreasing positive trend.



#### Data

Multiple indicators and data sources used.

Source

Auckland Greenhouse Gas Inventory, Projections of Auckland Greenhouse Gas Emissions.

#### Frequency

Annual greenhouse gas emissions are reported for 1990 and from 2009 to 2015, so a pre-Auckland Plan 2050 baseline is available. Projected greenhouse gas emissions are reported every 3 to 5 years.

#### **Availability**

Emissions data from all the sectors and sources are available.

#### Notes

There are multiple indicators and data sets that can be used to report on greenhouse gas emissions and projections across various environmental domains.

#### Relevance

Climate change mitigation contributes to all Focus Areas and Directions of the Environment and Cultural Heritage Outcome, as well as Auckland's Climate Action Plan. The measure of greenhouse gas emissions enables us:

- To be in line with national and international best practice
- To better measure progress

#### Baseline (2015)

The current baseline is set against 2015 data - 6.5 net  $tCO_2e$  per person.

#### Analysis

In 2015, Auckland's gross greenhouse gas emissions were 11,309 kilo-tonnes of carbon dioxide equivalent (kt  $CO_2e$ ) (10,267 kt with forestry sequestration included). Transport emissions made up 39.7% of total emissions (Figure 1), with 35.7% of this made up of road transport emissions. 2015 saw an increase of 1.5% on net 2014 emissions, and 2.1% on 2009 emissions.

Auckland's greenhouse gas emissions are increasing. However, as Auckland's population and Gross Domestic Product (GDP) have increased, there has not been a proportional increase in greenhouse gas emissions, and thus emissions per capita and per unit GDP have declined.

#### ( \land ) Trend

From 2009 to 2015 increasing negative trend.

## Measure 4

Protection of the environment

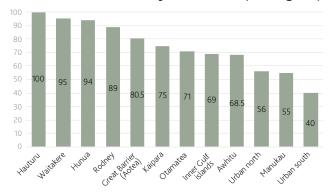
Composite measure explanation – Pest animals and plants are exotic animals and plants that cause damage and disruption to native ecosystems or agriculture. New Zealand's isolation from the rest of the world and unique biodiversity means that Auckland's indigenous ecosystems and species are especially vulnerable to the impact of introduced animals and pest plants.

This composite measure covers two main categories:

- Exotic plants
- Pests

#### Measure 4a.

Relative weediness of Auckland's forest ecosystems index (100 = good)



#### Data

Weed index score.

#### Source

Auckland Council State of the Environment monitoring and research. Site-based monitoring carried out by Auckland Council, Department of Conservation and a wide range of different community groups.

#### Frequency

Collected annually and reported 3 yearly.

#### Availability

New data expected to be released in 2019.

#### Notes

Pest plant (weed) plot and survey data from a representative sample of wetland, duneland, forest, riparian freshwater, urban forest and lake ecosystems.

#### Relevance

More than 1,100 exotic plants have naturalised in the Auckland Region and new introductions continue. Many of these introduced species have the potential to become pest plants. For example, pest plants such as pine, wattle, pampas and privet outcompete and displace adult native trees, seedlings and shrubs. Other pest plants, such as climbing asparagus, tradescantia and ginger, can supress the regeneration of indigenous seedlings and saplings.

#### Baseline (2016)

The current baseline is for 2016:

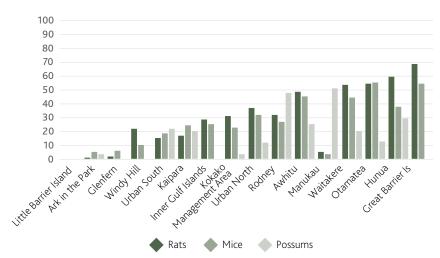
Hauturu - 100	auturu - 100 Waitakere - 95		
Rodney - 89	Great Barrier (Aotea) - 80.5	Kaipara - 75 Awhitu - 68.5	
Otamatea - 71	Inner Gulf islands - 69		
Urban north - 56 Manukau - 55		Urban south - 40	

#### Analysis

Hauturu (Little Barrier Island) is the least weed affected part of the region, and the values recorded in its plots are the standard against which all other locations are judged. In contrast, the forest and scrub vegetation of the Auckland urban area is heavily compromised by weeds. Up to 15% of all tree stems, 34% of all saplings and 20% of all seedlings we recorded in urban forests were comprised of exotic or weedy plant species.

#### (•••) Trend

Insufficient data to determine a trend at the time of reporting.



#### Measure 4b. Chewcards damaged by pest animals (% of cards chewed)

#### Data

Mean percent of chewcards damaged by pest animals in different parts of the Auckland Region. (Bars are standard errors)

#### Source

Auckland Council *State of the Environment* monitoring and research. Site-based monitoring carried out by Auckland Council, Department of Conservation and a wide range of different community groups.

#### Frequency

Collected annually and reported 3 yearly.

#### Availability

New data expected to be released 2019.

#### Notes

Presence/absence of possums, rats, and mice, and ungulate pellet counts on 8km x 8km grid plots. Possum RTC (residual trap catch) data for Hunua and Waitakere Ranges. Presence/absence of possums, rats and mice in land covered by various 'Pest Free' and other community initiatives.

#### Relevance

Pest animals are a major threat to New Zealand's native species. New Zealand has been geographically separated from other land masses for over 80 million years, over which our plants and animals have evolved in isolation of land mammals and thus without adaptations to succeed in their presence. For example, pests such as possums, rats and stoats compete with our native birdlife for food and habitat. They also eat bird's eggs and young and attack the adults. Animal browsers such as domestic stock, possums, deer, goats and rabbits consume native vegetation, and can significantly alter ecosystem composition and nutrient cycling.

#### Baseline (2016)

The current baseline is for data collected prior to 2016.

#### Analysis

Pest density is relatively good (i.e. low) in our highly managed areas (e.g. Ark in the Park, kokako management area (Hunuas), Glen Fern, Windy Hill). However, in some locations where pests are not controlled there is a lot more work to do to secure our native biodiversity against the negative impact of pest animals. Note the data in Figure 2 only includes data collected prior to 2016, before the Hunua Ranges 1080 poison drop dramatically reduced rat density in the Hunua ranges.

#### (•••) Trend

Insufficient data to determine a trend at the time of reporting.

#### Additional data to be added to composite measure in the future:

Auckland Council resource consents and compliance records - The issuing of resource consents is one of the main ways in which our policies and plans are implemented – through the regulatory control of activities. The numbers and types of resource consents issued or active provide one measure of environmental pressure and compliance monitoring provides one measure of how effective consent conditions are. This information can be combined with environmental state and change information to provide a measure of how effective our policies and plans are implemented through resource consents and achieve good environmental outcomes.

This information will be available through the Unitary Plan monitoring programme currently under development.

## Measure 5 Resilience to natural threats

**Under development** 

(•••) This measure will draw on the same measure as for Measure 1, 2 and 4 to gauge current Ecosystem Health and Resilience. There are multiple indicators and data sets that will be used to report on ecosystem health and resilience across various environmental domains.

In addition to the existing data sets this measure will look to incorporate through the AUP Schedule 1, clause 1.4 "Matters to identify and investigate and address" for the purpose of "considering anticipated climate change impacts (and identifying an appropriate planning response). This should result in a more pro-active approach towards avoiding and/or mitigating impacts on the environment.

### Measure 6 Treasuring of the environment

**Composite measure explanation** – Retention of treasured environments such as Maunga, volcanic features and sites of cultural and natural heritage significance – The natural and built environment is inextricably connected to Aucklanders' sense of identity and place. This composite measure covers:

• Statutory provisions as a measure for how much and how well our treasured areas are protected (under development)

• Volunteering – An expression of personal commitment by Aucklanders of how they treasure their environment.

Under development

#### Measure 6a.

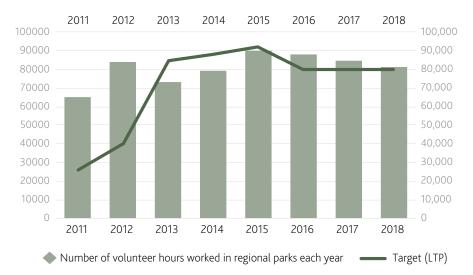
#### Statutory Provisions (Under Development)

This composite measure requires <u>further development</u> to determine the most informative indicators to use and to ensure systems are in place to provide data in a consistent and timely manner.

The spatial layers exist in the Auckland Unitary but in many cases the mapped areas are those we know about and are not necessarily a complete stocktake. Some are being updated through currently funded work programmes, e.g. Natural Environment Targeted Rate.

To measure change in extent (e.g. loss) of treasured environments would require survey or some other systematic form of collecting data on change in status.

Records of consents issued in overlay areas would provide a measure of impact.



## Measure 6b. Number of volunteer hours worked in regional parks each year

#### Data

Level of service from Auckland Council Long Term Plan.

#### Source

Auckland Council.

#### Frequency

Annual.

#### Availability

Auckland Council website: https://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-bylaws/our-plansstrategies/budget-plans/our-10-year-budget/aucklands-10-year-budget-2018-2028/our-plan-for-the-next-10-years/

#### Notes

There are other environmental volunteer programmes and groups outside of regional parks e.g. Stream restoration, Conservation Volunteers New Zealand. Inclusion of these groups will be considered for future reporting.

#### Relevance

Individuals and communities invest considerable time volunteering which makes a considerable contribution to the protection and enhancement of their environment. An individual's willingness and ability to commit personal time can be considered a general expression and demonstration of how they value their environment.

#### Baseline (2018)

In 2018, 81,342 volunteer hours were given across the regional parks network

#### Analysis

LTP measures have predetermined targets which are used to monitor success. Based on those targets expected volunteer hours were significantly exceeded between 2011 and 2012, but were not met between 2013 and 2014. Targets were met between 2015 and 2018.

#### (-) Trend

From 2015 to 2018 no significant change.

# Outcome Outcome Opportunity and Prosperity

## Measure 1 Labour productivity

### Real GDP per filled job (\$)



#### Data

Output per worker: real Gross Domestic Product (GDP) in constant 2010 dollars, per filled job.

#### Source

Infometrics, Auckland regional economic profile

#### Frequency

Annual

#### Availability

Public access funded by Council subscription to Infometrics website portal https://ecoprofile.infometrics.co.nz/Auckland/ Productivity , which also includes a variety of related data such as productivity breakdowns by industry and location and changes over time.

#### Note

Labour productivity uses GDP per employed person (in constant 2010 prices). GDP measures the value economic units add to their inputs - broadly equivalent to its sales revenue less the cost of materials and services purchased from other firms. Infometrics breaks national production-based GDP (published by Statistics New Zealand for years ended March) down to territorial authority (TA) level by applying estimated TA shares to the national total.

#### Relevance

Productivity relates to how efficiently a firm or any other organisation can turn its inputs, such as labour and capital, into outputs in the form of goods and services. Labour productivity is a measure of the amount produced for a certain amount of labour effort. It is closely related to individual incomes (i.e. wages and salaries) and living standards

Growth in labour productivity over time can imply an increase in the efficiency and competitiveness of the economy. (However, comparisons of labour productivity over time or between regions should be done with caution, as each worker may have different levels of access to other production inputs (such as machinery, technology, and land) over time or between regions whose economies have vastly different industrial structures.)

#### Baseline (2018)

In 2018 GDP per job filled in Auckland was \$103,438 (NZD).

#### Analysis

Between 2000 and 2018 there was a general increase in real GDP per job filled in Auckland. Real GDP per job filled in Auckland remains consistently higher than New Zealand average.

#### ( Trend

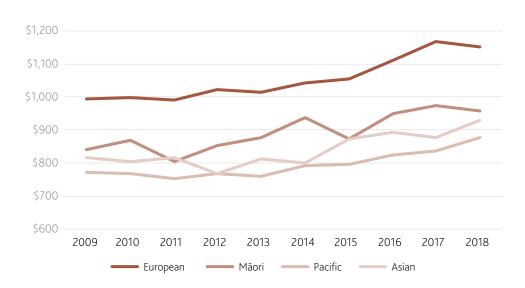
From 2000 to 2018 increasing positive trend.

# Section 2.1 Comportunity and Prosperity

# Measure 2

# Aucklanders' average wages

Median weekly earnings of employed people by ethnicity (\$)



#### Data

Earnings of people in paid employment by region, age, sex and ethnic group - median and average, hourly and weekly; inflation-adjusted.

#### Source

Statistics New Zealand, Labour market statistics (incomes) (formerly NZ Income Survey, now from June quarter of Household Labour Force Survey) and Consumer Price Index.

#### Frequency

Annual, (Ethnicity, only from 2009).

#### Availability

Published at http://nzdotstat.stats.govt.nz/wbos/index.aspx - Incomes - Income tables.

#### Note

All data is subject to survey error margins. Coverage is people over 15 years old who work for wages or salaries or are selfemployed. Earnings now comprise income from wages and salaries, self-employment, and government transfers, but no longer including private transfers or investment income. Variations in weekly earnings arise from variation in both hourly earnings and hours worked. Weekly earnings comprise full- and part-timers, but median hourly rates typically equate to 37 - 40 hours/week. Ethnic group sums may exceed totals due to respondents selecting multiple ethnic groups.

#### Relevance

Employment earnings are the main source of income for most people and their households, and the main way that improved prosperity benefits the general population. They also generate taxes that help fund government services and transfers to other households.

#### Baseline (2018)

In 2018 the mean weekly earnings for Aucklanders who identify as European were \$1,150 (NZD), \$959 (NZD) for Māori, \$878 (NZD) for Pacific, and \$928 (NZD) for Asian (Aucklanders average wages \$1,036).

#### Analysis

Between 2009 and 2018 there was a general increase in median weekly earnings for all ethnic groups in Auckland. This increase was largest for the European ethnic group.

#### ( \land ) Trend

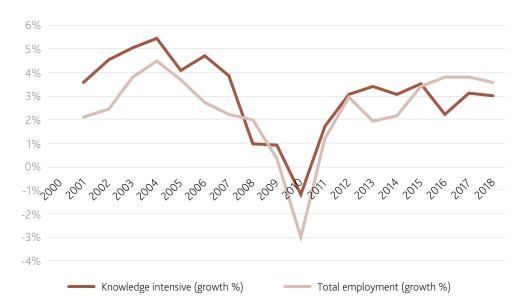
From 2009 to 2018 increasing positive trend.

# **Opportunity and Prosperity**

# Measure 3

# **Employment in advanced industries**

Knowledge Intensive industries and total employment growth (%)



#### Data

Employment in advanced industries (Australian & New Zealand Standard Industrial Classification, NZSIC 7 digit) defined as knowledge intensive: 25 per cent of workforce have degrees and 30 per cent are professional, managerial or scientific and technical

#### Source

Infometrics, Auckland regional economic profile - skills - knowledge intensive.

#### Frequency

Annual

#### **Availability**

Advanced industries: one-off https://www.aucklandnz.com/sites/build\_auckland/files/media-library/documents/J000922\_Paper\_1\_ FINAL\_Advanced\_industries.pdf; knowledge industries: public access funded by Council subscription to Infometrics website portal https://ecoprofile.infometrics.co.nz/Auckland/Skills

#### Note

Employment here is average number of filled jobs (including self-employed and working proprietors and part-timers) for the year ended March, estimated by Infometrics from Statistics New Zealand's quarterly Linked Employer Employee Data (LEED). Advanced industries are largely a subset of knowledge intensive industries (11% versus 36% of Auckland's workforce), defined by high spending on research and development, and workers having degrees in science, technology, engineering and mathematics (STEM).

#### Relevance

Knowledge Intensive (KI) industries are those in which the generation and exploitation of knowledge play the predominant part in the creation of economic activity. They represent an increasing share of the New Zealand economy's output and employment, and may be a source of future productivity growth.

#### Baseline (2018)

In 2019 growth in knowledge intensive industries and the total employment market averaged around 3 per cent and 3.6 per cent, respectively.

#### Analysis

Between 2000 and 2018 there was a general increase in the growth of Auckland's knowledge intensive industries as well as in the total employment market. Some negative growth occurred in both knowledge intensive industries and the total employment market around 2009 and 2010. Growth figures recovered following this period. However, these figures have not matched the 2004 peak of over 5 per cent and over 4 per cent in the knowledge intensive industries and the total employment market, respectively.

#### ) Trend

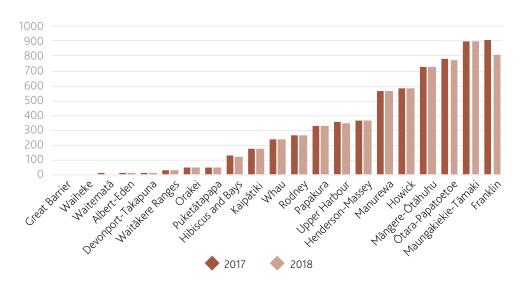
From 2001 to 2018 no significant change.

# Outcome Outcome Opportunity and Prosperity

# Measure 4

# Zoned industrial land (Development Strategy)

# Zoned industrial land by local board (hectare)



#### Data

Hectares of zoned industrial land.

#### Source

Auckland Council.

#### Frequency

Annual.

#### Availability

The area of zoned industrial land is calculated in geospatial software, using zoning data from the Auckland Unitary Plan, as at 2017, by Research and Evaluation Unit (RIMU) at Auckland Council. Detailed data at sub-regional level is available on request from the Research and Evaluation Unit (RIMU) at Auckland Council.

#### Note

Business zoned land under the Auckland Unitary Plan are zones that are classified as being in either the Light Industry or Heavy Industry zones.

#### Relevance

This is a high-level strategic measure directly related to the Development Strategy (DS) required to track zoned land for light and heavy industry. The DS identifies the need for up to 1,400 hectares of business land (mainly industrial) in the future urban areas, and the retention of existing business land. This will require monitoring as locations of industrial land may shift as they compete with other uses for well-located land.

#### Baseline (2018)

6,336 hectares.

# Analysis

Measure 4 demonstrates the amount of zoned industrial land in Auckland.

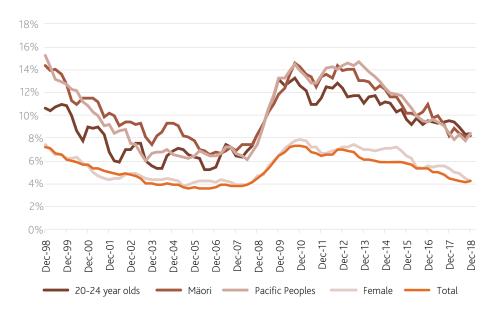
#### (-) Trend

From 2017 to 2018 no significant change.

# Outcome Outcome Opportunity and Prosperity

### Measure 5 Level of unemployment

Unemployment rate for selected age, ethnicity and gender (%)



#### Data

Unemployment levels and rates by location, ethnicity, age group – also gender.

#### Source

Infometrics Statistics New Zealand, Household Labour Force Survey (HLFS).

Frequency

Quarterly.

#### Availability

High level data available from Statistics NZ website http://archive.stats.govt.nz/infoshare/?url=/infoshare/ - Work income and spending. Detailed Auckland breakdowns from RIMU custom dataset.

#### Note

Employment here is the number of individuals in paid employment (including self-employed and working proprietors and part-timers). Unemployed excludes people whose only job search method was to look at job advertisements in newspapers or online. All data is subject to sampling errors, which can be prohibitive for small sub-samples. Quarterly data is seasonal, so annual averages are recommended.

#### Relevance

Employment generates wealth for society and income for the individual, so unemployment diminishes these benefits. Unemployed people (especially youths) who are also not in education or training are particularly at risk of becoming socially excluded – individuals with income below the poverty-line and lacking the skills to improve their economic situation.

#### Baseline (2018)

In June 2018:

9 per cent of 20-24-year olds were unemployed.

8.4 per cent of Māori were unemployed.

8.3 per cent of Pacific people were unemployed.

4.9 per cent of females were unemployed.

(4.3% total level of unemployment)

#### Analysis

Between 1998 and 2018 unemployment rates for 20-24 year olds, Māori, Pacific Peoples and females fluctuated. For all groups, unemployment rates peaked around 1998 and again between 2010 and 2013. Since the last peak in 2013, unemployment rates have decreased for all groups.

#### 🗸 ) Trend

From 2010 to 2018 decreasing positive trend.

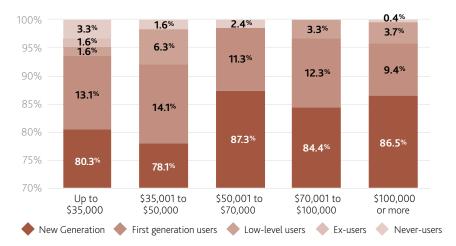
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# **Opportunity and Prosperity**

## Measure 6

# Internet usage based on income

Proportion of respondents under 65 years of age by internet user status by household income bracket (%)



#### Data

Proportion of respondents under 65 years old to the World Internet Project New Zealand survey of internet usage who gave their household income information, by categories of internet user status and household income brackets.

#### Source

Auckland University of Technology (AUT), World Internet Project New Zealand (WIPNZ) survey of internet users 2017.

#### Frequency

The WIPNZ survey is undertaken every 2 years.

#### Availability

Report of the 2017 survey results for New Zealand is published by AUT in late May 2018. Data and analysis of the results for Auckland are available on request from RIMU.

#### Note

The WIPNZ survey begins with asking respondents (at the age of 16 or above) whether they are currently using the internet or have used internet in the last three months. Based on answers to a series of questions in regards to internet usage (e.g. frequency of using different devices, type of internet connection at home, abilities in using the internet and frequencies of engaging in a range of online activities), respondents have been grouped into five sub-groups of internet user status:

- never-users (those who have never used the internet).
- ex-users (those who have used the internet in the past but are not current users).
- low-level users (those who use the internet but at a relatively low level).
- first generation users (internet users who tend to connect through traditional devices).
- next generation users (internet users who are highly connected, using multiple, and more mobile devices to go online). **Relevance**

Indication of how lower incomes may affect the level of internet usage among Aucklanders. A higher proportion of neverusers or low level users among those at the lower income brackets could suggest that those who are socio-economically disadvantaged may also be more likely to be digitally-disadvantaged, which constrains their access to information, education and employment opportunities available online. Data on those aged 65 or above have been excluded as 65 is the retirement age, so the incomes of people in this age group tend be significantly below those who are under 65.

#### Baseline (2017)

The 2017 data is shown in the table below.

	Up to \$35,000	\$35,001 to \$50,000	\$50,001 to \$70,000	\$70,001 to \$100,000	\$100,000 or more
Users	95.0%	98.5%	98.6%	100.0%	99.6%
Non-users	4.9%	1.6%	1.4%	0.0%	0.4%

#### Analysis

For respondents under 65 years of age who gave their income information, 4.9 per cent of the up to \$35,000 household income bracket indicated that they are non-users. This is higher compared to those across all other income brackets.

#### (•••) Trend

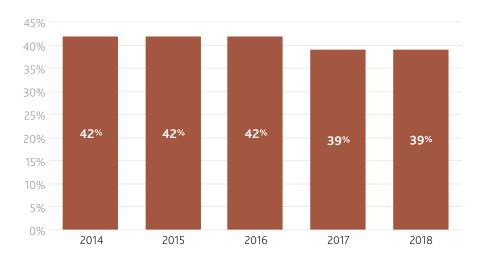
Insufficient data to determine trend at the time of reporting.

# **Opportunity and Prosperity**

# Measure 7

# Educational achievement of young people

Percentage of those aged 20-24 with a Level 4 qualification or above (%)



#### Data

Proportion of young people aged 20-24 with a qualification registered on the New Zealand Qualifications Framework (NZQF) at Level 4 or above.

#### Source

Stats NZ Household and Labour Force Survey (HLFS).

#### Frequency

Annual.

#### Availability

Available by custom order from Stats NZ.

#### Note

Annual data is obtained by averaging quarterly data across four quarters.

#### Relevance

Higher-level qualifications, including vocational education and training at NZQF levels 4, and bachelor's level and above, have the greatest benefits for students. People with higher qualifications tend to have better economic and social outcomes and higher life satisfaction than those with low qualifications. In particular, individuals with higher level qualifications are more likely to be employed and generally have higher incomes.

National Certificate of Educational Achievement (NCEA) is the national qualification system for New Zealand's senior secondary school students and NCEA sits within the larger New Zealand Qualifications Framework (NZQF). A secondary student with qualifications at NCEA Level 1, 2 or 3 has achieved Levels 1, 2 and 3 of the NZQF respectively. Levels 4 and above are usually studied after finishing secondary school. Measuring the NZQF Level 4 and above achievement of young people aged 20 to 24 gauges levels of achievement in both vocational training and tertiary education. This provides insight into how well young people are prepared with the skills required to access employment. As well, this is an indication of how well the education system is assisting young Aucklanders to develop the skills and qualifications to support Auckland's workforce and economic growth.

#### Baseline (2018)

In 2018, 39 per cent of Aucklanders aged between 20 and 24 had a NZQF qualification at Level 4 or above.

#### Analysis

The percentage of those aged 20-24 with a Level 4 qualification or above decreased slightly between 2014 and 2018.

#### (>) Trend

From 2014 to 2018 decreasing negative trend.



