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MRQ

Monitoring Research Quarterly

Auckland Council
Te Kaunihera o Tāmaki Makaurau

Monitoring Research Quarterly, MRQ is the newsletter of Auckland Council's Research and Evaluation Unit, RIMU. Each edition of the newsletter contains reports of RIMU's current work including information about recent publications, research, facts and trends about Auckland. RIMU publications are available on the Auckland Council and Knowledge Auckland websites.

Contents

Auckland office conversions: a new research proposal

Housing affordability and availability in Auckland is never far away from public and political discussion, with much of the energy of the debate focusing on densification infill in existing suburbs, new city centre apartment buildings and opening up of greenfield land at the city's margins for residential growth.

One area of change in our city with less obvious impacts on the urban form, and happening at an increasing rate, is the conversion of sub-prime office accommodation to residential dwellings (Thomas, 2015; Winter, 2015). In the UK, the conversion of unwanted office buildings to residential dwellings is proactively enabled by the government through the temporary loosening of planning restrictions in a measure to combat the issue of housing shortages (Muldoon and Greenhalgh, 2016), raising the question whether there is scope for changes in the New Zealand planning framework to use this route to address the current housing shortage in Auckland.

Office building repurposing is also seen as a sustainable alternative to new build and has been championed around the world, as a means not only to reduce the significant environmental impact of the construction industry, but also as a means of revitalising areas of the city blighted by empty office buildings, while also allowing the desired environmental outcomes of the compact city, such as reduced congestion and sharing of services and energy (Remoy and Wilkinson, 2012).

RIMU's Land Use and Infrastructure Research and Evaluation team has been monitoring the conversion of Auckland's unwanted office buildings recently and thinking about a research project to look at the opportunities and challenges presented by office to residential

conversion in Auckland. Potential research themes include:

- determining the capacity for residential growth offered through redundant office conversions
- mapping the financial viability of office conversions in Auckland
- identifying negative externalities of office conversions, for example the reduction in space for third sector accommodation, demands on existing infrastructure through increased sewerage demand (etc)
- the potential for adaptation under the existing and proposed planning frameworks in Auckland
- opportunities for internal subdivision of existing buildings.

The Land Use team aims to refine the research question soon and gain a greater insight into the potential and challenges of this growing area of urban change. The proposed research project will analyse information from stakeholder interviews with developers and planners, and assess existing consenting information and construction and sale price figures.

References:

Muldoon-Smith, K and Greenhalgh, P (2016). Greasing the wheels, or a spanner in the works? Permitting the adaptive re-use of redundant office buildings into residential use in England, *Planning Theory & Practice 17 (2)*

Remoy, H T and Wilkinson, S J (2012). Office building conversion and sustainable adaptation: a comparative study. *Property Management* 30 (3)

Thomas, W (2015). Old offices become luxury homes: Developers turn dated Auckland buildings into high-end apartments as demand increases for city property. *New Zealand Herald*. 15 April 2015

Winter, C (2015). Former Wellington offices being converted to apartments. Stuff. Business Day. 16 October 2015.

Auckland water quality trends

The total length of permanently flowing rivers in Auckland is an estimated 16,500km. An estimate that nearly doubles if intermittent and ephemeral rivers are included. In Auckland, no mainland location is greater than 20km from the coast, so the catchment areas of our rivers are relatively small and many reach the sea before they merge to form larger rivers.

Auckland Council operates a long-term water quality monitoring programme that measures the physical, chemical and microbiological properties of rivers at various sites across the region. The monitoring programme is regionally representative in that a range of river types and sizes are monitored at different points in their catchments, across a variety of land uses in Auckland (see Figure 1). The results enable us to assess the life-supporting capacity of the rivers and provide a regional overview of water quality for state of the environment reporting, identification of environmental issues and check that council environment related policy initiatives and strategies are effective.

Water quality data is collected monthly, summarised in an annual report and a 'state and trends report' is produced every five years, for a long-term trend analysis of Auckland water quality data.

The latest state and trends report is available and reports on trends from 2005-2014: *State of the environment monitoring: river water quality state and trends in Auckland 2005-2014* (Auckland Council technical report, TR2016/008). The report notes that several metals, including total lead, total and soluble copper, and total and soluble zinc, showed declining trends on a regional scale over that time. The same trends were observed for total phosphorus, soluble phosphorus, and total suspended solids (see Figure 2).

While these results are encouraging, because they show some parameters are improving, many streams have a baseline of poor water quality so there is still room for improvement. This is especially true for streams in highly impacted urban environments. The focus of future work in Auckland's water quality monitoring programme will be on management of land-water interactions in urban streams. However, we will also be reviewing options for improving poor water quality in rural catchments where high nitrogen concentrations are a concern.

For more information, please contact Dr Laura Buckthought, Scientist Aquatic Chemistry, laura.buckthought@aucklandcouncil.govt.nz

Figure 2 Auckland Council river water quality programme trend analysis at a regional level

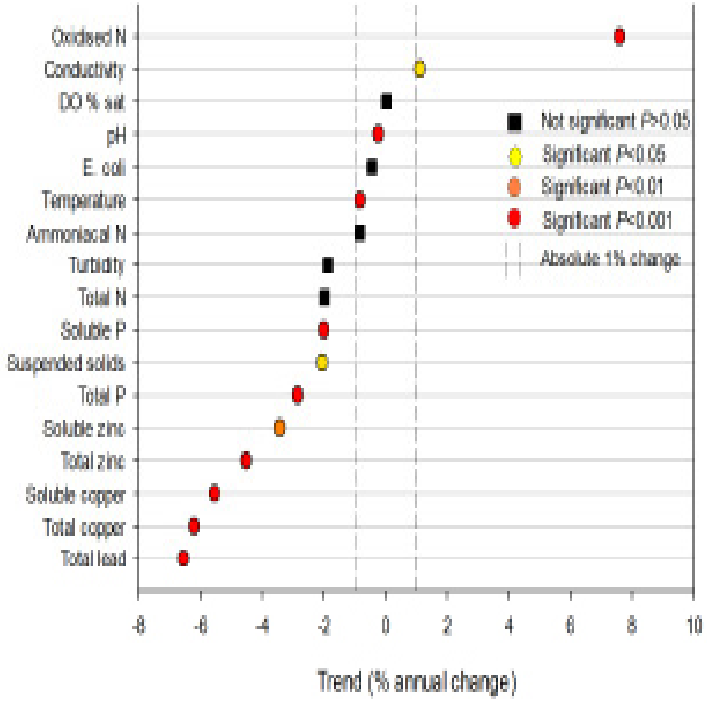

Figure 2 trend graph: where y axis = parameters and x axis = per cent annual change. Circles indicate significant trends at the 95% confidence level and squares non-significant trends. Circle colours indicate the level of significance described in the key. A statistically significant trend that is greater than an absolute 1% annual change is considered environmentally meaningful.

Figure 1: Examples of typical streams in the water quality monitoring programme

Native forest catchments, Cascades Stream

Rural catchments, Makarau River

Urban catchments, Pakuranga Creek

Māori and housing in Auckland, a new report

Māori and housing in Tāmaki Makaurau draws on existing census data and research to provide an understanding of the housing issues that face many Māori in New Zealand, Auckland in particular. It aims to assist in policy development on Māori housing in Tāmaki Makaurau.

Socio-economic indicators reveal that there have been positive improvements for Māori between 2006 and 2013, including higher educational qualifications and an increase in Māori earning more than $50,000 each year. However, the gap in median weekly income between European/Pākehā and Māori has increased by 103 per cent and despite a closing gap between Pākehā and Māori for housing affordability and household crowding measures, there remains a large gap between the two groups in terms of housing outcomes including home ownership.

The main housing challenges that many Māori in Tāmaki Makaurau face include higher than average rates of household crowding, lower than average home ownership rates and less stability as a result of higher than average rates of renting. Case studies show that attempts to meet a person's or family's housing needs are often part of a complex regulatory environment that many low-income individuals and whānau cope with each day. Wider societal factors, whether historical or contemporary, provide an important way of understanding how overarching legal, economic and organisational structures can disadvantage certain groups. This includes issues such as low wage growth, and undersupply of affordable housing in Tāmaki Makaurau, and central government legislation and regulations including the Residential Tenancies Act 1986 and Te Ture Whenua Māori Act 1993.

Arguably, more profound are the effects of colonisation which have resulted in a substantial loss of iwi equity and identity that has had wide-ranging, long-lasting and ongoing effects. In this regard, while the issue of whenua (land) is much greater than the issue of housing, it is tied closely to Māori notions of home.

Partly offsetting this, and summarised in the report, are the various central government, local government, community and iwi programmes and initiatives that aim to address housing supply, affordability and quality for both Māori and non-Māori, and also support the cultural resilience of Māori through the likes of papakāinga housing in Tāmaki Makaurau.

Māori and housing in Tāmaki Makaurau: a stocktake of issues, experiences and initiatives. Lysnar, P., Tuatagaloa, P and Joynt, J L R (2016) Auckland Council technical report, TR2016/026. See also: *Pacific people and housing in Auckland: a stocktake of issues, experiences and initiatives*. Joynt, J L R., Tuatagaloa, P and Lysnar, P (2016) Auckland Council technical report, TR2016/027

Recent research activities

RIMU's scientists, researchers, technical specialists and analysts have assisted with many Auckland Council projects over recent months. A list of recent publications and research related activities follows.

• New reports:

- *Cloak or skin: perceptions of Māori responsiveness in Auckland Council's Research and Evaluation Unit, RIMU,* TR2016/016

- *Coastal inundation by storm-tides and waves in the Auckland region,* TR2016/017 (Auckland Council Healthy Waters Department)

- *Elevated nitrate concentrations in Franklin surface and groundwater: a review,* TR2016/015

- *Farm-scale digital soil mapping techniques for Karaka and Patumahoe, south Auckland,* TR2016/013

- *How do Aucklanders value their parks? A hedonic analysis of the impact of proximity to open space on residential property values,* TR2016/031

- *Laingholm beach water quality investigation,* TR2016/030 (Auckland Council Healthy Waters Department)

- *Mahurangi Estuary ecological monitoring programme. Report on data collected from July 2013 to January 2015,* TR2016/028

- *Manukau Harbour ecological monitoring programme. Report on data collected up until February 2015,* TR2016/029

- *Māori and housing in Tāmaki Makaurau: a stocktake of issues, experiences and initiatives,* TR2016/026

- *Pacific people and housing in Auckland: a stocktake of issues, experiences and initiatives,* TR2016/027

- *A profile of children and young people in Auckland,* TR2016/022

- *Stream ecological valuation: application to intermittent streams,* TR2016/023 (Auckland Council Healthy Waters Department)

- *Tamariki Māori ki Tamaki Makaurau. A study of Auckland Māori children under five and their whanau,* TR2016/025

- *Understanding the costs and benefits of planning regulations: a guide for the perplexed,* TR2016/018

- *Upper Waitematā Harbour hydrodynamic and sediment transport modelling,* TR2016/019

- *Youth mobilities in the Southern Initiative, Auckland: transport practices and experiences of 15-24 year olds,* TR2016/014

• We hosted RIMU Insights presentations:

- Maui Hudson, *Ethics in the age of co-governance and big data: Matauranga Māori and indigenous data sovereignty*

- Robert Stratford (with the Government Economics Network), *New Zealand's living standards framework at a time of unsustainability*.

• The 2016 updates of the State of Auckland report cards are expected to be published in late August, with new data on Auckland's air quality, marine environments, plants and animals, population, soil quality, and water quality.

Watch for the new cards on the State of Auckland website, http://stateofauckland.aucklandcouncil.govt.nz

• RIMU social scientists are working with COMET Auckland and the Ministry of Education on the Auckland part of the OECD's Programme for International Assessment of Adult Competencies, PIACC.

• Researchers are working on the results of a survey of Auckland inner city residents that asked questions about living in the Auckland city centre. The survey research report is expected to be published in August.

• Scientists attended the National Environmental Monitoring Standards (NEMS) meeting about soil quality and trace elements, and suspended sediment monitoring.

• Freshwater team members were out in heavy rain measuring water flow and sediment discharges. The data collected will be used to assess and help understand sedimentation in Auckland's rivers and harbours.

Tamariki Māori ki Tāmaki Makaurau

A study of Auckland Māori children under five and their whānau. Rootham, E (2016). Auckland Council technical report, TR2016/025

Improving the well-being of tamariki and their whānau contributes to the goals and vision expressed in both the Auckland Plan and the Māori Plan for Tāmaki Makaurau. The aim of Auckland Council's Te Toa Takitini Whai Painga-Early Years Project is to ensure that all of Tāmaki Makaurau's tamariki Māori, their whānau and their communities are thriving and resilient. This report was prepared to provide the council's Community and Social Policy team and the Te Toa Takitini project team with available data on the well-being of tamariki Māori under five.

The well-being of tamariki Māori is intricately related to that of the whānau who are collectively involved in raising them. The 2013 census found 17,535 tamariki under five years of age who identified as Māori residing in Auckland. This represents 18 per cent of children of this age group in the city. Tamariki Māori are living across Auckland with concentrations in the south and west of the city, with the highest proportions found in Papakura, Manurewa and Henderson-Massey local board areas.

The report explores important trends in demography, well-being, education and employment by adapting *Te puawaitanga o ngā whānau. Six markers of flourishing whānau*, a framework developed by Te Kani Kingi and others (2014)[1]. This framework locates six markers identified as significant domains of whānau well-being. The six markers are:

1. Heritage: The heritage domain captures the degree of access that tamariki and their whānau have to a rich and dynamic Māori cultural heritage.

2. Wealth and standard of living: The wealth and standard of living marker addresses the degree of hardship faced by tamariki and their whānau in Auckland.

3. Capacities: The capacities marker explores the extent to which tamariki and their whānau have the capacity to flourish in society in terms of their health, education and access to employment.

4. Cohesion: The whānau cohesion marker explores the extent to which whānau are cohesive and able to foster positive intergenerational transfers.

5. Connectedness: This section explores the connectedness and inclusion of whānau in Auckland to wider society – both as individuals and as Māori. It explores their degree of trust in social institutions as well as their civic engagement and sense of being fairly treated in society.

6. Resilience: This marker serves to capture the future outlook for whānau and includes their capacity to demonstrate leadership, to anticipate future needs and to transmit values and knowledge across generations.

Each of these markers has been used to locate the available data and to provide an appropriate frame for analysis.

The main sources of data used are Statistics New Zealand, the Ministry of Health, the Ministry of Education, the Ministry of Business, Innovation and Employment and the Ministry of Social Development. As well as an analysis of census data and *Te Kupenga 2013*, the survey of Māori well-being.

The report concludes that to achieve a more holistic picture of the well-being of tamariki and their whānau, and especially the future potential of whānau in Auckland as social collectives, a different approach to data collection will be necessary. Ideally, the data collected and the indicators monitored in the future will specifically address collective well-being, rather than relying on the mainly individual level socio-economic data that forms the basis of the analysis in much of this report. The ongoing development of appropriate individual and collective indicators should ideally be carried out in partnership with Māori to ensure that the flourishing of whānau is measured with data that is trusted and meaningful from Māori's perspective.

1. Kingi, T., Durie, M., Durie, M., Cunningham, C., Borman, B and Ellison-Loschmann, L (2014). *Te puawaitanga o ngā whānau. Six markers of flourishing whānau. A discussion document*

For more information about Auckland related research, data and monitoring programmes visit the Research Unit's websites:

Knowledge Auckland

www.knowledgeauckland.org.nz

State of Auckland

http://stateofauckland.aucklandcouncil.govt.nz

Auckland Counts, census data

www.censusauckland.co.nz

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