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Urban Growth & Densification – The case of Tāmaki Makaurau

As cities grow, a choice is made to expand outwards or upwards. The word urban growth often has negative connotations, urban slums, or auto-centric sprawl, which are we to choose. Densification is a contentious debate. This report looks at urban growth and dense infill development within the context of Tāmaki Makaurau Aotearoa, first exploring urban growth and the various forms of development before assessing how relevant agencies perform. At last, we assess the current trajectory and look forward to the future with recommendations for improving outcomes.

Urban growth & forms of development

Urban growth can be destructive, leading to decreased biodiversity or unaffordable housing. From 2006 to 2018, Tāmaki Makaurau experienced a twenty percent increase in population to 1.57 million (Stats NZ, n.d.-a) and is projected to reach 2.3 million by 2048 (Stats NZ, n.d.-b). Managing populations within urban centres needs to be carefully planned. Urban growth can be managed in a variety of ways. Development can occur within the urban boundary. This might include developing greenfields at the edge of cities (fringe development), redeveloping brownfields, or infill and densification. Another way urban growth can be accommodated is development outside of the urban boundaries, with the development of satellite towns.

Xu and Gao (2021) found that population growth has led to massive development. The pace of expansion in Auckland between 1975-2001 was 989ha/year but has dropped to around 249ha/year in the 21st century due to policies introduced to curtail sprawl, leading to the overall density of the city slightly increasing. They also found that expansion has led to decreased biodiversity. Nevertheless, cities must meet demands for development to accommodate population growth to avoid unaffordable housing. Tāmaki Makaurau has

developed most of the land within its urban limits and even outside of them and, therefore, must find alternative ways of accommodating population growth.

The direction set by the central government through the National Policy Statement on Urban Development (NPS UD) and The Resource Management (Enabling Housing Supply and Other Matters) Amendment Act seems to suggest that the way our urban centres will accommodate growing populations is through densification.

Density

Hess (2014) defines *density* as an urban planning concept that describes how intense the development and human occupation across a defined area is. Higher density means developments across the defined area are more concentrated and compact. Increasing density allows more people to live, work, and shop within an allocated area. The current overall density of Tāmaki Makaurau is relatively low, at 28 persons per hectare (Xu & Gao, 2021).

The NPS-UD, recently introduced by the government, aims to provide housing capacity to address unaffordable housing for current and future generations. Ministry of Housing and Urban Development (2021b) explains that the current high and unsustainable housing prices are due to the Resource Management Act 1991 (RMA) restricting efficient use of the land. The NPS-UD allows for significant upzoning and capacity by requiring councils to permit the construction of buildings up to six storeys tall within the walkable catchment of the city centre, ten large metropolitan centres, and around rapid transit stations.

The Resource Management (Enabling Housing Supply and Other Matters) Amendment Act is a second policy allowing significant densification. This policy focuses on implementing medium-density across cities, requiring councils to allow up to three dwellings and three-story buildings on each site without the requirement of resource consent. This will

streamline the process of infill development and allow for greater densities across all areas of Tāmaki Makaurau (Ministry for the Environment, 2022).

These policies will allow for a more compact development pattern going forward. Auckland Council (n.d.) explains that most future development will be within the bounds of urban limits and potentially less auto-centric, allowing multimodal transit such as active or public transport. This will allow existing infrastructure and land to be utilized more effectively.

Ministry of Housing and Urban Development (2011a) performed a cost-benefit analysis and found that the Medium Density Residential Standard could add anywhere from 27,927 to 53,683 dwellings within Auckland; furthermore, the benefits of these developments would outweigh the costs associated with them.

Elsen (2017) performs a case analysis of Hammarby, Stockholm, assessing the effects of dense development and providing lessons for Auckland. Some outcomes of this development include strong social cohesion, high quality of life, the substantial use of public or active transport, and a lower environmental footprint. The lessons learned are that there must be strong political will from central and local governments, including funding and mandate. Furthermore, the study recommends using mixed-use and perimeter blocks within Auckland.

Assessing performance

Currently, Auckland Council's performance in density is relatively poor. Large swathes of the city have come about due to suburban auto-centric fringe development. Density can primarily be found within the central business district. There is an evident lack of medium density, with a stark transition to single-family zoned housing even in the city center.

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Wegmann (2019) argues that single-family zoning should be abolished and replaced with a 'missing middle.' The paper argues that single-family zoning increases automobile dependence and high emissions, a pattern that can be observed in Auckland. However, due to a mandate from the central government, this will soon change, with most sites other than qualifying matters allowing for medium-density development.

Pockets of density can be found, such as Stonefield. A study by Ministry for the Environment (2011) explores the merits of this medium-density master-planned community which was part of brownfield development. The overall gross density of the area is 23-26 dwellings per hectare, with the net density of the case study at 40 households per hectare. Critiques of the development include no local bus network or shops, meaning residents must walk 10 minutes to the closest bus stop and 20 minutes to train stations. However, the development scores relatively highly on landscape coverage and outdoor living space with multiple parks. The development's housing typologies and street scenes also score relatively highly. The case study overall evaluates Stonefield as demonstrating sound principles of urban design.

Angel et al. (2021) found that 76% of Auckland's population was accommodated within its 1990 footprint. The report argues that densification, too, requires outward expansion and acknowledges there is strong resistance to radical change in cities and that densification might disrupt existing urban fabrics. Furthermore, they argue that rather than a binary choice of fringe development or densification, a mix of both must be adopted to make room for densification. A comprehensive strategy to make room for urban expansion must be utilized to ensure dense quality development.

Kāinga Ora, a state housing agency, often has high-density developments. Kāinga Ora (2020) states that they are committed to increasing the urban densities of communists while ensuring quality outcomes and great places to work and live. Kāinga Ora (2021) also states

that where possible, the agency is looking to demolish housing and replace them with medium or high-density developments. Their developments are often on the cutting edge, including passive houses, and are exemplary examples of urban design.

Nevertheless, the problem is that developments like Stonefield or by Kāinga Ora are relatively rare within the overall context. However, case studies prove that thoughtful medium and high-density developments are possible and can deliver good outcomes. With recent changes in policy and the plan for a more compact development style focusing on greater density within walkable catchments, it is without a doubt that Auckland Council will fare much better in density in the future.

Recommendations for the betterment of outcomes

Greater Auckland (2022) criticizes Auckland Council's preliminary response to the recent policy changes. One contentious factor is special character areas, which the council believes hold heritage value. Special character areas have regulations imposed, limiting building heights and density to retain the area's character. The criticism of the preliminary response comes about due to significant portions of special character areas being within central suburbs, which they argue are some of the most suitable lands for medium to high-density development within the city. Another criticism is the implementation of higher density areas along rapid transit, questioning why stations along the proposed and approved Eastern Busway, such as stations for the suburbs of Edgewater and Burswood, are emitted from the report.

To better the outcomes of densification within Auckland, this report proposes that more thought is given to targeted high-density alongside rapid transit and town centers rather than blanket medium-density. More comprehensive mixed-use zoning would allow alternative modes of transport to residents of higher density developments for most of their

day-to-day activities. Permitting perimeter blocks is another significant recommendation. Moreover, the inclusion of public green spaces is essential in ensuring that future higher-density developments are high-quality.

Conclusion

In conclusion, Auckland has already engaged in vast fringe development and has, in most cases, reached its urban boundaries. This has presented a need for densification. International and local case studies have shown that with sound design principles and a mandate from local and central government, dense developments can improve the quality of life, reduce the impact on the environment, and address housing shortages. The recent policy changes are promising and a sign that Auckland is moving in the right direction in accommodating population growth through a compact-town policy and medium and high-density developments. Though boundaries to success still exist, such as the lack of mixed-use zoning and premier blocks.

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