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Does higher density housing enhance liveability? Case studies of housing intensification in Auckland

Errol Haarhoff*1, Lee Beattie1 and Ann Dupuis2

Abstract: Larger cities in Australia and New Zealand have urban consolidation policies promoting higher-density development, justified on the grounds of enhancing urban sustainability. Despite evidence for persistent preferences for lower density, there has been a significant increase in the supply of higher-density housing over recent years. More recent iterations of urban growth management policies, however, are now justified on the grounds that higher-density will result in enhanced “liveability”. Reflecting on research findings from case studies of residents in medium density housing in Auckland, this paper examines the extent to which liveability is being enhanced in intensified suburban contexts. Using resident expressions of housing satisfaction as an indicator of liveability, the findings point to some positive outcomes. However, despite these perceptions, future housing aspirations tend to remain oriented to detached housing and lower densities, which raises policy issues for the promotion and management of urban consolidation and higher densities.

Subjects: Built Environment; Spatial and Regional Planning; City and Urban Planning

Keywords: liveability; urban consolidation; intensification; medium density housing; urban growth management

ABOUT THE AUTHORS

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Ann Dupuis (now retired) was an Associate Professor of Sociology, at Massey University, New Zealand, and a participating researcher in an analysis of higher density housing: Future Intensive: Insights into Auckland’s Housing. Of particular interest in our research is understanding the process through which urban planning and urban design strategies are transformed into quality built outcomes.

PUBLIC INTEREST STATEMENT

Urban sprawl is unsustainable for many reasons: It destroys natural areas and farmland, places people at increasing distances from where they work, and car dependency increases pollution. Consequently, many cities have establish urban boundaries, and require future development to be at higher density. Imposing this form of growth management has been justified on the grounds of sustainability. Newer versions of these strategies in Australia and New Zealand now contend that higher density also enhances “liveability”. This contention is examined through interviews with people living at higher density in Auckland. Liveability is examined through expression of housing and neighbourhood satisfaction, in the context of complex trade-offs people make in choosing where to live. Given that cities promoting higher density housing need more confidence that their policies will result in the enhanced liveability claimed, further research that addresses these issues more directly is encouraged.
1. Introduction

Large cities in Australia and New Zealand have established urban growth management policies and planning strategies to prevent unrestrained outward sprawl. The origin to these measures can be traced to the US states of Oregon and Maryland in the 1970’s where concern about low density urban expansion destroying high value surrounding natural areas and productive farmland led to the establishment of urban growth boundaries (Ingram, Carbenell, Hong, & Flint, 2009; McHarg, 1969). In what became called “smart growth”, constraining growing cities within an urban boundary had the consequence of enforcing development at high density. These constraints attracted considerable opposition from those who argued that higher density was misaligned with perceived demand for lower density suburban lifestyles, and that the regulatory barriers added cost to development initiatives (Ingram et al., 2009). Notwithstanding the opposition, the idea of limiting urban expansion and promoting urban intensification was boosted in the 1990’s by research that demonstrated that high density cities were more transport fuel efficient than low density cities (Newman & Kenworthy, 1989; Newman & Kenworthy, 1996). Higher density also makes public transport more economically viable, and potentially reduces private car dependency and atmospheric pollution, leading to more sustainable and resilient urban forms (Dodson, 2010; McCrea & Walters, 2012; Quastel, Moos, & Lynch, 2012).

Public and political resistance to indiscriminate higher-density development across cities, especially where low-density suburban lifestyles are valued, was strategically countered by spatially concentrating higher-density development at transit nodes and corridors, leveraging off existing infrastructure at “activity centres” (Woodcock, Dovey, Wollan, & Robertson, 2011). Transport oriented development (TOD) involves concentrating greater numbers of people within walking catchments of activity centres, and living in multi-floor, attached forms of housing such as terrace housing and apartments (Buxton & Tieman, 2005; Calthorp, 1993; Condon, 2010; Dittmar & Ohland, 2004; Talen & Koschinsky, 2013).

Transit-oriented development has been a key strategy for accommodating urban population growth in large Australian and New Zealand cities for at least the past two decades—a strategy associated with the idea of “building up, not out” (Janda, 2011; Lincoln Institute of Land Policy, 2015). Promoting TOD housing is now further underpinned by research that demonstrates that where higher density development promotes active transport (such walking and cycling), there are also positive health outcomes (Campoli, 2012; Ewing, Meakins, Hamidi, & Nelson, 2007; Falconer & Richardson, 2010). For example, research measuring the health benefits of higher density living in Perth came to the positive conclusion that:

... the development of more compact and sustainable suburban neighbourhoods, reducing car dependence, encouraging walking, cycling and public transport use, and promoting a sense of community ... shows that government policies and planning initiatives play a vital role in creating cities, towns and neighbourhoods that can positively impact community health and wellbeing. (Centre for Built Environment & Health, 2015, p. 6)

The outcomes to urban intensification over the past two decades has seen a significant increase in higher density housing in most cities in this region (Auckland Council, 2012, 2013; Australian Government, 2012; Bunker, Gleeson, Holloway, & Randolph, 2002; Buxton & Tieman, 2004; CHRANZ, 2011; Randolph, 2006; Yeoman & Akerhurst, 2015). In Australia, this change is seen by Randolph (2006, p. 473) as “a revolution” where “little over a generation ago living in flats (apartments) was a minority pastime”.

Observed in the more recent iterations of many urban growth management plans, however, is the justification for higher density development shifting from an emphasis on achieving more sustainable urban form, to assertions that higher density housing enhances “liveability” and the “quality of life” (Bramley, Dempsey, Power, & Brown, 2006; Ingram et al., 2009; Yang, 2008). This idea frames the key question explored in this paper: Is there evidence to support the claim that higher density enhances “liveability” and “quality of life”? This question is explored in the following ways. First, the
perceived shift of emphasis from “sustainability” to “liveability” in urban planning is considered and contextualised. Second, the concept of “liveability” and “quality of life” as applied in urban planning is explored. Third, drawing on interviews with residents living in higher density housing in Auckland, the extent to which residents experience enhanced “liveability” is examined.

2. Liveability goals in urban planning and design

A scan of current urban growth management plans in Australia and New Zealand cities, all of which promote higher density TOD-type development, reveals the embedding of “liveability” visions and goals. For example, Perth’s urban growth plan, Directions 2031 and Beyond, is argued to lead to “a world class liveable city: Green vibrant, more compact and accessible with a unique sense of place” (Department of Planning, Government of Western Australia, 2010, p. 2). An associated operational policy, the Perth Liveable Neighbourhoods initiative, aims to achieve enhanced “liveability” by promoting walkability in higher density, transit-oriented development (Department for Planning & Infrastructure, Western Australian Planning Commission, 2009).

The Victorian Government’s Activity Centre Toolkit promotes higher density, transit-oriented development in Melbourne as part of the wider urban growth management strategy, based on the idea that this will enhance the quality of people’s lives:

Melbournians will stay close to friends and family in their local area, while having access to goods and services and a reliable public transport network ... [and] older people will be able to maintain their quality of life with access to quality services (Department of Planning & Community Development, Government of Victoria, 2010, p. 2).

Similarly, the Auckland Plan (Auckland Council, 2012, p. 2) aims to establish the “world’s most liveable city”, where:

higher-density neighbourhoods offer opportunities to create healthy stimulating and beautiful urban environments ... (that) enhance social cohesion and interaction by attracting people across all demographic groups to a mix of cafes, restaurants, shops, services and well-designed public spaces ... meeting the full spectrum of people’s everyday needs ... (Auckland Council, 2012, p. 42).

Liveability as an urban planning goal also resonates in North American examples. Portland’s metropolitan plan is based on an “understanding that compact development is more sustainable, more liveable and more fiscally responsible than low-density sprawl” (Metro Portland, 2008, p. 10). Vancouver’s metropolitan plan directs future growth to designated “Liveable Urban Centres ... that create a strong sense of place and community while fostering active and healthy living” (Metro Vancouver, 2011).

All the policies and plans have what Raman (2010) sees as an implicit causal assumption that higher-density will enhance “liveability” and the “quality of life”. In part, achieving liveability as an urban planning goal has become associated with significant changes in planning systems over the past few decades in parts of North America, the UK, New Zealand and Australia (Gunder, 2011). Gallent and Wong (2009, p. 353) point to recent changes in the English planning system, away from plan making and development control, “to deliver a broader ‘place-shaping’ agenda with a view to achieving enhanced ‘liveability’”. These changes were embedded in local government reforms, promoting a strategic role for local government to “promote the general well-being of a community and its citizens” (Lyons, 2007, Para.14).

Gunder (2011) points to a deeper context for these changes, that he sees being propelled by a “dissatisfaction with restrictive regulatory land use planning codes ... coupled with the rise of public choice theory and a neoliberal agenda supportive of market-driven values”. These relationship are reflected by Gallent and Wong (2009, p. 354) with an expectation for strategic partnerships to “promote, and coordinate local stakeholders, communities and business in local decision-making”. The central idea in these changes is to incorporate the private sector into land use decision-making, and
involves the community on the understanding that the outcomes will deliver enhanced “liveability” (Gallent & Wong, 2009).

Gunder (2011) traces the same shift in the role of urban planning in New Zealand and Australia. In the case of New Zealand, he concludes that:

... by the start of the millennium, it was recognised that (the planning system) was not producing, or maintaining liveable communities. This deficiency resulted in a turn to urban design principles, in initially non-statutory local planning, including the deployment of master plans ... (Gunder, 2011, p. 187).

Similarly, in Australia, Gunder (2011, p. 187) points to the example of how urban planning in Melbourne “changed from prescriptive regulations to a place-based performance framework with a focus on existing or desired ‘urban character’”.

Associating liveability with higher density is thus aligned with broader shifts in planning systems, to a devolved focus on local contexts, the incorporation of public and private stakeholders into decision-making, and offering communities the vision that the outcome will produce enhanced liveability. While this may be the vision, it leaves questions about what exactly “liveability” is, and how it is to be assessed to be sure that the outcomes are indeed delivered. These are questions explored below.

3. The idea of “liveability” in urban planning and design

Responding to the broad question of the extent to which higher-density housing can achieve enhanced liveability requires some discussion about what constitutes “liveability” and the “quality of life” (QOL) in relation to urban environments. Liveability per se is not necessarily related to density, as evidenced by the high degree of satisfaction often expressed about varying density lifestyles (Woodcock et al., 2011; Yeoman & Akerhurst, 2015). Moreover, as Gallent and Wong (2009) point out, the idea of liveability is often conflated with QOL and “well-being”. Consequently, there is difficulty in finding consistency in the use of the concepts and terms, as van Kamp, Leidelmeijer, Marsman, and de Hollander (2003) point out in a useful literature review:

The concepts of urban environmental quality and related terms such as liveability, quality of life and sustainability enjoy great public popularity and form a central issue in research programmes, policy making, and urban development—or at least they do so in terms of the appearance of these terms in the respective literatures. However, the manifestation of and context in which environmental quality is used in research and policymaking is seldom uniform. (van Kamp et al., 2003, p. 6)

Despite this observation there appears to be an agreement in urban housing research that liveability is an element of overall QOL as experienced and perceived by residents (Marans & Couper, 2000; McCrea & Walters, 2012; Pacione, 2003). Moreover, while approached differently by various disciplines, urban scholars appear to accept that satisfaction with housing is one measure that contributes to the quality of life experienced by urban dwellers, and is considered to be an expression of liveability (Diener & Suh, 1997; Yang, 2008; van Kamp et al., 2003). In this context, Yang (2008, p. 309) defines residential satisfaction as “the degree to which people perceive their residential environment as able to meet their needs and further the attainment of their goals”, a domain over which urban planners and urban designers have influence.

Also argued, is that liveability has both objective and subjective dimensions (Yang, 2008). The objective dimension concerns the way in which the physical environment may influence behaviour positively or negatively, and in this way enhance or diminish liveability (Pacione, 2003; Raman, 2010). The subjective dimension concerns urban residents’ perceptions of how the urban environment impacts their urban living experiences, and shapes their cognitive construction of liveability (Losciuto & Perloff, 1967).
In the context of transit-oriented development, liveability is argued to be derived from housing conditions together with the amenity provided by the associated neighbourhood “activity” or “town” centre. For this reason, housing satisfaction measures are extended beyond the dwelling units to include the neighbourhood context (Haarhoff et al., 2012, 2013). Fincher and Gooder (2007), in their study of medium density housing in Melbourne, thus emphasise the multi-dimensional factors embedded into expressions of dwelling satisfaction. They argue “more than for single family housing or high-rise apartment housing, medium density housing means home outside the domestic space of family privacy ... it means a lived experience of belonging to an immediate community” (Fincher & Gooder, 2007, p. 181). For these reasons Yang (2008, p. 309) sees housing units, neighbourhoods and communities as a “nested hierarchy”, that is consistent with Marans and Couper (2000) who recognise that liveability is experienced at different scales.

Within urban planning and housing research there appears to be sufficient agreement to conceptualise liveability as an urban condition derived from interactions with the urban environment, argued by van Kamp et al. (2003, p. 10) to be “made operational in life- or residential satisfaction”. In this way liveability is indicated by the degree of satisfaction expressed by residents with their urban environment, in objective and subjective dimensions. At a policy-making level, Gallent and Wong (2009, pp. 354–355) see place shaping as an objective dimension and as a process able to provide and facilitate necessary “services that a community and its members need, whilst also striving towards the qualities that communities expect within their neighbourhood; building the context, and encouraging the behaviours, that make places liveable”.

McCrea and Walters (2012, p. 192) in their study of two Brisbane suburbs subject to intensification pressures, underscore the difference between liveability objectively “derived from an urban environment vs. liveability experienced in the context of an urban environment”. Following their approach, in this paper we too are concerned with the impact (whether positive or negative) that intensification has on enhancing the subjective experience of liveability derived from the local environment. We have taken the perceptions of resident satisfaction with housing in the context of the neighbourhood as a subjective expression of “liveability”.

4. Liveability through urban intensification

Notwithstanding the strong advocacy for the idea that higher density leads to enhanced liveability, Yang (2008, p. 307) notes that the “empirical basis for this claim is weak”. Building a body of evaluative research that examines the extent to which urban intensification enhances liveability is therefore important. Among contributors to this research focus is that of McCrea and Walters (2012), already referenced, who examined how residents in inner and outer Brisbane suburbs perceived the prospect of intensification (or urban consolidation) of their neighbourhoods. What they found was that to different extents, residents were willing to trade off resistance to densification for enhanced neighbourhood amenities and services. They conclude that urban planning needs to be “sensitive to ... identifying what urban liveability means to local residents with an overriding view to enhancing their urban liveability as part of implementing urban consolidation ...” (McCrea & Walters, 2012, p. 205). In the same way, recent research by Allen (2016) demonstrates the positive role that local amenities play in contributing to the “quality of urban life” experienced by residents living in higher density neighbourhoods in Auckland.

Relationships between population density and perceived liveability has also been examined by Walton, Murray, and Thomas (2008). They applied the Perceived Residential Environmental Quality (PREQ) indices established by Bonaiuto, Fornara, Ariccio, Cancellieri, and Rahimi (2014) to samples of residents in Auckland living in low, medium and high densities. They found no significant difference in PREQ scores among the three densities, indicating that “people trade off elements of their environment against each other for overall neighbourhood satisfaction” (Walton et al., 2008, p. 418). Bramley et al. (2006) came to a similar conclusion that urban dwellers make a trade-off between enhanced amenities and services that intensification can provide vs. detached suburban houses. These findings point towards housing choices being more complex than a simple choice between different densities.
Affordability is another key consideration in choices people make about housing. Yates (2001) notes that while an “increasing number of households have opted for higher density housing, they have done so only when constrained by income in meeting their location and tenure preferences” (Yates, 2001, p. 517). Choosing location and multi-unit housing as a trade-off for suburban home ownership is another factor noted in a Grattan Institute report, where “younger households rent in ... inner city and middle ring suburban areas where they could not afford to buy, in order to gain better access to jobs, schools and amenities” (Kelly, Hunter, Harrison, & Donnegan, 2013, p. 16).

In a recent study of housing preferences, choices and trade-offs in Auckland, respondents in a survey placed significant importance on the size of a dwelling (Yeoman & Akerhurst, 2015). Interestingly, they found that respondents were willing to trade off location against having a dwelling of acceptable size, even if this was an attached housing unit or apartment. While pointing to the methodological difficulties in measuring liveability, Thomas, Walton, and Lamb (2010) explored the relationship between density and liveability in an experimental simulation. Using randomly selected participants from Lower Hutt, New Zealand, the participants were asked to respond to reductions in house sizes and increases in neighbourhood densities. What they found was that the participants traded off closer travel distances to key destinations (such as workplaces) for a friendly, safe, clean neighbourhood environment. They also warn of a potential limiting factor to eliciting residents’ perception of liveability, because cognitive bias can lead people to always rate what they have actively chosen more positively (Losciuto & Perloff, 1967; Thomas et al., 2010).

What these studies show is that the relationship between density and liveability is complex and multivariate. On the one hand, urban consolidation and intensification as Searle (2010) points out, can negatively impact on existing areas, especially suburban areas where the lower density and large subdivisions are considered to be positive attributes that contribute to liveability. On the other hand, Searle (2010) also sees intensification of such areas as an opportunity to enhance liveability, a key assumption in the urban growth management plans referred earlier. Key factors emerging from this body of research is that residents trade off perceived advantages and disadvantages important to their life-stage and circumstances when making housing choices. As cities grow and become denser, trade-offs of this kind will become increasingly relevant, especially where rising house prices and affordability restrict housing options in other ways.

5. Methodology

We evaluate residents’ perceptions of liveability derived from living at higher density in transit-oriented developments, promoted by urban growth strategies in Auckland. We explore:

(1) How residents’ experience of higher density living might influence their perceptions of liveability;
(2) Whether residents considered “trade-offs” when choosing to live in the higher density housing;
(3) How their housing choices were conditioned by their perceptions neighbourhood liveability, and;
(4) What their future housing aspirations might be?

Three case study areas were selected for study in consultation with the Research Information Management Unit of the Auckland Council, that met the following criteria:

• Areas designated for higher density development, as defined in the Auckland Plan (Auckland Council, 2012) as gross densities greater that 20 units/hectare, outside of the CBD.
• Locations designated as a “town” or “metropolitan” centres in the Auckland Plan (Auckland Council, 2012) targeted for transit-oriented development.
• Have housing within a 10 min walking catchment of a town or metropolitan centre.
• Comprise multi-unit, multi-floor housing units.
• Completed and occupied for at least 2 years, and have a minimum of 50 units to provide sufficient scale.

Three case study areas that met the criteria were identified: Albany (to the north of the CBD), New Lynn (to the east), and Onehunga (to the south), and are located in Figure 1.

Table 1 demonstrates the alignment between the case study areas and the criteria set out above. Net densities of the housing developments range from 57 to 67 units/ha, and although they are all multi-floor, attached forms of housing, the typologies vary: three storey slab blocks in Albany, terrace houses in New Lynn and a perimeter block in Onehunga. Although the governance structure in Auckland changed in 2012 to a single local authority, the case study areas all had policies and plans for intensified development promoted by previous, now disestablished, local authorities. The case
study developments all match what is defined as medium density development in the Auckland Plan (gross densities of 20–60 units/ha), with building heights of up to four storeys. All are served by rapid transit—rail in New Lynn and Onehunga, and bus rapid transit in Albany. Including New Lynn as a case study had the advantage of having been previously studied in 2001 (Dixon & Dupuis, 2003; Dupuis & Dixon, 2002). This afforded an opportunity to compare the outcomes of the 2001 and 2012 studies, and identify any significant changes to the context or resident perceptions over the intervening period.

Interviews were sought with the residents of higher density housing in each of the case study areas. They were recruited from mailbox invitations in each of the 12 residential developments. A total of 84 residents across the three case study areas responded, and each were interviewed in their apartment, or at a location they nominated. The interviews lasted about one hour. A list of questions was used as a prompt and woven into the conversations. The aim was to gain understanding of the complex issues related to the housing choices people make, how their perception of the neighbourhood shapes their idea of liveability, and what their future housing aspirations might be.

Based on the approach that housing satisfaction expressed by residents conditions their perceptions of liveability, responses to 84 interviews were examined in relation to the following key issues:

- **Reasons for moving into higher density housing**: Most of the respondents had previously lived in detached housing at lower densities, and for this reason we were interested in understanding their motivations for choosing to live at higher density.
- **Walkability**: Liveability has been associated with the walkability offered in transit oriented development. Understanding the extent to which this is considered to be a positive factor in the experience of residents potentially contributes to housing satisfaction, and perceptions of liveability.
- **Neighbourhood satisfaction and future housing aspirations**: The extent to which residents express satisfaction with their housing in the context of the walkable catchment, highlights the role played by local amenities in shaping perceptions about overall satisfaction and liveability. Future aspirations will indicate the extent to which any expressed satisfaction may endure over a longer period of time.

<table>
<thead>
<tr>
<th>Case study area</th>
<th>km from CBD</th>
<th>No of bldgs</th>
<th>Date completed</th>
<th>Building typology</th>
<th>Height storeys</th>
<th>Total no of units</th>
<th>Net density units/ha</th>
<th>Public transit mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albany</td>
<td>16</td>
<td>2</td>
<td>2005</td>
<td>Slab block with single level apartments</td>
<td>3</td>
<td>169</td>
<td>67</td>
<td>Dedicated busway</td>
</tr>
<tr>
<td>New Lynn</td>
<td>12</td>
<td>9</td>
<td>1996</td>
<td>Terrace houses</td>
<td>2–3</td>
<td>293</td>
<td>57</td>
<td>Rapid rail</td>
</tr>
<tr>
<td>Onehunga</td>
<td>10</td>
<td>1</td>
<td>2005</td>
<td>Perimeter block</td>
<td>4</td>
<td>112</td>
<td>64</td>
<td>Rapid rail</td>
</tr>
</tbody>
</table>

Source: Haarhoff et al. (2012).
6. Results

6.1. Reasons for moving into higher-density housing

Only a small number of the residents interviewed had previously lived in a multi-storey, attached form of dwelling. Prominent reasons given for their move into higher density housing was proximity to schools, shopping, public transport and employment. These reasons for the move are reflected in summarised comments extracted from the interviews:

For an Albany resident, the nearby school was an important factor in choosing their development. They had a son attending the school just across the road from their development and had researched schools before deciding on the area.

For others living in Onehunga and New Lynn, it had exceeded expectations pointing out that everything was very convenient with a library, community centre, supermarkets and many other community facilities available in the area.

Similarly, another New Lynn resident expected to live in a place that was safe, convenient for shopping, and one which offered a good environment with fresh air and clean water. All this resident’s expectations had been met.

Another Onehunga resident expressed the view she knew exactly what she was getting into. She knew Onehunga well. She knew it was perfect for her circumstances and so it has proved to be.

Perceived opportunities to form social networks was also an important reason given for making the move, especially for Albany and New Lynn interviewees. In New Lynn, the established Chinese community, and retailers catering for Chinese-specific needs (e.g. groceries and reading material), was reported as a major attraction to the area. This is well illustrated in the sample extracts from the interview transcripts:

A Chinese owner-occupier told us that living in New Lynn was a good choice. The high number of Chinese people living there meant she had many Chinese neighbours. It was also within convenient walking distance to shops and supermarkets which was important as she did not drive. This resident stated that she had to be self-reliant as her son could not live with her. She also mentioned safety. She had had recently gone back to China for three months leaving her house empty, but that it was perfectly safe.

Another owner-occupier stated that this was their first house; was affordable, had easy access to public transport and to Chinese and Western supermarkets, and that they liked the neighbourhood because of the number of Chinese people already living there.

When comparing these responses to those given in the 2001 study of the same area, it was interesting to note that positive social factors were stressed to a greater extent. This change probably reflected the increasingly stronger bonds that forged among the Chinese residents and the extent to which Chinese-born participants felt at home among their neighbours in the New Lynn developments. Most interviewees expressed ideas that social factors associated with their neighbourhood had influenced their choice of housing in the location.

Affordability featured as another reason for the move, although the importance of this varied across the study areas. In Onehunga and Albany, where there were more renters, interviewees reported comparing the choice of lower quality detached houses with their current apartment. For some, this was perceived as a step towards ownership of the unit, if not a step on the property ladder. For others, despite desiring more up-market suburban locations, their current unit was an affordable trade-off.
In summary, the reasons expressed by residents for moving into their current housing were not simply related to a choice between lower and higher densities, or between housing typologies. Choices were complex and in most cases involved trade-offs between a range of individual factors that condition housing choices. This finding is consistent with the research cited (cf. Allen, 2016; Bramley et al., 2006; McCrea & Walters, 2012; Thomas et al., 2010; Walton et al., 2008; Yates, 2001; Yeoman & Akerhurst, 2015). Surprisingly in our research, making housing choices solely on the quality of the development itself did not feature strongly. Although a consideration, this factor seemed to be overridden by other broader locational factors and the perceived amenity and liveability of the neighbourhood.

6.2. Walkability and car dependency
Urban intensification aims to place more people within walking distances of a range of services and amenities, and reduce car dependency. For this reason, achieving a good response to these factors is a measure of success for transit-oriented development. Interviewees reported using a wide range of local amenities and services, including banks/ATMs, café/restaurants, medical services, personal services (e.g. hairdressing), convenience stores, dental services, government services, gymnasiums and laundrettes. Also important in TOD is taking advantage of walkable neighbourhoods. Most of those interviewed reported walking to neighbourhood amenities or walking in combination with a bicycle, car or bus. A minority reported using a car exclusively for local access, which suggested a good response to the urban planning goal of walkable communities. This is illustrated by the following summary from the interview transcripts:

Public transport was very convenient, particularly for elderly people because they did not drive. Also their homes were within walking distance of the community centre. Facilities for food shopping were nearby as was a medical centre, which was “all the service elderly people need”.

There was, however, variation between the three case studies. In New Lynn, the town centre was highly valued for the range of services and amenities, and proximity of these to the case study developments scored high as a liveability factor. This was also the case in Onehunga in the context of a retail high street. Although the case study developments in Albany were within walking distance of as many services and amenities (if not more) compared to the other two case studies, walking routes were considered poorly developed and unsafe by residents, and were not well used. Not surprisingly, interviewees here reported a high level of car usage. This underscores the fact that walkability is much more than defining a catchment. How the neighbourhood is planned, designed and configured, to produce a quality public realm that people feel safe and comfortable in, is a crucial factor.

Interviewees were also asked whether they used their car more or less since moving to their current residence, and significantly many stated that they used their car less. Journeys to school produced mixed results, being complicated by parents’ preferences for particular schools outside of walking distances. In Albany, all children of those interviewed either walked to school or used a bus, compared to New Lynn, where travel modes were spread across car and bus to preferred schools, often outside the area. Journeys to work were overwhelmingly made by car, despite many of the workplaces being served by public transport.

Our interviews indicated that residents responded positively to the presence of services and amenities within walking catchment of their housing, and made good use of the facilities offered. They also reported being more prepared to walk to these facilities, and use cars less, where there was a quality public realm, and less likely where this was absent.

6.3. Housing satisfaction and future housing aspirations
At the end of each interview, participants were asked to reflect on whether living where they were had met their general expectations, with most of those interviewed responding in the affirmative.
Although the level of response varied across the case studies, those satisfied still outnumbered those dissatisfied. While noting that these responses may reflect the cognitive bias reported by Losciale and Perloff (1967) of over emphasising positive outcomes to choices people make, most of those interviewed expressed a high level of satisfaction with their living conditions. Given the extent to which the amenities and services of the town centres contributed to the residents’ perception of satisfaction with overall housing conditions, also indicates that quality transit-oriented development and its associated higher density contributes positively towards the perception of liveability.

There is, however, a dissonance between the growth of intensive housing running in tandem with continuing preferences expressed for detached housing (cf. Bramley et al., 2006; Dunbar & McDermott, 2011; Kelly et al., 2013; McCrea & Walters, 2012; Yates, 2001). In part this is reflected in perceptions expressed about the suitability of higher density housing for families and different life stages:

As one participant commented: young professionals, like themselves, were especially suited to living in Onehunga, as it was a good first step into the housing market. It was also deemed suitable for families with young children because of the facilities nearby. This participant also thought that while it would be better if they lived on the ground floor it would be excellent for older people with good mobility because it was safe and having people around would reduce isolation. Another interviewee thought that the Atrium was best suited to young people or those with busy lifestyles away from their homes and that the units function best as low maintenance “crash pads”.

These issues were pursued our interviews in a context where most of those interviewed had expressed overall satisfaction with their higher density living experiences. They were asked about their future housing plans: How long they intended living in their current residence; what type of housing they thought they would move to if they were to move; what type of housing they thought they would be living in the long-term.

Most of the interviewees did not know how long they would stay in their current residence, especially among renters. However, most of those interviewed indicated they would stay at their current residence, at least in the short- or medium-term, with some indicating a reasonably long-term intention to remain in their current place of residence, especially among home owners.

A range of responses was received to the question; “Is there anything that would make you leave?” Reasons included a move for work purposes, schooling for their children or their own study obligations, or to return overseas. Age-related reasons were also given, especially in multi-generational households where older people resided.

When asked what type of housing they aspire to in the future however, there was a large response for a desire to own a stand-alone (detached) house. This response appears contradictory, to the high level of satisfaction expressed about their current higher density living and the amenity of the associated neighbourhood, amenity unlikely to be available in a lower density suburb.

In summary, despite interviewees expressing general satisfaction with their current higher density housing, coupled with the fact that many had chosen to move from detached to higher density housing, aspirations were overwhelming for moving on to detached housing in the future. This of course should be of concern to cities promoting higher density housing.

7. Conclusions
Current iteration of urban growth management strategies in large Australian and New Zealand cities are embedding an urban planning goal of delivering enhanced “liveability”. The question raised in this paper, is the extent to which this is being achieved as an outcome? The embedding of liveability goals in urban growth management was contextualised in the context of broader shifts of focus for urban planning systems, where in the context of neoliberal political agendas, urban planning at the
local level is promoted as a partnership between public and private interest, with an understanding the place shaping process delivers liveability.

The concept of urban liveability is explored in relation to applications in urban intensification and explored with respect to how this is experienced by residents living at higher density. Following approaches taken by other researchers (Allen, 2016; McCrea & Walters, 2012) we have taken satisfaction with housing in the context of the local neighbourhood as a subjective expression of liveability.

Building on evidence to support the idea that higher density leads to resident’s experience as enhanced liveability is argued to be important, where urban policies and development strategies envisioning this as an outcome. Making the case for higher density development in Australian and New Zealand cities has, as reported, met with resistance, and the advocacy of higher density development will be undermined if it fails to deliver the anticipated outcome for residents concerned. Noting Yang’s (2008) contention that the empirical basis for the argument that higher density enhances liveability is weak, this underscores the importance of research on this issue.

There is a small, but growing body of research (to which this paper contributes) examining the relationship between density and liveability (Allen, 2016; McCrea & Walters, 2012; Walton et al., 2008). Taking housing satisfaction as an expression of liveability, what these studies underscore is that the quality of the local environment contributes to urban resident’s sense of housing satisfaction, and hence the perception of liveability. Indeed, in the context of transit-oriented development, the close association between higher density, multi-unit housing forms and a walkable catchment to the local centre are considered to be an interdependent set of conditions contributing to the experience of liveability.

From interviews with residents living in three transit-oriented development locations in Auckland, we have assessed the extent to which expressed housing satisfaction in the context of the wider neighbourhood indicates liveability. This was explored around three key issues framed as questions. Reasons for making the move to their current higher density was of significance because most of the interviewees had previously lived in lower density detached forms of housing. Underscored in the responses to the interviews was the strategic trade-off between multiple factors considered when making housing choices. Moreover, what we found among those interviewed is that the amenities of the local centre and the public transit options were considered to significantly contribute towards their perception of liveability. This is consistent with the findings of McCrea and Walters (2012) Brisbane study reported, and with the findings of Allen (2016) from her interviews of residents living in medium density housing in Auckland.

More surprising, was the finding that despite those interviewed expressing satisfaction with their higher density housing and their neighbourhood, when challenged to consider future housing options, most selected a lower density, detached house type. This finding however, needs to be qualified in a number of ways. Firstly, unconstrained aspirations do not reflect real life conditions that people face when making housing choices. Secondly, urban development policies, with their constraints on urban sprawl and emphasis on intensified development, will mean a reducing supply of detached houses, or at least those within commuting distances that people find tolerable. Thirdly, in some cities such as Sydney, Melbourne and Auckland, the reduced supply of detached houses is increasingly priced beyond the reach of many people who desire them, especially first time homeowners. The potential consequence of unfulfilled aspirations should be of concern to urban authorities, to ensure that higher density policies deliver appropriate housing in quality neighbourhoods—places that people consider to be liveable.

Broadly, the findings from our interviews indicates that for the residents living in higher density areas, there was a positive expression of housing satisfaction. This satisfaction is derived as much from the housing units as it is from the amenities and services of the neighbourhood centre. In the context of the transit oriented development relevant to the three case study locations, where
conditions have facilitated walkability and reduced car dependency, the outcome is seen in a positive way by those interviewed. Generally, these points align with the findings of McCrea and Walters (2012) and Allen (2016) from their Brisbane and Auckland studies respectively.

These conclusion, however, have some limitations. What we cannot conclude is whether the expression of satisfactions found indicates that liveability is enhanced, without a comparative measure. For example, comparing housing satisfaction and liveability between residents living in higher density housing with low density suburban areas suggests a better approach. The study reported here, and indeed the research cited, have all used housing satisfaction as an expression of liveability. Having greater confidence in the findings will be enhanced if questions about liveability are more directly probed with residents concerned. Indeed, one of the values of Allen’s (2016) research is that residents were directly asked to conceptualise their idea of what “quality urban life” meant to them. Given the continuing priority of urban authorities to facilitate urban development at higher density, undertaking more research on these questions in a more direct way seems appropriate for further study.

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Cover image
Riverwalk higher density housing in Vancouver, BC.
Source: Errol Haarhoff.

Notes
1. While recognising that often three scales of density are identified, namely low, medium and high, in this paper a distinction made between “lower” and “higher” density housing and development. Lower density housing refers to stand-alone or detached houses located on an independent land subdivision. Higher density refers to all housing types that involves attached forms of housing in multi-unit blocks of varying building heights.
2. These interviews were conducted as part of a larger research study considering intensification in Auckland, published as a report Future Intensive: Insight’s for Auckland’s Housing (Haarhoff et al., 2012). It was funded by the Auckland Council and Transforming Cities, University of Auckland. The opinions and conclusions expressed are those of the authors and do not necessarily reflect those of the funders.
3. The earliest urban growth management plan is the Auckland Regional Growth Strategy (1999). Following the amalgamation of previous smaller local authorities into a single body for the Auckland Region in 2011, the new Auckland Council prepared the updated Auckland Plan (Auckland Council, 2012). Following a public consultation period and the recommendation of an independent commission, the Auckland Council approved the Unitary Plan in September 2016 (based on the proposals in the Auckland Plan that provides a legal basis for implementation.
4. Interviews of residents were undertaken under protocols approved by the University of Auckland Human Participants Ethics Committee.

References
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