CHANGING DEMOGRAPHICS AND HOUSING TYPOLOGIES: ADDRESSING SOCIAL AND AFFORDABLE HOUSING IN AUSTRALIA

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Abstract
    This paper will report on current Sustainable Built Environment National Research Centre (SBEnrc) research which aims to identify the strengths and weaknesses of various social procurement approaches for social and affordable community and private rental housing in Australia. To achieve this, the research team is investigating the three inter-related areas of demographics and typologies; social procurement; and funding and financing models. This paper will primarily discuss findings of the first of these three areas.

An important question being asked is: has the time come to rethink the traditional distinctions between elements of the housing continuum in order for governments and not-for-profits to better engage with the market and institutional investors? In doing this, and to ensure access to safe and secure housing when needed, we need to: (i) address the types of housing being provided across the spectrum; (ii) better understand the changing nature, needs and demographics of each cohort; and (iii) diversify our housing responses, seeking innovative and perhaps informal approaches providing housing which respond to the various needs of different cohorts.

Early findings around the demographic and typological theme are showing an aging population with complex life course trajectories including the multiple presentations of family that exist in a modern society, and longer stay of young adults in the parental home. Key emerging trends identified include: a more holistic approach to achieve resilient and sustainable communities and environments; inner-city infill is a priority area in large cities, with higher densities in bigger cities accommodating a broad variety of dwelling types; community engagement and input is increasingly considered as a valuable resource; and more resource efficient housing developments are needed and are becoming mandatory.

Keywords: Social housing, Affordable housing, Demographics, Housing typologies, Australia

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INTRODUCTION

Current research is seeking to identify the strengths and weaknesses of various social procurement approaches for social and affordable community and private rental housing in Australia through investigating the three inter-related areas of demographics and typologies; social procurement; and funding and financing models. This will ultimately lead to the development of a set of social procurement criteria which address this changing and complex sector, to assist those responsible for both policy development, and asset and service delivery.

This research builds on the findings of two previous research projects, *Rethinking Social Housing*[1] and *Valuing Social Housing*[2]. That research provided the methodological underpinning including consideration of impacts across the nine domains of community, economy, education, employment, environment, health and wellbeing, housing, social, and urban amenity. It also established a productivity-based conceptual framework that highlighted productivity benefits from four angles: the individual; macroeconomic; fiscal; and non-economic such as social and environmental capital.

An important question raised in the course of this investigation is: has the time come to rethink the traditional distinctions between elements of the housing continuum in order for the government and not for profit sectors to better engage with the market and institutional investors? In doing this, and to ensure that safe and secure housing remains available to those in need, when they need it, we need to: (i) address the types of housing being provided across the spectrum; (ii) better understand the changing nature, needs and demographics of each cohort; and (iii) diversify our housing responses in Australia, seeking innovative and perhaps informal approaches providing housing which responds to the various needs of different cohorts.

This paper thus reports on early findings and conclusions with regards to the changing demographics and associated impact on housing typologies.

RESEARCH APPROACH

An initial review of both academic literature and industry documentation was undertaken in mid to late 2017, across the fields of demographics, housing and community typologies, social procurement approaches, and funding and financing models. This particularly included Australian Housing and Urban Research Institute (AHURI) academic publications and documentation from State agencies involved in the delivery social and affordable housing (with a particular focus on New South Wales (NSW), Queensland (QLD and Western Australia (WA). A limited review of international literature was also conducted from the United Kingdom (UK) (especially HACT UK), the European Network of Housing Researchers (ENHR), the Canadian Mortgage and Housing Corporation (CMHC), and the United Stated (US) National Housing Conference. Findings from the social procurement, and funding and financing streams of this research will be reported elsewhere.

DEMOGRAPHICS AND HOUSING TYPOLOGIES– A CRITICAL LINK FOR FUTURE SYSTEM RESILIENCE

This research is investigating the significant changes which have occurred, and will continue to occur, in Australian demographics, and that are thus impacting on the social and affordable housing sectors.

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[1] http://sbenrc.com.au/research-programs/1-31-rethinking-social-housing-effective-efficient-equitable-e3/

[2] http://sbenrc.com.au/research-programs/1-41/

The affordability crisis is evident in Australia due, in part, to the cost of housing that has outpaced minimum wages and pensions. Other influences are: the decline in local economic activity; the mismatch between population growth and insufficient supply of new housing; and out of date planning zoning and land-use regulations reducing land availability for the provision of affordable housing (Demographia 2017, AHURI 2017).

The main factors affecting the social and affordable housing sectors are the changing age-structure driven by population ageing (Cigdem et al.2015) and the increase of the number and diversity of households, compared to the rate of population growth (HILDA 2017). This is due to a detected increased complexity in life course trajectories including the multiple presentations of family that exist in a modern society and longer stay of young adults in the parental home because of rising unaffordability in housing markets. Therefore, there is a mismatch between the changing demographics of those in need and current housing stock that needs to be addressed, requiring more variety in the type of social and affordable housing available to vulnerable groups.

The research question guiding the investigation is 'how are the housing typologies changing or how do they need to change to face growing demands, demographic variations and sustainability issues?' This question led to an exploration of emerging demographic trends and responsive housing types and precincts, and how future needs will be met through consideration of more holistic approaches to achieve resilient and sustainable communities and built environments. Australian examples, especially those from WA, Qld and NSW along with international cases were analysed to propose housing typologies that can address needs across the spectrum, with a particular focus on the social and affordable community and private rental segments.

Demographics

According to the recent Household, Income and Labour Dynamics (HILDA) report (HILDA 2017), conducted from 2001-2015, household types have been relatively stable across the nation, with 41 per cent of the population living in *couple with dependent children households*; with 20 per cent being *couples without children* in second place. However, this survey detected other trends in household structures due to various factors such as population ageing, choices individuals make about living arrangements, preferred lifestyles and attitudes towards marriage, parenting and work. As a result, that study found some non-standard emerging household types such as *multi-family* and *single parents with non-depending children households* growing 4% and 1.4% respectively. The process of population ageing has a strong impact on households' composition as well. As population over 65 years is projected to double by 2030 (Cigdem et al 2015), the trend for households of *couples without children*, and *single-person* are also expected to grow in coming decades (HILDA 2017).

In terms of general population growth, Western Australia currently has a population of 2,623,164 (around 80% concentrated in Perth and Peel region) and an estimated growth to 3,500,000 by 2050. *Couples with children* is the most common household both in Perth and regional WA, followed by *Single person households* (ABS 2017; WAPC 2015a; HIFG 2017). Queensland has a population of 4,883,739 half of it concentrated in Greater Brisbane. Estimated growth 8,000,000 by 2050[3]. Most common household in Brisbane and regional Qld is *Couple with children*, followed by *Couple without children* (ABS 2017). And in NSW the population is 7,480,228, concentrating 4,823,991 in greater Sydney. Estimated growth 11,360,000 by 2050. Most common household in Sydney and regional NSW is *Couple with children*, followed by *Couple without children* (ABS 2017).

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[3] http://www.qgso.qld.gov.au/products/tables/proj-pop-series-qld/index.php

According to the 2016 Census, the metropolitan areas of the three capital cities and regional areas of the three states do not present significant differences in terms of demographic cohort and household composition. The population median age is 36 years, presenting 5 per cent of older inhabitants (65+years), and 7.5 per cent of people within 25 to 39 years (Millennials and GenY). Household composition is distributed between average 72 per cent of family households and 23 per cent of one-person households (38 per cent *couples without children,* 44 percent of *couples with children* and 15 per cent *of sole-parent families* (ABS 2018).

Of this, and considering demographic projections trends (HILDA 2017), key target cohorts for social and affordable housing will include elders, young people (Millennials, GenY), single-person and single parent households, which require diversity in housing options to suit changing lifestyles and market demands.

Typologies

The lack of affordable housing is impacting all age cohorts across the nation. From the 2016 Census statistics (ABS 2018), comparisons between dwelling composition, structure and tenure in Perth, Brisbane and Sydney show that in the three capitals, detached houses are dominant typologies (WA and Qld with average 78 per cent; NSW with 66 per cent). This is followed by semi-detached houses (WA with 14 per cent, NSW and Qld with average 11 per cent), and apartments (NSW 20 percent; Qld 11 per cent and WA 6 per cent).

The demographic trends explained in the previous section suggest the need to address innovative and affordable solutions incorporating the concept of sustainable communities, smaller units with access to green spaces, amenities and public transport. This was identified by the early review of academic and industry literature pointing to several relevant initiatives under development in the three states studied, along with lessons from international cases that can be adapted to Australian conditions.

In **Western Australia**, the Department of Communities (Housing) has developed and is implementing innovative housing strategies and typologies that are complemented by educational programs and incentives to sustain people within the housing system and also facilitate transitions across the housing continuum.

Social Housing initiatives include:

- *Social Housing Investment Package (SHIP)* - is part of the State Affordable Housing Strategy that supports transition though the housing continuum and aims to favour seniors and families with children on the priority waiting list through the provision of new dwellings (about 1,000 additional homes), purchase of spots and private rental leases.
- The *Rental Pathways Pilot* - assists eligible tenants to transition from public housing to private rental market and maintain a successful tenancy there.

Community housing initiatives include:

- *Sustainable Housing for Artists and Creatives (SHAC)* - developed and owned by community provided Access Housing (who also deliver other community housing options), won the 2017 UDIA (WA) award for Excellence in 'Leading Affordable Housing Development Project' category. SHAC comprises 12 apartments and two art and creative studios which offer residents strata community-based solar energy capture, storage and shared usage infrastructure. SHAC is part of the White Gum Valley (WGV) development in Fremantle (https://www.accesshousing.org.au/more-awards-success-for-access-housing).

Affordable private rental initiatives include:

- *White Gum Valley 'Innovation through demonstration"* - precinct in Fremantle, is a partnership of the City of Fremantle and Landcorp, WA's land authority. It offers a

variety of new approaches, such as family and row houses and apartment studios, and a sector incorporating the Baugruppen approach. The same site is also home to the *Gen Y Demonstration Housing Project*, which consists of three interlocking one-bedroom apartments that appear as a single house (Landcorp 2017).

- *Connected Living* - aims to deliver more affordable developments around key transit precincts and activity centres. The WA Department of Communities, Housing set a target of 500 apartments, in seven sites in metropolitan Perth. The developments have to align with the objectives of affordability, diversity, design quality, and innovation.

- *Micro lots* – this initiative targets first home buyers and downsizers, offering a new housing typology consisting of villages of lots under 100sqm and homes of up to 120sqm, located close to public transport. The first community launched, in Ellenbrook is designed to house eight villages with an estimated population of 30,000. This is a public-private partnership between the Department of Communities and two private companies (WA Department of Communities 2018).

- *Tiny houses* - the City of Fremantle has supported an amendment to the WA planning scheme proposing the subdivision of larger residential blocks to create smaller independently-owned houses and encouraging the conversion of one single dwelling into multiple smaller dwellings within the existing built form (City of Fremantle 2017).

    In **Queensland** social housing and community initiatives include:

- The *Queensland Housing Strategy 2017–2027* - aims to deliver more social and affordable housing and better services to people in need. The strategy targets growth, prosperity, connections and confidence, and is complemented with an *Action Plan* that provides key actions and deliverables for each category to drive key reforms and guide investment across the whole housing continuum (Qld Government 2017). Through an investment of $1.6 billion, the Strategy aims to provide 4,522 social homes and 1,034 affordable homes state-wide, generating 450 full-time jobs a year across 10 years. The Strategy also encompasses youth foyers to protect and house young people exiting institutional and out-of-home care encouraging education, training and employment opportunities to support their transition to independence (Qld Government, 2017).

Affordable private rental initiatives include:

- *The Density and Diversity Well Done Open Ideas Competition* initiative - encourages built environment designers to deliver innovative ideas for affordable housing and sustainable communities. This competition is based on that in NSW for the design of the 'missing middle', a term used to describe dwellings that are compatible with surrounding lower density resident environments, incorporating affordable and buildable projects (Qld Government, 2017).

- *Shaping SEQ* - builds on previous regional plans and has identified the missing middle as a range of housing types between the two extremes of detached houses and high-rise apartment buildings focusing on affordable living (https://www.qld.gov.au/about/newsroom/shaping-seq).

    In **New South Wales** the Department of Families and Community Services, Communities Plus program, Land and Housing Corporation (LAHC) is delivering a new generation of integrated housing developments through government, private and non-government partnerships. 23,000 new and replacement social housing dwellings are being provided aiming for quality, integrated communities with improved social outcomes (https://www.facs.nsw.gov.au/__data/assets/pdf_file/0003/425559/FACS-Land-and-Housing-Corporation-Statement-of-Business-2016-17.pdf).

To encourage affordable housing development which incorporates the needs and character of the surrounding area, the NSW Department of Planning and Environment created several planning policies to encourage the development of new affordable housing and the maintenance of existing stock. They include:

- *NSW State Environmental Planning Policy Number 65 – Design Quality of Residential Apartment Development (SEPP 65)* - this policy aims to increase the supply and diversity of affordable rental and social housing in the state. It covers housing types including: villas, townhouses and apartments, secondary dwellings (granny flats), new generation boarding houses, group homes, social housing, and supportive accommodation.
- *Planning initiative AHSEPP (2009)* - aims to increase the supply and diversity of affordable rental and social housing in the state.
- *Design Guide for Medium-density Housing* - is part of the NSW Government's commitment to facilitate faster housing approvals and deliver a diverse range of housing options to support NSW's changing demographics and affordability (http://www.planning.nsw.gov.au/Policy-and-Legislation/Housing/Medium-Density-Housing).
- *The Missing Middle Design Competition* - was instigated to put into practice the design principles for medium-density housing for NSW. This competition sought high-quality, innovative design solutions for low-rise medium-density housing, including detached and attached dual-occupancy dwellings, terraces and townhouses, to bridge the gap between inner-city high-rise apartments and low-density housing on the outer fringes (https://www.google.com/search?client=safari&rls=en&q=%22+The+Missing+Middle+Design+Competition&ie=UTF-8&oe=UTF-8).

Integrated large scale projects delivering housing developments across all three categories-social, community and affordable rental include:

- *Ivanhoe Estate* - located on an 8.2 hectare site, Ivanhoe Estate envisions the transformation of 259 social housing properties into a socially integrated neighbourhood of around 3000 to 3500 properties including up to 1000 social and 128 affordable rental apartments, which means more people in need can move off the social housing waiting list. The project also will incorporate 120 bed residential aged care facility, 141 purpose-built social housing and 132 private independent living units, a wellbeing centre, educational facilities, public space and a retail centre (https://www.communitiesplus.com.au/major-sites/ivanhoe-1).
- *Western Sydney City Deal,* aims a measurable impact on the productivity, liveability and sustainability of the area, complementing NSW planning decisions to 2036 and influencing the state vision to 2056 (https://cities.infrastructure.gov.au/western-sydney-city-deal).

International examples, based on a limited review of the international literature, include the following examples of relevance to the Australian situation.

In **Canada**, *higher density residential developments* such of apartment condominiums, to accommodate to land high cost has attracted new households moving from rental housing, and people looking for urban lifestyles like downsizers and millennials. It also attracted developers making up roughly 50 per cent of new homes by 2006. *'Gentle density'*[4] and affordable housing options are being used to permit secondary suites (similar to Australian 'granny flats') and laneway housing in established neighbourhoods. Mid-rise housing also provides a less controversial, and more liveable,

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[4] http://www.smartergrowth.ca/what-gentle-density-and-why-do-we-need-it

option. The *Housing affordability by design* initiative is about designing, building and renovating housing to be adaptable, durable, functional, resource-efficient and cost-effective. Well-designed typologies include: *Accessible housing* providing for the effective use of space to fit families with young children, older people and persons with disability; *Adaptable housing* aiming to fit changing needs in an affordable manner; and *Sustainable housing* including resource-efficiency, durable materials and easy maintenance (http://www.cbc.ca/news/technology/passive-house-affordable-housing-1.443233).

In the **United States**, Philadelphia provides a strong case for urban transformation. Current activity commenced in this city in 2005 to address the demands and needs of population growth and housing unaffordability. The success of this approach integrated key aspects including strong community participation in developing processes and decision making with: planning reform including the *Zoning Code* (Clarion Associates and Duncan Associates 2011); land use reform and the creation of the *Philadelphia Land Bank* and the *Philadelphia Land Bank Strategic Plan* (Philadelphia Land Bank 2017); developing significant projects based on *The Affordable Housing Design Competition* (PNDCCDC 2005); and considering sustainability as a priority. Many lessons, can be drawn from the Philadelphia case study, particularly for community involvement in participatory design and decision making, design initiatives and planning regulations for the regeneration of greyfields (as is the case of land use reforms and procurement such as the *Philadelphia Land Bank).*

In the **United Kingdom**, the government published a white paper titled *Fixing our broken Housing Marke*t in 2017. This provides a plan to boost the housing system, calling for community involvement and stakeholder integration. It includes measures to ensure: planning for the right homes in the right places; building homes faster; and diversification of the housing market. This strategy may provide lessons for the Australian environment (UK Government 2017).

Three **European community-led examples** are also worthy of note. These examples are demonstrating success in providing affordable housing through innovative approaches such as building communities and solving social problems at the same time (Davies et al, 2017). These are: the *Baugruppen* phenomenon in Germany (oriented to the affordable rental or purchase sector, mainly located in urban infills); social housing in Austria; and the *Living Laboratories* experimental approach in Sweden (oriented to affordable student accommodation).

Baugruppen (building groups) in **Germany** is a model of co-housing, which is architect-led and collectively funded by the future residents that allows them to act as their own developer in a multi-unit housing project. This strategy allows for reductions between 10 to 20 per cent in development costs. An important aspect of these developments is the connection with the urban context and the social interaction it promotes. It adds to urban vitality by incorporating mixed-use elements that fuel urban interaction considering social issues of inclusion and community, for example every Baugruppen project in Berlin has a shared garden, which is often open to the public (Ring 2016ww).

In **Austria**, Vienna's city government owns and manages about 25 per cent of the city's housing stock. In the 1980s, the city adopted a different approach aiming to collaborate with the private sector to build affordable housing rather than developing and owning more public housing. Thus, the city indirectly controls 200,000 units that are built and owned by limited-profit private providers, developed through a local government-regulated process. This can be another case appropriate to Australian conditions. (*https://www.huduser.gov/portal/pdredge/pdr_edge_featd_article_011314.html*).

And in **Sweden**, the architectural firm <u>Tengbom</u> is constructing an apartment block to be occupied by students (*Living Labs*), located on the Chalmers University campus. The students will try different products, materials and test different ways of living. Research will be conducted in close collaboration with the Chalmers and Gothenburg Universities and the results will be used the Swedish Housing Cooperative (HSB) to develop innovative housing. Features include: flexible adaptable design enabling change layout over the ten-year duration of the experience; shared facilities such as an exhibition area, a common laundry room and a meeting area; cooperation between HSB and a management team with representatives from Chalmers, Interactive Institute and NASA (http://suslab.eu/partners/chalmers-th/hsb-living-lab/).

KEY FINDINGS TO DATE

Early findings from the demographic and typological research show an ageing population (estimated to double by 2030) with complex life course trajectories including changing family arrangements and longer stay of young adults in the parental home.

Several key emerging trends have been identified:

1) There is a need for a more holistic approach to achieve resilient and sustainable communities and environments to address affordability. These need long-term planning strategies, policies and processes where social and affordable housing is embedded in precincts with ready access to social services and facilities, public transport, amenities, and green open spaces. New housing types are also emerging in this context.

2) Inner-city infill is a priority area in capital and large cities, with higher densities in bigger cities that accommodate a broad variety of dwelling types. Such infill also potentially provides a more diverse selection of housing types, important to deliver a range of housing options suitable for social and affordable housing cohorts, in terms of both space and affordability. Tenure diversity is also an essential element in this equation to provide opportunities of mobility across the housing spectrum (Rowley et al 2017). Infill can provide a range of benefits to social and affordable housing sectors and also to affordable private market including: savings from consolidating existing infrastructure can contribute to the affordability of new developments; contributing to updating existing amenities and creating new ones; providing higher density to improve and expand public transport networks and services; and providing additional opportunities for quality design and improved sustainability of dwellings and precincts. (Rowley et al 2017).

3) Community engagement and input is increasingly considered as a valuable resource in identifying the needs of future owners or tenants, regarding diversity, flexibility and sustainability of new developments.

4) More resource efficient housing and developments are needed and becoming mandatory.

EARLY CONCLUSIONS

Key demographic changes are related to: (i) population growth, mainly due to longer life expectancy and to migration processes; and (ii) a trend toward one-person and multigenerational households, due to changes in family arrangements, such as longer stays of young adults in the parental home (often for financial or cultural reasons). These trends are altering household composition, and affecting lifestyles and the demand for appropriate housing. This is in turn impacting on social and affordable private rental

cohorts, and thus affecting the capacity of governments and CHPs to address specific demands.

To address this changing environment, a review and adaptation of local planning systems and regulations is necessary (and in some cases is underway) to facilitate mechanisms that allow for higher densities and greater diversity of housing stock. Philadelphia is one example of how to address these affordability issues. Despite its population growth, that city invested in infill and existing housing stock renovation to accommodate migrants and local demand. The strategy included: community engagement in development and approvals processes; zoning code reforms that allowed to increase percentage of development built as-of-right; land use reform; and architectural competitions to create significant, memorable housing projects.

Many cities are currently revising and adapting planning laws and regulations to encourage construction of more multi-residential typologies for social and affordable housing. Local Governments are also streamlining regulatory and design review processes to reduce construction costs. Some countries already have developed land regulations and are proposing plans to achieve housing goals, as is the case of England, and from which lessons can be drawn to ameliorate the Australian system.

Another critical element is identifying and developing new housing typologies which address the changing demographic and economic environment confronting the housing sector. Australia's heritage of the detached house is changing, but still constrains our thinking.

A further key lesson to be drawn from successful national and international cases highlighted in this paper is the creation of sustainable communities as foundation for affordable housing. This approach facilitates decision-making and sustainable and resilient urban infill. A holistic approach to the design of these communities is crucial to ensure affordable living, through the inclusion of the cost of dwelling, transport, food and clothing and access to amenities, green space, schools and jobs in affordability analysis. Medium-density typologies with a variety of units allowing for multigenerational and diverse, inclusive social connections seem to be the most appropriate for the inner-city infill, not letting behind low-density single-family homes, but also combined with access to transport and amenities. Community input remains a valuable resource in decision-making and in identifying the real needs of future owners or tenants, regarding diversity, flexibility and sustainability of new developments.

ACKNOWLEDGEMENTS

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