POLICY EVIDENCE SUMMARY April 2023

Insights into how more sustainable housing can be achieved when planned at a neighbourhood level

Based on AHURI Final Report No. 396: Sustainable housing at a neighbourhood scale

What this research is about

This research investigated the challenges and opportunities that built environment professionals in Australia experience when planning, designing, and implementing sustainable housing developments at the neighbourhood scale. The research also examined strategies and policy levers employed in good practice eco-neighbourhoods from across Australia and Europe that can inform Australian policy and practice.

The context of this research

Neighbourhoods are the 'in-between scales' between individual buildings and the urban scale, and have been described as the 'building blocks' of a city. A neighbourhood is defined as a cluster of residences, sometimes in conjunction with other land uses, and with shared infrastructure.

While the Circular Economy is concerned with realising closed loop material flows (that is, avoiding the use of non-renewable resources, reducing waste, designing products and materials for reuse and recycling), this research also considered sustainable development goals of social and intergenerational equity, environmental protection and economic prosperity.

The key findings

Benefits of neighbourhood planning

The neighbourhood scale offers sustainability gains and economies of scale for decentralised systems (such as water and energy) and opportunities for integrated land-use and transport planning, biodiversity planning and social sustainability.

Planning for green (natural and open spaces) and blue (water) infrastructures at a neighbourhood scale can maximise their benefits, as this scale enables the coordination of water bodies, open spaces and the greening of streets and individual sites. Moreover, this scale allows consideration of the importance of communities and social capital for achieving sustainability.

While neighbourhoods are much more complex than buildings, they are 'small enough to innovate in public policy, governance and sustainable urban design strategies, but large enough to create important social and ecological benefits that impact the city scale.

Who is involved in developing sustainable neighbourhoods

Developers, urban designers/consultants, local council planning departments and state government planners are key actors for realising sustainable neighbourhoods. It is largely the interaction between these groups that determines what sustainable development outcomes can be achieved at the neighbourhood scale beyond minimum planning and construction requirements. Statutory planners in local governments are critical gatekeepers of more progressive opportunities in relation to sustainability at the neighbourhood scale. State and territory government departments have an important role to set policy frameworks and initiate policy and regulatory change. However, given the weak policy frameworks for sustainable development and neighbourhood-scale planning currently available, political support at all government levels is required to ensure that above-standard residential and mixed-use neighbourhood projects can be realised.

Findings from survey respondents

Planning issues at the neighbourhood scale

The researchers conducted an online survey with policy makers, public and private sector planners, property developers and architects and designers in the Australian volume housebuilding industry. Several respondents commented on the difficulties of realising integrated transport and land use planning at the neighbourhood scale, given the traditional and dominant focus on the scale of individual buildings for housing developments in Australia. The survey responses suggest that the provision of decentralised renewable energy and water systems is not currently receiving much attention, despite the potentials of planning such features at the neighbourhood scale. Respondents also highlighted the challenges of moving beyond the building scale in realising open and green spaces and biodiversity planning.

Respondents noted that lack of restrictions on greenfield development or (conversely) a lack of incentives to develop brownfield or greyfield sites meant there was no priority to develop brownfield or greyfield sites, unlike in the UK for instance. If a shift towards prioritising brownfield and greyfield developments is to be achieved, this suggests there is a need for stronger policy frameworks and better coordination of land release between local government areas and across states and territories.

Many respondents indicated that they do not assess environmental performance at the neighbourhood scale using one of the currently available (voluntary) community rating systems. These responses suggest that unless neighbourhood-scale rating tools are explicitly required by government agencies or clients they will only have limited use in urban planning and development processes.

Organisations are aware of the opportunities that the neighbourhood scale offers in relation to site orientation and design; access to green spaces; tree canopy cover; energy micro-grids; and sustainable mobility concepts. Responses also indicated an awareness that realising these opportunities at the neighbourhood scale would deliver improved outcomes for individual dwellings. However, respondents highlighted several barriers to realising sustainable housing at a neighbourhood scale resulting from existing policy frameworks and land ownership structures that prioritise the building scale.

> ‘The research found that built environment professionals find it challenging to navigate the governance and policy landscape, and to identify the relevant tools to plan, design, develop and evaluate sustainable housing at the neighbourhood scale.’

Barriers to neighbourhood scale sustainable housing

Important barriers to comprehensively incorporating sustainability principles in planning and development processes are the fragmentation of policy and regulatory frameworks for sustainable urban development and weak mechanisms for planning at the neighbourhood scale. Building regulations are set at federal level while state and territory governments are responsible for urban and regional planning policies. Housing developments are usually designed and realised at the scale of individual building sites, with weak mechanisms for planning and design at the neighbourhood scale.

The research found that built environment professionals find it challenging to navigate the governance and policy landscape, and to identify the relevant tools to plan, design, develop and evaluate sustainable housing at the neighbourhood scale.

They also experience a wide range of limiting factors in realising sustainable housing at the neighbourhood scale. These limiting factors include:

- policy frameworks that perpetuate low standards and prevent both the consideration of a more holistic perspective of sustainability and the opportunities afforded by planning at the neighbourhood (rather than individual building) scale
- land ownership structures (especially in greyfield locations)
- costs/economics of realising higher standards
- a lack of sufficient technical expertise among key actors and sectors as well as limited opportunities for professionals to combine their expertise in shaping development outcomes.

Currently there are weak mechanisms for realising sustainable neighbourhoods in Australia, with a dominant focus of planning and development processes on individual building sites that imply limited scope to consider wider effects of the development. Sustainability is given insufficient attention in urban development processes due to weak statutory underpinnings and an often merely selective focus on specific aspects.

Many survey respondents expressed disappointment at the low regulatory standards for building performance in Australia. The current requirements are seen to prevent industry innovation and as presenting considerable challenges for local governments trying to negotiate higher standards in planning and development processes.

Case studies reveal more sustainable developments are challenging to deliver

Ten case studies of eco-neighbourhoods from Australia and five from Europe were analysed. These eco-neighbourhoods are government or developer-driven good practice examples in urban brownfield or greenfield settings.

The case studies highlighted that realising such projects are time-consuming and require strong leadership and dedication to overcoming challenges. In many cases, the original ambitions for sustainability had to be reviewed (and often lowered) over the course of the project duration, and/or some of the original intentions could not be realised for technical, regulatory or political reasons. Compromises made during implementation often resulted in a watering down of initial ambitions and a selective focus on only some aspects of sustainability.

In comparison to the European examples, it appears that the Australian cases started with considerably more modest ambitions for sustainability. During the planning and implementation processes they also proved more vulnerable to external influences that required compromises and that often resulted in a watering down of standards.

The master plans and development plans in the European cases incorporated the vision for the neighbourhood and for the in-between spaces, demonstrating the value of such instruments in realising the overarching vision for the sustainable neighbourhood through key infrastructures (such as public transport connections) or landscaping (including water management approaches).

Case studies show success requires significant cross-sector cooperation and policy instruments

The cases have shown that clear responsibilities, coordination between government levels (and sometimes across jurisdictions), as well as partnerships of government, the private sector and local communities are important for the implementation (and later functioning) of eco-neighbourhoods. Moreover, government-led projects also showed the importance of continuing political support.

As policy instruments, master plans and design guidelines (with binding requirements for developers) or similar tools, were important instruments. They ensure that the expectations for the sustainability of the development are realised by the usually considerable number of organisations involved in the process. However, evidently only those aspects included in the plans and guidelines will be followed through, so a comprehensive and integrated vision for sustainable urban development is important from the beginning of the project.

What this research means for policy makers

To support sustainable housing at the neighbourhood scale in Australia, major regulatory and policy reform is needed. The research found:

- there is a need for stricter regulatory requirements on urban sustainability in general, as well as for policy frameworks and development models to support sustainable housing at a neighbourhood scale specifically
- new governance models and partnerships of governments, private developers, and local communities will help support sustainable housing at a neighbourhood scale
- planning, designing and implementing sustainable housing at a neighbourhood scale will only become more mainstream if the demands are included in planning and building regulations. Mandatory targets and policies and regulation on sustainability and neighbourhood-scale projects will require coordination across different levels of government and jurisdictions
- policy expectations for sustainable neighbourhood developments should be performance-based, rather than prescriptive, and they should be supported by objectives and targets so that achievements can be evaluated
- sustainable housing developments need to be coordinated with policies for transport, environment and the economy
- a review of existing sustainability rating tools, and making sustainable community assessment tools mandatory, would further support sustainable neighbourhoods
- comprehensive neighbourhood-scale master plans and design guidelines and similar tools can help ensure that the sustainability of the large-scale developments become a binding requirement. Such planning instruments can provide an important decision framework following subdivision and during many years of implementing large-scale projects
- information, education and training would help change the professional and public discourses on sustainability and the circular economy in the built environment
- securing the financing needed for sustainable neighbourhoods was identified as a major challenge: policy support is needed to change the financing landscape, for example through ethical investment practices that prioritise quality and legacy of development projects over quick financial returns
- temporary financial or fiscal incentives for industry to support the uptake of new approaches may be required during a regulatory transition phase
- local councils need more support to reduce real or perceived risks attached to ‘untypical’ developments. Projects such as eco-neighbourhood developments are frequently seen to place higher demands on planning and development processes and may result in higher costs for the maintenance of public assets created as part of projects
- policies that prioritise recycled materials over new ones are important so that a market for such products can develop. Databases of available second-hand construction materials and structures could be a useful tool to support efforts of procuring reused or recycled building material.

Methodology

This research reviewed academic and policy literature; conducted an online survey with policy makers, public and private sector planners, property developers and architects and designers; undertook case studies of ‘eco-neighbourhoods’ in Australia and Europe; and discussed findings in two online workshops with government and industry professionals.

To cite the AHURI research, please refer to:

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