

# Developing sustainable affordable housing: a project level analysis

authored by

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## ACRONYMS

ABCB	Australian Building Codes Board
ACT	Australian Capital Territory
AHURI	Australian Housing and Urban Research Institute Ltd.
ΑΤΟ	Australian Tax Office
BASIX	Building Sustainability Index (New South Wales)
BCA	Building Code Australia
CHP	Community Housing Provider
COAG	Council of Australian Governments
CRA	Commonwealth Rent Assistance
DHS	Department of Human Services
DA	Development Application
ESD	Environmentally Sustainable Design
FaHCSIA	Australian Government Department of Families, Housing, Community Services and Indigenous Affairs
LUPTAI	Land Use and Public Transport Accessibility Index
NAHA	National Affordable Housing Agreement
NatHERS	Nationwide House Energy Rating Scheme
n.d	no date
NBESP	National Building and Economic Stimulus Program
NFP	Not-for-profit
NRAS	National Rental Affordability Scheme
NSW	New South Wales
WELS	Water Efficiency Labelling and Standards
ResCode	Residential Code (Victoria)
SEPP	State Environmental Planning Policy (NSW)
SHI	Social Housing Initiative
m <sup>2</sup>	square metre(s)
TPC	Tenant Participation Compacts

## EXECUTIVE SUMMARY

## The purpose and context of the research

This study examines how contemporary Australian affordable housing projects are designed, financed, developed and managed. The study aims to deepen understanding and raise awareness of the various trade-offs that shape the design and development of affordable housing projects in Australia, and to suggest ways in which such trade-offs can be managed to deliver outcomes that are socially, environmentally and financially sustainable. The study also offers a tool for project-level evaluation of affordable housing.

Governments across Australia are increasingly turning to not-for-profit housing providers to help address shortages in housing that is affordable to low and moderate income households. Consequently, various new forms of affordable housing projects have been developed or procured by not-for-profit organisations in recent years. Previous research has examined some of the challenges faced by not-for-profit organisations involved in this rapidly emerging industry and has focused on organisations or the wider policy and regulatory contexts in which they operate (Milligan et al. 2009, 2004; Lawson et al. 2010; Travers et al. 2011). The focus in this study is on delivery at project level, using a sample of eight affordable housing projects that have been selected on the basis of specified criteria.

The project level analysis is underpinned by the concept of sustainability, giving consideration to financial, social and environmental goals and outcomes of affordable housing projects. A sustainability framework encourages providers planning a new project to aim high, to manage multiple objectives and to consider both immediate and long-term impacts. This framework underpins the four principal research questions addressed in the study:

- 1. What qualitative and quantitative metrics are appropriate to evaluate the on-going financial, environmental and social sustainability of affordable housing projects developed by Australian not-for-profit providers?
- 2. What are the key contemporary approaches in the development of affordable housing projects by not-for-profit providers?
- 3. What sustainability considerations have been included in the design and development of affordable housing projects? What trade-offs were made between financial, environmental and social aspects?
- 4. What sustainability outcomes have been achieved in the affordable housing projects examined? What are the implications for policy setting and organisational development in this field in Australia?

Overall, the study aims to encourage a more critical and informed approach to the planning of new affordable housing projects. It is hoped that it will also be of practical benefit to emerging affordable housing providers who can learn from the experience of early players in the industry. Policy-makers should benefit from gaining an understanding of the financial, environmental and social outcomes achieved by projects with different forms and levels of public support. Finally, by developing and testing methods for analysing the sustainability of affordable housing projects, the project offers a methodology that could be used for regular evaluation (see also Milligan et al. 2007) and, possibly, to assist in decision-making about future projects.

## The projects studied

The study uses a specific definition of the term 'affordable housing', referring to housing that is initiated and owned by non-government not-for-profit providers; is financed through a mix of public subsidies, planning benefits, private equity and/or debt finance; is priced at below market rents; and is restricted to moderate and/or low income client groups (Milligan et al. 2004, p.5).

Funding was provided for the examination of eight affordable housing projects. The selection criteria sought to achieve a sample of projects with diverse social, financial and environmental features. Consequently the projects, that were selected from a list of all of the affordable housing projects that have been developed by not-for-profit organisations in eastern Australia until the end of 2009, show considerable differences in scale, dwelling form and size; location (metropolitan or non-metropolitan); funding arrangements; environmental standards; and income and social mix (see Tables 5 to 7).

## Methodology

The assessment of each project has been based on qualitative and quantitative research methods that included provider interviews, site visits, a design checklist, an independent expert review of architectural aspects, a resident survey, and a focus group with residents and document analysis. Field work was conducted during the first half of 2011.

Analysis included two main components. First, each project was evaluated separately by the research team and the independent expert using the data sources described above. Each project's description and assessment is presented in full in Chapter 4; project providers were given an opportunity to comment. Projects are not identified. Second, a thematic analysis was used to identify issues that emerged across the projects, such as typical attributes of affordable housing or common challenges for not-for-profit developers. The thematic analysis is presented in Chapter 5.

## Findings

Affordable housing projects are developed by a wide range of not-for-profit organisations with different skills and priorities and under policy and funding conditions that vary by jurisdiction and over time. Consequently, as demonstrated in the sample, there is a great deal of variety in their social, environmental and financial outcomes. Below we highlight some of the more consistent findings of the study, drawing particular attention to the trade-offs that affordable housing providers make in order to achieve viable projects. While we are basing these findings on a small sample, our previous research and knowledge of the industry, together with our interviews with providers, which covered the strategic contexts within they were operating, all suggest these findings are more widely applicable.

## Tenant viewpoints and broader social outcomes

The experiences of affordable housing residents had strongly positive aspects, evident across all of the projects studied to a greater or lesser extent. These included especially the high quality of housing provided in good locations, and valued feelings related to security of occupancy and the absence of stigmatisation that was for many tenants associated with more traditional forms of assisted housing, such as public housing and the private market. Rental costs were not identified as a problem by tenants, at least partly because of the attributes of their housing that added value for them. In several projects, tenants were also benefitting from lower living costs as a

result of reduced water and energy bills and having good access to services, both factors directly associated with the choice of sites and design of the affordable housing project that was studied.

Tenants' views of their housing management services were more mixed. While there were examples of good practice in tenant services and tenant engagement in some projects, most were lacking in this area.

The most consistent area of tenant frustration was with insufficient car parking provisions, which was a trade-off made in most projects to achieve greater dwelling yield and thus improved financial viability. Without organising compensating arrangements such as shared parking schemes, affordable housing providers are perhaps ahead of their time in reducing the ratio of car parking to dwelling numbers. Limited parking space may also reduce providers' opportunities to sell the property and hence reduce their asset management options.

A second area of dissatisfaction arose from projects that, while well located in terms of access, were on sites that presented significant noise and dust issues, which had not been adequately mitigated through project design.

In terms of wider social outcomes sought by governments, both low and moderate income households were represented in the profile of residents across projects and also within some. However, access for low income households clearly depends on how far providers are expected to leverage government funding through private financing arrangements under present subsidy policy settings. Projects with heavier debt financing obligations were least able to house lower income households affordably. Older households were well-represented among residents but modified dwellings suitable for people with disabilities were not so widespread. Additional incentives may be required to ensure such outcomes as the sector expands.

The study found a lack of transparency and consistency in local registration and letting practices among providers. This finding predates implementation of common access systems for affordable housing, which will help to address the issue by ensuring that those in housing need can register simultaneously for housing that may be provided by a range of different providers. However, the case studies also show why it is important that individual providers maintain flexibility in making allocations to their projects: to ensure that design is appropriate to resident needs; to maintain financial viability; and to support social cohesion objectives.

In our sample, there was a clear trend towards providing smaller sized dwellings (to optimise dwelling yield for a given level of funding), which while meeting some priority needs (such as for single person households) also has the effect of excluding larger families from affordable housing. Thus the task of ensuring that affordable housing reflects local demand is an important planning concern. A particular issue in two of our case study projects stemmed from policy and planning requirements that imposed controls on who was housed. These were not identified at an early enough stage and the result was a mismatch between the dwelling design and the subsequent resident profile.

#### Dwelling procurement, design and financing

Projects in the sample were delivered by both first time and established developers. All developers performed well in terms of the delivery of their projects within financial benchmarks and budget settings. Some of the more established developers had also taken on quite large-scale and innovative projects involving mixed tenure and mixed use. This and the other findings of the study attest to growing capacity in the not-forprofit sector to develop affordable housing. Projects also performed well in urban design terms, responding sensitively to the scale and form of their context. Several projects, however, faced major hurdles and consequential costly delays in achieving planning approval, either through inflexible planning practices and restrictions, or because of resistance from local residents. This is a major area for attention: by planning authorities, who should be informed and proactive in supporting affordable housing; by providers themselves, who could adopt more effective, front loaded community consultations; and by the wider industry, which needs to lead public education in this area, for example by showcasing successful projects and publicising positive community benefits and outcomes.

Private financing of projects only contributed to funding in half the cases studied. However, all but one of the projects sampled pre-dated the advent of the National Rental Affordability Scheme (NRAS), which is geared to stimulating private investment in affordable housing. An assessment of the effectiveness of private financing should be a strong contender for further specialised research.

### Environmental performance

The environmental performance of the case study projects was quite varied, although providers were generally found to be well aware of the benefits to tenants and to themselves (as long-term landlords) of achieving high standards of environmental sustainability. In this context, it should also be noted that the projects studied were developed in the mid to late 2000s, a period of rapidly changing practice in this regard. While several projects incorporated active features that improve energy efficiency (such as mechanical ventilation systems, blinds, ceiling fans and solar-boosted hot water systems), most did not maximise opportunities for passive heating, cooling, daylight access and natural ventilation. These passive design features are generally preferable to active systems because they use no energy and typically require less maintenance. Stronger professional development in this aspect of affordable housing design and incentives for enhancing the environmental performance of the affordable housing industry would help to address these deficiencies.

## The way forward

The study's conclusions concerning the implications of these findings are organised around three dimensions: implications for practice; implications for policy; and implications for research and training (Chapter 6).

#### Implications for practice

This study has provided rich insight into and detailed evidence of design and development practices that can help to improve the social, environmental and financial performance of affordable housing projects. Adopting an industry development framework and developing and disseminating comprehensive guidance about the design and development of affordable housing will help further improve practice across the board.

Individual providers need to learn which features of their projects are most valued by tenants through self-evaluation and independent evaluation of their existing affordable housing projects, and through the ongoing engagement of tenants in project design and management.

#### Implications for policy

Policy settings affecting the development of affordable housing derive from many disparate areas including, crucially: Commonwealth and state housing funding programs; policies related to the provision of rent assistance to lower income tenants;

unfolding regulatory requirements applying to the not-for-profit housing sector; and planning, building and environmental policy requirements. Providers, therefore, face a plethora of external and highly dynamic constraints and opportunities in delivering affordable housing projects. This study has not focused on an analysis of policy settings for affordable housing as such. However, the project level findings point to a number of areas where policy development and coordination should be enhanced.

Priority areas include sector-wide housing needs planning, development of a social benefits framework, stronger and more explicit planning policies for affordable housing, various forms of government support for land supply, national leadership in developing more cost effective private financing mechanisms for the industry and a review of rent subsidies to ensure that the shift to non-government forms of affordable housing provision does not result in poorer access and affordability for high need and high cost clients.

### Implications for research and training

The design and development of affordable housing is an area that warrants increased focus in both architectural education and professional development. Not-for-profit providers would benefit from the wider availability of architects with specialist training and experience in the design of affordable housing projects.

There is a need for Australian research on the reasons that affordable housing is so frequently and so fiercely resisted and how the concerns of oppositional groups might potentially be alleviated. There may also be benefit in more post-occupancy evaluations in neighbourhoods where affordable housing projects that were initially resisted by local community members have subsequently been developed successfully.

There is also a need for planning education and professional development to focus on affordable housing as a specialist area, acknowledging the potential of affordable housing to contribute positively towards planning objectives for the creation of more mixed communities and more sustainable cities.

## **Overall**

Overall, our study demonstrates the good capacity of diverse not-for-profit organisations to develop affordable housing projects that are more socially, financially and environmentally sustainable. The study shows that well conceived, well designed and well managed projects can have strongly beneficial outcomes for residents, be financially viable and make a positive contribution to the urban environment.

At the same time, the study also reveals that not-for-profit housing providers face a variety of challenges initiating, delivering and maintaining projects. The emerging industry faces a steep learning curve as it seeks to respond to opportunities for rapid growth and to achieve multiple sustainability objectives. Addressing these challenges will require continuous professional development within the not-for-profit housing sector, as well as more informed governments offering better designed policies and subsidies, supported by further targeted research and evaluation.

## 1 INTRODUCTION

## 1.1 Context of study

There is a large shortage of housing that is affordable to low and moderate income households in Australia. By examining the cost and availability of private rental housing, Wulff et al. (2009, 2011) have estimated that there is a shortfall of nearly 300 000 private rental dwellings that are affordable and accessible to those on the lowest 40 per cent of household incomes. Additionally, the National Housing Supply Council has calculated that Australia presently needs an additional 90 000 social housing dwellings to maintain access to that sector at current rates (Australian Government 2010a, p.89). Across the wider housing market, a cumulative shortfall in supply estimated at over 178 000 dwellings in 2009 is adding to affordability pressures and reducing access to home ownership for first time buyers (Australian Government 2010a, p.xiv). These numbers are projected to rise significantly under current policy settings and anticipated household growth scenarios, unless additional supply-side measures are adopted.

Governments around Australia are increasingly turning to the not-for-profit (NFP) housing sector to help address some aspects of this challenging housing supply problem by financing and developing new housing that is affordable for low and moderate income households. However, the policy frameworks that enable provision of affordable housing by not-for-profit organisations are relatively new in Australia and those housing providers seeking to develop or procure affordable housing projects with little or no previous experience face a dynamic policy environment and a steep learning curve. Previous research has documented and critically examined several aspects of this emerging industry, including the policy drivers and organisational responses (Milligan et al. 2009a, 2004), financing mechanisms (Lawson et al. 2010) and the regulatory model (Travers et al. 2011).

## **1.2** Focus and purpose of the study

Building on the existing body of knowledge related to the affordable housing industry in Australia, this study specifically examines a selection of recent affordable housing projects that have been delivered by not-for-profit providers to evaluate their performance.

Milligan et al. (2007) first drew attention in the Australian context to the desirability of systematic evaluation of the emergence and development of an affordable housing industry. They proposed a multilayered approach to evaluation, covering five dimensions of affordable housing policy and provision:

- 1. National evaluation of overall processes and impacts of national policy (system level).
- 2. State level monitoring of housing market efficiency with a focus on the relationship to housing affordability.
- 3. Case studies of projects with specific features, exemplary practice.
- 4. Evaluation of component programs, strategies, processes or tools.
- 5. Longitudinal and periodic studies of client outcomes (Milligan et al. 2007).

In the context of limited resources, Milligan et al. (2007) acknowledged that evaluation research needed to be selective in order to achieve a balance of breadth and depth. Accordingly, among other priorities, they supported emphasis being given to evaluations of exemplary practice in the early years of a project or model's operation,

in order to build the evidence base for what works and to promote learning within the sector.

Consistent with that suggestion, this study adopts a case study approach where examples of affordable housing projects have been selected on the basis of specified criteria in order to build knowledge about the design and operation of affordable housing. The case study assessments consider which particular levers or package of levers work, why, in what contexts, and what is their potential for wider application (Milligan et al. 2007, p.70).

### 1.2.1 Earlier local studies

There is very little local research on how well not-for-profit housing developers meet the range of social, financial, and environmental goals expected of them, making this study of selected projects one of very few of its type. One exceptional example of an academic study that examines potential outcomes of architectural design in affordable housing is Zanardo's (2009) analysis of four low-cost housing complexes in Sydney. Zanardo's study begins to develop a typology of affordable housing design-a 'repertoire of strategies, principles, and data which can positively inform architectural design' (Zanardo 2009, p.12). Most other relevant studies in the field are evaluations of affordable housing initiatives. In 2006, the Queensland Government commissioned an evaluation of its joint initiative with Brisbane City Council; the Brisbane Housing Company (KPMG 2005). This evaluation was specifically concerned with the social and financial performance of this affordable housing developer and the quality of the company's governance. The findings of the evaluation were favourable to the company in terms of its achievements against its business plan but shed little light on its relative effectiveness compared to other models or agencies (Milligan et al. 2007). In Victoria, where most affordable housing development by not-for-profit providers has been concentrated until recently, the Auditor-General has specifically examined the response of Victorian housing associations to that state's strategy for growing affordable housing supply (Victorian Government 2003) using a social and financial auditing methodology. The report of the auditor highlights tensions inherent in the model between pursuing financial viability and growth objectives on the one hand and social goals to allocate to those in greatest need on the other (Victorian Auditor-General 2010, p.vii). This issue is addressed as one aspect of our case studies. Port Phillip Housing Association, Yarra Community Housing and Community Housing Canberra (Milligan & Phibbs 2005; Press 2009) are known to have used post delivery studies as a tool for self-evaluation of aspects of some of their projects, but there is no published evidence of a wider application of that methodology in this sector.

#### 1.2.2 International studies

A systematic review of international studies of affordable housing projects was beyond the scope of this research. However examples of such studies were identified though a general review of relevant literature (see Chapter 2). One example of a comparable study conducted in the US is Bratt et al.'s (1998) evaluation of 34 affordable housing projects undertaken by not-for-profit providers. Of the 34 projects, 11 were new developments, 21 were procured and rehabilitated and 2 were acquired without rehabilitation. The evaluation study focused on the projects' performance in terms of finance and management, and reported the following findings:

The majority of the properties in our sample are functioning adequately day-today, but the future holds real problems for a significant number of properties if timely corrective action is not taken. The basics of property management appear to be handled capably at most of the properties studied: rents are being collected; buildings have curb appeal greater than other properties in their neighborhoods; and the properties are providing decent housing to residents. The financial analysis, however, signals that all is not well. Persisting patterns of current inadequate cash flow and reserve accumulation clearly will lead to trouble in many of the developments studied. Further, the low levels of operating reserves and the reliance on nonrecurring sources of funds suggest that preventive maintenance and repairs, which over time could slow the rise of operating costs, are not being made. (Bratt et al. 1998, p.44)

In England, the Homes and Communities Agency commissioned an audit of the design quality of 218 affordable housing it funded, developed between 2004 and 2007 by both market builders and Registered Social Landlords (not-for-profit providers). The audit (CABE 2008) addressed aspects of architectural quality, urban design, construction techniques and adaptability. Areas of strength were found to be architectural quality, contribution to the public realm, the suitability of the mix of tenure and accommodation for the scheme's context, and the performance beyond statutory minimum requirements. Areas of weakness included the development of schemes that are distinctive in their design yet responsive to their context. Relatively poor scores on environmental performance were described in the report as disappointing (CABE 2008, p.12).

An international evaluation study, with a smaller sample but a broader evaluation framework than the studies cited above, was conducted by the Urban Sector Network (USN 2002), involving three cooperative housing projects developed by not-for-profit providers in South Africa, Malaysia and England, respectively. The evaluation framework measured the performance of the projects against their initial stated goals, and focused on four evaluative criteria: efficiency, effectiveness, impact and sustainability/replicability. The report of this study identifies the challenges but also the benefits for not-for-profit providers when designing and developing their own properties, as a means to reduce costs and avoid long-term management problems with buildings that are not custom designed.

## 1.3 Research aims and questions

Building on the limited evidence base in its field, this project has two key objectives:

- → To better understand the how contemporary Australian affordable housing projects are designed, financed, developed or procured and managed.
- → To develop and test criteria and methods to measure the sustainability of affordable housing projects.

To achieve these objectives, the project addresses the following research questions:

- 1. What qualitative and quantitative metrics are appropriate to evaluate the on-going financial, environmental and social sustainability of affordable housing projects developed by Australian not-for-profit providers?
- 2. What are the key contemporary approaches in the development of affordable housing projects by not-for-profit providers?
- 3. What sustainability considerations have been made in the design and development of affordable housing projects? What trade-offs were made between financial, environmental and social aspects?
- 4. What sustainability outcomes have been achieved in the affordable housing projects examined? What are the implications for policy setting and organisational development in this field in Australia?

To obtain our empirical findings, eight affordable housing projects have been studied, representing a diverse mix of project sizes and dwelling forms, funding models,

procurement methods, architectural designs, housing submarket locations and target groups. Methods of study and the project selections are described in detail in Chapter 3.

The study has a number of intended benefits. Overall, it aims to encourage a more critical and informed approach to the planning of new affordable housing projects that can contribute to having a sustainable affordable housing industry in Australia. It also aims to be of practical benefit to emerging affordable housing providers who can learn from the experience of early players in the industry concerning the challenges of planning, designing, financing, procuring and managing affordable housing projects. It is intended that policy-makers will benefit from gaining an understanding of the financial, environmental and social outcomes achieved by projects with different forms and levels of public support. Finally, by developing and testing methods for analysing the sustainability of affordable housing projects, the project offers a methodology that could be used for a program of periodic evaluation (see also Milligan et al. 2007) and, possibly, to assist in decision-making about future projects.

It should be stressed that the aim of the study is not to compare the quality of the selected affordable housing projects one against another. The circumstances under which each affordable housing project has been developed are unique in many ways, and so a simplistic comparison of outcomes was not considered to be a valid approach. Instead, our assessment considers each project separately on its merits. For each project, qualitative and quantitative assessments have been made (Chapter 4) using standard assessment tools that have been developed from the literature relevant to this study (Chapters 2 & 3). In bringing together our assessments of the eight projects in Chapter 5, we do not seek to demonstrate that any particular approach is better than others; rather, our aim is to identify some of the challenges which are shared by developers of affordable housing, and to reveal the range of potential responses that can be adopted and adapted to different circumstances. In this way, we also hope to promote learning about why certain programs or policies work and in what contexts.

In keeping with this approach, while not-for-profit housing providers are rightfully proud of their affordable housing projects, we have not identified any participating organisation or project by name in this study. To further protect anonymity, significant documentation of each project (photographs, plans and drawings, and profit and loss statements) that has been examined during the course of the research has not been reproduced in this report.

## **1.4** A sustainability framework for analysis

A three-way sustainability framework has been chosen for the project level analysis. This involves giving consideration to the ways that the projects contribute to financial, social and environmental sustainability goals for affordable housing, as defined in Chapter 2.

Financial, social and environmental sustainability are essential for the preservation and expansion of affordable housing supply in the long run. Tapping into the sustainability agenda gives not-for-profit providers an opportunity to demonstrate their contribution and leadership beyond the provision of lower cost housing, and can be an effective strategy for increasing their political and financial support (see, e.g. Lovell 2004).

To obtain private and public finance, providers must be able to demonstrate the initial financial viability of their projects and the ongoing impacts on their organisation's financial sustainability. Yet affordable housing projects are based on complex financial

models, and operate in the context of volatile housing markets and within policy frameworks that often do not provide long-term certainty, for example in relation to future subsidies. Financial factors will, therefore, be critical not only to whether a project is built but also to the continuing achievement of its intended social goals.

The core social purpose of housing providers in the not-for-profit sector is to deliver appropriate and secure lower cost housing to people in need. While this is a commendable goal, past experience also shows that there can be significant social problems associated with housing developments for lower income households (Jacobs et al. 2011). Therefore, today's affordable housing projects need to be designed, tenanted and managed in ways that contribute not only to affordability but also promote the wellbeing, social inclusion and economic participation of residents.

In the residential sector generally, using designs and materials that demonstrate environmental sustainability has become a central feature of climate change adaptation strategies. The growth of an affordable housing industry in Australia at a time of greater action on climate change provides an opportunity for civic-minded housing providers to lead the way in innovative residential design. Improving environmental efficiency over the life cycle of dwellings not only contributes to these broad community goals but provides specific benefits to the lower income residents of these projects and incurs specific costs for providers. Thus how environmental sustainability is achieved will also impact on the social and financial outcomes of a project.

Given the breadth of each of the dimensions of sustainability and their interconnections, it can be very challenging for not-for-profit providers to develop projects that are financially robust, meet high environmental standards, and contribute to social inclusion and a long-term supply of affordable housing, and some trade-offs appear inevitable. This research project offers new ways to conceptualise and measure the sustainability of affordable housing projects to better understand the strategies employed by not-for-profit providers in order to promote a balance of desirable financial, environmental and social outcomes.

## **1.5 Housing policy context**

The emergence of a third sector of affordable housing developers in Australia is comparatively recent. In 2004, Milligan et al. (2004, p.iv) found that less than 1200 additional dwellings had been initiated by not-for-profit developers of affordable housing. At the end of 2007/08, the largest and best established developers owned over 5440 dwellings and had plans to finalise procurement of at least another 2330 in the near future (Milligan et al. 2009a, p.4). While there has been no systematic data collection since that research, the advent of the National Rental Affordability Scheme (NRAS) in 2008 and the Social Housing Initiative (SHI) in 2009 have provided further impetus to the development of additional affordable housing by this sector (see details in Milligan & Pinnegar 2010). For example, over 62 per cent (15 242) of NRAS incentives allocated by end September 2011 have been awarded to not-for-profit organisations to enable them to procure new rental dwellings (Australian Government 2011b). At least 75 per cent of dwellings procured through the Social Housing Initiative are being transferred to the not-for-profit sector to enable those organisations to leverage additional growth (FaHCSIA 2011).

From tentative beginnings, there are now much stronger government commitments to utilising not-for-profit organisations as primary developers of affordable housing (see, e.g. Australian Government 2010b). Many different reasons for this shift can be found in the policy discourse, including accessing private finance, leveraging public assets, creating a more contestable and efficient model for service provision, ameliorating

tenure stigmatisation, providing tenant choice and promoting social inclusion. By and large, this mix of social and financial objectives emulates international literature on the rationale for the privatisation of social housing (Milligan & Pawson 2010). Notably less developed in the Australian affordable housing policy context so far, however, has been emphasis on innovation in dwelling design and sustainable living as specific goals of a third sector model (see Table 1). This reflects a wider situation where housing policy goals and broader urban goals have not been well integrated in Australia (Milligan & Pinnegar 2010).

Rules about the provision of affordable housing by not-for-profit housing providers that receive government funding appear in many forms. These have different coverage, varying degrees of specificity and consistency, and use different language and definitions of key terms, such as affordability. Historically, affordable housing has been a policy arena governed by states and territories, which has contributed to a fragmented policy landscape. However, national policy settings have become more influential since 2008 (Milligan & Pinnegar 2010).

Table 1 includes a summary of current specifications of the main social, environmental and financial requirements for government-supported projects that are the responsibility of not-for-profit organisations in the jurisdictions of New South Wales (NSW), Queensland and Victoria where this study was conducted. More details can be found in the references cited. The table includes both Commonwealth and state government requirements, as relevant. One or more of these sets of rules would apply to each of the projects that is examined in this study. Moreover, as many projects are blended—combining funding from different sources—different requirements could apply to discrete dwellings within a project.

As Table 1 and the underlying documents show, the approach taken by government funders to influencing the conception and delivery of affordable housing projects varies from having formal program regulations; through adopting principles, guidelines or statements of expected outcomes that assist providers operationally by allowing some discretion; to specifying assessment criteria for competitive project financing. These requirements and rules are monitored and regulated through legal and contractual frameworks and by government appointed registers (see Travers et al. 2010).

A broad review of the policy and program frameworks applying to the projects highlights the possible influence of government policy settings on the achievement of sustainability goals, as discussed later in this report. It reveals the potential complexity of the policy frameworks for projects and the explicit or implied trade-offs that are likely to be needed to achieve social goals (such as equity of access, targeting to need and rental affordability), financial goals (such as leverage and viability) and to meet rising standards of environmental sustainability. To a greater or lesser extent (depending on how the rules are specified), not-for-profit housing providers have to design their projects to give governments best value for their investment, to optimise the social and environmental benefits that can be achieved (commensurate with their own missions) and to control financial return and risk. To what extent financial, social and environmental goals are achieved, therefore, will be a function of many factors, especially how reasonable and well-founded government policy rules and targets are, how efficiently and effectively providers operate, and exogenous factors (discussed next) that affect the delivery and ongoing operation of a project, such as planning and construction delays, interest rates, housing demand and policy changes.

## **1.6 Housing market context**

Not-for-profit developers operate in a wide variety of housing markets in Australia covering metropolitan cities, regional growth areas and rural and remote locations. There are important differences in the characteristics of those markets (and submarkets within cities) that will influence the scope for and viability of producing affordable housing. For example, metropolitan markets generally have higher land costs than non-metropolitan markets. However, construction costs may be higher in areas further away from capital cities because of factors such as higher transportation and labour costs or a less competitive industry situation. Higher density developments generally have higher per unit costs of provision than low density detached house building. Similarly, long-term maintenance and upgrading costs may be affected by such considerations and also by widely varying climatic environments across the country.

Planning requirements for development, which are generally the responsibility of local governments (but subject to some higher level state policies), also vary significantly by location. Some local government areas may offer incentives for affordable housing developers, while others are indifferent or, possibly, politically hostile, thus affecting the feasibility of a development. To promote more consistent provision of affordable housing, some state governments have adopted overarching policies, guidelines and incentives that are designed to encourage greater housing diversity and, in some cases, to increase supply of housing below a specified price point, as referred to later in the report. State guidelines also establish minimum environmental standards for residential development.

The cyclical nature of housing markets may also affect the timing of a development and whether there are delays and unforseen costs. For instance, shortages of labour may arise where there is heavy demand for house building, pushing up costs. There can also be risks to asset sales that arise over time, for example, if markets weaken. Finally, varying conditions in financial markets will affect at what cost and for what period (short or long term) a not-for-profit developer can obtain finance for a development.

Demand for affordable housing also relates closely to local demographic, economic and social conditions. A recent general overview of housing demand and demand projections for Australia is given in the second report of the National Housing Supply Council (Australian Government 2010a). Generally, there is a widespread shortage in Australia of smaller dwellings affordable to one and two person households, both aged and non-aged. However, some areas, such as those with high Indigenous populations, suffer specific shortages of larger housing required for extended families and large families.

For these reasons, housing markets also must be recognised as another set of exogenous factors, along with policy settings, influencing the social, financial and environmental outcomes that are achieved by not-for-profit developers. Undertaking local housing market and housing needs studies should be a critical activity informing development planning for this sector: however, as we discuss later in the report, this practice is not widespread in Australia.

## 1.7 Terminology

This section gives an explanation of key terms and provisions as they are used in this report.

### Affordable housing

The term 'affordable housing' can be explained in a number of ways. In its broadest sense, it can refer to any type of housing (market or non-market provided) that is rented or purchased at a cost that is not beyond the financial capacity of a household. A typical yardstick used for defining housing affordability stress in Australia has been when housing costs exceed 30 per cent of a household's gross income. Definitions of housing costs typically include expenditure on rent or mortgage payments and on rates, property taxes, household insurance, repairs and maintenance where these are the responsibility of the resident. Other costs, which may be related to housing, such as utility payments, are considered by some but not all researchers as housing costs (Gabriel et al. 2005).

In this study, we use a more specific definition of the term 'affordable housing', referring to a specific type of housing that includes the following attributes:

- → Initiated and owned by non-government not-for-profit providers.
- → Financed through a mix of public subsidies, planning benefits, private equity and/or debt finance.
- → Priced at below market rents.
- → Restricted to moderate and/or low income client groups (Milligan et al. 2004, p.5).

Social housing is a form of affordable housing which is highly targeted and deeply subsidised. In Australia, social housing is provided either by state governments, when it is referred to as *public housing*, or by not-for-profit providers, when it is referred to as *community housing*. We follow those conventions in this report.

#### **Commonwealth Rent Assistance (CRA)**

CRA is a fortnightly payment that is available to recipients of government pensions or benefits. It is designed to assist recipients to meet the costs of renting where those exceed a minimum specified level. It is not payable to tenants of public housing authorities. CRA payment rates are proportionate to the amount that rent paid exceeds a minimum level, until a ceiling or maximum payment level is reached. Maximum payment levels vary by household type and size but do not vary by location.

Table 1: Policy rules and guideline	s applying to affordable housing projects,	NSW, Queensland and Victoria
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Policy/Program	Scope, scale and applicability to NFPs	Social Goals/Guidelines/Target groups	Financial goals/guidelines	Design and environmental guidelines
National Rental Affordability Scheme (national guidelines and regulations).	Tax offsets or, in the case of not-for-profits (NFPs), grants to assist development/major refurbishment of 50 000 rental dwellings, 2008–15. NFPs and for-profits compete for allocations of incentives. NFPs also manage some for- profit developments.	Increasing supply of rental dwellings. Access by low and moderate income households. Social mix outcomes form part of assessment criteria. Rent maintained at not more than 80 per cent of market value for 10 years. Tenancy may be for up to 10 years, subject to ongoing eligibility.	Attracting large scale private investment in rental housing. Financial viability forms part of assessment criteria.	Accessibility and sustainability outcomes form part of assessment criteria.
Social Housing Initiative, Nation Building and Economic Stimulus Program, Stages 1 and 2.	Grants for at least 19 300 additional social housing dwellings 2009/10–2011/12. At least 75 per cent to be managed or owned & managed by NFP providers.	Immediate stimulus to the building and construction industry. Priority to (high need) applicants for public housing and people who are homeless/ at risk of homelessness. Promoting mixed communities. Similar tenancy provisions to public housing (varies by state).	Leveraging additional residential building activity. NFP sector ownership to facilitate other non- government contributions and future leverage of private finance against assets.	Six star energy rating. Six minimum universal design elements (Stage 2). Twenty per cent to meet adaptable housing standard (Stage 2).
Social Housing Growth Fund (National Partnership Agreement on Social Housing).	Grants for 1600 to 2100 additional social housing dwellings 2009/10–2010/11. Most delivered by NFPs.	Unmet need for social housing. People who are homeless or at risk of homelessness, including Indigenous clients.	Efficient provision of social housing.	Universal design elements for older people and people with disabilities.
Affordable Housing Innovations Fund NSW 2007/08 on (previously Debt Equity program).	Various offers of funding to NFPs; integrated with NRAS after 2008.	Allocations to social housing or affordable housing clients (see below) in proportion to state government and other financial contributions. Retention of some affordable housing in perpetuity.	At least 30 per cent non- government co-contribution to financing projects. Mix of tenants and rent setting must ensure ongoing financial viability of project without resort to government	Not specified.

Policy/Program	Scope, scale and applicability to NFPs	Social Goals/Guidelines/Target groups	Financial goals/guidelines	Design and environmental guidelines
			subsidies.	
Affordable Housing Guidelines NSW. <sup>1</sup>	Policy guidelines applying to the provision of subsidised housing other than social housing by regulated NFPs in NSW.	Access by very low, low and moderate income households. Rent to be within capacity of client to pay. Rent for very low and low income clients not to exceed 30 per cent of household income. Lease terms not to exceed 10 years.	Operational viability without resort to government subsidies. Collection of CRA to be optimised in rent setting.	Not specified.
Victoria, various affordable housing growth strategies, 2006 on.	Partnerships between registered housing associations /providers in Victoria to achieve growth in affordable housing owned by NFPs (target 1700+).	Access for those entitled to Commonwealth Rent Assistance (CRA) with 50 per cent of places to be filled from public housing waiting list (via referrals). Rent at tenancy commencement not more than 30 per cent of household income for public housing eligible clients (excluding any rent assistance received).	At least 25 per cent non- government co-contribution to financing projects. Leverage of 15 per cent growth off any transferred assets to be achieved. Demonstration of operational viability at project commencement. Affordability outcomes for higher income tenants monitored.	Not specified.
Queensland affordable housing.	No specific additional program frameworks. Opportunity for NFPs to tender for funding for 1400 dwellings under SHI.	Access to any projects funded with assistance from the Queensland Government to comply with rules of One Social Housing System (Dept. of Communities 2011).		Design guidelines for affordable housing offered.

Sources: Department of Sustainability, Environment, Water, Population and Communities (2011); DHS NSW (2010a, 2010b); DHS VIC (2007); Department of Communities (n.d; 2009); FaHCSIA (n.d.; 2009)

<sup>&</sup>lt;sup>1</sup> NSW introduced an additional set of guidelines, Community Housing Asset Ownership Policy in 2011 but no projects in this study were developed under this framework (see Housing NSW 2011).

### **Commonwealth Rent Assistance optimisation**

Not-for-profit housing providers can capture CRA in various ways, depending on how they set their rent. Increasingly, rents in the not-for-profit sector are being set to optimize the level of CRA that will be received by an eligible tenant and to include this amount in the rent to be paid to the not-for-profit landlord.

CRA optimisation (as referred to in this report) works by having a fixed rent for rental properties set at a level that will not leave the tenant with less after-rent income compared to if they paid an income-related rent (such as 25% of income) in public housing (where they would not receive CRA). Because the rent set is higher than an income-based rent, additional CRA that is earned can be passed through to the landlord, at the same time maintaining the affordability standard. A rent calculator has been developed for use by not-for-profit providers to determine the rent level that should be charged by household and pension type to achieve the intended result. Thus, CRA optimisation is a method for increasing provider revenues while protecting tenant affordability. The sustainability of this approach (and the revenue it generates for not-for-profit providers) is heavily dependent on Commonwealth policy settings for CRA.

### Dwelling types

When describing different types of dwellings in this report we use the following definitions:

- → Bedsit: A bedroom within a boarding house (also referred to as a rooming or lodging house) that is not self-contained, and shares a common kitchen, bathroom and main entrance (foyer or hallway) with other bedsits.
- → Studio: a self-contained dwelling with one combined bedroom and living room, a kitchen and a bathroom.
- → Townhouse: one of a row of houses joined by one or more common sidewalls. In this report we use the term townhouse to describe both single-storey and twostorey dwellings.
- → Apartment/flat: a dwelling within a multi-storey, multi-unit building.

#### Not-for-profit

Not-for-profit (NFP) refers to organisations with a social mission that do not distribute any profits of their activities to their shareholders or members. Instead, retained earnings are reinvested in the social goals of the organisation. Additional terms used in the report to identify not-for-profit housing providers include community housing providers, housing associations and housing cooperatives.

## **1.8** Structure of the report

The report is structured as follows:

- → Chapter 1 introduces the key aims and research questions of the study and gives an overview of the context for the study.
- → Chapter 2 provides an overview of the analytical framework of the study, explains the concept of sustainability which is central to the research methodology and introduces some of the social, environmental and financial criteria addressed in the assessment of affordable housing projects.
- → Chapter 3 presents in detail the methods used in this study. Chapters 2 and 3, together, address research question 1, by offering a set of criteria and an

assessment tool to evaluate the on-going financial, environmental and social sustainability of affordable housing projects.

- → Chapter 4 presents the findings of the empirical work conducted, and provides an overview of each of the eight affordable housing case study projects, their design and development process, key features, and sustainability outcomes. This chapter begins to address research questions 2, 3 and 4 by: providing examples of contemporary approaches to development of affordable housing; offering a detailed analysis of the trade-offs made between financial, environmental and social aspects in the design of the projects; assessing the sustainability outcomes that have been achieved in each of the projects.
- → Chapter 5 is arranged thematically. Themes that underpin the development of sustainable forms of affordable housing are derived from the key issues that emerge from our empirical analysis, particularly the challenges, opportunities and trade-offs that were faced by providers developing affordable housing projects. By bringing together all of our case studies into discussion, the chapter deepens and broadens our analysis in response to research questions 2, 3 and 4.
- → Chapter 6 concludes this report, addressing research question 4 with a summary of our findings and their implications for policy and practice and for future research and evaluation.

## 2 SUSTAINABILITY IN AFFORDABLE HOUSING PROJECTS

The notion of sustainability is very broad and used in different ways by different researchers. The World Commission on Environment and Development defined sustainable development as 'meeting the needs of the present without compromising the ability of future generations to meet their own needs' (WCED 1987, p.8). In the context of housing, Priemus (2005, p.5) defines sustainability as the minimisation of negative impacts of housing development on the environment. Lawrence (2000) takes a broader perspective by considering not only the environmental but also the social impacts of housing development. Yates et al. (2008, p.8) take a systems viewpoint, defining a sustainable housing system as one that is fiscally sustainable and allows successive generations to gain access to appropriate and affordable housing. In business literature, the concept of 'triple bottom line' is defined as an approach which measures success of projects and organisations by looking not only at their financial bottom line, but also the social and environmental impacts of their activity (Norman & MacDonald 2004, p.243).

Our approach in this study is based on the notion that social, environmental and financial outcomes all need to be considered in the evaluation of affordable housing projects. In this chapter, we discuss the key environmental, social and financial considerations that are relevant to the design, development and operation of affordable housing. These, in turn, are central in shaping our research method, as we discuss in Chapter 3.

## 2.1 Social sustainability

Our understanding of socially sustainable housing is underpinned by the principles of sustainable communities: places where people want to live and work, now and in the future; places that meet the diverse needs of existing and future residents; clean, safe environments; sensitive to other communities; places that are inclusive, well planned, built and run, and offer equality of opportunity and good services for all (ODPM 2006, p.3). Our criteria for assessment of social sustainability in housing are based on three general principles: affordability, wellbeing and inclusion.

Affordability, the key objective of affordable housing, is also the first criterion in our social sustainability framework as it underpins every other principle of socially sustainable housing. The relationship between housing quality and health outcomes and wellbeing is well established in research literature (Mueller & Tighe 2007; Saegert et al. 2003). A number of criteria (dwelling design, open space, tenancy management, rights and responsibilities and tenant satisfaction) have been included in our framework as major aspects of housing quality that can impact on the residents' wellbeing.

Inclusion is the third dimension of our social sustainability framework. Social inclusion is defined by the Australian Government (2011a) as an opportunity for all members of society to 'participate fully in the life of our society', including opportunities for participation in education and work, opportunities for social connections and opportunities to 'have a voice' and influence decisions that affect people as citizens.

## 2.1.1 Affordability

Improving housing affordability is the primary objective of affordable housing provision. Improved affordability allows people with lower incomes to access housing of decent standard that they could not have afforded in the private market. Furthermore, affordable housing reduces income stress, allowing households to

spend more of their income on other essentials such as food, health and education. For some households, affordable housing provides a pathway into homeownership in the future, by allowing them to save more of their income. In other words, housing affordability is integral to the two other principles of social sustainability—wellbeing and inclusion.

In the context of high house prices and their long-term inflationary trends, an increasingly acknowledged aspect of affordable housing policy concerns the preservation of affordability for future generations. Recognition of this societal challenge brings to the fore questions of how affordable housing benefits can be preserved and passed on. Ownership by not-for-profit entities is one core strategy for keeping housing affordable in perpetuity. Jacobus and Lubell (2007) provide a fuller discussion of the issues and mitigating strategies that have been developed in the United States.

In Australia, housing affordability standards are typically defined as the proportion of income spent on housing. The '30/40 rule' proposes that housing costs are affordable if they fall below the benchmark of 30 per cent of a household's income; this rule applies for the bottom 40 per cent of the unequivalised<sup>2</sup> income distribution (Gabriel et al. 2005, p.v). An alternative standard to measure affordability is the residual income approach that 'looks at what different household types can afford to spend on housing after taking into account the other necessary expenditures of living' (Stone et al. 2011, p.2). While having conceptual appeal, such an alternative measure is not straightforward to use in applied situations, such as rent setting.

Housing costs definitions typically include expenditure for rent or mortgage payments plus rates, taxes, household insurance, repairs and maintenance. Affordability, however, extends beyond direct 'housing costs'. For example, in a project in a well-serviced location, rent may be higher but transport costs lower for tenants. This approach is sometimes referred to as a measure of 'affordable living' (Stone et al. 2011, p.12).

In Australia, the rent for social housing tenants is usually calculated at 25 per cent of the household's assessable income. In affordable housing, different organisations apply different rent setting systems, including fixed rents (e.g. 74.9% or 80% of market rent), or rents calculated as a proportion of household income plus CRA. Organisations may adopt different affordability benchmarks—typically ranging between 25 to 30 per cent of income—for households with different levels of income. Therefore, although affordable housing projects are generally more affordable than private rental, there may be variations between different projects and for different types of households. For low-income households, these differences may be significant.

#### 2.1.2 Housing quality and wellbeing

Housing quality, and its impact on the residents' wellbeing, is the second aspect of our assessment of social sustainability in affordable housing projects. In defining housing quality, we address the physical elements of housing quality (dwelling design, open space), subjective elements (tenants' satisfaction) and those elements that are related to the management of tenancies (tenancy management, rights and responsibilities).

<sup>&</sup>lt;sup>2</sup> Equivalence scales are used to present the incomes of households in a way that takes into account their size and composition, for example by presenting per capita figures. Such adjustments are not made when presenting unequivalised income.

#### Dwelling design

The architecture and urban design of affordable housing projects can greatly influence the standards of residential amenity enjoyed by both residents and their neighbours. One of the first design considerations for developers of a project concerns the possible built form outcomes that are appropriate for a site given its social, environmental, economic and physical context. Decisions made about the height, orientation and setbacks of new buildings, as well as the separation between them, are of fundamental importance, particularly for multi-unit and medium or high density projects. In this respect, the positioning and design of new buildings should seek to respond to the scale and form of surrounding areas, minimise overshadowing, protect visual and acoustic privacy, and allow for cross ventilation and maximum access to daylight, for instance through the orientation of buildings to promote and guide prevailing breezes, and for optimisation of northern aspect (For detail on how this can be achieved, see NSW Government 2002; Victorian Government 2004).

The layout of a dwelling also has a major impact on residential amenity. Dwelling layout should respond to local context by orienting main living spaces towards the primary outlook and aspect and enabling cross ventilation. Where floor area is limited, it is important that the spatial arrangement of units is efficient, functional and flexible to change, enabling a range of activities and meeting shifting needs and circumstances (NSW Government 2002). In this respect, long and narrow dwelling layouts are typically simpler to furnish than those that are squarer in shape, balconies and other exterior private spaces are a cost-effective way of increasing useable space, and the positioning of kitchen space along walls represents an efficient use of space. Circulation spaces are also an important consideration: generally, an effort should be made to avoid the use of long corridors serving large numbers of dwellings and to ensure that circulation spaces have access to adequate daylight and ventilation. All residents will require adequately sized, designed and located storage space, especially older people who may have accumulated many possessions (NSW Government 2002; Sarkissian et al. 2004). In the UK, the Housing Corporation has developed certain desired standards for internal and external storage provision in affordable housing; these relate to kitchen and cupboard storage, tall storage for vacuum cleaners and ironing boards, secure internal and external storage, bathroom storage and bedroom storage (Housing Corporation 2005).

Noise nuisance can be created or exacerbated by poor dwelling design and construction, for instance through inadequate sound insulation or the location of bedrooms next to laundries, bathrooms and living rooms. It may be difficult to do anything about noise nuisance after a dwelling is built, and consideration of noise at the design stage is therefore important. Noisy areas should generally be located together and away from quiet areas wherever possible (NSW Government 2002). Screens such as fences, trees and hedges can act as barriers to noise from surrounding areas, and heavy and dense construction materials such as concrete are usually better for sound insulation than lightweight materials. Soundproofing in dwellings can be used, and double glazing and laminated glass are both effective at reducing noise (Commonwealth of Australia 2011b). The Australian Building Codes Board set out minimum standards for noise performance in Volume 2 (Section 3.8.6) of the Building Code of Australia (Australian Building Codes Board 2010).

Another key design consideration for affordable housing providers concerns the extent to which dwellings can be used by people with varying physical, mental and intellectual disabilities. There are a range of closely-related design approaches that can be used to enable people who would be unable to live independently or interdependently in conventional housing to live in their community (Quinn et al. 2009). Accessible Design is a term generally used to refer to housing that meets prescribed government requirements, and which can be used by people with disabilities, including wheelchair users (Center for Universal Design 2006a). The Australian Standard for Accessible Design (AS 1428.1-2009 Design for Access and Mobility) makes a series of specifications for the design of environments that enable use by people with a disability. These relate to design features such as circulation space, signage, ramps and stairways, handrails, doorways and switches (Standards Australia 2009). Many of the features of accessible units are obvious and markedly change the appearance and use of dwellings. For some people for whom these features are not essential, these differences are unwelcome (Center for Universal Design 2006a). As a response to this, an Adaptable Dwelling is one that is typical in appearance and use, but which can be modified easily and at minimal cost, as necessary, to become accessible to both occupants and visitors with disabilities or progressive frailties (Standards Australia 1995).

Universal Design is the design of a dwelling such that it is usable by all people, to the greatest extent possible, without the need for adaptation or specialised design (Centre for Universal Design 1997). Universal Housing considers the needs of residents of all ages and the widest range of abilities, rather than focussing on the needs of people with particular disabilities (Quinn et al. 2009). Typical features include step-less entrances and wide doorways, an open plan design with turning spaces for wheelchairs, curb-less showers, variable height workspaces, knee spaces under sinks, front-loading washers and driers, low storage areas, and accessible switches and controls.<sup>3</sup> In Australia, recent government guidance sets out key design elements for three standards of 'liveable' dwelling design: silver, gold and platinum. In line with the current government approach to social and affordable housing initiatives, higher levels of universal design are proposed for all new housing that receives government assistance or funding for construction (Department of Families, Housing, Community Services and Indigenous Affairs 2011).

Minimum standards for gross floor area in various types of dwellings are specified in the NSW Government's Residential Flat Design Code;  $50m^2$  for a one-bedroom apartment,  $70m^2$  for a two-bedroom apartment, and  $95m^2$  for a 3-bedroom apartment (NSW Government 2002, p.69). The State Environmental Planning Policy (Affordable Rental Housing) sets out a further minimum standard of  $35m^2$  gross floor area for bedsits and studio apartments (NSW Government 2009, Part 14, 2 (b)).

#### **Open space**

The provision of communal areas and spaces can increase the frequency and quality of social interaction, promoting community participation at the level of both buildings and neighbourhoods. Social interaction can be influenced by design strategies that provide opportunities for low-intensity and informal contact (Gehl 1987; Carmona 2003), and natural environments have been linked with various social, psychological and health benefits (Jackson 2003). Private open space is important for private outdoor activity and can influence levels of resident satisfaction, particularly for those groups accustomed to living with significant areas of private open space over a long period of time (Troy 1996; Mulholland 2003). In affordable housing projects, communal spaces might come in the form of rooms or open areas that are accessible to all residents, or which are shared among a number of occupants. Private open space might be a private balcony, patio, garden or courtyard attached to an individual dwelling.

<sup>&</sup>lt;sup>3</sup> For more detailed discussion of Universal Design principles and approaches, see Centre for Universal Design, 1997; Centre for Universal Design, 2006b; Landcom, 2008; Quinn et al. 2009

### Car parking

Availability of car parking spaces-particularly in areas that are car dependent-can improve residents' mobility and, therefore, can be seen as an important element of housing quality. However, minimising car parking space in an affordable project can reduce project costs and the use of private cars, and thus potentially impacts on the costs of living for tenants, economic feasibility for providers and environmental emissions (see Section 2.2.5 on urban consolidation and Section 2.4 on financial sustainability). Furthermore, due to their generally lower incomes, many affordable housing tenants are often less able to afford to own a car, meaning that the standard levels of parking space required by councils may not be necessary. Port Phillip Council's 'Review of Social Housing Car Parking Demand' (GTA Consultants 2009), provides data on usage of cars by residents in affordable housing. For that review, a survey was devised to assess whether there was under-supply or over-supply of car parking space in affordable housing projects. It found that there was an oversupply of parking spaces, with one car space provided for every 8.6 units, whereas only one in every 10.6 households had a car. At the same time, however, private cars may be crucial to provide tenants with access to jobs, opportunities and essential services. The number of parking spaces provided at an affordable housing project should, therefore, be evaluated in relation to access to public transport. In Queensland, for example, car parking rates in planning schemes for one, two and three-bedroom dwellings are generally reduced by 25 per cent where housing is within 400 metres of public transport. Other issues that need to be considered are the presence of people with disability and elderly among the project's residents, and whether they have special parking requirements.

#### **Tenant satisfaction**

Access to decent housing is a central feature of social inclusion (Hayes et al. 2008). While objective standards of decent housing may be defined, it is also important to recognise the way tenants experience their housing situation. Tenant satisfaction surveys in affordable housing are common in the UK social housing sector, and increasingly also in the US (Varady & Carroza 2000). In Australia, a national satisfaction survey of public housing tenants has been conducted annually since 1996 and community housing tenants have been surveyed biannually since 2003, providing some basis for comparison of satisfaction by provider type. However, a careful approach should be taken when considering findings from tenant satisfaction surveys as indicators of quality of housing and services. Customer satisfaction surveys typically show high levels of satisfaction, even among tenants living in homes otherwise considered as poor quality dwellings. Reforms in management towards greater tenant participation, for example, may raise expectations and consequently reduce satisfaction survey outcomes. In affordable housing, increasing presence of moderate-income tenants may result in reduced satisfaction levels because their expectation may be higher than those of low-income tenants. (Varady & Carroza 2000, p.798). It is therefore important to contextualise satisfaction rates by tenant subgroups and development type (e.g. density), and conduct surveys multiple times to identify trends rather than momentary levels of satisfaction (Varady & Carroza 2000, p.801). Varady and Carroza identify four dimensions of tenant satisfaction which need to be addressed separately: satisfaction with the dwelling unit; satisfaction with services provided, including repair; satisfaction with the whole package received for the rent; and, satisfaction with the local area. These aspects were covered in our tenant survey (see Chapter 3).

#### Tenancy management, rights and responsibilities

Not-for-profit organisations providing affordable housing in NSW, Queensland and Victoria are subject to specialised regulation that is concerned with their service standards, financial performance, housing outcomes and public accountability (Travers et al. 2010) They are also subject to general state or territory tenancy regulation: in NSW, the *Residential Tenancies Act 2010*; in Victoria, the *Residential Tenancies Act 2010*; in Victoria, the *Residential Tenancies Act 1997*; in Queensland, the *Residential Tenancies and Rooming Accommodation Act 2008*. These acts include a number of controls such as: empowering a special tribunal with exclusive jurisdiction to resolve tenant-landlord disputes; systems regulating payment of deposits (bonds) and their return; rules on termination of tenancies; rules regarding repair and cleaning obligations on both sides, including mitigation for damages; control over rent increases; and, anti-discrimination provisions (Bradbrook 1998; Hulse et al. 2011).

Tenancies in some affordable housing projects may be managed by private developers or real-estate agencies. However, most of the providers of affordable housing in Australia—and the providers of all the projects selected for this study—are registered community housing providers, with specific skills and experience in tenancy management for social housing. Therefore, it is possible that tenants in affordable housing projects will enjoy benefits that exceed normal practice under a jurisdiction's residential tenancies act. For example, a more flexible approach to rent arrears may be taken. Further, while not required to do so under any residential tenancy act, some registered housing providers may provide additional services, such as advocacy and representation services: referrals to other community, health and support services: internal dispute resolution services and others. In NSW and Victoria, tenants of registered community housing providers also have access to an independent review of administrative decisions affecting their tenancy (other than those governed by residential tenancies legislation in those jurisdictions). Tenancy terms in affordable housing are also likely to be better than for renting privately, although this is a matter for either government policy or organisational practice, depending on the jurisdiction and program under which government funding is obtained (see Table 1).

#### 2.1.3 Inclusion

Socially inclusive housing is located in sites that provide residents with good access to transport as well as local amenities and services. It also provides residents with a voice in decisions that affect their own lives, such as concerning the management of their homes. Inclusive forms of affordable housing should provide residents with opportunities for positive social connections and interactions across cultural and socioeconomic differences. These dimensions of socially inclusive housing are elaborated below.

Being socially and economically connected means, among other things, enjoying access to jobs, services and social networks (Hayes et al. 2008). One of the key objectives of increasing the supply of well located affordable housing is to improve such access for tenants, as well as respond to labour shortages in low-to-medium paid jobs in some locations (Berry 2003). Access to public transport is important both in order that residents without cars can access jobs and services, and to reduce car-use and energy consumption—it has implications both for social sustainability (individuals) and environmental sustainability more generally (as discussed earlier). Where jobs and services are accessible by walking, cycling and public transport this reduces travel costs and energy use, contributes to good health and reduces social inequity for those who cannot drive (Burton 2000). Concentrations of jobs and services can also be important to residents as meeting places, can help identify a place, improve the health of residents as they choose to walk rather than drive and

can improve safety by fostering passive surveillance. Where residents have poor access to jobs and services they can experience what is known as 'locational disadvantage' (Maher et al. 1992, p.10) and face disincentives for social and economic participation.

#### Tenant participation in project management

Having a voice in decisions affecting a person's life is a major aspect of social inclusion (Australian Government 2011a). Participation in the management of an affordable housing project is one way for residents to influence decisions that directly affect their lives. Tenant participation may be defined as 'the involvement of social housing tenants in the housing services provided by their landlords' (Hickman 2006, p.209). Hickman identifies three main approaches to tenant participation: a traditional approach, a consumerist approach and a citizenship approach. In a traditional approach, landlords are reluctant to share decision making power with tenants. Tenant representatives may be invited to attend some committees, but in fact are not provided with information and opportunities to affect decisions in a meaningful way. A consumerist approach views tenant participation as a practice of identifying tenants' needs, providing information and choices to tenants where possible as a means to deliver better housing and services. A citizenship approach, in contrast, values tenant participation itself, not just as a means to improve service delivery but as a necessary practice to address the social exclusion of tenants, and includes sharing of power with tenants to a greater extent (Hickman 2006). Measures to increase tenant participation identified in the literature include: Tenant Participation Compacts (TPCs) and formal structures for representation of tenants on decision-making bodies. Effective tenant participation must include training of tenants and provision of clear information (e.g. on costs) and decision making tools (points-systems and menus).

#### Mix of tenants

Since the 1970s, social housing allocation policies have increasingly targeted populations experiencing 'greatest need', many of whom are highly disadvantaged households (Hayward 1996; Burke & Hulse 2003). The increasing concentration of people experiencing severe disadvantage in social housing estates gave rise to concerns about 'area effects' and socio-geographic exclusion (Atkinson & Kintrea 2002). One response to this concern has been an increased focus on 'social mix', through redevelopment of existing public housing estates (Milligan & Randolph 2009). Another response has been growing recognition that new affordable housing developments should aim to achieve a more diverse mix of residents, particularly in terms of income levels and tenure types. Under contemporary approaches, large concentrations of affordable housing projects in a precinct are discouraged, and an income mix is also sought within some individual affordable housing projects. However, the income mix that is achievable in an affordable housing project is closely linked to its financial model, and more specifically rent settings and rent subsidies. There is a risk that in areas with higher land values—and consequently affordable housing projects with greater debts to service-the providers' need for higher rent revenue will result in the exclusion of lower income households, unless rent subsidies are sufficient to cover the difference between tenants' capacity to pay and cost rents. This is not the case presently in high value areas in Australia, as explained in Chapter 1. This has led to concerns about the risk of 'creaming' by providers who select those tenants who are considered low-risk and easier to manage (Phillips et al. 2009, p.32). Such a response, if widespread, can result in systemic exclusion of vulnerable groups such as people with mental illness.

Some affordable housing projects target specific population groups, such as elderly people (DHS NSW 2010a, p.4) and therefore do not aim to achieve social mix within

their project. However, such projects when integrated with housing for other groups contribute to the overall social mix in a neighbourhood. The question of social mix also refers to the way that tenants of affordable housing projects, as individuals and as a group, relate to the wider community in the local area. Design may have a role to play in the integration of the tenants of projects in their local area. An affordable housing project may either blend in or stand out in the local environment, in terms of its size and other aspects of its design. Both blending and standing out in the environment may potentially reduce stigma, either by concealing the nature of the project as an affordable housing development or by presenting a superior exterior that directly challenges (rather than avoids) the stigma that may otherwise attach to affordable housing. The careful design of streets, paths and spaces may also play a role in facilitating the integration of tenants in the local area by encouraging or enabling them to use nearby shops, services and public spaces.

## 2.2 Environmental sustainability

The concept of environmental sustainability has in recent years emerged as one of the key themes guiding urban policy discourse in Australian cities, and there is now widespread concern about the effects of human development on natural ecosystems and environments. In this respect, the contribution made towards unsustainable practices by the design, development and operation of buildings is often underestimated—buildings are resource-intensive in construction and operation, and they also produce large amounts of waste at the point of their eventual demolition (Pitts 2004). In Australia, government regulations increasingly require that new buildings achieve a high level of environmental performance, particularly in terms of their energy and water efficiency (Australian Building Codes Board 2010).

There are many factors that influence the environmental performance of a building. These include features of its architecture and design, aspect, location, the construction materials and processes used, opportunities for rainwater harvesting and recycling, and the presence of on-site renewable energy sources. Buildings that perform well environmentally will often make good economic sense on a life-cycle cost basis, albeit that they may be more costly than more standard building types on a capital, or first-cost, basis (Kilbert 2005, p.8; Carpenter 2009, p.25). This is because Environmentally Sustainable Design (ESD) features may reduce the long-term demand for resources such as electricity and water, and because the use of long-life and durable construction materials may bring down cyclical building maintenance costs. Below, we consider some of the ways in which the environmental performance of our case study affordable housing projects could potentially be optimised through planning, design and development measures.

## 2.2.1 Energy efficiency

The construction and operation of buildings represent major sources of energy consumption and greenhouse gas emissions in Australia; around 20 per cent of total energy consumption and 23 per cent of greenhouse gas emissions according to recent Commonwealth Government reports (COAG 2010; DOCCEE 2010). The energy used in the construction and operation of homes can be reduced through building design and layout, and through the careful selection of construction materials. An important starting point for achieving high levels of energy-efficiency in a building is consideration of 'passive design'. Passive design is the design of a building's heating, cooling, ventilation and lighting systems; it includes the use of all possible measures to reduce energy consumption prior to the consideration of any external energy source other than the sun and wind (Kilbert 2005, p.186). By responding to climatic conditions and site context, and by making use of sunlight, wind and

vegetation, the need for artificial lighting, heating and cooling in a building can be reduced significantly, improving its environmental performance.

In Australia, principles of passive solar heating can be used to maximise winter heat gain through the northerly orientation of daytime living areas and open spaces, the positioning of the long axis of buildings extending east-west to maximise the length of north-facing walls and windows, and through the installation of insulation in roofs and cavity walls. In multi-unit housing projects, the level of attachment between dwellings also acts as a form of insulation, reducing external wall area and preventing heat from escaping. Eaves on north-facing windows can also be angled so that they admit winter sun but block summer sun penetration (Government of South Australia 1999; Smith 2005: Commonwealth of Australia 2011b). Conversely, principles of passive cooling can help minimise heat gain from the external environment and facilitate heat loss in summer. Windows can be glazed or effectively shaded by building features or vegetation, light coloured roofs and walls can be used to reflect solar radiation, and buildings can be oriented for exposure to cooling breezes (ibid.). In this latter respect, air movement is the most important element of passive cooling (Commonwealth of Australia 2011b); cross-ventilation is a highly-effective way of generating air exchange and bringing about the cooling of buildings. It can be maximised by limiting potential barriers to breezes and providing multiple flow paths through a building.

Thermal mass is another important element of passive design. Materials such as brick and concrete can be used for walls and floors, absorbing energy during the day, releasing it at night, and providing thermal inertia (Kilbert 2005; Smith 2005). A building with reverse masonry veneer provides good environmental outcomes in Australian climates, although it is not widely used in apartment buildings. With reverse masonry veneer construction, the majority of a building's thermal mass is positioned inside a lightweight outer shell of timber, cladding or steel. The advantage of this in terms of energy efficiency is that heat generated in the dwelling in winter is absorbed by the masonry, preventing the loss of heat from the building. In summer, however, sun is blocked by the building's exterior shell, limiting the extent to which heat is absorbed and retained by masonry (Commonwealth of Australia 2011b).

Clearly, the effective use of natural light for illumination is also crucial in achieving a sustainable building outcome. Not only does the use of natural light reduce energy consumption associated with artificial lighting, it can also contribute to an occupant's sense of wellbeing (Kilbert 2005; Halliday 2008). In Australia, southerly-facing windows are less prone to glare, but they can also be a source of local cooling in winter. Unless appropriately shaded externally by vegetation, shutters or blinds, large areas of northerly-facing windows can create problems for occupants with glare and solar heat capture. Internal blinds and curtains may block direct sunlight, but they do not prevent the penetration of heat through windows.

Careful selection of the materials used for a building can yield significant improvements in both energy efficiency and durability. Energy efficiency can be increased by designing buildings to be durable and flexible to change, by minimising material use wherever possible, using locally sourced materials, avoiding materials with high levels of embodied energy and embodied pollution, selecting materials that can easily be recycled or re-used, and by sourcing materials with a minimum of processing and transportation (Carpenter 2009; Commonwealth of Australia 2011b). The levels of on-going maintenance required for a building also influence its energy efficiency and therefore its affordability outcomes for building managers or occupiers; certain types of construction materials and finishings are durable and require little maintenance, particularly natural materials that weather well, while others are likely to require regular upkeep and/or re-application. For instance, unpainted external brick
and concrete construction generally has minimal maintenance requirements compared to painted exteriors.

The Australian Building Codes Board (ABCB), with the support of the Council of Australian Governments (COAG), has been progressively tightening requirements for energy efficiency measures to be incorporated in new-build dwellings since 2003. The Building Code of Australia now requires that new buildings achieve a rating of 5 or 6 stars; this to be verified by the ABCB's own energy-rating software (Australian Building Codes Board 2010). The government of NSW has not adopted the requirements under the BCA, but it does operate its own Building Sustainability Index, known as BASIX (NSW Government 2011).

#### 2.2.2 Active design features

While an effort to reduce occupant demand for energy through passive design should be the primary concern at the design stage, 'active' ESD systems can also be incorporated into buildings as a way of improving their environmental performance. Active systems are those such as ceiling and extractor fans, boilers, pumps and certain renewable energy generating technologies that, unlike passive systems, involve the use of mechanical and electrical devices (Kilbert 2005). Examples include sources of renewable energy that are generated in buildings through technologies that convert sunlight and wind into electricity. Photovoltaic (PV) systems are devices that convert sunlight into energy. They can be installed on roofs or incorporated into the building envelope, and have become quite widespread in Australia due in part to recent government initiatives promoting their installation and use. The main advantages of PV systems are that they are silent, have no moving parts, produce no emissions in operation and require minimal maintenance (Halliday 2008). Although costs have recently fallen and efficiencies raised, PV systems remain expensive presenting an additional financial challenge for not-for-profit developers. In addition to generating electricity, solar energy can also be used in buildings for heating water, often boosted by a non-renewable water heating system. In the urban context, energy can also be generated from wind by small wind turbines suitable for building scale applications. Although these wind turbines have the advantage of being the lowest kilowatt/hour cost of any renewable energy source, they may be unsightly, noisy and usually require significant annual wind quantity (Kilbert 2005; Smith 2005).

#### 2.2.3 Water efficiency

Water shortages and the long-term security of water supplies are serious concerns in many parts of Australia. At the same time, excess water in the form of rain can lead to substantial problems for drainage systems, particularly in built-up areas where vegetation is sparse (Pitts 2004). The aim of sustainable water management is to ensure that the use of water is efficient and pollution is minimised, so that water can be returned to the environment in a benign form (Halliday 2008). Rainwater tanks can be installed on, in, underneath or around buildings in order to collect rainwater and reuse it for watering vegetation, toilet flushing and laundries (Commonwealth of Australia 2011b). Grey water from showers, basins and taps may also be collected and re-used. Water consumption in outdoor areas can be reduced by minimising lawn areas and planting drought-tolerant species. Sustainable Drainage Systems (SuDS) is an approach to dealing with rainwater that aims to return water to the natural environment at an appropriate rate and quality; typical systems use permeable surfaces, swales and filter strips to capture rainwater run-off. They may also allow for infiltration where appropriate (Halliday 2008).

### 2.2.4 Building maintenance

The design of buildings and dwellings, and the careful selection of construction materials can both increase the longevity of a building and minimise its life-cycle cost. In order to reduce maintenance requirements, durable and cleanable materials should be used, and applied surfaces should be minimised, particularly on building exteriors. Appropriate ventilation and irrigation systems should also be provided in order to prevent the growth of mould. Manually operated systems for shading and ventilation are generally preferable to those that are mechanically operated in maintenance terms (moving parts are prone to malfunction), and graffiti-resistant materials should be used on building exteriors (NSW Government 2002). Not only can such measures reduce the maintenance costs for a building over time, they can also deliver improvements in environmental performance by negating the need for building features to be repaired, replaced or otherwise treated.

#### 2.2.5 Urban consolidation

Planning policy in all major Australian cities currently supports a more compact, mixed-use and higher-density urban form (Victorian Government 2008; Queensland Government 2009; Government of South Australia 2010; Government of Western Australia 2010; NSW Government 2011). The aim with such an approach is to contain outward urban expansion and direct growth into established urban areas, particularly those with good access to public transport. This is seen to be an important way of reducing automobile dependence, increasing the efficiency of public transport and community infrastructure, protecting agricultural land and promoting a vibrant and more equitable city (see Jenks et al. 1996; Williams et al. 2000; Gray et al. 2010). In terms of these urban consolidation strategies, an environmentally sustainable project would be one that achieves relatively high development densities, is located on previously-developed land within the existing urban boundary, provides a mix of uses, and is located close to public transport, essential services and facilities. Critical here is the extent to which a new building developed in an existing area (particularly where it is built at a relatively high development density) is sensitive to its social, environmental, economic and physical context (NSW Government 2002). Because of their generally lower incomes, tenants of affordable housing may be less able to afford a car than higher income groups. This means that they stand to benefit from living in an area with good access to public transport, job opportunities and essential services and facilities.

### 2.3 Financial sustainability

Financial sustainability of affordable housing is often thought of in fairly simple terms. For example, the NSW Affordable Housing Guidelines (DHS NSW 2010a, p.4) describe it in the following terms:

Financial sustainability—rent policy needs to achieve a balance between affordability and the sustainable operation of affordable housing, including meeting the cost of private finance. To assist in achieving sustainability, income limits will generally exceed those for public housing and rents will be set to optimise the amount of Commonwealth Rent Assistance (CRA) payable.

This is simply proposing that project income exceed project costs. However, for the emerging sector to enhance its role it needs to drive its financial performance so that it can maximise revenue that can be reinvested in further growth of the sector, while also maintaining strong social and environmental outcomes. Hence, financial sustainability is concerned with optimising yield and driving costs down. Critical factors that will affect this equation are identified below.

### 2.3.1 Procurement factors

#### Capital expenditure

This concerns the initial costs of acquiring the dwellings, covering the purchasing costs of land and construction costs, or, in the case of existing dwellings, their purchase price. Plans for new capital investment will require financial evaluation of the options (on a life cycle costing basis) to determine the best option for achieving the intended outcomes, detailed risk management planning, effective project management, and demonstrating the social, environmental and financial sustainability of the project. Development and procurement costs have to be well managed to minimise variations, budget overruns and costly delays.

#### Financing approach

The cost and terms of any loans that are used to support development and refurbishment of affordable housing lie at the heart of financial sustainability, in a policy environment where public subsidies are limited and mixed financing models are being promoted. The ability of providers to service loans is also a central issue. Providers using NRAS to finance their projects face particular issues after 10 years, when the tax offset expires or cash grant ceases. This has implications for whether affordable housing can be maintained and for the rehousing of tenants, if a dwelling is sold.

#### Revenue from sales in mixed tenure developments

Providers of mixed tenure developments may be relying on sales as a key strategy to contribute to their liquidity and profitability. In such cases, the quality and success of the sales strategy will be critical to their asset acquisition plans and growth targets.

#### 2.3.2 Operating issues

#### Revenue from rents

Rent revenue is a function of rent setting policy, rent subsidies and, depending on how these are deployed, the income-mix model that is used. Allocations, vacancies and rental arrears have to be well managed to maintain revenue stability.

#### **Operating costs**

A critical issue for the management of an affordable housing portfolio is containment of operating costs over time—because margins are low and providers generally do not have access to operating subsidies.

#### Expenditure on maintenance

Over time, all buildings require reinvestment in maintenance. Exposure to maintenance requirements will be significantly determined by initial capital investment. For example, some building materials may be cheaper to purchase at the construction phase, but may require greater ongoing expenditure on maintenance.

Budget setting and provisions (e.g. a sinking fund) for maintenance expenditure have to allow for significant annual variations. An evidence-based maintenance and capital replacement fund is an essential component of any financially sustainable development.

#### 2.3.3 Assessing financial sustainability

Each of the financial issues described above will be examined as part of the assessment of the projects in this study. However, achieving financial sustainability does not necessarily require that each project makes a surplus (i.e. net rent revenue

exceeds costs, including any debt servicing costs). Most projects are part of a portfolio held by a provider who is trying to balance financial outcomes over their asset portfolio. So a provider may budget for, or experience a loss on, one project that can be offset by a surplus on another project. However, where such a cross-subsidy approach is taken, it will be critical for the provider to have a detailed financial model that accurately estimates the extent of the subsidy which is required, and a sustainable source of funds to support the flow of cross-subsidy.

Financial sustainability is an important issue for the emerging affordable housing industry. There have been some overly optimistic views about the extent to which the industry in Australia will be able to leverage investment from government to create additional affordable housing (Milligan & Pawson 2010). Recent modeling in one jurisdiction shows that the leverage targets cited in some public pronouncements are not sustainable (Shelter 2010). Any leverage models taken up the sector will need to be financially sustainable in order for housing assistance to be provided at affordable rents to those who need it over the long term.

# 2.4 Conclusions

Sustainability is presented as the overarching framework for analysis in this study. In this chapter we have established the key criteria for an assessment of environmental, social and financial sustainability of affordable housing. For affordable housing projects to be sustainable, they need to perform well in all three areas, which are closely interlinked. There is no point in having a financially sustainable development if it is not socially sustainable, and the social benefits of a project are unlikely to endure unless it is financially sustainable. Given the high cost of energy, unless a project is environmentally sustainable it is unlikely that it will be socially sustainable. The sustainability framework presented in this chapter serves as the foundation of our detailed methodology, informing the key measures that have been selected for project assessments, as set out in the next chapter.

# **3 PROJECT ASSESSMENT METHODOLOGY**

This chapter sets out the methods used to collect and analyse information for the empirical part of the research. The research design has been shaped and informed by the analytical framework discussed in Chapter 2, and employs a range of quantitative and qualitative methods. The chapter begins by discussing the key criteria used for the selection of affordable housing projects, before outlining the methods used for data collection and analysis.

# 3.1 Selection of affordable housing projects

Funding was provided for the examination of eight distinctive affordable housing projects across three or four jurisdictions. There is no consolidated database of affordable housing projects across Australia that could be used as a sampling frame to choose a sample of projects, and it is not known how many affordable housing projects have been developed and completed in the not-for-profit sector.<sup>4</sup> However, until the advent of the SHI and NRAS (see Chapter 1), this was not a large number, so we were able to use our prior research and knowledge of this sector (Milligan et al. 2009a) supplemented by information taken from providers' websites and annual reports to develop a short list of providers who are undertaking affordable housing developments. Approximately 130 affordable housing projects (completed or in progress) across Australia were reviewed by the research team. Of these, a shortlist of 32 projects whose development was completed by the end 2009 was created.

In consultation with a users' advisory group for the project, we developed selection criteria that would allow the diversity of social, financial and environmental features of those completed affordable housing projects to be represented as much as possible in our sample. We knew that existing projects varied considerably in scale and density, had been developed under different state government policy settings and in different geographic locations (metropolitan and regional), and were variously targeted to low or moderate income groups or, in some cases, a mix of these. Developers of these projects also varied from those that had an established in-house development function to first timers (see Milligan et al. 2009a). From this, we developed a list of selection criteria that were consistent with our aims and methods of evaluation and allowed for practical considerations.

#### 3.1.1 Selection criteria

The following criteria were used to select the case studies.

- 1. **Timing**. Projects had to have been completed and tenanted preferably for at least 12 months to allow for a meaningful post-occupancy tenant experience to be assessed. As field work for the study was conducted over the first half of 2011, in effect this meant choosing projects that had been completed by the end of 2009. All projects selected were developed after 2007 reflecting the first period of significant growth in development by not-for-profit providers in most jurisdictions.
- 2. Developer. The focus of this study is on the capacity and skill of not-for-profit organisations as initiators, developers and funders of affordable housing projects. Hence a key criterion was the extent of control that the originating organisation had over the procurement of the project. Including both established and new developers was considered desirable in view of the nascent stage of development of the industry and the benefit of providing lessons for the likely increasing numbers of new players.

<sup>&</sup>lt;sup>4</sup> As first highlighted in Milligan et al. (2007), lack of information on emerging forms of affordable housing provision in the NFP sector continues to be a major shortcoming in current data collections.

- 3. Geographic location. This criterion had two dimensions. One concerned coverage of jurisdictions with different policy settings that are shaping the form and outcomes of local affordable housing projects. Four jurisdictions, which together have the majority of 'eligible' projects, were considered for possible inclusion—New South Wales, Queensland, Victoria and the ACT.<sup>5</sup> The second aspect concerned housing submarket location, which has a significant impact on the cost of projects as well as the types of demand and the lifestyles and needs of residents (e.g. access to transport and services). For this criterion, our aim was to achieve a mix of inner city, suburban and non-metropolitan projects.
- 4. Tenure mix. There was a desire to include one or more mixed tenure projects, if possible. As discussed in Chapter 2, mixed tenure provides significant additional financing options for not-for-profit providers as well as offering a socially mixed environment and possible tenure pathways to residents. Development of mixed tenure projects is a growing trend in the latest procurement programs in the sector.
- 5. Form and scale. Affordable housing developed by not-for-profit providers in Australia so far is occurring predominantly in multi-unit project buildings, comprising apartments or villas and town houses. Mainly studio, one and two bedroom dwellings are being provided with a small component of rooming house type accommodation. Given this situation, this criterion was used to ensure that some variations in dwelling mix and project scale were reflected across the projects chosen.
- 6. **Target group**. Affordable housing projects differ considerably in the target group that is catered to, whether determined by income, life stage, household type or type of housing need. This has major implications for financial sustainability, design requirements and social outcomes. Therefore, it was considered important to sample projects with different tenant selection criteria.

#### 3.1.2 Selected projects

Eight projects were selected initially in accord with the above criteria and providers were approached to obtain their support. One provider declined which meant that a substitute project had to be found. In Table 2 we provide an identifying name for each of the projects, which is used throughout the report, and show how the projects match the selection criteria.

In terms of the selection criteria, the set of projects sampled have the following features:

- $\rightarrow$  Projects were completed between 2007 and 2009 (criterion 1).
- → Each of the projects was developed or procured by a different organisation. Five of these were developers with track record, three were not. Six projects were developed by the owning not-for-profit organisation and one was developed through a partnership between a not-for-profit housing provider and an aged-care provider. The final project, which was substituted after one provider declined to participate in the research, was developed by a private company and later purchased by a not-for-profit housing provider. While a single case study cannot be considered representative of this approach to procurement, it was decided that it would be advantageous to include this case to draw attention to potential advantages and disadvantages of in-house development versus market procurement (criterion 2).

<sup>&</sup>lt;sup>5</sup> Of the remaining jurisdictions, only Western Australia had any qualifying projects and funds were not available to enable coverage of that state.

- → Projects come from the jurisdictions of NSW, Victoria, and Queensland (criterion 3).
- → Three projects are in inner metropolitan suburbs, two are in other metropolitan areas and three are in non-metropolitan locations (criterion 3).
- → Two projects include a mix of affordable rental dwellings and dwellings for sale. All other projects are dedicated affordable rental housing.
- → Projects range from 12 dwellings to 71 dwellings. Two developments comprise town houses and villas. The remainder are apartment buildings. Across all developments, there are 4 rooming house bedsits, 63 studios, 99 one-bedroom apartments, 67 two-bedroom apartment, 3 three-bedroom apartments and 20 twobedroom townhouses that are designated for affordable housing (criterion 5; see Figure 1).
- → There is considerable diversity in the target groups who are designated to occupy dwellings. In several projects there are places for a mix of low income and moderate income households. Employment status is also a criterion for allocation to a proportion of dwellings in several projects. Two projects are exclusively for older people, one purpose built, one not. Several projects have some units that are adapted for people with disabilities. Full details of the occupancy mix in all projects are given in Chapter 4 (criterion 6).



#### Figure 1: Affordable dwelling types included in sample

	Scale (number of units)	Settlement	Developer	Geographic location	Tenure mix	Building Type	Target group
Barwon	71	2009	NFP	Inner urban	Rental	7-storey apartment building	Mixed employed and Centrelink
Broadwater	31 (16 affordable)	2009	NFP	Suburban	Mixed tenure	4-storey apartment building	Aged
Clyde	35	2009	NFP	Regional	Rental	Two 3-storey apartment buildings	Mixed
Eleanor	50	2009	Private developer	Suburban	Rental	8-storey apartment building	Mixed employed and Centrelink
Hastings	60 (8 affordable)	2007	NFP in partnership	Regional	Mixed-tenure	Townhouses	Aged
Livingstone	29	2008	NFP	Inner urban	Rental	A 6-storey apartment buildings	Low and moderate income
Paramount	35	2008	NFP	Inner urban	Rental	One 2-storey and one 3- storey apartment building	Mixed employed and Centrelink
Swan	12	2009	NFP	Regional	Rental	Townhouses	Moderate income

Table 2: Projects selected by selection criteria

# 3.2 Assessment tools

The assessment of each project was based on qualitative and quantitative information obtained through the following processes:

- $\rightarrow$  interviews with providers
- → a design checklist and design assessment workshop
- → a tenant survey
- $\rightarrow$  a focus group held with residents
- → a building survey
- $\rightarrow$  a review of project documents.

Each project was also visited by at least two researchers in the team with different expertise so that its environmental, design and community aspects could be observed.

The first project assessed was used as a test case for research tools and the assessment process. This first case study helped us refine and better target the type of information and documents that we requested from participating organisations, particularly as it became clear that some of the more sensitive financial data may be difficult to collect. Most other data collection tools, described in the following subsections, were found effective and we continued to use them with minor adaptations in the remaining case studies.

#### 3.2.1 Interviews with providers

The main purpose of the interviews with providers was to learn how each project was conceived, initiated, delivered and managed, and to obtain detailed project plans, financial information, asset management plans and policy settings that would enable an independent assessment of the project's sustainability. Attention in the interviews was also paid to the course of negotiations relating to the project with policy-makers and regulators, public and private funders, planning approval authorities and local communities to determine how these factors influenced the nature and timing of the final project. For all projects, the most senior officer interviewed (usually the CEO) was given the opportunity to explain the organisation's current corporate strategy and business directions and to reflect on how their organisation's experience in procuring and managing the project being assessed related to their mission and broader plans.

Interviews were conducted with executive staff, typically the chief executive, finance director and project manager. In some cases these were held jointly, in other cases interviews were conducted separately (see Table 3). Interviews were semi-structured.

#### 3.2.2 Design checklist and design assessment workshop

To assess the design features and standards of each project, a specialised 'Housing Quality Indicators' form was developed specifically for the study (this is reproduced in Appendix 1). This assessment tool was adapted for the Australian context from a similar tool used by the Housing Corporation<sup>6</sup> in England. The Housing Corporation's tool was condensed and revised in line with Australian policy guidance and legislation, and to cover the analytical framework discussed in Chapter 2. It was intended that this tool could be used by providers or evaluators to appraise future projects in the design phase or post-occupancy, as we discuss in Chapter 5.

<sup>&</sup>lt;sup>6</sup> The Housing Corporation was a statutory agency responsible for funding and regulating registered social landlords (providers of affordable housing) in England between 1964 and 2008.

For each selected project, the 'Housing Quality Indicators' form was completed by the researchers following a site visit. This assessment formed part of the basis for determining the standards of design quality that had been achieved by each of the case study projects (see Chapter 4). Following collection of all of the design data for each project (the completed check list, photos, plans and drawings), a half-day workshop with an expert architect was held to finalise the research team's assessment of design quality and its implications for the social, financial and environmental outcomes at each project.

Project name	Focus group participants	Survey responses	Staff interviews
Barwon	4	10 (15%)	CEO, Project Development Manager, General Manager (tenancy)
Broadwater	7	4 (25%)	CEO, Project Manager, Tenancy Manager
Clyde	5	19 (54%)	CEO, Project Manager, Tenancy Manager, Finance Manager
Eleanor	2 *	5 (10%)	General manager, Project Manager, Tenancy Manager
Hastings	4	27 (45%)	CEO, Project Manager, Project Co-ordinator
Livingstone	5	12 (41%)	CEO, Project Manager
Paramount	2	12 (35%)	CEO, Operations Manager, Tenancy Manager
Swan	2 *	4 (33%)	CEO
Total	31	93 (30%)	22 staff interviewed

Table 3:	Partici	pants i	in s	urveys	and	focus	groups
		P					9

\*Separate interviews with individuals

#### 3.2.3 Resident survey

A short questionnaire designed to elicit residents' views of the project and their housing experience was distributed to all residents in each of the projects, including owners in mixed-tenure projects. The questionnaire asked respondents to rank different aspects of the project's design, management and location and also sought general information about each resident. The questionnaire is reproduced in Appendix 2. Some parts of the questionnaire are an adaptation of the National Social Housing Survey that is conducted biannually by the Australian Institute of Health and Welfare (AIHW) across samples of public and community housing tenants. The survey was distributed to project residents with the assistance of the housing provider, but the returned surveys were mailed directly to the research team using reply-paid envelopes. The overall response rate to the survey was 30 per cent. Table 3 provides details of response rates by project. Survey responses meet or exceed typical rates for these kinds of surveys for all but two projects.

Males and females were equally represented in the sample. Close to two-thirds of survey respondents were Australian born, and approximately one-fifth were born in non-English speaking countries. It is possible that the response rate among residents from non-English speaking backgrounds was relatively low due to language barriers, as the survey was only distributed in English. Three Indigenous tenants responded to the survey.

Participants in our sample represented a good mix of household types (Figure 2) singles and couples of different age groups, as well as a number of single-parent households. Only two participants who responded to our surveys lived in a household that included a couple with children, which may be a result of the predominantly small size of dwellings being provided (Figure 1). The age pension (34%), wages (31%) and the disability pension (23%) were the three main income sources among participants (Figure 3). This reflects the targeting of affordable housing to a mix of employed people and households on statutory incomes.

### 3.2.4 Focus groups

A focus group of about one hour's duration was arranged for residents<sup>7</sup> who live in each of the projects. The focus group was designed to draw out insights about the residents' experiences, deepening the research team's understanding of resident satisfaction and identifying residents' views concerning the affordability, environmental and social qualities of their residential environment.

Participants for the focus groups were recruited through the survey. Participants were not paid but a prize draw was used as an incentive to increase participation in focus groups. In some cases, due to a low initial response rate, the housing provider was used to assist in recruiting willing focus group participants. When the groups were held, there were no attendees for one project and only one resident participated in another. Attendance rates for focus groups are given in Table 3. For the two projects with the lowest levels of participation, telephone interviews were conducted with additional residents who had previously indicated they were willing to participate. Two researchers participated in each of the seven focus groups that were held. These were conducted either in a communal area on site or in an office organised by the researchers. Overall, considerable effort was required to recruit participants to the focus groups and there were poor results for three projects. This severely limits the assessment of resident views in those projects. Overcoming this problem, however, would have involved the research team having greater capacity to promote participation or visit projects at times that best suited residents.

#### 3.2.5 Review of documentation

Document inspection and analysis covered financial information and design and construction documents for each project, plus relevant organisational strategy documents. These were either publicly available or supplied in confidence by providers. Financial documentation included:

- → initial estimates and final costs of each project
- → sales realisations where applicable
- → income and expenditure Statements
- → maintenance and Asset Management Plans
- $\rightarrow$  details of any financing arrangements.

The types of documents supplied and level of detail shared by the providers varied between projects, and one of the key challenges in analysis was developing standard measures to allow for comparison between different types of data. Data gaps were partially addressed through the interviews and expert assessment; one of the benefits of using mixed methods.

#### 3.2.6 Summary of key measures of project sustainability

The aim of the mixed methods approach described above was to allow for adequate assessment of the full range of sustainability measures discussed in Chapter 2 for

<sup>&</sup>lt;sup>7</sup> In mixed tenure projects, this could be a resident owner or a tenant.

each case study project. The way in which each assessment tool was used to contribute to the assessment of project sustainability is summarised in Table 4.



#### Figure 2: Household types among survey participants

Note: Data excludes owners in mixed-tenured projects Source: Resident survey responses

#### Figure 3: Main household income source of survey participants



Note: Data excludes owners in mixed-tenured projects Source: Resident survey responses

Table 4: Key	y sustainability	y measures and	assessment tools
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	Key measures for project analysis	Assessment tool(s) used		
Social Sustainability	·			
Affordability	Provider's rental policy	Interviews, document review		
-	Access to services	Design quality assessment, focus groups, survey		
	Energy saving design features	Design quality assessment, focus groups, interviews		
Housing quality and wellbeing	Design quality of dwellings and project	Design quality assessment, focus groups, interviews, survey		
	Floor space area	Design quality assessment		
	Safety	Design quality assessment, focus groups, interviews, survey		
	Open space/communal space	Design quality assessment		
	Car parking	Design quality assessment, focus groups		
	Tenant rights, responsibilities and participation	Interviews, focus groups, document review		
	Tenant satisfaction	Survey, focus groups		
Social mix	Tenant mix	Interviews, survey, focus group, document review		
Environmental Sustainability		·		
Energy efficiency	Passive design features	Design quality assessment, interviews, focus groups		
	Active ESD features	Design quality assessment, interviews, focus groups		
	Clothes drying facilities	Design quality assessment, interviews, focus groups		
	Heating/cooling system	Design quality assessment, interviews, focus groups		
	Effective shading	Design quality assessment, interviews, focus groups		
Water efficiency	Water capture/recycling	Design quality assessment, interviews, focus groups		
Maintenance	Building materials	Design quality assessment, interviews, document review		
	Manual/mechanical systems	Design quality assessment, interviews, document review		
Financial sustainability				
Procurement factors	Capital expenditure	Document review, interviews		
	Financing approach	Document review, interviews		

	Revenue from sales	Document review, interviews
Operating issues	Revenue from rents	Document review, interviews
	Operating costs	Document review, interviews
	Expenditure on maintenance	Document review, interviews

# 3.3 Analysis

Analysis of the empirical data collected was conducted in two main ways.

First, each project was individually evaluated by the research team using the data sources described above. Each evaluation systematically covered the circumstances under which a project was initiated, designed, financed and developed, its occupancy rules, rent setting and tenancy and property management arrangements, and its overall performance in terms of financial sustainability, environmental sustainability and outcomes for tenants. Apparent strengths and weaknesses of each of the projects were also identified using qualitative analysis of focus group discussions, quantitative analysis of survey responses and independent analysis of the project design.

Specifically, in relation to financial sustainability, the following key areas were examined:

- → Whether projects were achieved at or close to budget and whether development costs were inside market benchmarks. Significant cost and revenue changes between the original project feasibilities and the final project costs were also noted.
- → Whether there was a sound financial plan for the project in place. Income and expenditure statements were used to evaluate the current financial viability of the project. Future revenue and cost estimates were also evaluated, where these were provided.
- $\rightarrow$  Whether there was a maintenance plan in place.
- → Whether financing of any loans was prudent and repayments feasible.

To validate and strengthen our assessment of the design of each project, a workshop was held with Michael Zanardo, an architect with expertise in designing for affordable housing. Zanardo reviewed the team's assessments and commented on the design quality of each of the projects. Since the expert had not been involved in any of the focus groups with residents, interviews with providers or site visits, his assessment of the projects' designs was based on analysis of other data sources, such as project plans and drawings, maps of site characteristics and photographs.

The housing providers that participated in our study were given an opportunity to review and comment on a draft version of our assessment of their project, in order to share our lessons with the providers and validate the factual information included. The final assessment is presented in Chapter 4.

The second approach to analysis was thematic. Themes selected for discussion (from the literature on sustainable housing and the findings from all eight projects) concerned those aspects of project financing, design and use (liveability and management) that emerge as typical features of affordable housing or as common challenges for organisations that are seeking to develop sustainable affordable housing projects. The thematic analysis is presented in Chapter 5. This analysis helped inform the discussion of the implications of the findings of the study for policy and practice, presented in Chapter 6.

# 4 CASE STUDIES

This chapter presents the findings of the empirical work conducted for this study. It provides an overview of each of the eight affordable housing projects, their planning, design and development process, key features, sustainability innovations and tradeoffs. The case studies are presented in alphabetical order by given name. Three tables at the end of the chapter provide a general overview of the key social, environmental and financial attributes and outcomes respectively for the eight projects.

# 4.1 Barwon

### 4.1.1 Physical description and tenant profile

The Barwon is located on a busy commercial strip in a metropolitan inner city location with excellent access to shops, public transport and services. The site is approximately 0.13 hectares, has a street frontage to the north, and is neighboured by buildings ranging from two to eleven storeys in height. The project comprises two main buildings. To the north of the site, fronting the street, there is a two-storey early 20th century commercial building which has been preserved and restored. This houses a 161m<sup>2</sup>, cafe at ground floor and a 140m<sup>2</sup>, community arts space above. To the rear of the commercial building has been inserted a new-build seven-storey apartment building. This apartment building is accessed from a side laneway, and has two lifts providing access to all levels. On the ground floor, there is a cycle lock-up and communal room for resident meetings and gatherings, together with 272m<sup>2</sup>. of office space and commercial parking. Levels 1-6 are solely residential in use; they provide a total of 71 dwellings. Of these 36 (50%) are self-contained studio units, 12 are onebedroom units (17%) and 23 (32%) are two-bedroom units. Six of the studios are accessible units. All studio units are furnished (with bed, table and chairs, built in storage and whitegoods) and have access to shared laundry facilities located on each floor. On the roof of the building, there is a communal space with a herb garden, barbeque, seating and shade.

The residential services in this project are based on provision of stable long-term housing at affordable rents for a mix of families (currently 32%), couples (5%) and single people (63%). The target is for around half of the tenants to be in employment with incomes falling in the moderate income range (up to \$82 000 per annum, depending on household size and type) but above public housing income eligibility levels. The remaining 50 per cent are earmarked for applicants who are public housing eligible. Each resident floor includes a mix of employed tenants and those not in the workforce, which aims to assist social integration within the building. A diverse ethnic mix and a range of ages among residents were evident during the visit of the research team. Any support services to tenants are not provided through the housing provider but obtained on an individual basis.

Rents are fixed but are set in a way that ensures that households pay no more than around 25 per cent of their household income (excluding CRA) in rent, while also ensuring the provider can optimise collection of the level of rent assistance that tenants who receive Centrelink benefits are entitled to (see Chapter 1).<sup>8</sup> For residents in the studios and one bedroom apartments, utilities bills are included in their rent. Residents in the two bedroom apartments pay for utilities through a direct relationship with utility providers, in addition to their rent.

<sup>&</sup>lt;sup>8</sup> Higher market value locations assist in optimising revenue from available CRA subsidies.

#### 4.1.2 Procurement phase

This project was initiated and developed by a registered not-for-profit housing provider and has been occupied since late 2009. It was financed with a mix of government grants (75%), a commercial loan (20%) and other equity (5%), which included a small donation and internal surpluses and reserves. The loan has a 25-year term and a variable interest rate.

Planning approval for the development was straightforward as the provider catered to the planning authority's desire for a lesser number of storeys than had been proposed by a previous applicant. However, as discussed below, this compromised provision of car parking.

The provider was an experienced developer but had not taken on a development of this scale and complexity previously. While they have experienced a period of rapid growth in their development program, they have not experienced any major issues, delays or cost overruns.

#### 4.1.3 Design features

The decision to provide utility services to most tenants created a strong incentive for the provider to keep utility costs down. Consequently, the building contains certain passive design elements and active environmental sustainability design features (as listed in Table 6), that were specified by the provider in their brief. To the south end of the building, automated louvre windows are designed to allow southerly wind to circulate through rear staircase, corridor and ventilation vents to each apartment. The system uses room temperature sensors located on each residential level lift lobby to determine the cooling requirement, as well as a weather station located on the roof. Units have small private balconies with external vertical louvre screens for heating and cooling purposes, and are oriented for solar gain. The project has a solar-boosted gas hot water system, and rainwater is harvested on the rooftop garden and used in some toilets. On-site parking is provided only for commercial tenants and not for residents. The project includes electronic security controls, which have been enhanced after some initial problems. Standard studio units have an average floor area of 32m<sup>2</sup>, disability modified studios average 36m<sup>2</sup>, one bedroom units average  $43m^2$ , and the two bedroom units average  $6m^2$ .

This provider has a strong orientation to improving the economic and social connectedness of their tenants and, therefore, commercial tenants have been selected purposely to help to generate community interaction and social capital. Several features of the building (such as the design of communal areas and high quality laundry facilities) were based on the provider's previous experience in managing accommodation for similar clients.

Although the Barwon has many positive design features, there are aspects that could have been improved. The entrance to the new-build apartment block is not immediately obvious from the street, the principal access for tenants is from a laneway with blank walls and no active frontages, and the rear of the project does not present an active frontage to the public realm; it simply comprises blanks walls and service entries. Because the project is built almost to the site boundary, an equivalently-sized project built on either side would also seriously reduce access to natural light and solar gain for tenants, particularly as units are mostly deep and single-aspect. Other possible issues at the project include the use of painted surfaces on the building exterior that will require ongoing upkeep and the reliance upon active mechanical systems for ventilation, rather than passive systems that do not require energy.

#### 4.1.4 Resident experience and satisfaction

Tenants of this project who were surveyed and/or attended the focus group were well satisfied with most aspects of their residential environment and management services. Aspects of tenant satisfaction that were specifically highlighted included having responsive services, safety within the building, the high guality of units and a good social atmosphere in the building. Environmental noise was not reported as a major issue because windows were double glazed. Tenant interaction was said to be growing and a residents' committee, strongly supported by management, was increasing its activities. The project's location and its access to transport and services were also rated highly by residents, although the neighbourhood was perceived by some to be deficient in public open space and recreational amenities. Tenants in the focus group expressed the view that the whole atmosphere of the building and the attitude of the provider encouraged them to better themselves rather than stigmatising them, as some had experienced in their previous housing. Tenants in the focus group were also particularly praiseworthy of the way that a flood in the building<sup>9</sup> had been handled by management to ensure resident inconvenience was minimised. Affordability was not reported as an issue, although several residents are paying more than they otherwise would in public housing.

The major area of dissatisfaction in this project concerned the lack of resident parking. Residents did not have on-site parking and were not entitled to parking permits granted by the local council because this had been a condition of development consent.

#### 4.1.5 Financial issues

This provider provided the research team with comprehensive information about the projected performance of the Barwon project over 40 years, based on a life cycle asset management approach. Examination of this data shows that operating and management costs for the building are well within industry benchmarks, and that debt servicing costs are significant but manageable—around 56 per cent of net rental income (assuming a 9% annual interest rate and 25-year loan period). It also shows that adequate provision has been made for long-term asset management, with additional investment in the building becoming feasible once the loan is paid off, and that rent revenues are optimised within government-set allocation targets, affordable rent benchmarks and available subsidies.

For the level of debt finance underpinning this project (at commercial rates), it is particularly apparent that having 50 per cent employed tenants is critical to achieving a viable project. On average these tenants are able to contribute between 15 per cent and 30 per cent additional rent (depending on household and pension/type) than non-employed tenants.<sup>10</sup> The greatest difference in rent contribution between employed and Centrelink tenants occurs for single person households—this situation highlights the challenge faced by many affordable housing providers in housing low income unemployed or retired single people. In this project a 27 per cent component of low income singles housing has been achieved.

The main scope for improving the financial performance of this project (or a similarly configured one) would be to reduce the cost of finance or to enhance the capacity of

<sup>&</sup>lt;sup>9</sup> The flood was the result of vandalism by an intruder not a natural occurrence. Residents were displaced for one week as a result.

<sup>&</sup>lt;sup>10</sup> This comparison is made after allowing for transfer to the provider of the maximum rent assistance payment that non-employed tenants in this project would be expected to receive.

low income tenants to contribute to the rent-for example, through them having an improved CRA payment.

#### 4.1.6 Parking

A major trade-off made in the design and development of this project concerned provision for resident parking and, as discussed above, lack of access to parking is an ongoing problem for residents. Provision of resident parking was not a requirement under local planning policy. The provider opted not to provide it because it would incur significant additional excavation costs and reduce dwelling yield (and thereby financial feasibility) to achieve a building height that was acceptable to council, and because of the excellent accessibility attributes of the location. However, many of the target groups for the project use cars for employment, family and recreational reasons. The provider recognises this issue. An option to address it could be for the provider to establish a local hire car scheme with the assistance of the local council, or to establish 'locational' criteria for the selection of tenants.

#### 4.1.7 Social mix

A common theme among the projects assessed in this study concerns which income and population groups are targeted. The provider that initiated Barwon is a wellestablished housing agency that has had a traditional mission to assist very low income single people, many of whom have a history of homelessness. Through projects like Barwon and others, they have expanded their target group to include a wider mix of household types and to include a proportion of moderate income tenants. While this has been primarily a response to government requirements to leverage government capital investment, it has also brought recognition to the organisation of the social benefits of adopting a mix of housing allocations. However, unlike for some other projects described in this chapter, this provider is reluctant to extend their social goals to encompass clients who are capable of paying rents closer to or at market rates. Their rationale for this position is the overall scarcity of funding and sites for housing that is affordable to those who are more disadvantaged in the high value areas in which they operate and which are rapidly gentrifying through market processes (interview provider).

#### 4.1.8 Overall assessment

Overall, our assessment is that this project is well designed and well managed for the most part, albeit that there are some specific ways in which residential amenity and environmental performance could have been improved. The project was also very well documented, facilitating a thorough assessment in this study. Many attributes and innovative features of the project have been driven by social and environmental goals that have produced positive outcomes for the residents and the provider as well as wider community benefits. Within the parameters of government policy and regulatory requirements, financial viability has been realised, but with little margin and at the expense of adequate parking provision. The housing provider has demonstrated a high level of skill in project development and delivery. This provider's accomplishments at Barwon demonstrate their own awareness that 'best practice in affordable housing involves a lot of layers '(interview Barwon provider CEO).

### 4.2 Broadwater

#### 4.2.1 Physical description and tenant profile

Broadwater is located on a small commercial strip in a low-density middle-ring suburb around 8 kilometres from a major CBD. It is around 250m from a train station and is served by two bus routes with services leaving approximately every 15 minutes during working hours on weekdays. In addition to a range of local services and facilities in the immediate vicinity, there is a major shopping mall located less than 1 kilometre away, on a bus route. The site is 0.2 hectares, has a street frontage to the east, and is neighboured by commercial buildings of one and two storeys. The building is four storeys in height and is mixed in terms of use and tenure. It is accessed through a pedestrian entry from the street. There are two lifts, each of which can only be accessed with a security pass outside working hours. Corridors are open-air and there is a large internal atrium adjacent to the lift.

The ground floor of the project consists of three retail units fronting the street and totalling 340 m<sup>2</sup>. On the second level, 569m<sup>2</sup> of commercial space is split across four tenancies. Levels 3 and 4 provide a total of 31 residential units. The 16 units on Level 3 are affordable housing units managed by the provider, and the 15 on Level 4 are for-sale. Of the 16 affordable housing units, seven are self-contained studios (44%), seven are one-bedroom apartments (44%) and two (13%) are two-bedroom units; one of the one-bedroom apartments is an accessible unit. On Level 3, there is also an open-air communal area for use by tenants. This includes seating, table, cupboards, a television and a small herb garden. The project incorporates a two-level parking facility to the rear of the retail and commercial space, providing a total of 54 spaces. Of these, eight are allocated to tenants of the affordable housing units, 16 are for the apartments being sold, and 30 are for the commercial and retail users.

All tenants on level 3 are aged over 55 years; most but not all receive the age pension. Rent, which does not include utilities, is charged at no more than three quarters of the market rent. The provider's policy is to allocate housing to households for whom this will be affordable using a benchmark of 30 per cent of income (other than CRA payments).

#### 4.2.2 Method of procurement and planning process

The site for Broadwater was acquired by the provider in 2007 for \$3.5 million. It was vacant at the time, with planning permission for a mixed-use commercial and residential development. However, the existing proposal was not financially viable for the provider, and a new Development Application (DA) was lodged in late 2007. At this point, the project was envisaged as a four-storey mixed-use project comprising retail units at ground floor and 51 affordable housing units above. The height and bulk of this proposed development was less than the original approval and the provider was confident that obtaining planning permission would not be too problematic. The decision had been made to limit the project's height to four storeys, in order that it would be code-assessable by the local planning authority, rather than impactassessable. In response to the new DA, a local resident action group was formed. Concerned about the social housing component of the scheme (they had acquiesced to a larger commercial building previously approved), they fiercely resisted development for 12 months. The local chamber of commerce was a vocal element of this opposition. Not only did this result in a significant delay to the construction process, it also prompted the provider to make a number of concessions to the objectors. Of the three levels of affordable housing proposed, one would be reconfigured to provide commercial space, and one would be sold as market housing. The total number of affordable housing units would consequently be reduced from 51 to 16, and an agreement with the local Chamber of Commerce subsequently sanctioned by council required that all of the affordable housing tenants were to be 'active elderly'; interpreted by the provider as aged 55 or over.<sup>11</sup> Construction of the

<sup>&</sup>lt;sup>11</sup> Whether a planning condition specifying the age of tenants is legal is an interesting side issue to this case. It would certainly be very difficult to enforce if it resulted in tenants being evicted because of their age. How compliance would be managed is also unclear.

revised scheme commenced in August 2009, almost two years after the DA was originally lodged. There were significant holding costs for the provider associated with this delay. The changes to the original design also injected a large degree of market risk into the development since a large part of the project was now subject to sales risk.

There was another major headache for the provider through the development process. As part of the project's planning approval, there was a requirement for access easements to three adjacent sites. Only once construction had commenced were the owners of the sites contacted about these easements, and two refused to sign for them. As a result of their refusal and a refusal by the local authority to amend the easement requirement to something within the provider's control, the project was completed in a manner that contravened the conditions of planning consent, and title could therefore not be registered. The provider was then left with no option but to apply for an amendment to the approved planning permission through the courts. Although this amendment was eventually granted and title registered, this did not happen until six months after construction was completed. During this six-month period, no rent could be collected from market residential or commercial tenants, as there was no title registered at the property. Whilst this outcome placed further financial stress on the provider, they had sourced senior legal advice that suggested that they would win a legal challenge to the approval condition on easements. This raises questions about why a local government authority would take such a hard line on this issue with an affordable housing provider. Indeed there was an acknowledgment by senior local authority officials in the closing stages of the process of resolving the issue that the council's requirements were not enforceable, which suggests that this was not a considered position.

The total construction cost of Broadwater was \$14.2 million, of which \$3.56 million was for the 16 social housing units on Level 3; the average cost of each social housing unit was therefore approximately \$223 000, including land, car parking, consultant fees and infrastructure charges. The social housing component was financed through the Social Housing Initiative; the remainder was financed internally by the provider without the need for any loan facility. The success of the provider in obtaining grant funding was important in reducing their financial exposure in the project. Tenders from builders and contractors were extremely competitive, partly due to the economic climate after the Global Financial Crisis, and the provider was consequently able to deliver higher-quality finishings in the affordable units than would normally have been possible.

#### 4.2.3 Design and environmental performance

The provider commissioned an architect with previous experience in designing affordable housing. The project incorporates a facility for water harvesting and reuse, and was built at 4 stars energy rating; the standard at the time. Concrete blockwork is used for exterior walls, in order to maximise the project's thermal mass. The front entrance, central atrium and open areas on the south and north sides of the project allow the flow of air through the building, and the communal space has a north aspect and is furnished and well used. All units are insulated and have ceiling fans, large screen doors, extractor fans and furnishable balconies. Consistent with the normal design standard for this provider the affordable housing accommodation is not airconditioned, although the for-sale residential units and all the commercial and retail spaces have this feature. Most units are long and narrow, and kitchen spaces are positioned along walls. Floor area in studios is  $33.7m^2$  (including  $9.1m^2$  balcony), one bedroom units have  $42m^2$  (including  $7m^2$  balcony), and two-bedroom units have between  $63m^2$  or  $65m^2$  (including  $13m^2$  or  $8m^2$  balconies respectively). The accessible

unit has 53m<sup>2</sup> floor area, including a 10m<sup>2</sup> balcony with a step. All units have their own washing machine location with appropriate fittings. On the affordable rental housing floor, there is also a community laundry facility with coin operated laundry equipment for those tenants that do not possess their own machines.

Despite the many positive features of Broadwater's design, there are a number of south-facing units that will receive limited natural light and little solar heating in winter. Because the project extends almost to the site boundary on its northern side, an equivalently-sized project built on the adjacent site to the north would also dramatically reduce the natural light and solar gain in the communal area and north-facing apartments. However, the building is well insulated. The long and narrow apartments make efficient use of space, and the width of studio units is tight but adequate; being just 3.6m. While the project does provide active frontages at ground level, the entry to the apartments does lies to one side of retail units and would benefit from improved signage. Another issue with Broadwater's design is that dwellings do not appear to have been redesigned once the agreement was reached that all tenants were to be active elderly, as we discuss in more detail below.

#### 4.2.4 Resident experience and satisfaction

Our focus-group participants were generally satisfied with their living arrangements at Broadwater. Residents felt safe in their homes and in the local area more generally. All of the affordable housing tenants knew one another, and most interacted regularly in the communal space on Level 3. A major factor seen to have helped them gel as a group was their common age—all are aged over 55 years. Units at Broadwater were felt to be light, airy and of a high quality, and residents valued their balcony spaces. They also appreciated the wide range of services and facilities in the local area, and the good public transport connections locally and further afield.

The main area of dissatisfaction concerned parking. Consistent with the housing provider's general policy on car parking, which is derived from extensive surveys of car ownership and retention across their large portfolio, there are eight parking spaces allocated on the basis of need to tenants of the 16 affordable housing units. Residents considered this insufficient. Some residents had low levels of mobility, yet they were unable to park their cars at the project, nor in the surrounding streets. In practice, however, given the high number of car spaces in the development overall, it has been possible for some affordable housing tenants to secure a parking space within the building by entering into a commercial arrangement with other residents in the building.

There were also issues with the design and detailing of units at Broadwater. Residents complained that the height adjustments between the balcony and internal space and the bathroom and corridor level, while normal building practice to provide water proofing and consistent with the building code (BCA), constituted a hazard. Occupants of studios also had difficulty accessing washing machines and moving around the bathroom because space was so tight. In addition, cupboards in hallways had bi-fold doors, which when open left little or no room to pass. Another problem in all units was that certain cupboards were too high to be reached by the majority of tenants. Utilities bills are not included in rent at Broadwater, and several residents complained that their gas bills were expensive. In one case, the tenant had asked for the hot water to be disconnected in order to save money.

The provider's tenancy manager visits the project regularly, usually for the tenant participation meetings held by residents. There is also a volunteer caretaker at Broadwater, who receives a discounted rent in exchange for her caretaking responsibilities. Several tenants complained that the provider had been unresponsive

to maintenance issues. One of the issues they raised was that they weren't sure when building defects they had raised with the provider had been 'logged' into the system.

Our survey of resident satisfaction showed that Broadwater scored well on the design and quality of homes, location, social character and safety. Its lowest scores were for parking facilities and levels of exposure to noise, although noise has not been raised as an issue with the property manager or featured in responses to the provider's own annual tenant survey.

#### 4.2.5 Planning amendments

There were a number of concessions made by the provider in response to local concerns about the development of Broadwater. The original proposal for a mixed-use project with one level of retail units and 51 social housing units was fiercely resisted by local residents and businesses. Although that proposal was supported by the local councillor, there was little support from the planning authority. Through negotiation, the number of social housing units was subsequently reduced to 16, with two levels re-configured to provide commercial space and owner-occupied apartments for sale. In addition, an agreement reached with the local residents committee and sanctioned by council required that all tenants were to be active elderly, and an extra level of parking had to be provided to serve the commercial units and for-sale apartments. Although this involved a major revision to the project's internal configuration, it did not require any major changes to the building exterior, as viewed from the street.

The evolution of the Broadwater development raises important questions about the integration of affordable housing into mixed communities, and about the extent to which local residents can shape development outcomes outside the statutory notification process (because the original Broadwater proposal was code-assessable rather than impact-assessable, there was no reason for it not to have been approved in its original form). Reflecting on the project, the provider indicated that they now undertake a more extensive assessment of the need for community consultation, in order to better anticipate and respond to resident concerns. On this subject, the view of employees of the provider was that Broadwater was resisted by local residents because there had been no formal public notification, and because many locals were unaware that the site had earlier been rezoned for mixed-use development up to four storeys. The Chamber of Commerce was said to have provided leadership to what was initially an unengaged residents group; the Chamber had already been well organised as a result of a long-standing campaign to preserve the commercial viability of the local shopping street, in the face of competition from a nearby shopping mall.

Two of the major criticisms of Broadwater expressed by focus groups participants are directly related to the changes that were made to the project's configuration through the planning process. Firstly, only eight parking spaces are provided for the 16 affordable housing units. The provider indicated that that there were limited spaces at Broadwater (consistent with the broader provider policy) because of the proximity of the train station and local bus services, and that one space for every two affordable housing units exceeded their standard levels of parking provision. However, most of the provider's projects are more centrally located than Broadwater, and no others are occupied solely by over-55s. Broadwater's more-peripheral location and its older resident demographic are both likely to have generated an increased requirement for parking, some of which remains unmet. This is because older tenants are generally more likely to have reduced levels of mobility, to have accumulated enough wealth to afford a car, and because many feel unsafe using public transport. Secondly, Broadwater was originally designed for occupation by the general population, not specifically for over 55s. Consequently, there are certain design features that create

difficulties for those with declining mobility—steps, tight spaces and high cupboards for instance.

The case does highlight the high level of risks involved with development. This issue is revisited in Chapter 5.

#### 4.2.6 Financial issues

The total cost of constructing Broadwater was \$14.22 million, of which the 16 social housing units accounted for \$3.56 million. The social housing component was financed through the Social Housing Initiative (see Chapter 1), with the remainder financed by the provider.

One-bedroom units are priced at \$330 000 and two-bedroom at \$390 000. Apartment sales and the take up of commercial units have been slower than expected. At the time of our study in 2011, two of the three retail units on the ground floor had sold but one remained vacant. On the second level, two of the four commercial units had sold and two had been leased. Only five of the fifteen for-sale residential units on level 4 had sold. There was a suggestion from the provider that slow sales of the residential accommodation are mainly related to current market conditions, and there is no evidence of an impact arising from market perceptions linked to the project's affordable housing component.

The view of the provider was that had they not been in a position to finance construction internally, without the need for a loan, the holding costs and legal costs incurred through the development process would have presented them with some serious financial difficulties. As it was, however, they were able to absorb these additional costs.

#### 4.2.7 Overall assessment

Broadwater provides high-quality affordable housing in an area with a wide range of services and good access to public transport. It is highly-mixed in terms of use and tenure, albeit that the different uses and tenures are not integrated, and it provides a pleasant and well-used communal space for tenants. The project is taller and bulkier than surrounding buildings, but maintains a human scale overall and provides several active streetscape frontages. Its environmental performance was in some respects above statutory requirements prevailing at the time it was constructed, and tenants value the quality of their units and the strong sense of community. However, certain features of the project's design are unsuitable for its tenant base; it is clear that the project was not designed specifically for the needs of the over 55s, albeit that they are 'active elderly'.

The provider incurred a series of unexpected costs through the development process. Resident and business resistance to Broadwater delayed planning approval and increased holding costs, an additional level of parking had to be provided in order to serve the commercial units and for-sale apartments, and there were substantial legal costs associated with amending the easement planning condition. Additionally, the take-up rate on the for-sale apartments and commercial space has been slower than expected. Had the provider not been in such a stable financial position, and able to finance construction without the need for a loan facility, it seems likely that Broadwater would have represented a major financial burden to them. However, despite these difficulties an innovative project did emerge from a long and protracted process. This reflects the skills of the provider in 'sticking with it' and entering productive negotiations with the local opponents to the development and the consent authority. The positive outcome of the project is testament to emerging capacity within the sector to deal with challenging and complex projects.

# 4.3 The Clyde

### 4.3.1 Physical description and resident profile

The Clyde is located in a quiet residential area of a regional seaside town, walking distance from the beach and from a central road with various fast-food restaurants, convenience stores and other small commercial activities. It is mostly a car-dependent area. The Clyde is comprised of two separate sites located in two parallel streets with a total area of 0.1 hectares. One of the buildings faces east and the other faces west. Both buildings are surrounded by a mix of low-rise apartment buildings up to three-storey in height, and detached dwellings. Both buildings of the Clyde are three-storey walk-up buildings and residential use only. Entry into the buildings is via a ground-floor car park. There are no lifts in the buildings, and the stairways are external and uncovered. In both buildings, an open air corridor separates the east-facing and north-facing units.

In the first building, the ground floor consists of four units and a car park for 10 cars. The second and third floors each consist of eight units. In the second building, the ground floor consists of four units and eight parking spaces. The second and third floors consist of six and five units respectively. All dwellings in both buildings are onebedroom units and are rented as affordable housing. All ground floor units have an enclosed backyard, and the second and third floor units have balconies.

Most residents in the Clyde are over 55-year old, either singles or couples, but there are also a number of younger residents, some of whom have moved in from transitional housing. Two ground floor units in each building are wheel-chair accessible and have been allocated to residents with mobility restrictions. Rents are fixed at 70 per cent of market rates, and an affordability benchmark of 30 per cent has been set as part of the allocation criteria. Should the rents for existing residents exceed this benchmark, transfer options will be considered. The mixed portfolio of the provider, who has community housing units in the same vicinity, provides the opportunity for internal transfers.

#### 4.3.2 Procurement phase

The Clyde is the first affordable housing project developed by an organisation that has traditionally offered transitional housing services. Developing affordable housing was seen as a strategy to diversify the organisation's portfolio, allowing cross-subsidy across projects as well as opportunities for existing transitional housing residents to move into longer-term tenancies in affordable housing. The target group for this project was initially working-age low and median income singles or couples.

The sites for the Clyde were purchased specifically for the project, funded by the provider. Existing units on the sites were rented until commencement of construction. The architect adapted a design from a market housing project—an important part of the brief was to ensure that the development didn't look like 'affordable housing'. The DA was approved in February 2008. Construction was fully funded through a grant from government. Total construction costs were \$7.0 million for both buildings. With completion of construction in August 2009, the organisation had little control over allocation of the units due to a change in government policy, resulting in the majority of residents being over 55, an outcome that was not initially intended by the organisation. The project was tenanted in October 2009.

#### 4.3.3 Design features

Both buildings of the Clyde are well-presented. Both are located in streets with a mix of detached houses and low-rise apartment buildings, and the Clyde does not stand

out in terms of its scale or form. One concern is that the design requires a fair amount of external painting. With no lifts in place, an external staircase which is exposed to rain and a mix of predominantly older residents living in the Clyde, physical accessibility is a major weakness of this project's design. Slippery tiles inside the units and toilets with no accessibility features were also reported as a design problem by some tenants. These issues are currently being reviewed by the provider's asset management team.

Key positive design features of the buildings are the private backyards for ground floor residents and balconies for second and third floor residents. As the units themselves are compact, these private semi-open spaces add significant amenity. Open-air corridors between the east and west units do not count towards gross floor area, and so leave more space for dwellings, are cheaper to build, and bring improvements in daylight access and ventilation. The units include a small living area combined with a kitchen with electric facilities supplied by the housing provider, a bedroom and a bathroom. A number of features contribute to reduced energy consumption by tenants, such as cross-ventilation in all units, solar hot water systems that have been installed in both buildings, and facilities to dry clothes in the balconies and yards. If a similar building was built adjacent to the Clyde, it would not have a major impact upon the levels of environmental amenity enjoyed by residents. Nevertheless, half of the units in the building are oriented to the south, resulting in limited daylight access and less solar heating in winter. In some of the common area lights run all night, projecting light into tenants' bedrooms and consuming unnecessary energy—another issue that is currently being reviewed by asset staff.

There is no designed communal space in either project, and at times the internal parking space has been used for common activities, such as a barbeque. In response to tenant requests, arrangements have been made with the public housing authority to allow use of its facilities nearby for future community engagement activities.

#### 4.3.4 Residents experience and satisfaction

Focus group participants expressed overall satisfaction about the quality of their units and were grateful for the opportunity to live in a secure affordable tenancy. Most residents were happy about the location of the Clyde, particularly the health benefits of being able to walk to the beach.

An area of dissatisfaction for tenants has been tenancy management. A number of residents reported that response to defects and other tenancy issues, such as fixing the water heating system in the winter or addressing transfer requests on medical grounds, was very slow. In response, management drew attention to situations where providers do not have full control over time needed for certain actions. For example, when liability for defects is held by the building contractor, it can be difficult for management to respond to maintenance issues in a timely manner. Similarly, transfers are dependent on the availability of vacancies, and when there are none the process can be delayed.

Residents reported that management had initiated a number of consultations with them on pending decisions concerning the Clyde, such as pet policy. Following consultation with the residents, screens have been installed on the sliding doors leading to the balconies, making it more convenient to keep the doors open in summer to allow ventilation.

#### 4.3.5 Financial issues

The land purchase was financed by the provider using existing funds. The construction costs were fully funded by government and thus there are no debt

servicing costs. The project has a detailed maintenance and capital replacement costs plan that is being comfortably funded through the net rental returns at this time given that the properties are new build. Revenues from the Clyde will allow for cross subsidisation to other community housing projects that are unable to generate sufficient revenue for capital upgrading in the future.

#### 4.3.6 Social mix

The housing provider had limited control over the selection of residents for the Clyde, which resulted in an unforeseen mix of predominantly older residents, on the one hand, and a number of younger households moving from transitional housing. Focus group participants reported some level of mistrust and conflict between residents from different age groups and socioeconomic backgrounds. At the same time, some of the older residents have developed a network of friends within the building, providing various types of support and assistance to each other, as well as initiating social events. However, the lack of a shared communal space in the project has been a significant barrier to such activities. Occasionally, the provider organises shared activities with residents of other projects in the area, in public spaces or facilities. There is also very little engagement between residents across the two separate buildings. Residents have considered setting up a representative group themselves.

### 4.3.7 Overall assessment

Two main factors have had an adverse impact on the successful functioning of the Clyde as an affordable housing project. Firstly, a changing policy regime resulted in an unexpected increase in older residents, for which the project's design was clearly unsuitable-given the higher risk of changing medical conditions and potential mobility restrictions. It should be noted, however, that at the time of initial allocation full consideration was given to each tenant's medical needs to ensure that the property was appropriate for them in the short to medium term. Secondly in comparison to some of the other case studies, there was less focus on tenant participation and community building in the building design and the ongoing management of the project. A senior manager in the organisation has noted that while the design of the Clyde is not as flexible as newer projects, it does provide much needed secure, good quality accommodation in a central location for 35 low income households in need. It also provides the organisation a predictable stream of additional revenue that is available to be reinvested in development of new projects and maintenance of less profitable projects, such as transitional housing. Moreover, it provides the organisation with flexibility to transfer some of its existing clients from transitional housing to affordable housing. A number of important lessons from the Clyde have been internalised by the organisation, and have been implemented in new developments.

# 4.4 Eleanor

### 4.4.1 Physical description and resident profile

Eleanor is located in a major suburb approximately 45 minutes drive from a major CBD, and within five minutes walking distance of the railway station. The area is wellserved by shops, cafes, restaurants and services, and is neighboured by buildings of similar size and bulk. Eleanor is comprised of two 8-storey east-facing apartment buildings on a site of approximately 4000m<sup>2</sup>. One of the blocks (48 units) and two units in a second block were purchased from a for-profit developer by the not-for-profit housing provider, and are now rented as affordable housing. The rest of the units in the second building have been sold by the developer to private owners. Entry into the building with 48 affordable units is through a security door, leading into an internal foyer with a single lift. On the ground floor there are two commercial shops (approximately 400m<sup>2</sup> in total) and six residential units. There are six additional residential units on each floor. The affordable housing units comprise a mix of thirty-four two-bedroom units (68%) and sixteen one-bedroom units (32%). There is an underground car park, with a parking space allocated to each of the units. Two of the ground floor units are wheelchair accessible.

The affordable housing units are mostly occupied by young families with children according to the provider. The wheelchair accessible units are not currently tenanted by people with a disability. NRAS income eligibility (currently ranging between \$40 000 and \$105 000 depending on household size and type) was the main criteria considered in allocation of the units. The rents are fixed at 74.9 per cent of market rates. Tenants for whom the fixed rent exceeded 30 per cent of their gross household income (excluding CRA) were not eligible, resulting in an absence of very low income tenants. Several residents were selected from the housing provider's waiting list for community housing, and a limited number of tenants were transferred from community housing properties.

#### 4.4.2 Procurement phase

In 2008, the housing provider applied for 100 NRAS incentives. The application was successful, and the provider sought appropriate sites. The 50 units at Eleanor represent one of the two affordable housing projects for which the NRAS incentives were used. The project cost nearly \$15 million to purchase, funded in part by the provider (\$1 million) and a state government grant (\$7 million). The remainder (\$7 million) was borrowed from a bank.

The units were purchased early in 2009 during the Global Financial Crisis from a builder when the development was close to the final stages of construction. The organisation sought 50 units in the area, and the units in Eleanor matched the organisation's key specifications, although the appraisal of design quality was limited since a quick decision was needed in order to capture the opportunity. All 50 units were tenanted in May 2009, within 21 days of their purchase.

#### 4.4.3 Design features

Overall, the housing provider had very little control over the design of the project, as it was purchased 'off the shelf'. Nevertheless, the units at Eleanor did meet two of the key specifications: first, having all units within a single project as a means to reduce the costs of management and maintenance; and second, having all units accessible by lift, while keeping a minimal ratio of lifts per unit in order to keep maintenance costs low. However, there is only one lift in the building with 48 units.

Two major compromises were made by the provider in their decision to acquire Eleanor. Firstly, they took units with fewer bedrooms than they had initially planned. Secondly, the ratio of one underground parking space per dwelling was more than the provider had originally sought.

There is no communal area in Eleanor apart from a small play area for children at the back of the building, which is rarely used by tenants because it is open to the street and not perceived by them as safe. The provider is currently investigating the possibility of converting the roof space into a common area for residents, which may also include installation of a solar-boosted hot water system.

Units have balconies and main bedrooms have en-suite toilets. Some residents told us that their units were very well positioned, enjoying natural light, good sun in the winter and good ventilation in the summer—the building is designed such that none of the units face only south. Kitchens on external walls with windows in most units are an efficient use of space. Internalised bathrooms are one disadvantage in the design of the units, resulting from the bulkiness of the building as a whole. Circulation in the building is internal but efficient.

#### 4.4.4 Residents experience and satisfaction

The residents that we talked to were generally happy to live in Eleanor. The location with excellent access to public transport, shops and services—was a major advantage. The quality of the units that are relatively generous in size and provision of bathrooms, in line with private sector development standards, was also mentioned by residents as a positive feature of the project. A social program run by the housing provider that includes various social activities and events was praised and some neighbours have formed close friendships as a result.

Some residents reported paying relatively high electricity and gas bills (compared to other projects), partly because no solar-boosted hot water system was installed and the lack of facilities to hang clothes, resulting in extensive use of automatic driers (which were included in the development). Residents were allowed to install drying facilities individually, but some said that the design of the balconies did not allow for this.

Concerns were raised about security of tenure for residents in Eleanor, given that they hold fixed term leases.

One important aspect of dissatisfaction among residents has been frequently recurring breakdowns of the single lift in the building, forcing residents to use the stairs. Also, some residents raised issues concerning vandalism, particularly graffiti, and littering in the building.

#### 4.4.5 Financial issues

Eleanor is the most highly geared project in our study by a considerable margin. Revenue from rents covers the additional outgoings to debt servicing because of the assistance of the NRAS payments—the 50 NRAS incentives provide an annual Commonwealth government cash payment for 10 years currently valued at \$7143 per annum per incentive. Whilst the project demonstrates the utility of NRAS to generate additional affordable housing supply, the provider could be under financial pressure from the project when these payments cease after 10 years. The net position will depend on both the inflation performance over the 10-year period (especially rental growth) as well as maintenance liabilities. Given that the project was procured through direct purchase rather than through development, the ongoing maintenance liabilities may be higher for this project than for other projects in this study. For these reasons, it may not be financially viable for the provider to maintain this project as affordable housing beyond 10 years. Since the project is already strata-titled<sup>12</sup> the provider will be able to sell some individual units in order to reduce the size of their loan.

#### 4.4.6 Overall assessment

Eleanor demonstrates that although procurement of projects 'off the shelf' may involve less control for the housing provider over the design of their projects, it provides 'efficiency and ease' (interview, provider) in delivery of affordable housing and allows a quicker response to both new opportunities and emerging challenges. While the procurement costs of the project per square metre match the other comparable projects we have examined, the costs per dwelling are higher since the dwellings are larger and 'market-geared'. There is also greater risk on the maintenance side since the project was not designed to minimise the recurrent costs of the development. On the positive side, the project was not exposed to any development risk.

<sup>&</sup>lt;sup>12</sup> In Australia, strata is the legal term for the subdivision of a building into lots (units) (Raff 2009, p.9)

As it was acquired under NRAS, there is no long-term certainty for this project. This will increasingly affect the security of existing tenants and may result in a loss of affordable dwellings in the medium term. Proactive plans to manage this situation will be required.

# 4.5 Hastings

The Hastings project is located at the edge of a small, regional city. Around 150m from the project, there is a major shopping mall with a medical centre attached. Hourly bus services run to the local commercial centre from directly outside the main entrance. The site is approximately 2.2 hectares and has a street frontage to the east. To the north it is neighboured by a single-storey aged-care home, and to the west and south there are open fields. Areas surrounding the project are dominated by agricultural uses and 'big-box' style retail. Hastings comprises 60 independent-living units for people aged 55 years or over. Units are a mix of single-storey detached and semi-detached dwellings grouped around an internal loop road; all have a small area of private open space, two bedrooms, garage space, and are adapted to meet the needs of people with limited mobility. Between the independent living units and the aged-care home to the north there is a large shared communal space with kitchen, dining facilities and a gathering area. Eight of the 60 units at the project are affordable rental housing, the remaining 52 are owner-occupied. The rental units are 'salt and peppered' around the site, and cannot be distinguished from those that are owneroccupied. Throughout the project, spaces are landscaped with native vegetation, water and seating. There are no steps or ramps-the site is completely flat.

Rent, which does not include utilities, is fixed at a level that is designed to draw no more than 25 per cent of standard pensions for older singles and couples (exclusive of CRA). Low income tenants benefit from having access to all services and facilities provided on site at no additional cost to them.

#### 4.5.1 Method of procurement and planning process

The project was conceived by the provider as a joint venture with the not-for-profit aged-care provider that owned the land. The site was undeveloped at the time, although an aged-care home had been established on an adjacent site for a number of years. It was agreed by the two partners that the housing provider would finance construction of the project through a combination of retained earnings and a \$6 million standard bank loan facility; existing assets were used as security against this loan. The aged-care provider did not provide any of the financial capital for construction, but did provide the land, which they owned already. The design and construction of the project was co-ordinated and driven by the housing provider, due to its considerable development experience, with the development profits split equally between the partners. The housing provider's aim in participating in this joint venture was to use their share of the development profits to obtain affordable rental housing for their existing tenants, several of whom were ageing and in need of more appropriate accommodation than the provider could offer from their existing portfolio. The project was fully funded without government subsidies.

It was originally envisaged that 60 independent living units would be developed in total and that 48 of these would be sold to owner-occupiers with the remaining 12 to be purchased by the housing provider. However, due to a lack of demand from their existing tenant base, a decision was made by the housing provider that only eight of the completed units would be acquired by them, with the remaining 52 to be sold to owner-occupiers. Construction went to tender, with local builders targeted. The housing provider specified their design requirements, particularly the need for all homes and spaces to be suitable for people with limited mobility. The planning process was generally straightforward, although some minor changes to the original plans were necessary in order to comply with planning conditions requiring footpaths.

Construction of the 60 units commenced in 2005 and was undertaken in three phases of 20 dwellings each. The third phase was completed in 2007, although earlier phases were already occupied by this time. The total profit from the sale of 52 units was \$2.9 million, which was split 50/50 between the two partners. With their share (\$1.45 million), the housing provider acquired 99-year nomination rights for the remaining eight properties at the project. These rights are saleable at their deemed value.

The total construction costs for Hastings were \$11.5 million. The total cost of constructing the 60 dwellings was \$9.3 million, with the remaining \$2.2 million going towards communal facilities, roads and landscaping.

#### 4.5.2 Design and environmental performance

The project has only one entry for vehicles and there are no vehicular through routes. Dwellings have two bedrooms and resemble standard suburban single-storey homes; their floor area is around 87m<sup>2</sup>, plus 24m<sup>2</sup> of garage space. Dwellings are positioned either around the internal loop road or in groups of four of five in small courtyards. All have open-plan living and eating areas, and all rooms have windows; this means that dwellings benefit from high levels of daylight access and provide opportunities for cross ventilation. There are four different, albeit similar, dwelling designs. Although private open spaces are small, they are mostly north-facing and provide adequate space for sitting and drying clothes. Communal open space around the project is attractive and well-maintained, with trees and plants providing shading for homes. If they wish, residents are able to grow herbs and vegetables in allocated planting boxes. All dwellings are designed for people with limited mobility and are adaptable as and when occupants' requirements change. A major innovation at Hastings is the colocation of independent-living units for over 55s with an aged-care facility. There is an arrangement offering residents of Hastings priority placement into this facility, as and when they need it. In 2007, the project received an award for this integrated design.

#### 4.5.3 Resident experience and satisfaction

Our focus-group participants were generally satisfied with their living arrangements at Hastings. Residents believed their homes were of a high quality, and they felt safe living at the project. They valued the close proximity to a major shopping centre and a lawn bowls club, and appreciated the wide range of activities and gatherings that are arranged by the on-site project co-ordinator—these include regular meals, video nights and bus trips. Tenants were happy with the levels of maintenance at the project, although there had been no major maintenance issues. Tenants were respected in the same manner as owners, and were able to participate in all activities as they saw fit.

There were no major areas of dissatisfaction, although some residents did complain that dwellings and garages were too small.

Our survey of resident satisfaction showed that the project received its highest scores for the design of homes, its location and its social character. The least satisfactory aspects were parking and exposure to noise. Among residents, there were high levels of participation in local groups, events and activities.

#### 4.5.4 Financial issues

Construction of Hastings was financed by the housing provider using their existing capital and a standard bank loan with a commercial floating interest rate. The loan was for the construction period and was terminated after the sale of the market properties. The land was provided by the aged-care provider partner. The housing provider's profit was reinvested in the acquisition of nomination rights for eight of the properties. The cost of construction for each dwelling was \$155 000 increasing to \$192 000 after allowing for the contribution to the cost of roads, landscaping and community facilities. Dwellings sold originally for around \$220 000, which the provider indicated was an affordable entry price in the local market.

Hastings was built in three stages of 20 units, which helped to manage the sales risk. There were legal triggers for each stage based on how many units had been sold. Stage 1 was said to have sold quickly because of pent-up demand. However, the next group of prospective purchasers mainly wanted to buy into Stage 3 because they wanted to delay purchase in order to sell their existing homes—they wanted a 12-month lead time rather than 6-month lead time. At one point Stages 1 and 3 had sold, but the trigger point for Stage 2 had not been reached. This created some anxiety for the provider but did not prove to be a problem.

Responsibility for the external maintenance of buildings and grounds lies with the aged-care provider who retains title for the land, but the housing provider is responsible for internal maintenance of the tenanted dwellings. A standard maintenance charge applies to the rental units which has first call on the rent revenue. This goes towards all external maintenance of the buildings and grounds and to pay for services provided for residents (including the community room and activities coordinator). The remaining rent revenue goes to the provider for the internal upkeep of the dwellings and repair and replacement of electrical appliances that are provided. Currently, the fixed maintenance fee paid represents 64 per cent of the rent revenue for single occupancy and 50 per cent for villas with couples.

#### 4.5.5 Overall assessment

Dwellings at Hastings are similar in appearance to standard suburban detached homes, and few active ESD features were incorporated at the project in an effort to limit construction costs. However, the homes provide high levels of environmental amenity for tenants, with plenty of internal space, windows in every room, good access to natural light and solar heating, north-facing open space, and external shading on windows. The project is also tailored to the needs of its residents—homes and open spaces are designed for use by people with limited mobility, essential services and facilities are close at hand, the project is safe and quiet, and there are opportunities for residents to participate in a wide range of group activities and events, facilitated by a coordinator. Public open spaces are attractive and well-maintained, with native vegetation, seating and water features. Hastings is accessed from a quiet cul-de-sac, and there is little traffic in the internal loop road. Speeds for cars are limited to 5 km/hour, with paving, cul-de-sacs and speed bumps used to enforce this.

Overall, Hastings is a thoughtfully-developed project that meets the needs of its residents. It demonstrates how the entrepreneurial approach and complementary skills of two not-for-profit organisations have produced, among other benefits, a modest yield of affordable rental dwellings (13%) without government subsidy. Having demonstrated such benefits, the partners are now replicating this approach at a larger scale. In conceiving this project, the housing provider showed foresight in responding to the changing housing needs of their existing clients. These tenants have been successfully housed in a mixed tenure project of older people. Another innovation is

the co-location of independent living units with an aged-care facility—this provided residents in our focus-group with peace of mind; a sense of certainty about what would happen to them should they suffer an injury or experience a deterioration in their health.

# 4.6 Livingstone

### 4.6.1 Physical description and tenant profile

Livingstone is located on a busy road, approximately 5 kilometres from the CBD, on the edge of an area undergoing rapid redevelopment from industrial to residential land use. A number of bus lines stop within 200m of the project. A wide range of amenities, including a shopping centre, supermarket, cafes and other services for residents, are within walking distance. The site is approximately 800m<sup>2</sup>, narrow in depth (15 metres), and north-facing. It is surrounded by low industrial buildings on both sides, and a sixstorey residential building to the rear (south). The project itself consists of two buildings connected on each floor by an external covered bridge, a shared main entrance and a shared lift. One of the buildings is eight-storey and the other is sixstorey. It is predominantly residential in use, although there is a small commercial unit on the ground floor. Entry into Livingstone from the road is across a strip of grass that is not owned by the housing provider. The entrance to the building is secured by a gate and an intercom system. The first floor consists of three residential units and one commercial unit (45m<sup>2</sup>). Floors one to five consist of four or five units each. Floors six and seven (in the eastern building only) consist of two residential units. The mix of units includes 18 one-bedroom units (63%), 8 two-bedroom units (27%) and 3 threebedroom units (10%). In the underground basement, there are 16 secure individual car park spaces as well as eight lockable storage cages for residents. Two of the units on the ground floor are adaptable units. There are no planned communal areas, apart from a space of approximately 5m<sup>2</sup> at the back of the building that has been designed as a play area for children.

Units in Livingstone are allocated to tenants on the basis of the provider's general income-mix policy, which applies to all of its affordable housing projects. One quarter of the units are allocated to very low income tenants (less than \$30 000 annual household income), 45 per cent to low income tenants (\$30 000-\$47 500) and 30 per cent to moderate income tenants (\$47 500-\$80 000). Rents are charged as a direct proportion of household income, depending on their income band (25%, 27.5% or 30%, progressively by income band). This method of rent setting does not optimise revenue from CRA for the provider. The mix of tenants includes working people, retired pensioners, single-parent households and people with a disability. The proportion of tenants from the most disadvantaged segment of the housing needs continuum is lower than could be achieved, given that the project does not have loan costs and revenue is not optimised.

#### 4.6.2 Procurement phase

At the time of the decision to purchase this site for development, the housing provider was under some pressure to invest accumulated capital from developer contributions<sup>13</sup> under a local planning scheme into the development of new affordable housing in the area where Livingstone was built. As a result, the provider had to buy a site in a time of a strong market with very few developable lots available.

<sup>&</sup>lt;sup>13</sup> Developer contributions refer to a proportion of total development costs that developers are required to pay local council or a nominated NFP provider when building in certain zones. These contributions are used for finance of public infrastructure, including affordable housing.

The provider has an experienced project manager who has managed all stages of procurement and development. Livingstone was designed by an architect who has designed several other affordable housing projects for the provider.

The DA was lodged in February 2004 and approved in January 2005. The project's design included two features that did not comply with the council's planning controls, which did not provide specific criteria for affordable housing. First, the total of 18 onebedroom units proposed exceeded the maximum allowance of fifty per cent. Second, the total number of 16 parking spaces proposed was well below the council's minimum requirement of 27. In assessment of the DA, the council accepted the provider's view that the mix of units and parking space proposed were appropriate for an affordable housing project.

Construction was completed in January 2008. The final scheme cost was approximately \$11.5 million—a cost of around \$293 000 per dwelling, excluding land. Close to 25 per cent of the total cost included purchase of the site. The project was built within the pre-estimated budget. The purchase of land and construction were fully funded by the provider and no loan was raised because the provider was well capitalised (interview, provider).

#### 4.6.3 Design features

The major considerations in the design were concerned with reducing the ongoing costs of maintenance, water and electricity, for both tenants and the provider. Strategies for achieving this included the use of non-mechanical (i.e. passive) ventilation systems, choosing gas systems over electrical, orienting buildings for good natural lighting, separate metering for hot and cold water in each unit, providing rainwater tanks for gardens, using durable and low-maintenance building materials, and externalising circulation spaces—these external spaces do not count as floor space, are cheaper to build and improve solar access and ventilation.

To reduce street noise 10 mm single-glazed windows were used and the balconies were acoustically screened. The number of car park spaces is limited because the provider generally only includes one level of parking to reduce costs and because ramps take up additional space, so the gain is considered not worthwhile, given that a proportion of tenants typically do not own cars. Two ground floor units in Livingstone are designed as adaptable units. In future, it is planned that all units in this provider's projects will be designed as adaptable. One-bedroom units have between 54m<sup>2</sup> and 59m<sup>2</sup> gross floor area, two-bedroom units have 78–80m<sup>2</sup>, and the three-bedroom units have 103m<sup>2</sup>. These figures exclude space on balconies.

#### 4.6.4 Resident experience and satisfaction

Rents in Livingstone are significantly lower than market rents in the area, but vary widely depending on residents' income. Residents on the lowest incomes pay approximately \$120 per week, compared to local market rents of \$450–550 for a one-bedroom unit or \$550–700 for a two-bedroom unit. Generally, none of the residents pays more than 70 per cent of local market rents.

Residents have expressed satisfaction with the affordability of rents, the location of the project with good access to services and transport, and the high quality of the units they lived in. The internal layouts of the units are efficient and can be easily furnished and the balconies are of good proportion. Because the building is narrow, more rooms have windows.

The main area of dissatisfaction was the high level of exposure to noise and dust from the street below. This also resulted in loss of benefits of cross-ventilation because opening windows is discouraged by the external environment. This was another major consequence of choice of site. Residents also expressed dissatisfaction about their sense of personal security, particularly at ground floor level, despite having a swipecard access system. Some safety concerns were also related to other tenants living within the building. The design of the building was described by some tenants as not being child-friendly. For example, they considered balustrades to be too low, although they are within the BCA and council minimum standards, and they were concerned about gaps between boundary walls. The survey identified a level of dissatisfaction among tenants concerning access to parking space, suggesting that the level of provision in this project (55%) was insufficient in an area with limited street parking available and a mix of residents with high levels of car ownership.

The survey indicated a high level of satisfaction with the management of the project and the responsiveness and quality of maintenance services provided. However, participants in the focus group reported being discouraged from making requests, and some felt that the provider's policies were inconsistent and ad-hoc. Tenants had not acted collectively and there appears to have been little attempt by management to promote tenant interaction in this building or resident involvement in the wider activities of the organisation. However, the provider is currently developing a community inclusion strategy to address such issues (interview, provider).

Two other small design aspects of Livingstone compromised both environmental sustainability and affordability for tenants: the lack of facilities to hang clothes after washing had resulted in increased use of automated driers, and leaking water pipes had resulted in waste and higher utilities costs. The initial design for Livingstone included a larger area for drying facilities, but the council required that the drying area be reduced to minimum in order to increase the size of landscaped open space and communal areas. The developer attempted to solve the external drying issue by fitting each balcony with a pull out clothes line situated below the balcony so that it could not be seen from the street. Some other suggestions by residents to address the drying issue had not been responded to at the time of the research.

#### 4.6.5 Financial viability and trade-offs

Livingstone was fully funded by the provider utilising a mix of developer contributions and retained earnings. Timing of procurement in a strong market resulted in two financial disadvantages in procurement costs. Firstly, the site was more expensive than the provider had budgeted. Secondly, the provider was forced to acquire a very narrow site due to the limited land available. This impacted on the cost of construction because of the extra concrete and steel required to support an eight storey building on such a narrow site. Although some of the additional costs were partly offset by the provider through adjustments to the design of the building, the impact was significant because structural costs (concrete and steel) are about 30 per cent of the total construction costs.

The situation faced by this provider highlights problems for affordable housing developers who have to compete in high-demand/high-cost land markets. Although the provider is the recipient of developer contributions, these have all been contributed as cash payments. A more cost effective approach (and one that would optimise the effectiveness of public subsidies) would have been for a development site to have been allocated to the provider, as occurs under inclusionary zoning schemes in many places (see Gurran et al. 2008; Milligan et al. 2009a).

With no debt servicing costs, the operating position of this project is very healthy. Surpluses of nearly \$240 000 per annum from the project will be reinvested in future projects. These could be increased by a different approach to rent setting (that optimises revenue from CRA) without having an adverse impact on affordability for residents. Thus, this provider has the potential to enhance leveraging of their asset and revenue bases to increase their housing output.

#### 4.6.6 Social mix

With a clearly defined income-mix policy guiding allocations, a mix of units of different size, and a drawing area that is highly diversified, Livingstone residents have a diverse cultural and social profile. However, some level of distrust and even conflict between tenants suggests that such mix requires careful attention by providers, when designing new projects and later when managing them. A proactive approach to promoting positive resident interaction (as demonstrated in some other projects in this study) can assist with mitigating cultural conflicts and social differences.

#### 4.6.7 Overall assessment

Overall, Livingstone provides high-quality modern units in a fast-developing inner-city location. These units are affordable for a wide range of tenants with low to moderate incomes, and deliver substantial revenue for the provider. However, expectations placed on the provider and the timing of the project resulted in a chain of effects compromising the project's cost, quality and residents' satisfaction.

The project has been described by the provider's CEO as comparable to other affordable housing projects they have developed in the past, and its design positively distinguishes it from much of the private sector residential development in the surrounding area.

### 4.7 Paramount

#### 4.7.1 Physical description and tenant profile

Paramount is located on a residential through-street in a mostly low-rise inner-city location, around 5 kilometres from a major CBD. It is located within 400m of multiple public transport options and several small shops, and around 1 kilometre from a local commercial centre with a wide range of shops, services and opportunities. The site is long and narrow, and covers approximately 0.15 hectares. It has a frontage to the west, and is neighboured by mostly low-rise buildings to the north, east and south. The project is split into two buildings; one a refurbished and extended nineteenthcentury villa with a lift, and the other a new-build three-storey apartment block in a contemporary style. There are a total of 35 units. Twenty of these (57%) are selfcontained studios, eleven (31%) are two-storey one-bedroom apartments and four are bedsits (11%). Two of the studios and one of the bedsits are accessible units; these are all located in the existing building. Between the two buildings, there is an area of communal open space which incorporates a barbeque, washing line, seating and tables, native plantings and a small cycle lock-up. There is another small communal area at the rear of the project and the villa's original lawn is retained at the front, providing an elegant entrance set back from the street. Unallocated parking is provided for six cars on-site, and the two buildings and internal communal spaces can be accessed only with a security pass.

Around 25 per cent of tenants are low-income workers, with the remaining 75 per cent on Centrelink incomes; there is a broad mix of ages and backgrounds. Rent, which includes all utilities, is charged at 30 per cent of household income plus eligible Commonwealth Rent Assistance. Paramount's scale is in keeping with surrounding areas, and the project is not identifiable as affordable housing.
# 4.7.2 Method of procurement and planning process

The site for Paramount was acquired by the provider in 2006 for \$3.2 million, having previously been in use as a private boarding house. From 2007, the existing nineteenth-century villa was refurbished and extended, and the new-build three-storey block was built at the rear. There were some restrictions on the changes that could be made to the existing building due to its heritage listing, but these were incorporated into the design program with few issues; bedsits are located in this building due to constraints on internal re-configuration. Council parking requirements were low for the project because of its bedsit component. The project was completed in 2008.

It was necessary for the project to achieve a high yield due to the cost of the land and the provider's emphasis on delivering an architectural outcome with a range of active environmentally-sustainable design features. Despite this high yield, however, buildings at Paramount are no taller or bulkier than those in surrounding areas, and the new-build apartment block is barely visible from the street. However, individual units are small. Some local residents opposed the development of the new-build apartment block on the grounds that their views would be obstructed, even pursuing legal action at one stage. Although this opposition did eventually drop away, it caused some delays to the development process and a consequent budget overrun.

One major decision made by the provider was to limit car parking at Paramount to six spaces. This enabled them to increase the development yield on the site and was permissible because of the project's boarding house component; council parking requirements were lower for boarding houses than for projects with only self-contained units.

The total construction cost for Paramount was \$8.4 million, of which 72 per cent was funded by state government. Originally, it had been envisaged that government funding would fund 75 per cent of the total construction cost, but the cost overrun resulting from the planning delays were absorbed by the provider. A variable-interest commercial loan of \$2 million was used to finance most of the provider's share of construction costs; their security against the loan was a set of four existing properties.

### 4.7.3 Design and environmental performance

The existing building was in need of reinvestment prior to its purchase by the provider, and it has been comprehensively renovated and restored. The new-build apartment block received an award for its architecture in 2009 and incorporates a number of passive and active ESD features: reverse-masonry veneer construction, rainwater harvesting, high-quality insulation and a solar-boosted hot-water system. These environmental features were driven principally by the provider's own design specifications, at least in part in an effort to reduce utilities' expenses. However, the arrangement of dwellings does not produce optimum environmental outcomes; almost half the dwellings at the project are south-facing and single-aspect, dwellings do not have balconies, and there are few opportunities for cross-ventilation through either building. The issue of limited natural light in dwellings has been partly addressed through the incorporation of skylights in the 11 two-storey one-bedroom apartments, but the ground and first floors of buildings are still likely to receive little daylight or solar heat in winter. The architect for the project had previous experience in the design of affordable housing projects, and had been used by the provider on several separate occasions.

Floor space areas at Paramount are 28m<sup>2</sup> in standard studios and 33m<sup>2</sup> in disabilitymodified studios. One bedroom apartments are built over two levels with internal staircases and a bedroom and bathroom on the upper level; their total floor space is 45m<sup>2</sup>. Both the villa and the new-build apartment block have a laundry facility, communal kitchen, bathrooms and lounge room. There is lift-access to all levels in the villa, where the disability modified units are all located.

### 4.7.4 Resident experience and satisfaction

Focus-group participants were generally satisfied with their living arrangements at Paramount. The units were considered to be of a high quality and tenants were able to personalise them as they wished. Tenants were pleased with the levels of service that they received from the provider. Rents were considered to be affordable by the residents, especially as they covered the cost of utilities. Residents valued the close proximity of the project to local shops and services and the high levels of independence that they enjoyed. They generally felt safe living at the project and secure in their tenure; they did not fear that they would be evicted. Some tenants had moved to Paramount from other projects managed by the same provider.

The main area of dissatisfaction for tenants concerned a perceived lack of parking space. Residents complained that the six unallocated parking spaces were insufficient, particularly as these were often used by non-residents. There was also a suggestion that some antipathy existed between residents of the original building and new-build apartment block, and between bedsit tenants and studio tenants in the former; there had been complaints about bedsit tenants leaving communal spaces in an untidy state. However, at the time of our visit the project was well-presented.

Our survey of resident satisfaction showed that Paramount scored well on the design and condition of dwellings, and on the location of the project. It received its lowest scores for exposure to noise (construction on an adjacent site was underway at the time of survey distribution), safety and for the social atmosphere in the building. On this latter point, the survey results suggest that levels of participation in community events/groups are low.

An independent post-occupancy evaluation had been undertaken at Paramount. This showed that residents were generally pleased with the appearance and location of the project, and with the quality of units. It also showed that they felt safe living there. A number of recommendations were also made regarding improvements to natural and electrical lighting, unit layouts and storage space. A suggestion was also made that there should be more social activities at the project, and that a barbeque and shelter for the cycle lock-up and central communal space should be provided. The latter suggestions were implemented by the provider in the light of the evaluation.

### 4.7.5 Financial issues

Twenty eight per cent of the construction costs for Paramount were financed by the provider, largely through a commercial bank loan with a variable interest rate. As part of the loan agreement, only interest is paid for the first three years (up to June 2011). Currently, the interest rate is 5.16 per cent and the line fee on the facility is 1 per cent, which equates to a servicing-cost of around \$123 000 per annum. The provider's records for Paramount show that annual revenues from rent in 2010 exceeded costs outlaid on maintenance, rates and utilities by almost \$200 000. What this means is that the provider's net income on the project after debt-servicing costs was around \$70 000 in 2010. This situation is likely to change considerably once the three-year interest-only period has passed, however, and it would seem that had the development yield at Paramount been any lower, the provider would have found it difficult to achieve anything more than a break-even position. Unfortunately, data was not available on projected debt-servicing costs beyond the initial three year period. The profit and loss statement for the project indicates that cyclical maintenance costs were \$12 000 in 2010.

# 4.7.6 Overall assessment

Paramount provides high-quality affordable housing in a sought-after inner-city location with excellent access to services, opportunities and public transport. Residents were generally satisfied with their homes and with the levels of service that they received from the provider. Although the decision to limit parking to six spaces (for 35 units) was a controversial one that has been widely criticised by residents, it did allow the provider to increase the project's financial viability. It is difficult to see how the development yield achieved at Paramount could have been much higher without the project encountering further planning obstacles, more sustained resistance from residents and greater cost overruns as a result. A major achievement in this case study was the careful balancing of imperatives for development density with a respect for context. Paramount manages to perform well environmentally, while also achieving a high development yield and respecting its sensitive heritage setting.

# 4.8 Swan

# 4.8.1 Physical description and tenant profile

The Swan is located in a low-density residential street at the outskirts of a regional town. There is very limited access to public transport in walking distance (the closest bus line runs every two hours), and services and amenities can only be accessed by car. The site is 0.4 hectares in size, its entrance facing south-east, and it is neighboured by large lots with single-storey houses on both sides, and an undeveloped open space at the rear (north). It comprises 12 two-bedroom dwellings configured as nine two-storey and three single storey dwellings, in three rows. All dwellings have lock-up garages and a small area of private open space. Entry into the site is via a sealed driveway. The three single-storey dwellings are wheelchair accessible.

The project was conceived and funded for working households with moderate incomes. Tenancies were advertised and clear selection criteria specified. The current tenant profile includes single parents, couples of different ages and two tenants with an intellectual disability. Most tenants work part time. Rents are fixed at 74.9 per cent of local market rents. In this non metropolitan market, the current rent level meets a 30 per cent affordability benchmark for households with incomes above \$29 000. The project generates a surplus but, according to the provider, would not be viable if lower income households were included.

# 4.8.2 Procurement phase

This project was initiated by the provider purchasing a site speculatively because they wanted to invest their growing surplus in additional housing and were unable to locate suitable housing to meet the needs of their clients in the local market. Subsequently, government funding was attracted and a commercial loan was obtained. The land acquisition cost was \$380 000. This included an existing single dwelling on the site, which has been retained.

As the provider had no development experience, they sought support with documentation and risk analysis from another not-for-profit developer, thereby using the project to develop their confidence and skills. They also chose a local builder with experience in building social housing. Having professional board members (e.g. with legal and planning skills) was considered beneficial to their capacity to manage the procurement phase and organisational learning (interview, provider).

Two challenges were experienced during the procurement phase. The first concerned significant time delays associated with getting government agreement for the project

to proceed, once funds had been approved. The second involved a redesign of the plans after a neighbouring property owner would not grant an easement to cater for a fire setback requirement. Despite these factors, the project was delivered at 7.5 per cent below budgeted cost. Construction costs for individual dwellings were just under \$200 000 each.

# 4.8.3 Design features

This project is generally well-designed and presented. Although the site is more densely developed than neighbouring sites, buildings at the Swan are of a comparable scale, height and mass to most of those in surrounding areas. On-site, the outdoor space is pleasantly landscaped, but the dominance of the driveway detracts from the overall design quality. Also, since the dwellings at the front of the site do not face the street, integration with the local surroundings is reduced.

All units have good access to daylight and provide opportunities for cross-ventilation. In addition to these passive design features, solar-boosted hot water systems have been installed in all units which, while being an additional cost for the provider, have reduced energy use and costs for tenants significantly.

# 4.8.4 Resident experience and satisfaction

Only two residents in this project participated in the survey and were interviewed separately. These residents were satisfied with the internal design of their homes and service responsiveness was compared favourably with their previous experience with public and private rental housing. Rents were considered to be affordable.

Visitor parking has been an issue at the site, particularly parking by visitors in resident spaces and residents parking second cars in visitor spaces for extended periods. The provider has indicated that these parking issues are being dealt with through tenancy management and will be addressed through the installation of new signage. Having no separate external water tap for gardens has also been an issue for tenants who pay for water usage; the provider stated that they plan to rectify this.

Although only a small development, this project has considerable resident diversity and there have been some conflicts between neighbours over life styles, disturbances and visitor parking. An opening event was organised by the provider and attended by approximately half of the tenants, but the provider has not been active since this time in supporting tenant activities at this project, as 'it's small and most tenants are said to be busy working' (interview, provider). Resident satisfaction may be improved through encouraging tenant introductions, especially across the three buildings.

# 4.8.5 Overall assessment

This project exemplifies the type of small scale low risk development that can be successfully initiated by smaller housing providers working with appropriate professional services that provide specialist advice. Undertaking their first project assisted this provider to build their confidence and skills in residential development. The provider had good knowledge of their local housing market and housing needs ('we know our backyard'), which contributed to their success and ensured they had control over the quality and appropriateness of their property portfolio. The approach to development taken by this provider is readily replicable, especially in rural and regional areas.

# 4.9 Summative review of project characteristics

In this section, we bring together some key qualitative and quantitative indicators of the characteristics of each of the projects that we have assessed, drawing on the detailed descriptions provided above. This enables us to show key project outcomes on a common basis. The summary indicators are grouped around the social, financial and environmental categories that have been used as the analytical framework throughout the report. Table 5 provides a set of indicators of the social attributes of the projects. This is followed by Tables 6 and 7 which provide overviews of environmental and financial attributes, respectively.

In the absence of an official set of performance measures for the sector, the indicators included in the tables have been chosen on two main bases: they are typical indicators of significant aspects of an affordable housing project and data was available from most or all of the projects included in this study.

As discussed at the outset of this report, it is not our intention in presenting summary indicators in this way to compare projects directly but instead to draw attention to the range and variety of outcomes that they have delivered, and to assist appreciation of how different trade-offs between financial, social and environmental goals have occurred among the projects. In the next chapter, we discuss strategic themes and lessons that emerge from the project assessments that we consider are relevant to the future development of the affordable housing industry as a whole.

### 4.9.1 Social sustainability conclusions

The development of affordable housing by the not-for-profit sector is at a fledgling stage in Australia. However, examples of early projects examined in this study show that a diversity of social needs are being met.

### Target groups

The projects examined were mainly designed for housing smaller households across the age spectrum. Provisions for households with special needs were lower than would be desirable in this sector, suggesting that additional incentives may be required to increase access by people with disabilities. Larger families appear not to be being catered for, possibly as a result of higher per dwelling costs.

### Affordable living

In addition to offering rents well below market levels, most projects included design and locational features to ease the living costs of residents. From the perspective of most residents, affordable housing objectives were being adequately met.

### **Resident participation**

A disappointing aspect of most of the case studies was a lack of active support for resident interaction and participation in decisions about the ongoing management and upgrading of their housing, or encouragement for tenant involvement in the governance of the providing organisation. This is an area that requires more attention by policy-makers and providers.

#### **Resident satisfaction**

High quality designs and good locations were consistent factors contributing to tenant satisfaction across the projects. However, limitations on parking provisions were a common negative attribute that should be addressed in future project designs, as discussed elsewhere.

### Preservation of affordability

Dwellings earmarked as affordable housing in all but one of the projects in this study seemed to be owned and financed by means that would allow affordability to be sustainable in the long run. The duration of affordable provision in project Eleanor—

the exception—is not secured beyond 10 years. As this situation is a direct outcome of the design of the NRAS program under which an increasing number of affordable housing dwellings are being funded in Australia, it signals a potentially major issue for sustaining affordable housing in future.

### 4.9.2 Environmental sustainability conclusions

In line with the methods used for the empirical research, our conclusions on the environmental sustainability of the eight case study projects can be grouped into two broad themes: environmental performance and design quality.

### **Environmental Performance**

The case study projects performed reasonably well in environmental terms. Several incorporated active ESD features such as solar-boosted hot water systems and mechanical ventilation systems, most were insulated, and all benefited from effective shading of windows. However, opportunities for passive heating, cooling, ventilation and daylight access had generally not been maximised. Provision for clothes drying and water capture varied among the cases, as did ease of access to public transport.

### Design Quality

All of the projects in our study were designed specifically for their site, and all performed well in urban design terms—they were generally contextual in scale and appearance, were well-detailed and provided passive surveillance of streets and spaces. Half of them provided communal spaces for tenants. Gross floor area in units varied considerably, but all projects included at least some disability accessible or adaptable units.

### 4.9.3 Financial sustainability conclusions

The data in the table and the detailed review of the eight cases suggest a number of conclusions about the financial sustainability of the development projects, using the methods described in Chapter 3.

### Cost overruns

The projects were delivered on budget. In one case there was a significant cost increase as a result of some engineering issues leading to a construction contract variation. However, in the other cases, no substantial cost overruns were evident. Indeed, one project came in under budget.

### Value for money

When reviewing the value for money delivered through the projects by benchmarking the costs against a standard costs guide (Rawlinsons 2011), it became clear that the complexities of many projects make such a comparison problematic because of differences in building configurations and designs compared to conventional market housing. Nevertheless, this review did reveal that the projects were built at a cost equal or less to the Rawlinson's benchmark in each market. A review of local sales data for each market indicated that it would not be possible to purchase a comparable dwelling in any of the markets for a price less than the procurement cost at the time of procurement.

An issue that emerges from Table 7 is the variation in costs per dwelling across the eight cases. This result was driven by two main factors. One, there were some sharp differences in the size of dwellings, with some providers generating affordable outcomes by delivering very small dwellings. While this has a positive impact on yield, it does lead to the exclusion of larger households. The second issue is dwelling type—

the projects with low density built form, such as detached dwellings or villas, are cheaper to construct.

#### **Financial viability**

In Chapter 2 we explained the limitations of undertaking a financial viability analysis on each development, given the portfolio approaches of most providers. At a project level, the projects at most risk are those that have ongoing loans to be serviced from their revenue. Loan requirements are currently being met from the net revenue streams of the respective projects. However, as the buildings age the need for additional maintenance may put pressure on financing the loan. This may be a particular issue for projects like the Eleanor because of its higher gearing, reliance on NRAS subsidies which will exhaust after 10 years and that the provider was not involved in the design and construction of the project.

#### Asset management issues

Most projects had an asset management strategy that had dedicated funds to cover future maintenance. Some providers presented a detailed life cycle costing model, which they used to determine a maintenance sinking fund. Other providers simply indicated an annual maintenance allowance. However, what is surprising is the range of the estimates of the likely maintenance costs (including capital replacement) ranging from 1.9 per cent to 0.4 per cent of the capital costs of the building. This is an area where a better documented approach is likely to generate benefits for the whole affordable housing sector, as discussed further in the next chapter.

It is also clear that in order to drive down the capital costs of dwellings many providers have adopted small dwelling sizes and rationed parking spaces in their developments. Both strategies will militate against providers selling down and replacing their assets as they reach particular age thresholds, as well as not necessarily providing the best outcomes for tenants, as discussed elsewhere.

		Barwon	Broadwater	Clyde	Eleanor	Hastings	Livingstone	Paramount	Swan
Social mix	Age profile	Mixed.	Over 55s.	Predominantl y over 65 year olds.	Mixed.	Over 55s.	Mixed.	Mixed.	Mixed.
	Bedsit units							4 (11%)	
	Studio units	36 (50%)	7 (44%)					20 (57%)	
	One- bedroom units	12 (17%)	7 (44%)	35 (100%)	16 (68%)		18 (63%)	11 (31%)	
	Two- bedroom units	23 (32%)	2 (13%)		34 (32%)	8 (100%)	8 (27%)		12 (100%)
	Three- bedroom units						3 (10%)		
	Accessible units (% total units)	6 (8%)	1 (6%)	4 (11%).	2 (4%).	8 (100%)	2 (29%) (Adaptable)	3 (9%)	3 (25%)
	Communal space	Meeting room and rooftop garden.	Open-air internal communal room.	None.	None.	Meeting room, dining room and kitchen. Landscaped open space.	Small outdoor play area.	Several internal and external communal spaces.	Outdoor play area.
Affordability	Rental affordability	Fixed rent designed to draw no more than 25% of household	74.9% of market rent.	70% of market rent.	74.9% of market rent.	Fixed rent designed to draw no more than 25% of standard pension net of	Rent proportional to income (25–30%).	30% of household income (includes utilities) plus eligible	74.9% of market rent.

 Table 5: Selected social indicators, affordable housing projects

		Barwon	Broadwater	Clyde	Eleanor	Hastings	Livingstone	Paramount	Swan
		income net of CRA received.				CRA received.		CRA.	
	Features improving affordable living	Cross- ventilation through building. Solar- boosted hot water system.	Cross- ventilation, no heating system.	Solar- boosted hot water.	-	On-site communal spaces and range of activities. Good environmental amenity. Walking distance to shops.	Cross- ventilation (ineffective).	Utilities included in rent. Excellent access to shops, services and public transport.	Solar- boosted hot water.
	Features reducing affordable living	Use of driers.	-	-	Use of driers.	-	Minimum costs for gas supply. Use of driers. Inefficient water system.	-	-
Location and accessibility	Character of local area	Inner-city commercial area.	Commercial strip in middle- ring suburb.	Regional coastal town.	Suburban centre.	Edge of regional city.	Fast developing inner-city location.	Inner-city residential area.	Regional town.

		Barwon	Broadwater	Clyde	Eleanor	Hastings	Livingstone	Paramount	Swan
	Access to public transport <sup>14</sup>	High.	High.	Average.	High.	Average.	High.	High.	Low.
	Access to local amenities <sup>15</sup>	High.	High.	Average.	High.	High.	High.	High.	Low.
	Ratio: Parking spaces to units	0%	50%	45%	100%	100%	55%	17%	100%
Overall tenants' satisfaction	Key features adding to tenant satisfaction	Well-served location. Rooftop garden. On-site cafe.	Location. Well-used communal space. Strong sense of community.	Walking distance to beach.	Location. Quality of the units. Responsive management	Community activities and social character. Landscaping and quality of units.	Convenient units. Location. Affordability.	Quality of dwellings and appearance of project, location. Utilities costs included in rent.	Quality of units. Responsive management
	Features detracting from tenant satisfaction	Lack of parking.	Lack of parking. Inappropriately designed units.	No lift. Maintenance services.	Insecure tenure. Noise, lack of natural light and ineffective		Noise; dust; poor ventilation. Personal security	Lack of parking.	Social atmosphere. Safety in the area.

<sup>&</sup>lt;sup>14</sup> For the purposes of this table, access to public transport was qualitatively assessed by the team based on the physical proximity of each project to public transport services, the frequency of those services, the range of locations that were accessible to users of those services, and the views expressed by residents in the focus group sessions and survey.

<sup>&</sup>lt;sup>15</sup> As with access to public transport, access to local services was qualitatively assessed by the team based on the physical proximity of each project to local amenities, the range of local amenities, and the views expressed by residents in the focus group sessions and survey.

	Barwon	Broadwater	Clyde	Eleanor	Hastings	Livingstone	Paramount	Swan
				ventilation.		issues.		
						Lack of		
						parking.		

 Table 6: Selected environmental indicators, affordable housing projects

		Barwon	Broadwater	Clyde	Eleanor	Hastings	Livingstone	Paramount	Swan
Environmental Performance	Cross- ventilation	Active	Passive	Passive	-	Passive	-	-	Passive
	Renewable energy source	Solar- boosted hot water.	-	Solar- boosted hot water.	-	-	-	Solar- boosted hot water.	Solar- boosted hot water.
	Orientation	North-facing. Orientation constrained by site.	East-facing. North-facing communal area, some single-aspect south facing units.	East and West facing. Half of units are south- facing.	East- facing.	Varied orientation. North-facing private open spaces.	North-facing. Orientation constrained by site.	West- facing. Orientation constrained by site.	Varied orientatio n.
	Effective shading	~	~	✓	✓	~	~	<ul> <li>✓</li> </ul>	~
	Outside clothes drying facility	-	-	✓	-	✓ 	-	V	✓
	Water capture	$\checkmark$	✓	$\checkmark$	-	-	$\checkmark$	✓	-
	Water recycling	~	~	~	-	-	~		-
	No room	$\checkmark$	$\checkmark$	✓	✓	-	$\checkmark$	$\checkmark$	$\checkmark$

		Barwon	Broadwater	Clyde	Eleanor	Hastings	Livingstone	Paramount	Swan
	temperature control								
	Heating system	Hydronic.	-	-	-	Air conditioning.	-	Hydronic.	-
	Insulation	$\checkmark$	✓	✓	✓	$\checkmark$	✓	✓	✓
	Windows	High- performance glazing.	Single.	Single- glazed.	Single- glazed	Single- glazed.	Thick glass.	Single- glazed.	Single.
Design quality	Site-specific design	$\checkmark$	$\checkmark$	✓	✓	~	$\checkmark$	~	~
	Contextual scale and appearance	1	1	~	~	*	1	~	~
	Well-detailed buildings	~	~	✓	~	~	$\checkmark$	~	$\checkmark$
	Well-detailed spaces	$\checkmark$	~	~	~	~	~	$\checkmark$	~
	Easily- identifiable entry	-	-	$\checkmark$	~	×	×	~	✓
	Passive surveillance	$\checkmark$	~	~	✓	~	$\checkmark$	~	~
	Defined boundaries	$\checkmark$	~	✓	✓	~	✓	$\checkmark$	✓
_	Sheltered communal spaces	¥	v	-	-	v	-	~	-

		Barwon	Broadwater	Clyde	Eleanor	Hastings	Livingstone	Paramount	Swan
	Floor space area—studio	32m <sup>2</sup>	34m <sup>2</sup> incl. balcony.	N.A.	N.A.	N.A.	N.A.	28m <sup>2</sup>	N.A.
	Floor space area—one- bedroom	43m <sup>2</sup>	42m <sup>2</sup> incl. balcony.	45m <sup>2</sup> incl. balcony	60m <sup>2</sup> incl. balcony.	N.A.	54-59m <sup>2</sup> excl. balcony.	45m <sup>2</sup>	N.A.
	Floor space area—two- bedroom	61m <sup>2</sup>	64m <sup>2</sup> incl. balcony.	N.A.	100m <sup>2</sup> incl. balcony.	87m <sup>2</sup> plus garage.	78-80m <sup>2</sup> excl. balcony.	N.A.	74–81m <sup>2</sup> excl. garage.
	Floor space area—three- bedroom	N.A.	N.A.	N.A.	N.A.	N.A.	103m <sup>2</sup> excl. balcony.	N.A.	N.A.

# Table 7: Selected financial indicators, affordable housing projects

Procurement	Barwon	Broadwater	Clyde	Eleanor	Hastings	Livingstone	Paramount	Swan
Project procurement cost total	\$20.2 million (m)	\$17.7m	\$7.5m	\$14.9m	\$11.5m	\$11.5m	\$11.6m	\$2.8m
Land cost	\$2.6m	\$3.5m	\$0.5m	N.A.	N.A. (Partner contribution.)	\$2.8m	\$3.2m	\$0.4m
Procurement excluding land	\$17.6m	\$14.2m	\$7.0m	N.A.	\$11.5m	\$8.7m	\$8.4	\$2.4m
Number of affordable dwellings	71	16 (\$3.6m cost)	37	50	8 (\$1.5 m)	29	35	12
Number of parking spaces for these dwellings	0	6	16	50	8	16	6	12
Other space (R=retail; C=Commercial)	R&C	R&C	Nil	Nil	Community facilities.	С	Nil	Retention of one existing

								dwelling.
Estimated procurement cost per dwelling excluding land and non-residential functions	\$196 thousand (k)	\$223k	\$190k	N.A.	\$192k	\$293k	\$233k	\$200k
Estimated procurement cost including land	\$232k	\$277k	\$203k	300k	N.A.	\$383k	\$331k	\$233k
Financing								
Government capital	\$12.9 m	\$3.6	\$7.0m	\$7.0m	0	0	\$6.0 m	\$1.7m
Own equity	\$1.0m	\$14.1m Utilised prior capitalisation by government and retained earnings	\$0.5m	\$1.0m	Partner provided land	\$11.5m Raised through mandated developer contributions and retained earnings.	\$3.6m	\$0.7m
Loan finance	\$4.1m	Nil	Nil	\$7.0m	\$6.0m (construction phase only).	Nil	\$2.0m	\$0.5m
NRAS incentives	No	No	No	50	No	No	No	No
Ratio: Government to private finance	75:25	N.A.	94:6	46:54	0:100	0:100	52:48	60:40
Ratio: Debt to equity ratio	20:80	0:100	0:100	46:54	0:100	0:100	17:83	18:82

# 5 DISCUSSION OF ISSUES AND THEMES

Chapter 4 presented the empirical material gathered from our eight case studies. In this chapter, we discuss the key themes that emerged from that analysis, particularly the challenges, opportunities and trade-offs that were faced by providers. Our aim here is to reflect on the ways in which different decisions, objectives and external pressures influence development outcomes.

There were undoubtedly some important commonalities among the eight case studies, most notably the high levels of resident satisfaction with dwellings, the feeling among tenants in most projects that they were secure in their tenure, and a widespread sense that their current accommodation was superior to that which they would be able to obtain in the private rental market or in public housing. Yet there were also marked differences between the projects in the approaches that had been taken to initiating and financing development (including cost to governments), design aims and priorities, tenant profiles, planning and construction processes, scale, location and everyday resident experiences. Below, we reflect on these similarities and differences through a discussion of the underlying themes that emerged from our empirical analysis.

Many of these themes are broad and multidimensional, and therefore cannot be divided neatly into environmental, social and financial groupings. Consequently, our approach in this chapter is to discuss each of the underlying themes under its own sub-heading, in a sequence that broadly reflects the chronological process of developing and managing an affordable housing project: from initiation by different types of housing providers; through site selection; the conceptual and architectural design of the project; financing the project and leverage of private finance; management of planning risk and development risk; rent setting; allocation policy influencing tenant access and managing the consequent social mix in the project; participation of tenants; and asset management and maintenance over a project's lifecycle.

# 5.1 Types of providers

The not-for-profit housing sector in Australia has been going through significant transformation in the last decade. Organisational change and restructuring within the sector has been marked by several trends, especially mergers and amalgamations to create larger organisations, geographic expansion of organisations, a new development orientation or aspiration (additional to tenancy management) for many organisations, and the emergence of new players. These new players include government created, arms length housing companies, traditional welfare organisations moving into the housing business, and intermediary not-for-profit providers offering specialist services, such as fund raising or development services (Gilmour & Milligan forthcoming).

In this study we have chosen not to focus on the characteristics of the organisations that were responsible for procuring the projects studied (to protect their anonymity). Nevertheless, the cross section of organisations that initiated the projects selected for this study does reflect several aspects of the changing nature of the sector. Providers that are represented include smaller traditional community housing and welfare organisations moving into development and ownership for the first time, rapidly growing larger scale housing providers building in-house development capacity and well-established special purpose affordable housing developers.

While it is not possible to generalise about the influence of these different organisational contexts on the project outcomes, a few observations can be made from our case studies:

- → While traditional tenancy service organisations had been able to handle their first development challenge, they would benefit from receiving more support and training in relation to decision making around housing procurement and financing.
- → Every project is different and even established developers faced significant challenges in securing the project from their portfolio that we had chosen to assess.
- → More specialised industry information would assist agencies to benchmark their performance and more fully consider their options for acquisition of housing.
- → Generally to date the development function has not been influenced to any significant extent by resident perspectives. As the potential to involve residents in the design and management of their housing is a recognised attribute of affordable housing models, this should be a stronger organisational focus.
- → In keeping with international trends, innovative and entrepreneurial models of development and financing are starting to emerge from the not-for-profit sector in Australia, evidenced in this study by projects such as the joint venture development that did not require public subsidy (Hastings); the mixed tenure and mixed use project (Broadwater) and the community oriented mixed use, mixed income project (Barwon).

Overall the projects examined suggest that the diverse organisations in the sector have good potential to provide a variety of high quality affordable housing that is distinct from private sector and public sector forms of provision.

# 5.2 Site selection

The location of an affordable housing project is a major factor shaping its social, financial and environmental outcomes. A well-located site can provide residents with good access to public transport, local amenities and services. As we saw in several of our case studies, the location of a project can be one of the features that its residents value most, particularly where they have limited mobility, limited resources, or where they are 'time-poor'. Many of our focus group participants spoke of the importance of having access to a range of local shops, amenities and opportunities close at hand. While sites in such locations may be more expensive, they will often also be suitable for higher-density development, allowing yields that can offset the initial costs of acquiring the site. In sustainability terms, sites with good access to local services and public transport are ideal locations for affordable housing development because they reduce car dependency.

Site-related planning regulations and decisions may also have a major bearing on the outcomes of development. As well as specifying the acceptable development densities and building heights for a site, planning controls may also stipulate levels of site coverage, floor space ratios, appropriate land uses, building types, construction materials, building style and parking requirements, and may also require certain urban design and landscaping features. As we saw in one of our case studies, planning authorities are also able to impose certain conditions on sites, with respect to easements and the profile of residents, for example.

Apart from access to transport and amenities, site-related factors may have various other impacts on the environmental amenity enjoyed by residents of a project. Noise and dust from adjacent busy roads were two of the most pressing concerns in our case study projects, detracting from the tenants' overall satisfaction and making it difficult for them to ventilate their homes properly, thus compromising the project's environmental performance. Certain features of a site—such as its depth and shape or other environmental features—may have a dramatic impact on the costs of construction, and on access to daylight, ventilation and solar heating in dwellings. As such, they potentially influence social and environmental sustainability, as well as the financial viability of an affordable housing project as a whole.

The selection of a site is, therefore, a critical stage in the development of an affordable housing project. However, it is the stage in which the provider has least control over the outcomes and length of the process, since opportunities for appropriate sites can be infrequent and not-for-profit providers can be disadvantaged in the competition with for-profit developers when bidding for properties. In some cases, providers may be under significant pressure to locate and purchase sites hastily, because of the urgent need to address shortages in affordable housing, and also because funding opportunities often require a timely response to tight deadlines. Our study shows that such pressure can result in adverse sustainability outcomes when not-for-profit developers are forced into difficult sites. Funding schemes should therefore be designed in a way that allows not-for-profit providers the flexibility to purchase cheaper and more appropriate sites when housing markets are less buoyant and more opportunities are at hand.

In this respect, governments may also proactively seek to facilitate access to land for affordable housing development, for instance through their surplus land disposal policies. By incorporating explicit affordable housing objectives for the disposal of government-owned land, any uplift in value arising from development can be secured for affordable housing (Gurran et al. 2008). Certain levels of affordable housing provision may be required of developers through inclusionary zoning (as applies to developments above a specified size in South Australia), parcels of land could be allocated for affordable housing only or gifted to not-for-profit providers, or the overall increase in land value could be re-directed towards the development of affordable housing.

# 5.3 Design and environmental performance

Our eight case studies reveal sharp differences both in the quality of design, and in the level of tenant satisfaction with design. While some of the projects were well-designed and responded sensitively to context and tenant needs, there were other cases where cost had been the overriding concern for the provider, or where compromises had been made due to factors outside their control—planning requirements, housing policy or characteristics of site location, for instance. The degree of tenant satisfaction with design in our case studies was usually linked to for whom the project had been designed. In a couple of our case studies, projects that were originally designed for the general population were ultimately occupied by over 55s with limited mobility, creating difficulties for residents in using or moving around buildings and homes. We return to this issue in our discussion of 'needs based' planning later in the chapter. First, however, we reflect on some of the key design-related themes and issues that came out of the research.

# Dwelling design

Our analysis highlights a number of key strengths and weaknesses in terms of both building and dwelling design. A positive finding was that all of the affordable housing projects in our study were successful in achieving design forms that do not reproduce the stigma of unattractive low-cost housing or standardised social housing. Rather, they are generally of equal or superior quality to much of the private sector residential development that surrounds them. In projects that were carefully designed to the highest standards, the residents who participated in our focus groups expressed a sense of pride at living in them, and in inviting friends and relatives to visit. There may also be a promotional advantage for providers who are able to showcase well-designed projects and demonstrate their innovation and leadership in the housing market. It is worth noting, however, that achieving avant-garde aesthetic quality should not be the main priority for not-for-profit developers, particularly where it increases costs and forces social or environmental trade-offs.

Our case study projects also performed well in urban design terms. They mostly responded well to the scale and form of their context, were site-specific, provided clear and defined boundaries, and were legible and well-detailed. However, their environmental performance was somewhat mixed. While many projects did incorporate active ESD features such as mechanical ventilation systems, blinds, ceiling fans and solar boosted hot water systems, most had failed to maximise opportunities for passive heating, cooling, daylight access and natural ventilation. Passive systems are preferable to active systems because they use no energy and typically require less maintenance, yet many dwellings in our case studies were single-aspect and south-facing, limiting cross-ventilation and daylight access. In several projects, circulation spaces such as corridors, lobbies and lifts were also completely internalised, preventing the flow of air through them and making electrical lighting a necessity at all times. In general, there appeared to have been too little attention paid to the passive design of buildings and dwellings; simple changes to the positioning and layout of buildings, dwellings and rooms could have brought significant reductions in energy costs and improvements in the levels of environmental amenity enjoyed by residents. This lack of attention is surprising, particularly given that several providers acknowledged the links between environmental performance and energy use. It may suggest a lack of awareness amongst providers and their consultant advisers of the potential benefits of passive design; an issue we deal with further below.

Our analysis indicates that figures for gross floor area in the vast majority of units at the eight case study projects was lower than the minimum apartment sizes recommended by one state standard, that is the NSW Government's Flat Design Code (NSW Government 2002). While the functionality and flexibility of units is in many ways as important as gross floor area, we noted problems for some residents with the use of dwellings where floor area was limited; particularly where buildings and units had not been designed with the people who now inhabited them in mind (see discussion below). However, some of the projects in our study did demonstrate how thoughtful design can allow an efficient use of existing space within buildings and units and improve affordability outcomes, even where gross floor area is limited. Examples include:

- → Communal facilities such as shared laundry and in some cases shared parking spaces rather than individual laundries and garages can save significant space within units.
- → The provision of communal areas can supplement individual living areas in dwellings.
- → Compared with deeper and squarer buildings, long and narrow buildings generally provide greater opportunities for daylight access and cross ventilation in dwellings.
- → Rectangular-shaped dwellings are generally easier to furnish and use space more efficiently than squarer-shaped dwellings.
- → Open plan kitchens on external walls are not only compact but also more convenient to use for households from a range of cultural backgrounds.

- → Balconies do not necessarily save space, but can be incorporated as an additional living space that is cheaper to build than internal rooms, and one that is highly valued by residents. Balconies can also be used for additional purposes such as clothes drying, saving energy as well as costs for tenants. Balconies should be large enough to furnish with chairs and a table.
- $\rightarrow$  Rooftops can be used as a communal space.

On the critical issue of building and dwelling usability, we found that design was in some of our cases mismatched with resident profile, presenting tenants with accessibility problems and safety risks. Two projects that were designed for general populations were occupied mainly, or exclusively, by over 55s. The result was that some tenants in these projects had difficulties using and moving around their dwelling and building, and that parking provision was sometimes insufficient. Some of our examples suggest that providers cannot always predict or fully control how a project will be tenanted, particularly in the context of integrated allocation systems that will soon be introduced in all Australian states, and are already in place in some (Wiesel et al. 2011). Not-for-profit developers of affordable housing are increasingly encouraged by government to maximise the number of units in each project that can be used by people with mobility restrictions (FaHCSIA 2011). Ground floor units and units accessible by lift should be either wheelchair accessible or easily adaptable. Improved physical accessibility and adaptability will allow ageing in place for residents and will therefore increase the security of their tenure. Furthermore, improved accessibility may contribute to social life and interaction within affordable housing projects. As commented by a tenant with a physical disability in our survey, although he himself lives in a wheelchair accessible ground-floor unit, the fact that he cannot visit his neighbours on the second floor is a cause for frustration. While lifts significantly improve accessibility, there are still advantages to allocation of ground floor units for people with significant mobility restrictions because lifts can break down.

The advantages of a lift should be a key consideration when making decisions about the scale of an affordable housing project, but installing and maintaining lifts in lowrise apartment buildings will not always be financially viable. Affordable housing providers will often need some additional financial support in order to deliver buildings and dwellings that are visitable, accessible, adaptable or—ideally—universally designed. Obtaining grants from government departments providing disability or aged services will increase the viability of making such provisions. Local governments may also contribute by increasing floor space ratio allowances that would enable additional storeys and units to increase the development yield and make the installation of a lift more financially viable; essentially a form of planning density bonus. Where finances are tight, the clustering of accessible, universal or adaptable dwellings in a single building can negate the need for multiple lifts where there are a number of buildings within a project; this approach was used successfully at Paramount. However, it is important that such a clustering does not lead to segregation and frustrate objectives for social mix.

### Number of bedrooms

In the private sector, there is high demand for spacious dwellings and developers can charge additional costs for larger units. In affordable housing, however, the size of units must often be minimised in order to 'squeeze-in' as many units as possible and achieve sufficient rental revenue, as well as to maximise the number of households that are assisted. This can lead to a situation where the vast majority of dwellings provided have either one or two bedrooms, as was the case in most of our case study projects (Figure 1). The type of dwellings in a provider's portfolio should aim to reflect the diversity of local demand for affordable housing. Our study has shown that

providers who managed their own waiting lists were able to estimate demand for different types of dwellings and planned their affordable housing developments accordingly. However, in the context of integrated waiting lists some providers will need to develop new strategies in order to estimate what type of dwellings they should develop and this should be coordinated with the plans of other providers operating in the same catchment area, and monitored over time.

Planning incentives and affordable housing funding schemes should not discourage the development of larger dwellings with more bedrooms where this is justified by need. Presently, incentives such as NRAS are allocated per dwelling regardless of their size or the number of bedrooms, thereby discouraging providers from developing larger dwellings. Similarly, providers will seek to optimise planning incentives, which may not match needs. For example, at Paramount, incorporation of a minimum number of bedsitter units enabled significant relaxation of parking requirements. From a needs based perspective, this may be a problematic outcome, since larger families or extended families will be disadvantaged in accessing affordable housing. What matters is not only the number of households that are assisted but also the number of individuals who are assisted and whether the aggregate mix of affordable dwellings in an area matches its needs profile. To ensure that overall provision of affordable housing in an area aligns with local need, governments should promote consistent measures of need, encourage local needs based planning and provide additional incentives for development of dwellings with a larger number of bedrooms in areas where these are in high demand and short supply. Local planning schemes can also provide incentives that encourage dwelling mix.

Presently, the dwelling mix emerging in the affordable housing sector appears to complement the profile of dwellings in public housing (which has a higher share of family accommodation) and private housing (which tends to be larger). As the sector grows, it will be desirable to promote coordinated local planning for affordable housing to ensure the full range of needs are being addressed. This is a potential role for local government.

### **Communal spaces**

Particular attention should be given to the design of communal spaces that can assist strengthening relations between neighbours in developments, as well as making tenant involvement in management of these properties easier to achieve. This was particularly well done in some of our cases; attractive community spaces were incorporated into a project, and events and activities were organised by the provider in those spaces as a way of engaging residents in community life. Some providers commented on the maintenance costs associated with such common spaces, but many of the tenants who participated in our study spoke of the way that they valued and used these spaces, and of how the communal areas had helped bring tenants together by promoting low-intensity contacts and informal interaction. A mix of openair and internal spaces is ideal; this allows for gatherings of various sizes and purposes, ranging from formal resident and management meetings to barbeques and relaxation. The provision of shared communal spaces is particularly important in innercity locations where floor area in dwellings is limited and little or no private open space is provided.

### Car parking

Car parking was an issue in almost all of the case study projects. Typically, this was because residents believed that there were too few parking spaces on-site. A reduction in car parking spaces enables an increased development yield for developers, and it may improve financial and affordability outcomes, especially when costly underground or multi-level parking is required. Not all affordable housing tenants can afford a car, and in some cases parking space provisions may therefore be reduced compared to other types of residential developments. In our case studies. lower statutory parking requirements were often sought by providers from planning authorities, for instance by incorporating bedsits into projects. In such cases, providers designing and developing their own affordable housing projects have an advantage over providers procuring projects 'off the shelf' with a lesser degree of control over the ratio of parking space per dwellings. However, a reduction in car parking space can also be problematic for some tenants, especially when on-street parking is in short supply and time-limited, council parking permits are not available, access to public transport is limited and services and amenities cannot be accessed within walking distance. A single parking fine can place great financial stress on a low income tenant. Parking problems can also limit the abilities of tenants to remain in the property if their circumstances change and they become car dependant. Lack of parking may also reduce providers' opportunities to sell the property and hence this reduces their asset management options.

There is no simple answer to the question of how much parking should be provided at a given project; of course it will vary according to location, public transport accessibility and tenant profile. Although planning policy in Australian cities currently promotes more compact and less car-dependent cities, the reality is that many people will continue to need access to a car in their daily lives, particularly those with restricted mobility. Where parking is rationed, there must be clear and transparent guidelines for deciding access criteria. For larger developments in areas with good access to public transport, there are also opportunities for the implementation of carshare schemes, potentially in collaboration with local government. In a car share scheme, vehicles are shared between tenants (and potentially other neighbours) with a pre-booking system, and dedicated car parking spaces are provided. These types of schemes may also improve affordability outcomes by eliminating the costs associated with car ownership.

#### Low maintenance design

All buildings require reinvestment in maintenance over time. However, their design and the materials used for their construction can increase longevity, minimise lifecycle cost and improve environmental performance. Although most of our case study projects had been built in the last five years, our study revealed significant variation in their estimated maintenance costs (Section 4.9.3). Many residents had encountered minor issues with plumbing, drainage, lifts and internal fittings, but there appeared to have been no major maintenance issues at any of the eight projects, and most providers had considered cyclical maintenance costs in their medium and long-term financial forecasts.

A number of design strategies have been used by providers in our case studies as a way of minimising costs. Some low-maintenance design strategies have no adverse impact on the initial cost of construction. For example, minimising the surface of external walls will reduce the costs of painting. This can be achieved without additional upfront investment (in fact, construction can be cheaper) through floor plans that are designed in simple square or rectangular shapes. Buildings that are higher rather than wider can minimise roof surface and associated maintenance costs. Other strategies to reduce a building's maintenance costs over the life cycle—such as use of low-maintenance materials (e.g. concrete, stainless steel)—may require additional upfront investment in construction. Not-for-profit providers who plan to retain long-term ownership of these assets will benefit more from such upfront investment than those developers selling into the market.

Durable materials, such as concrete, had mostly been used for the construction of the eight case study projects, and landscaped areas were generally low-maintenance. However, many of the buildings in our study did have applied surfaces on interior and exterior walls, and some exposed, blank exteriors were vulnerable to graffiti. In some of our cases, specific colours such as beige and orange were used on walls, as a way of reducing the conspicuousness of stains and marks. One issue with this is that the repeated use of particular materials, colours or designs to reduce maintenance costs can in some cases lend an 'institutional' feel to buildings and units.

There are other ways in which the provider's desire to reduce maintenance costs had impacted outcomes for tenants. These include the decision in some cases not to include communal spaces in projects as a means to reduce life-cycle maintenance costs, despite the various benefits of such communal spaces (described above). In one of our case studies, security cameras had also been installed in different parts of the building. Through this, the provider sought not only to improve safety for tenants, but also to reduce vandalism and associated maintenance costs. However, the privacy of tenants can be compromised through such measures.

# 5.4 Leverage

As discussed in Chapter 1, Australian governments are increasingly turning to private fund raising to help finance additional supplies of affordable housing. Using not-forprofit developers is one means of achieving this goal and the projects examined in this study utilise several different components of non government financing, including:

- → provider equity contributions
- → provision of free land
- → investment of developer profits
- → joint venturing to obtain profits for investment in affordable housing
- → private debt raising
- $\rightarrow$  applying developer contributions.

How much leverage has been achieved in the projects depends on how several factors are linked together, especially the use of public subsidies such as NRAS and CRA, rent setting, project designs and who is targeted (low and/or middle income households). Thus in order to achieve leverage, project providers have to make trade-offs between who accesses their housing, affordability levels, procurement and operating costs and revenue.

Table 8 identifies various means of increasing leverage. To be successful in their pursuit of leverage, governments need to fully understand the mix and layering of policy levers that can be used and to establish clear and well-founded goals for providers concerning cost structures, access and affordability. Governments could also do more to help providers secure cost effective forms of private financing (see Lawson et al. 2010). It is early days in Australia for establishing a mixed public and private financing regime for affordable housing and the extent of leverage that will be sustainable under existing policy settings is not well-established. Initial analyses suggest that governments' expectations may be optimistic (see, e.g. Australian Government 2010, Victorian Audit General 2010). A report for Shelter NSW based on detailed financial modelling by Sphere Consulting estimated that the leveraging potential of transferring a significant the portfolio of public housing stock to not-for-profit providers in NSW ranged between 3.4 per cent and 7.0 per cent over 10 years and between 9.7 per cent and 17.2 per cent over 20 years, depending on what existing policy levers (such as planning benefits, NRAS, CRA etc.) are used (Shelter

NSW 2010, p.15). This compares with stated targets of 25 per cent or higher in some jurisdictions.

Supply side	Demand side	Finance side		
Reduce construction costs (via efficient industry, contestable funding environment, use of NFP developers).	Increase rents.	Reduce cost of private finance (through wholesale fund raising, competition for funds, government guarantees, tax concessions etc.).		
Reduce land costs (via planning schemes that support developer contributions, planning bonus schemes, residual pricing of government land).	Increase rent subsidies (to increase revenue but offset affordability problems for low incomes).	Use existing asset base (and stock transfers) to secure additional finance and revenue for debt servicing.		
Develop for-profit housing and cross subsidise affordable housing	Adopt mixed income allocations to improve revenue base	Use (lower cost) public loans.		
	Decrease operating costs (including more cost effective design).			

#### Table 8: Increasing leverage

#### Source: Authors

Previous research on this issue by members of the research team (Milligan et al. 2009b) and our assessment of the results for projects in this study show that the following principles will be useful to guide governments in determining their expectations of leveraging in the affordable housing industry:

- → Leverage targets should not be not so high as to discourage targeting to low income households in the context of high needs and a very small social housing system that is under severe pressure in Australia.
- → Leverage targets need to take account of differences in procurement costs across geographic areas, so that housing for lower income households is located appropriately to meet needs and promotes social inclusion.
- → Commonwealth programs that provide supply-side and demand-side subsidies for rental housing, CRA and NRAS respectively, disadvantage high cost markets and should be cost-adjusted.
- → Leverage benefits will result from adopting a mixed income allocations regime that addresses a wider array of needs as well as contributing to other social benefits.
- → Layering and packaging of policy levers (such as funding, land supply and planning policies, and Commonwealth and state incentives) will optimise leverage benefits.

# 5.5 Planning risks

Several cases highlighted the significant risks associated with obtaining planning approval for projects. In some cases there was resistance from local residents, for a range of reasons, which had resulted in lengthy construction delays and significant cost overruns. Clearly this is something that could present major financial difficulties, particularly for smaller not-for-profit providers operating with limited financial resources—all objectors potentially need to do is delay construction until the project is

no longer financially viable. Furthermore, even objections to minor design features may require significant adjustments by the providers that are not only costly but can also impact on the overall quality of the design (e.g. the need to build two-storey units which are not wheelchair-accessible in the Swan).

In some projects, local planning authorities were seen by providers to have been unhelpful, particularly by imposing unnecessary planning conditions on their project. In one case, Broadwater, the planning authority had not supported the housing provider in the face of fierce resident resistance to a proposed project, and ultimately had bowed to the views of objectors and sanctioned a planning agreement requiring that units were occupied only by people aged 55 years or over. That project was also substantially revised as a result of resident concerns, even though it could have been approved as code-assessable development. Finally, the reluctance of the local planning authority to remove conditions for easements at Broadwater resulted in the provider incurring substantial legal costs, in addition to the costs related to the delays caused by the resident resistance. Had the provider not been in a healthy financial position, this series of incurred costs would have created major difficulties for them.

While some of these local planning risks can be mitigated by better consultation processes (see below), state governments can also directly support affordable housing providers through formal planning instruments. In NSW a special State Environmental Planning Instrument—The Affordable Housing State Environmental Planning Instrument (AHSEPP)—was gazetted in 2009 order to reduce planning risks for affordable housing projects. The AHSEPP also provided density bonuses for affordable housing projects. However, in the face of some local community opposition those planning benefits have been significantly reduced (NSW Planning and Infrastructure 2011).

#### **Community consultation**

While the residents resisting our case study projects most often complained about building height, bulk and views, there was little doubt among providers that the social housing component of projects was also a major factor underlying those resident concerns, even where they had not made this explicit.

There is no way of guaranteeing that local residents will not resist a proposal for affordable housing development in their neighbourhood, but it seems from our case studies that mixed tenure and mixed use projects may be less objectionable to them, and that genuine public consultation is key. It has been shown that involving communities at the planning and design stage, and educating them about their choices in plain language, can help alleviate concerns about higher-density development and reduce or eliminate resident resistance to change (Davison 2011). There are also many studies of the factors underlying resident resistance to undesirable uses, including low-income housing (see Dear 1992; Schively 2007). A recent Victorian study explored outbreaks of local objections to proposals for community housing (Press 2009). It found that that although community housing proposals are frequently opposed, even in cases where there has been a high level of engagement with local communities, there are a number of practical ways in which consultation and discussion can help mitigate resistance. In this regard, Press argues that informal discussions with immediate neighbours, prior to any formal application for the development of community housing, can help foster a shared understanding. She also makes a number of recommendations for more formal consultation processes:

 $\rightarrow$  It is important to identify the purpose and scope of consultation at the outset.

- → Avoid a theatre style seating arrangement as it promotes an adversarial response (them versus us).
- $\rightarrow$  Avoid the use of technical terms and jargon.
- $\rightarrow$  Don't be disparaging about the local area.
- $\rightarrow$  Be prepared to listen to the views and opinions expressed.
- $\rightarrow$  Show empathy (Press 2009, p.30).

Press identifies a number of positive examples of community engagement strategies by not-for-profit housing providers in Australia. In one example, the provider (Yarra Community Housing) undertook pre-planning consultation exercises with local communities in North Fitzroy about a proposed community housing development. Staff in attendance, including the Chief Executive, explained the purpose of the consultation, made it clear that the use of the building for community housing was not under discussion, and sought input and feedback on architecture and design. The project apparently received no registered objections once it had formally been submitted for planning approval (Press 2009).

Phibbs and Ziller (2010) point out that community engagement for affordable housing projects would be facilitated by some good communication resources that highlighted the need for affordable housing and provided some examples of successful projects. At the moment each provider has to undertake this task themselves.

At least two of the providers in our case studies had learnt from experience that frontloaded community consultation can help mitigate local resistance, and others already undertook extensive public consultation as standard at the planning and design stage. Beyond consulting community members, however, another critical factor in gaining local acceptance for affordable housing projects is achieving a design response that is sensitive to context, both physically and experientially. We saw in many of our case studies that affordable housing projects had been developed in keeping with their surroundings and had contributed positively to the local environment; through building renovation, innovative architectural design, new services and facilities, the clearing and redevelopment of derelict sites, by providing passive surveillance of the public realm, and through landscaping and detailing. Where new projects bring these types of benefits to a local area, they are surely less likely to be opposed by neighbouring residents.

# 5.6 Development risks

The case studies highlight the complexities and the risks associated with development. For instance, the two most experienced developers in the sample faced significant issues with costs overruns, planning approval delays and problems with easements. There are a variety of strategies that can be adopted to reduce these risks:

- → Hire experienced staff with significant development experience.
- → Build capacity of staff through appropriate training and mentoring.
- $\rightarrow$  Start out by developing simple projects.
- → Partner with an experienced not-for-profit developer to reduce risks—this was a strategy used in the Swan.
- → Use specialist not-for-profit developers (such as BlueCHP in NSW) to undertake development.

#### Construction versus purchase

The Eleanor case highlights differences between purchase of completed developments and development by a not-for-profit provider. The procurement cost of \$300 000 per dwelling (including land) represents good value for money and reflects the potential savings arising from 'bulk-purchasing', especially in a distressed market. However, there were probably only minor savings compared to the potential development costs at the time (based on what other not-for-profit providers are achieving) and the property carries some design and maintenance risks. While procurement through opportunity purchasing should always be considered as a business option, the best long-term results are likely to be obtained by experienced not-for-profit developers having full control over the conception and design of their own projects.

# 5.7 Rent setting

We found several differences in approaches to rent setting across projects and, sometimes, within projects of the same provider. Some approaches differed conceptually (that is, whether market or income-based) and others in the fine detail of their design and application. The major differences in approach have important implications for the revenue certainty of providers (and hence the financial viability of their projects) and social outcomes (access and affordability) for tenants, as well as influencing the capacity of providers to deliver high quality tenancy services. Minor differences were in the main a product of provider discretion and flexibility, which is desirable. This section examines the main approaches and their potential strengths and weaknesses in terms of financial and social outcomes, and discusses implications for policy.

An increasing number of not-for-profit affordable housing providers are charging rent at 74.9 per cent of market rent. This approach is driven by Australian Tax Office (ATO) provisions that set this formula for a maximum rent in order for not-for-profit providers to retain their charitable status and, thereby, receive an exemption from the Goods and Services Tax and other tax benefits. A market-linked rent, such as this, gives predictability of income to providers and sends price signals to tenants about the comparative amenity of their property, two advantages over income-related rents, discussed below. Also, unlike for income-related rents, there are no inbuilt work disincentives under this method. Rent setting is also straightforward resulting in low administrative costs for providers and obviating the need to regularly collect detailed income and household information from tenants.

However, adopting the ATO's maximum rate of rent as standard bears no necessary relationship to the key objectives of an affordable housing program—that is affordable rents for target clients and provider viability. Thus, the extent to which the project achieves these objectives becomes an empirical question (Milligan et al. 2004). As a general proposition, the impact of setting rents at a discount to market rent will be that the revenue, affordability outcomes and access to housing provided will depend (provided other things, such as cost structures, remain equal) on housing market conditions—and not on affordable housing benchmarks. Accordingly, across the diverse rental markets of Australia, quite different financial and social outcomes can result, particularly under present policy settings—because the CRA payment (see Chapter 1) has a standard ceiling (for each household type), above which no additional subsidy is paid to compensate for higher value local markets. Thus in general, the lower the household income and the higher the market costs, the less affordable a project will be under this arrangement. In some of the case study projects, this problem was being addressed by excluding tenants for whom the

market-related rent was not considered affordable, using a widely adopted (although little scrutinised) benchmark of rent not exceeding 30 per cent of household income. Typically in the absence of compensating policies, this stance discriminates against access to affordable housing by very low income households, smaller households (such as single aged people, or youth on benefits or low wages) and single income households. An affordability issue can also arise when an established tenant's circumstances change, such as when they lose a partner or a job.

For tenants who were accepted into the projects, there was no evidence from our tenant surveys or focus groups of significant affordability problems arising from paying 74.9 per cent of market-related rents. Tenants were aware of cheaper options (in both public housing and the private market) but valued the quality and locational attributes of their dwellings, absence of stigmatisation and comparative security, compared to renting privately. <sup>16</sup> This suggests that tenants value those specific attributes of affordable housing. Where tenants did raise affordability issues these tended to be concerned with rising utility costs, highlighting the importance of affordable housing providers addressing those issues in their project designs.

The problem that using a standard ratio of market rent will not necessarily support targeting to the most disadvantaged households can be overcome by better designed subsidy support, so that the fixed rents becomes more affordable to those on low incomes and providers have no financial reasons not to house them. Ensuring that providers retain discretion to adjust the rent below a maximum level (e.g. 70%) for hardship or transition will also provide a safety net.

The other common approach to rent setting is a hybrid of an income-related rent and transfer of CRA received by tenants as an additional amount of rent, as explained in Chapter 1. This was calibrated in slightly different ways across projects but the outcome was similar. Tenant rent comprised two components: the level of CRA they received from Centrelink and 25 to 30 per cent of their other household income, depending on which of those yardsticks was used. This method of rent setting is more responsive to ensuring affordability benchmarks are achieved than the first approach described above, while (at current payment rates) giving providers sufficient revenue to meet their outgoings. However, the method produces an operational tension for providers, as it is inbuilt that low income tenants can pay less rent than those with more income. Providers are also exposed to greater risk of revenue uncertainty, for instance, if there are adverse policy or design changes to CRA or if the income / tenant mix in their projects changes. The method is also more complex than the market based approach and its rationale is opaque.

The independent not-for-profit housing sector is set to expand quickly in Australia and, through stock transfers, to absorb more existing social housing. In this context, there would be benefit to more policy guidance being developed on rent setting. The rent-setting models that are chosen and the flexibility that providers have over rent levels will be critical to their financial security and to their capacity to secure loans. Of equal importance, access and affordability for tenants will be driven by how rents are set, the efficiency of providers and, crucially, what level of subsidy is paid to households with low-incomes. Policy-makers need to have good knowledge of these variables (e.g. the costs of housing provision) and how they intersect, to be clear about expected social policy outcomes and to ensure public subsidies are designed specifically to support achievement of those outcomes. Guidance is also needed on reviewing rents over time. Presently, if long-term cost structures deteriorate against

<sup>&</sup>lt;sup>16</sup> These findings are consistent with previous research on tenant views of affordability in similar projects (see Milligan et al. 2009, pp.118–21).

projected levels, the affordability of the housing offered to lower income households or, alternatively, the capacity to target that group in future may be at risk.

# 5.8 Tenant access

In Victoria and NSW, our study predates the implementation of a common register that includes affordable housing allocations and these are managed independently by providers. Our findings indicate that providers in NSW and Victoria have applied different allocation practices in their affordable housing projects. Vacancies in our case study projects were advertised in different ways, with some providers relying on word of mouth. Not all providers managed a formal waiting list for their project, or even a transparent allocation policy. Several providers filled some of their vacancies by transferring existing tenants from community housing projects they manage.

The lack of transparent rules, coupled with inconsistent practices across the sector, is problematic. When vacancies are only advertised through word of mouth, equal opportunity in access to affordable housing is significantly compromised. As noted by Phillips et al. (2009, p.32), one of the key concerns often raised with regard to the growth of the not-for-profit housing sector is the 'lack of transparency and accountability in allocation processes and perceptions of favouritism and 'creaming' by some housing organisations.' Lehr-Lehnardt (2005, p.50) suggests that the legitimacy of not-for-profit non-government organisations is founded on the public perception and trust that such organisations adhere to principles of accountability and transparency. This is particularly so when the services provided by such organisations are publicly funded even in part, as is the case for most affordable housing projects.

The implementation of common registers that includes allocations for affordable housing will address some of these problems, and increase consistency across the board (Phillips et al. 2009, p.32). However, it is important that even under a common register, providers will continue to have flexibility in managing their own vacancies to ensure that applicants are carefully selected by a local officer who is closely familiar with the project and its existing tenants. Further, the flexibility for providers to initiate internal transfers of tenants between projects can be an efficient way to assist those who are placed in unsuitable placements.

One of the key findings in this study is the need to ensure that the design of affordable housing projects matches the target group (see Section 5.3). Following this, in order to ensure that an optimal match is achieved, decisions about allocation priorities in each project should be determined at the very early stages of project design. Where providers have limited discretion over determination of allocation priorities—as in the case of Queensland's One Social Housing System (Wiesel et al. 2011, p.38)—it is also important that the provider and state government reach an agreement over allocation priorities before making decisions about the design of the project.

# 5.9 Social mix

A great deal of social diversity has been identified in the eight case study projects we studied; some aspects of this mix are represented in Figures 2 and 3. A variety of factors shape the 'social mix' within an affordable housing project. First, the rent settings and, in some cases, income-mix policy, determine the distribution of tenants earning different income levels. In some cases, such policies are beyond the control of the provider (see Table 1). Second, the range of dwelling types at a project will influence the types of households living there; a project that is dominated by studios and one bedroom apartments will typically house mostly couples and singles, with relatively few families with children. Third, the proportion of units that are accessible or universally designed will impact on the proportion of tenants with mobility restrictions.

Fourth, the characteristics of the local population (e.g. an older population or high proportion of immigrants) will strongly influence the social mix within the project itself. Finally, where some dwellings are sold in the market a more diverse resident profile may be the result of mixing tenure.

A diverse social mix counterbalances the tendency for segregation and concentration of marginalised social groups in lower-quality environments. When disadvantaged residents are concentrated spatially, they may suffer from 'area effects' (Atkinson & Kintrea 2002) that only exacerbates their disadvantage by limiting their life-chances in domains such as health, education and employment (Atkinson 2008, p.23). In contrast, when people of different cultural and socio-economic backgrounds share a neighbourhood or a building, the risk of area effects is reduced. Furthermore, the encounter that is made possible between people from different backgrounds can potentially enable individuals to experience the 'pleasure and excitement of being drawn out of one's secure routine to encounter the novel, the strange, the surprising' (Young 1990, p.239). Such encounters are an opportunity for people to 'explore different sides of ourselves and to craft new identifications through encounters with others as strangers' (Fincher & Iveson 2008, p.145). Meeting people of diverse backgrounds exposes one to different opinions and different ways of life, contesting 'enclave consciousness' (Tajbakhsh 2001, p.182).

In several of our case studies, participants reported conflicts and often a general sense of distrust between neighbours on the basis of differences in culture, socioeconomic group or tenure. In one of the projects, for example, some older residents in the Clyde, while enjoying some friendships with neighbours of a similar age, also expressed their anxiety about living in the same building with younger single residents who moved in from transitional housing. In Paramount there were issues for some residents with living in the same building as people occupying bedsitters, which are not self-contained. At Hastings, affordable rental housing units were scattered throughout the project and were indistinguishable from those that were owneroccupied. While there had initially been some hostility from certain owner-occupiers at the project towards the affordable housing tenants, this was from a minority and was short-lived. Over time, a strong sense of community has developed at the project with normal interaction across tenure groups. At Broadwater, tenants of affordable housing units and owner-occupied units were on different levels of the building. Although there was said to be relatively little interaction between the different tenure groups within this project, relationships were amicable and no problems had been reported.

There is no ideal social mix for affordable housing projects. Providers need to be aware of the potential challenges of different types of social mixes and develop the skills to manage these challenges. It is generally desirable that affordable housing in a mixed-tenure project cannot be distinguished from housing for sale, and that different housing types and tenures are 'salt and peppered', rather than clustered. Beyond these simple design and allocation measures however, a number of practical strategies can be considered at mixed-tenure projects to promote interactions between groups and limit conflicts:

- → Involvement of all tenants in management decisions: Atkinson (2008, p.40) suggests that involving residents from different sectors and backgrounds in management decisions is a key strategy in maintaining a socially-mixed environment and achieving positive outcomes.
- → Pro-active conflict identification, mitigation and resolution: Because of the unique nature and social mix of affordable housing, the level of intervention required from management in conflict mitigation and resolution may need to extend beyond what is typically expected of a landlord. Management will need to be able to proactively

identify conflicts between tenants, since not all conflicts are reported by the tenants themselves for a variety of personal and cultural reasons. Tenancy managers need to be trained to acquire conflict resolution skills in order to manage tensions and conflicts that arise. As noted by Atkinson (2008, p.40), a clear and transparent strategy is needed to tackle anti-social behaviour.

- → Design for privacy: The anxiety and conflicts associated with social mix can be alleviated through design that increases privacy. Privacy may be understood as the selective control of access to one's immediate environment, a dynamic process of openness and closeness to others (Altman & Chemers 1980). Privacy may be achieved through design that demarcates private spaces physically and symbolically (e.g. a fence), provides buffers against unwarranted communication channels (e.g. window screens) and enables those communication channels which are desired (e.g. an intercom) (Moser 2003, p.424). For example, design that keeps noisy areas away from quiet areas, as well as soundproofing installations, can significantly reduce the potential for conflicts between neighbours.
- → Communal space: A communal space in an affordable housing project—such as a meeting room or an outdoor barbeque facility—can be a place where more trusting relationships between neighbours are nurtured and developed. At the same time, communal spaces can also be a source of conflict if insufficient attention has been given to their design and management. The design of communal spaces should not compromise the privacy of tenants. For example, noise from communal areas should not impact on those who choose to stay at home. In some of the projects we studied, participants' anxiety about the social mix in the project was intensified by evidence of vandalism in communal areas. Improved design that reduces the potential for vandalism, and prompt management response to vandalism through maintenance, may help ease some of this anxiety. Furthermore, communal spaces need to be varied in size and location (internal and open-air), and to be flexible to a range of activities. They also need to be designed and managed in a way that is inclusive, so that all tenants are able and feel welcome to use these spaces, if they choose to do so.
- → Organised collective activities: In some of the projects we studied, management and in some cases the residents themselves—had organised collective activities such as barbeques, video nights and Christmas celebrations in communal spaces within the project, or in open public spaces nearby. Such activities were highly valued by many participants, and can contribute to a friendly social atmosphere in an affordable housing project that alleviates some of the potential tensions of social mix. While these activities had often brought residents together and helped foster a strong sense of commonality, several tenants we spoke to had not wished to participate in them—they valued their independence and did not feel the need to engage in community activities in their building. It is therefore important that any communal activities taking place are voluntary and do not compromise the privacy of tenants who do not wish to participate.

# 5.10 Tenant participation in project management

Our case studies provide examples of the three approaches to tenant participation identified by Hickman (2006). In some of our projects, a 'traditional approach' has been taken, whereby tenants had no role in the management of their housing project. Some providers justified this approach on the basis that affordable housing tenants are often busy working people that have no time to be involved in the management of their housing project. However, in one of our case studies, tenants felt they were discouraged from raising issues of concern with their landlord; such a perception can be alleviated by a consultative and inclusive approach.

In other projects, a 'consumerist approach' (Hickman 2006, p.209) was taken, where tenants were surveyed and consulted about their preferences concerning certain aspects of their projects (e.g. provision of window screens in all units; pet policy). However, such an approach provides tenants with little scope to promote their own agenda and to have a significant impact on decision making.

In only one of the projects we studied did the management encourage the establishment of a tenants' committee, an important feature of the 'citizenship approach' (Hickman 2006, p.209) to tenant participation. This provided tenants with an opportunity to raise issues of greater concern and priority for them in an organised, and thus potentially more effective, manner.

Our focus groups themselves served as examples of the benefits of bringing tenants together to talk about their housing project. Such assemblies provide tenants with an opportunity to share their concerns and suggest and discuss possible improvements. As our study demonstrates, tenants can play an important role in identifying and reporting defects in the building that the provider may not be aware of. An organised tenants' committee can be particularly useful for tenants who—for personal or cultural reasons—do not feel comfortable about making complaints to management on their own.

A tenants committee could perhaps be supported by a web-based platform that would allow residents to report defects and monitor the provider's responses to the issues that are raised. Presently, in some projects, there is uncertainty amongst tenants about whether slow responses to them reporting defects are the result of the information not 'reaching the right person' or simply the right person being unresponsive. Such a web based system would also allow management to monitor their own organisation's performance across time and between projects. One important finding of the recent review of the operations of Defence Housing Australia concerned their extensive use of web-based platforms to generate significant benefits for both tenants and management (Phibbs & Hanna 2010).

More fundamentally, tenant engagement in various well-supported forms is an important means of promoting the accountability of socially-oriented housing providers. This is a particular issue for independent organisations that provide services which are partly or fully funded by governments, because such agencies can appear to have weaker accountability than democratically elected governments.

The desirability of tenant participation should be considered early on in the planning or design of a new project. As noted above, the provision of common spaces within the building makes tenants' participation much easier as a convenient place for tenants and management to meet. Indeed, organising focus groups in projects with no appropriate common space proved somewhat of a logistical challenge in the conduct of this research. At the same time, while there is no question about the value of face-to-face meetings, there are also other complementary ways for providers to engage their tenants in decision making, such as online social networks or websites that provide a virtual space for communication between tenants and providers.

# 5.11 Funding maintenance

The effective management of the building assets in affordable housing projects which are to be retained to yield lasting community benefits requires a long-term approach to maintenance. Figure 4 shows a typical long run maintenance expenditure profile highlighting the significant expenditures required later in the life of a residential building. (This expenditure profile is why owners often sell buildings before the significant costs that are incurred after year 20).



Figure 4: Typical long run maintenance expenditure pattern on residential building

Source: Compiled by authors from a range of projects

In our study, the Barwon project showed a best practice approach to estimating the performance of the building over the long term and allocating funds to a long-term sinking/maintenance fund in order to fund the periodic maintenance of the building. Some other providers commented that governments had trouble understanding the long-term nature of the sinking fund concept and were reluctant to allow for a maintenance allocation that was not spent in the funding year. This is unfortunate given the importance from an asset maintenance viewpoint of having funds available for the major replacement items in the life of a building. If this attitude prevails, the not-for-profit sector risk emulating the history of public housing in Australia where insufficient provision for maintenance over the life course of that asset base has resulted in significant under-maintenance of much of the housing stock (Kenley et al. 2010, p.9).

# 5.12 Review

This chapter has discussed a broad set of issues related to the conception, design, planning, development, finance and operation of affordable housing projects in Australia. The issues impacting on the performance of affordable housing projects have been found to arise from a combination of policy factors, market circumstances and the choices and skills of providers. Overall, the chapter demonstrates the complexity of developing and managing affordable housing, but also points to a range of strategies that will enable policy-makers and providers to address specific challenges, as appropriate to their role. More general implications of the findings from this study for the future of the sector are discussed in the final chapter.

# 6 SUMMARY AND IMPLICATIONS

Governments across Australia are increasingly turning to not-for-profit housing providers to help address shortages in the supply of housing affordable to low and moderate income households. Consequently, new affordable housing projects developed or procured by not-for-profit organisations have appeared in various forms and locations across the country. Previous AHURI research has examined some of the challenges faced by not-for-profit organisations involved in this rapidly emerging industry (Milligan et al. 2009a, 2009b, 2004; Lawson et al. 2010; Travers et al. 2010, 2011), and several not-for-profit providers have conducted evaluations of their own affordable housing projects. One of the challenges identified by these studies and evaluations is the tension between growth objectives, financial viability and the underlying social goals of affordable housing provision (Victorian Auditor-General 2010, p.vii). Building on existing research, this study has sought to extend knowledge about how contemporary Australian affordable housing projects are designed, financed, developed and managed. Another important aim has been to develop an appropriate tool for the evaluation of affordable housing projects. The evaluation framework presented in this report (Chapters 2 and 3) is underpinned by the concept sustainability, taking into consideration measures of financial viability, of environmental performance and social impact.

Chapter 4 of the report provided an overview of eight recently-developed affordable housing projects, outlining their main features and describing their design and development process and current operating practice. In Chapter 5, we discussed underlying issues that emerged from the empirical analysis, reflecting on the various factors influencing development outcomes in affordable housing projects. In this final chapter, we consider the implications of those findings for policy-making, practice and research (addressing research question 4). After briefly summarising our findings as they relate to the affordable housing sector in a general sense, the chapter is divided into three main sections. The first of these deals with the lessons that our case studies provide for the practice of developing affordable housing. The second looks at how further development of a policy framework for affordable housing might facilitate the delivery of affordable housing by not-for-profit providers. The third section identifies a number of issues and themes arising from the research that either require further investigation, or should be priorities for professional training and development.

Although our findings are based on a modest number of case studies, these were carefully chosen to reflect the diversity of affordable housing projects that are up-andcoming in Australia. We consider that these new findings, when combined with our knowledge of the not-for-profit sector and its policy and operating contexts and our previous research, offer a robust basis for the more general conclusions that we draw in this chapter. Nevertheless, changes in the policy, market and operating environments for not-for-profit developers since the case study projects were completed, inevitably means that some findings may no longer be as relevant.

# 6.1 Summary of findings

The findings of our study demonstrate that affordable housing can generally be distinguished from traditional social housing by its financing—a mix of public and private funding sources; design—a move away from standardised and institutionalised form and appearance; and its tenant profile—a mix of low and moderate income households. Nevertheless, the case study projects presented considerable variety in the form and scale of developments, their financing and tenant profiles. Variety stems from having a range of organisations with different skills and priorities and also reflects the flexibility of providers in responding to intermittent funding and site

specifics, as opposed to a 'one size fits all' approach to housing development. Our findings suggest that this flexibility has been useful in addressing the various challenges of affordable housing development; a process that is rarely straightforward. As we discussed in Chapter 5, key challenges range from planning barriers and restrictions, through to local opposition to development, financial controls, competition with for-profit developers for appropriate sites and specific policy and regulatory requirements.

In terms of their skills in housing development, it is apparent from the spectrum of providers represented in our sample, that significant capacity building related to self initiated projects has been occurring in the not-for-profit housing sector. Established developers are getting stronger outcomes and new developers are learning the ropes. Provided that this emerging capability is sustained through a regular pipeline of projects and that learning and development within the industry continues to be promoted and facilitated, the study findings support expectations that not-for-profits a well-positioned to make a growing contribution to the future supply of affordable housing in Australia.

The social outcomes in the eight projects varied significantly in many respects, but all of them fulfilled their core social objective of providing lower-cost housing of a high quality for low to moderate income households. The majority of tenants who participated in our study was pleased with their homes and reported no major affordability problems. Very few residents were dissatisfied or felt unsafe or vulnerable to eviction. Locations of projects were generally attractive and provided good accessibility to transport and services. The rent levels in the projects were generally higher than for social housing, but we identified some offsetting benefits such as an increased sense of pride among tenants, as opposed to the stigma that is often associated with social housing in Australia (Jacobs et al. 2011). In some of the case study projects, the higher rents were also partially offset by the inclusion of utilities costs in rent, or by passive or active ESD features that reduced the need for artificial heating, cooling, lighting or drying.

A major trade-off identified in most projects was the generally small size of units (both in terms of floor area and number of bedrooms), which had allowed providers to accommodate more households and, therefore, to return a higher revenue from rents. Some providers had also elected not to provide communal spaces due to concerns about their on-going cost and maintenance, or had limited on-site parking spaces in order to reduce construction costs or increase their development yield. One disappointing aspect was that only one provider had encouraged the formation of a tenants' committee to represent tenant concerns and influence decision-making related to the project and the organisation.

Environmentally, the projects in our sample generally performed at a level that exceeded minimum planning requirements, but even the best-performing projects were still some way from fulfilling the potential for significant environmental gains, particularly in terms of their passive design. It would appear that while many not-for-profit providers are eager to improve the environmental sustainability of their affordable housing projects, they are often not aware of the various ways that this can be achieved through passive design, as well as through active ESD features. An effort to reduce the demand for energy through passive design should be the primary concern at the planning and design stage, as we discussed in Chapters 2 and 5. Related to this point, several providers took the view that improvements in the environmental sustainability of their project would inevitably have entailed an increased construction cost. In many cases, however, significant improvements in

environmental performance could have been achieved for little or no extra cost, simply by making better use of sunlight, wind and vegetation.

Financially, all projects in the sample performed within established benchmarks for development or acquisition costs. The projects are currently operating on a financially viable basis and some produce surpluses that can be invested in further growth. It has not been possible to assess the longer term viability of most projects, either because some providers did not appear to have robust forward plans or because it is too early in the life of the project to determine this. Although most projects had been made possible through high levels of direct or indirect government funding, one project was financed entirely by not-for-profit providers, yielding a small number of affordable rental units from developer profits. Half the projects included private debt financing. This covered around 20 per cent of project costs in three cases and nearly 50 per cent for the fourth project which had received additional NRAS subsidies enabling higher debt servicing. Without this additional subsidy, leverage was guite low and clearly involved trade-offs in terms of access and affordability. Thus, if governments want to promote leverage models for supplying additional affordable housing, subsidy arrangements will need to ensure that these are socially equitable, as we discuss in Section 6.3.

Decisions made by providers about social, environmental and financial outcomes essentially involved them in a series of major trade-offs. Given the various social and environmental objectives of not-for-profit providers and the many financial, planning, site, policy and design challenges that they face in the development of affordable housing, such trade-offs would seem to be inescapable within current policy settings. In Section 6.2, however, we consider a number of strategies for approaching and addressing the trade-offs of the design and development process in ways that can deliver the best outcomes for tenants. We also suggest in Section 6.3 that at least some of the trade-offs identified in our case studies would not have been necessary had there been greater policy certainty for providers and more appropriate funding streams and mechanisms.

Perhaps one of the most disturbing findings from the study concerns the role of statutory planning authorities in the design and development of affordable housing. It would seem that the planning system is currently not helping the growth of the sector, with many providers recounting the ways that certain conditions or requirements imposed by planning authorities were unhelpful to them, increased their financial risk or made undertaking development more complex. Given the important contribution that the development of affordable housing can have towards the realisation of current urban policy objectives for more compact and mixed cities, planning policy should be seeking to facilitate the delivery of affordable housing, rather than acting as a hindrance to it. Possible strategies here might include the zoning of affordable housing sites for streamlined planning approval, relaxed development conditions and/or fees, greater support for not-for-profit housing providers in the face of resident resistance to their projects, or front-loaded consultation with communities to discuss the value of affordable housing and address resident concerns about its development. What might also be useful, in this respect, are 'good news stories' of affordable housing projects that have been developed, despite or without resistance, and which have subsequently contributed positively to surrounding areas-as discussed in Chapter 5.

# 6.2 Implications for practice

Our empirical findings provide a number of lessons for not-for-profit providers in the practice of developing affordable housing; both through examples of leading practice,

and through the various problems or challenges that were encountered and the ways there were addressed. Sustainability would seem to be a useful framework for providers when considering the objectives of new affordable housing projects at the early planning and design stage: all providers have strong social agendas, most show a concern for environmental performance and all operate within tight financial constraints. A sustainability framework encourages providers to aim high when planning a new project, to take into consideration multiple social, financial and environmental objectives, and to consider both immediate and long-term impacts. Just as importantly, a sustainability framework provides a guide for providers when considering the trade-offs that they will inevitably need to address between these competing objectives, and it provides some indication of the social, financial and environmental impacts of the decisions they make. Not-for-profit providers are pressed to achieve rapid growth in the number of households they accommodate, in order to address the severe shortage in affordable housing in Australia. Yet with limited resources, such growth will often require compromises in the design of the dwellings provided (e.g. the size of the units, availability of communal spaces, the quality of a project's location), their environmental impact (passive design and the provision of active ESD features) as well as social equity trade-offs (the proportion of low-income tenants accommodated).

# 6.2.1 Affordable housing design and development guidelines

In this respect, specific guidelines for the design and development of affordable housing could be useful. Often there is no clear-cut way to resolve the tensions described above, but our findings suggest that many providers would benefit from documented guidance that allows them to make more informed and considered decisions. Such a document could identify the main goals and the major trade-offs in the design and development of affordable housing, and could outline strategies for realising those goals and managing those trade-offs; particularly through examples of best practice. Model guidelines could be along the lines of the affordable housing guidelines in NSW (Housing NSW 2010), but with a focus on the practice of developing affordable housing, rather than operating requirements. Possible areas of coverage could include advice on what to look for in the location and layout of a site, the architecture and design of a building, and guidance on how to get projects through the planning process as smoothly as possible. Related to this, our findings also suggest that not-for-profit providers would benefit from training in architectural perspectives and the planning process, as we discuss in Section 6.4.

### 6.2.2 Skills development

While specialised guidelines would probably facilitate the process of developing affordable housing and foster significant ongoing improvement in the quality and sustainability of new affordable housing projects, experience is also a key factor. Many not-for-profit organisations have only recently moved into development and may lack the skills and experience in-house that are required for what is a challenging process. One of the key lessons emerging from our study is that inexperienced providers could and should (and did in one of our case studies) join forces with more experienced organisations when developing new projects. A wide spectrum of potential forms of collaboration ranging from informal consultation, through 'shadowing' and ongoing mentoring to formally established partnerships is available (Pinnegar et al. 2011). Some partnering is also occurring as a result of the actions of industry peaks or trade bodies, such as the Community Housing Federation of Australia and PowerHousing, but more could be done to enhance information and ideas-sharing between providers at the project level. For example, perhaps one of the peaks could establish and maintain a database of new development projects on their
website, with information collected on a range of standard criteria. This would assist providers to identify lessons from previous similar projects and foster intra-sector collaboration.

## 6.2.3 Tenant engagement

Decision-making at the planning and design stage should also be influenced by the experiences and priorities of existing tenants. While it can be difficult to consult prospective tenants in the planning stages for a new affordable housing project, providers can learn which features are most valued by their existing tenants through self-evaluation and independent evaluation of affordable housing projects, and through ongoing engagement with tenants in project management. This input can then be used to shape decision-making on the design and development of subsequent projects. The importance that many participants in our study attached to influencing decision-making in the project, feeling that they were being listened to by providers, and feeling part of a community suggests that regulators should be giving much more weight to these issues. In this context, it is also worth noting that several prominent international models of not-for-profit housing provision (including arms length management organisations and stock transfer housing associations in England, cooperative housing models in Europe and North America, and community land trusts in the United States and the United Kingdom) include tenants in decision-making roles as a right.

## 6.2.4 Asset management

Affordable housing developers have a responsibility to develop housing that will be cost effective to maintain over the long term—to reduce their operating costs, to ensure tenants continue to benefit from good quality housing and to increase the longevity of the affordable housing benefits that they provide to the community. Financial sustainability of projects in the long term can be adversely impacted by initial cost cutting (e.g. reducing parking). Similarly, over burdening a project with debt can result in a future revenue deficit for on-going maintenance. While the overall aim of the industry is to create a larger supply of perpetually affordable housing, refinancing of affordable housing and trading in the assets will need to come more to the fore as the sector expands and matures. International studies (see, e.g. Bratt et al. 1998) and the history of underinvestment in public housing assets in Australia (Hall & Berry 2007) show this tends to be a perennial issue. Analysis for this study also suggests that the industry may not yet be sufficiently cognizant of these portfolio management issues, and it might benefit from some training and development in strategic asset planning and management that is tailored to their mission and role.

## 6.2.5 New products

Finally, a key area for the development of new practice in Australia concerns the role of the not-for-profit sector in supporting pathways to home ownership for tenants and offering specific products (such as shared ownership or rent to buy) to help meet the aspirations of tenants who wish to achieve this. This is a well-developed function of not-for-profit providers in the UK, parts of Western Europe and North America that has considerable scope to expand in Australia. The short life span of NRAS subsidies (10 years) that are funding an increasing share of the affordable rental housing that is being built gives this more urgency.

# 6.3 Implications for a sustainable affordable housing policy

In their 2009 assessment of the state of play in the provision of affordable housing in Australia, Milligan et al. argued the case for having a stronger and better integrated policy framework for affordable housing, and suggested a number of priority areas of

policy development that would benefit not-for-profit developers of affordable housing in particular. Policy development concerned with planning policy and planning system support for affordable housing, efficiency in private fund raising, specific affordable housing standards, better designed public subsidies and guidance on rent setting were among the policy priorities that were highlighted at that time.

Through its detailed examination of individual projects, this study also shines a light on areas where further public policy development would be beneficial. Consistent with the findings of the 2009 report, it shows that a number of key areas warrant policy attention to further assist the sustainability of projects and providers, as discussed below. Aspects of policy identified in this section are those that have emerged from the project analysis and associated interviews with providers; as such they do not represent a comprehensive record of current policy issues related to affordable housing. For example, the long-term preservation of affordable housing developed with government assistance is of rising concern in Australia under current policy and program settings (especially NRAS) but this only emerged as a potential issue for one project among our cases.

## 6.3.1 Needs based planning for growth

Since 2008 affordable housing provision by not-for-profit organisations has escalated under the influence of large scale public investment programs, particularly NRAS and the SHI. However, there is no strategic planning framework at national, state or regional levels within which providers can establish their development programs. The genesis and mix of projects in this study shows that what is being provided is a result of mainly local drivers (both constraints and opportunities), which give results that may or may not be well aligned to the underlying range and clusters of housing needs across the community. While program funds that are utilised by not-for-profit providers often have particular priorities (e.g. reducing long-term homelessness), these are not coordinated across program or funding streams and can, therefore, lead to a mish mash of social outcomes having different social benefits. While not wanting to stifle opportunity driven and innovative responses, we consider that there is a need to better monitor affordable housing development outcomes across providers, and to foster needs-based planning among providers at least at a local or sub-regional scale. Addressing this issue will particularly assist with achieving social sustainability goals.

#### 6.3.2 Social benefits framework

The breadth and mix of potential responses to affordable housing needs also suggests that governments, providers and community stakeholders would benefit from having an agreed framework to assess the relative merits and priority of the spectrum of affordable housing models. For the projects illustrated in this study, one set of social benefits relates to providing affordable housing to those in need. Another set of benefits relates to broader health, educational and labour market effects that may arise from the way that affordable housing is provided. There are also recognised community and environmental benefits from developing high quality, well integrated affordable housing projects. Additional indirect benefits may arise through providers being able to provide avenues for households whose circumstances improve to move to other tenures (such as shared equity or rent to buy), although (as we have noted earlier) this role for not-for-profit providers has not yet developed in Australia. In the longer run, having a sustainable supply of affordable housing protects future generations from structural declines in housing affordability and increases the value for money that governments and providers obtain from their initial investment. Each project will not contribute to all these benefits to the same extent but overall it is

important for providers, funders and regulators to weigh up the various benefits to inform their decision-making on a common basis.

#### 6.3.3 Access to land

Obtaining access to a suitable site at an affordable price emerged as an issue for one particular project in this study. However, obtaining land for larger volumes of affordable housing by not-for-profit providers can be expected to be a key issue, especially in high value and volatile housing markets. Thus helping providers to obtain land for their developments at the lowest possible cost is a core area for government intervention under an affordable housing strategy that aims to optimise financial sustainability. Strategies available to governments to address this issue include providing surplus government land or redevelopment sites for this purpose, enabling counter-cyclical investment in land by not-for-profit providers, encouraging innovative forms of long-term land ownership (such as community land trusts and local housing trusts), land rent schemes (such as the one operating in the ACT<sup>17</sup>) and using planning mechanisms that support the inclusion of affordable housing in larger-scale residential developments. In the Australian context, there is also a major opportunity for the state land development agencies to deliver a regular stream of sites for affordable housing at modest prices, as also occurs currently in the ACT (see Davison et al. 2010).

## 6.3.4 Planning approval

The findings of this study strongly reinforce the negative financial and social consequences of experiencing planning problems in the development process. Elsewhere, we have made several specific suggestions about how factors contributing to planning approval delays (such as community opposition) could be better dealt with at a local level. However, in view of this crucial difficulty, we consider a strong case remains for having a state planning framework and targets for affordable housing. The need for planning policies to directly support the supply of affordable housing has been advocated for a long time in Australia (see e.g. Ministerial Task Force on Affordable Housing 1998) and various state governments have taken some initiatives, as summarised in Milligan et al. (2009). However, current approaches are not comprehensive and have been subject to push back, as has occurred most recently in NSW (NSW Planning and Infrastructure 2011). Thus there is a case for state planning authorities to closely monitor what is occurring with affordable housing developments and to continue to improve their strategies and processes for ensuring affordable housing projects across their jurisdiction proceed in a timely way.

## 6.3.5 Environmental performance

Several of the providers in our study demonstrated a strong desire to achieve optimal environmental outcomes from their projects. Yet their efforts were frequently constrained by financial considerations or a lack of awareness of the opportunities for both passive and active design features to improve environmental performance. Alongside the implications of this for practice and professional development (see discussion in Section 6.4), this suggests there is an important role for governments in promoting greater linkages between government environmental initiatives and the development of affordable housing. More concerted efforts should be made by governments to raise awareness of and build connections to existing initiatives such as rebate schemes for not-for-profit providers, and new environmental incentives

<sup>&</sup>lt;sup>17</sup> The land rent scheme in the ACT (see <u>http://www.revenue.act.gov.au/home\_buyer\_assistance/land\_rent\_scheme</u>) was originally designed for individual low income home buyers but the intention is to extend this scheme to include registered NFP housing providers (verbal advice, ACT Treasury).

could perhaps be developed that are targeted specifically towards affordable housing projects.

### 6.3.6 The impacts of private financing

In Chapter 5 we discussed leverage as a rationale for using not-for-profit providers of affordable housing and suggested ways in which the potential for leverage could be enhanced (Table 8). Leveraging private finance introduces an additional cost factor into affordable housing schemes. As we have seen, this can be offset in different ways but these will have varying implications for social outcomes, such as who is housed and their rental affordability, both initially and over time. There is an inherent tension between increasing reliance on private financing of affordable housing and optimising its social benefits. This is a key issue for governments to scrutinise and address, as highlighted by the Victorian Auditor General (2010). Below we discuss briefly two primary ways that tension could be moderated in the Australian policy context, namely through reducing financing costs and enhancing rental subsidies.

#### Affording private finance

Providers in this study had not faced major challenges in obtaining private finance for the projects that are featured. However, levels of private financing in projects were generally low and finance costs appeared to be at full market rates<sup>18</sup>. This reflects the present situation that there is not a sustainable national policy framework to support large scale, continuous, low cost private investment in affordable housing. Although NRAS goes some way towards meeting that goal, it does not provide a subsidy stream for financing affordable housing beyond 10 years and currently available subsidies will exhaust in 2015, among other limitations. Separate AHURI research (AHURI Project 30652) is considering the potential for a new funding instrument, such as a government-backed housing bond: such bonds could increase the amount of low cost private investment that could be channeled towards affordable housing, on an ongoing basis. This is a high policy priority, if the potential and capacity of the not-for-profit sector to contribute to the supply of affordable housing is to be realised and sustained.

#### Rent setting and subsidies for low income households

Affordable housing providers need to set their rents to cover their costs, which includes the costs of private financing (Milligan et al. 2009). However, to ensure the social goals of access and affordability are not compromised by the use of private financing, governments need to ensure that rent subsidies are well designed and appropriately targeted. As a general rule, projects in this study with private financing had less capacity to provide housing to the lowest income households and those with special needs than those that were wholly or substantially publicly funded. This bias could be reduced by enhancements to CRA for households in higher cost markets and households with special needs, as recommended broadly in a recent government review of taxes and transfers (the Henry Review) (Treasury 2010).

A rent-setting methodology which makes provider costs more transparent would also increase accountability to tenants and governments. Cost-based rent setting, which is a well-developed approach internationally for not-for-profit providers (see, e.g. Lawson et al. 2010) could help to address difficulties with current rent setting approaches, as discussed in Chapter 5.

<sup>&</sup>lt;sup>18</sup> The researchers were not given full access to the costs, terms and conditions of the loans utilised in the projects that were assessed.

# 6.4 Implications for research and professional development

The design and development of affordable housing is an area that warrants increased focus in both architectural education and professional development. Not-for-profit providers are increasingly engaged in the development of housing, and would benefit from the wider availability of architects with specialist training and experience in the design of affordable housing projects. Some of our findings suggest that providers themselves may also benefit from architectural and design training courses that are specifically focussed on affordable housing development, as mentioned in Section 6.2. One possible strategy might be postgraduate research opportunities related to affordable housing design sponsored by AHURI, in conjunction with not-for-profit providers. Additionally the profile of affordable housing conference stream at the Royal Australia Institute of Architects (RAIA) National Architecture Conference. The design of affordable housing could also be the basis for an RAIA interest group or professional development course.

There is also a need for planning education and professional development to focus on affordable housing as a specialist area. Affordable housing developed by not-for-profit providers has the potential to contribute positively towards planning objectives for the creation of more mixed communities and more compact cities—affordable housing projects are ideal for medium and high density development around transport nodes. Yet local opposition to its development potentially undermines the growth of the sector and the viability of individual projects. As we have seen recently in NSW through the changes to the Affordable Housing State Environmental Planning Policy (AH SEPP), local resistance to affordable housing remains an emotive and highly-charged political issue. Currently however, there is very little Australian research on the reasons why affordable housing is so frequently and so fiercely resisted, who it is resisted by, and how the concerns of these groups might potentially be alleviated through consultation, planning processes and better information about the nature of affordable housing.

There is also a pressing need for post-occupancy evaluation of neighbourhoods where affordable housing projects that were initially resisted by local community members have subsequently been developed. Did local concerns about affordable housing development eventuate? Have the attitudes of those who initially resisted affordable housing development changed and, if so, why? What effects have affordable housing projects had on the wider neighbourhood, if any? Such research could explore the role of community engagement and planning processes in facilitating the development of affordable housing, and could highlight 'good news stories' that could be used by not-for-profit providers and governments to allay community concerns about proposed affordable housing projects.

Broader evaluative research of affordable housing projects on a regular basis will be important to inform providers and policy-makers and assist with industry development. Based on the costs of this research project, we estimate that an independent evaluation, using an established evaluation methodology, would cost less than \$14 000 per project to conduct. This represents a very small fraction of project development costs.

Another area for research involves more specialised financial analysis with a focus on investigating how funding sources and funding mix (internal funds, loans, government grants, part grant/part internal funds etc.) impact on the financial performance of development projects up front and over time. One interesting metric that could be utilised to compare front end performance would be the costs per square metre after adjusting for building form and quality differences. This type of research will be most

useful when more standard funding models than those applied to some of the historic projects in this study are established, such as is occurring through programs like NRAS and social housing stock transfer.

Finally, as development of affordable housing by not-for-profits expands in Australia, systematic comparison of performance of the local sector with those reported in similar research elsewhere would be useful to tease out how such models are affected by different institutional, policy and market contexts.

#### 6.4.1 Development of industry performance benchmarks and standards

It is hoped that this report has provided a range of insights into the current performance of affordable housing projects and provided a framework for improvement of future projects. One strategy to help take the lessons forward may be to develop, in consultation with the sector, a series of industry performance benchmarks that could be used to develop a ratings system for affordable housing projects. The ratings system could be administered by an independent third party.

For example, the green building council which currently provides a star rating system on different types of buildings is currently piloting a Green Star Communities tool. The intention is that new developments would be able to apply for a Green Star Communities rating. The draft green star communities rating tool (Green Building Council Australia 2010) provides a score based on a number of different elements including liveability; economics; design; environmental performance and governance.

An affordable housing project ratings tool might follow a similar process and have ratings based on:

- → liveability (based largely on post-occupancy evaluations but including some other metrics relating to usability)
- → financial sustainability
- → design
- → environmental performance
- → tenant participation.

Elements of the various instruments used in this project could be applied to the development of the ratings tool.

## 6.5 Final comments

The principal aim of this research has been to raise awareness and understanding of the various challenges and trade-offs that shape the design and development of affordable housing by not-for-profit housing organisations, with a view to identifying both best practice and desirable shifts in current policy settings to facilitate the growth of the sector. By adopting a sustainability assessment framework, analysis of eight case studies has been used to showcase the high quality of affordable housing as an alternative to both public or private rental that is becoming available to lower income households in Australia, albeit in small numbers so far. Residents of the particular affordable housing projects that were surveyed were, in the main, satisfied with and proud of their homes. The project analysis also demonstrates clearly the increasing skill and capacity of not-for-profit providers, as well as the diversity and flexibility of their sector more generally. However, it also shows that the development of affordable housing remains quite challenging and subject to a range of risks. Within current policy settings, providers face a series of major social, environmental and financial trade-offs, especially at the planning and design stage, which was the focus of this research. While we have suggested a number of strategies for negotiating these

trade-offs and enabling providers to make more informed decisions about them, it seems to us that without at least some of the policy shifts and improvements to practice that we have suggested above, optimal sustainability outcomes for tenants and the affordable housing industry will not be achieved.

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# **APPENDICES**

# Appendix 1: Housing design quality survey

# How sustainable are Australia's contemporary affordable housing projects?

Housing Design Quality Survey

### BACKGROUND INFORMATION

Name of provider		
Name of project		
Address		
NUMBER AND TYPE OF	DWELLING UNITS	Number of units
Total number of dwelling	s at the project	
Total number of affordab	le rental dwelling units	
Please enter the total nu	mber of dwelling units at the project to which the	
following apply		
Apartments		
Detached dwellings		
Semi-detached dwellings		
Attached dwelling/townh	nouses	
Boarding house		
Studio / bedsitter unit		
One bedroom unit		
Two bedroom unit		
Three bedroom unit		
Four bedroom unit		
Five bedroom unit		
Six bedroom unit		
Seven or more bedroom	unit	
Part of a one storey build	ing	
Part of a two storey build	ing	
Part of a three storey buil	lding	
Part of a four storey build	ling	
Part of a five storey build	ing	
Part of a six storey building	ng or higher	

1. LOCATION	YES	NO
	<u> </u>	
Support services and schools		+
Is there a healthcare facility or GP within 1km?	+	+
Is there a café restaurant or public house within 1km?	+	+
Is there a place of worship or community hall within 1km?	+	+
Is there a pre-school/nursery within 1km?		+
Is there a primary school within 1km?		+
Is there a secondary school within 2km?		+
Retail		1
Is there a local retail outlet (food or newsagent) within 1km?		1
Is there a post office within 1km?		
Is there a cash point or bank within 1km?		
Is there a major commercial centre or high street within 2km?		
Leisure		
Are there <u>play</u> facilities for children within 1km?		
Is there public open space within 1km?		
Is there a leisure/sports facility (pool or gym etc.) within 1km?		
Public Transport		
Is there a public transport stop within 400m?		
Liabilities (minus scores)		
Is there a refuse tip within 500m?		
Is there a polluting industry within 500m?		
Is there a derelict site within 500m?		
Are there high-voltage overhead power lines within 500m?		
Are there polluted waterways within 250m?		
Noise Sources (minus scores)		
Is there a bus route or major road within 20m?		
Is there a major road within 50m?		
Is there a freeway within 150m?		
Is there a railway within 150m?		
Is there industry generating noise within 150m?		
Is the site in a 25 ANEF (Australian Noise Exposure Forecast) zone?		
TOTAL		
TOTAL SCORE		

2. VISUAL IMPACT, LAYOUT, LANDSCAPING	YES	NO	N/A	Criteria for n/a
	(+1)	(-1)		
Is the design specific to the scheme?				
Does site scale and concept fit well with surrounding				Surrounding
area?				environment is
				of poor visual
				quality
Are buildings in context with local buildings, street				As above
patterns (form, mass, detail, materials)				
Do the buildings enhance the local environment?				
Are site elements such as lighting, street furniture, street				Urban infill
names, benches etc. well detailed and co-ordinated?				facing existing
				streets
Are external elements associated with dwellings well				
detailed and co-ordinated? (walls, fences etc.)				
Is it easy to understand how to enter and move about				Infill site, design
the site?				of this falls
				outside the site
Are streets defined by well-structured building layout so				
that streets do not dominate?				
Do buildings have architectural quality?				
Is overlooking of habitable rooms avoided? 10m away				
from other buildings/spaces				
Are buildings arranged to protect residents from external				
noise?				
Does the orientation of dwellings maximize opportunities				
for passive heating/cooling?				
Is the number of dwellings that share access (e.g. houses:				
driveway or courtyard; flats: landing or corridor) always 5				
orfewer				
Are windows shaded by plants or design features?				
Is the number of dwellings that share access from a cul-				
de-sac or vertical access route (apartments) always 15 or				
fewer				
Is open space within the project well-designed in shape,				No open space
dimension and location?				
TOTAL				
TOTAL SCORE				

3. OPEN SPACE AND CAR PARKING	YES (+1)	NO (-1)	N/A	Criteria for
a. PUBLIC OPEN SPACE	(12)	()		1,4
Are there hard surfaces or soft landscaping in the		_		
project? If no then proceed to Question 3b				
Is there varied planting to create visual interest?		_		
Is planting related to climatic conditions to provide wind				
protection/shade etc.				
Are there trees in public areas?				
Has a gualified landscape architect been used to create				No
or assess the landscape design?				opportunities
Is landscaping able to be easily and cost effectively				
maintained?				
Are spaces between buildings planned for specific uses?				No spaces
Are boundaries between public and private spaces clear?				
Is casual intrusion by non-residents beyond clearly				
defined public areas discouraged e.g. using barriers,				
gates or concierge systems				
Do unit boundaries consist of walls or railings to deter				
intruders and vandalism?				
Is main entrance visible and are hiding places avoided?				
Does building grouping and window positioning provide				
passive surveillance?				
Are halls and corridors well lit?				
Are play areas for children provided?				
Are there private sheltered spaces with access to the				
northern sun in winter?				
b. PRIVATE OPEN SPACE				
Private open space per dwelling (average)				
Characteristics of private open spaces. Number of units	YES	NO	N/A	Criteria for
to which the following apply	(1 x %)	(-1x %)		n/a
Robust walls or fences				
Lockable storage areas				
Lockable gates				
Facilities for water capture and recycling				
Outside tap				
Clothes drying facilities				
c. CAR PARKING. Please enter the number of	No. o	f units	N/A	Criteria for
units to which each of the following apply				n/a
On-street car-parking only	-1 x %			
Off-street car-parking	1 x %			
Grouped parking identified with dwellings it serves	1 x %		1	No parking
Car space is secure	1 x %			No parking
Clearly defined visitor parking provided	1 x %			
TOTAL				
TOTAL SCORE				

4. ROUTES AND MOVEMENT	YES (+1)	NO (-1)	N/A	Criteria for n/a
Are road, place and building names/numbers clear, visible and legible?	1			
Are public spaces connected by clear and well-lit hard surfaces?	1			No public spaces
Where ramps are used are handrails provided?	1			No ramps
Are there rails for essential steps and stairs?	1			No steps/stairs
TOTAL				
TOTAL SCORE				

5. UNIT TYPE AND LAYOUT Bedsitter/studio (>35 sq m) 1 bedroom (>50 sq m) 2 bedroom (>65 sq m) 3 bedroom (>95 sq m) 4 bedroom 5 bed	Average gross floor area for each unit type (sq m)	Nun	nber of rooms
Bedsitter or studio			
1 bedroom			
2 bedroom			
3 bedroom			
4 bedroom			
5 bedroom			
Please enter the number of units in w	hich the following features are in	ncluded	Number of units
Washing machine position			1 x % units
Broom cupboard/tall storage space			1 x %
Airing cupboard			1 x %
Wheelchair turning space			1 x %
External storage space			1 x %
TOTAL			
TOTAL SCORE			

6. NOISE AND LIGHT	Number	N/A	Criteria
Please enter the number of units to which any of	of units		where N/A
the following apply			maybe used
Noise reduction characteristics exceed Building Code of	1 x %		
Australia requirements	units		How?
Living/sleeping areas not adjacent to shared internal areas	1 × 96		
Bedrooms not adjacent to neighbour's bath/living areas	1 x %		
Windows more than 3m horizontal distance from public	1 × %		
route/space			
Noisy communal equipment more than 3m from	-1 x %		No noisy
doors/windows			communal
			equipment
Effective buffer between building and any noise source	1 × %		No identified
identified earlier			noise source
Double/Triple glazing	1 × %		
Quality of light, aspect and prospect			
Principal rooms have windows that do not look out on wall	1 x %		
within 3m			
Kitchen has a window	1 x %		
All bathrooms have a window	1 x %		
TOTAL			
TOTAL SCORE			

7. ADAPTABILITY AND ACCESSIBILITY		How do the units
Please enter the number of units to which the		exceed the
following apply		requirements?
Meets Australian Standard 1428.1-2009 Design for		
access and mobility		
Exceeds Australian Standard 1428.1-2009 Design for	1 x %	
access and mobility		
Meets Australian Standard 4299-1995 Adoptoble		
Housing		
Exceeds Australian Standard 4299-1995 Adoptable	1 x %	
Housing		
TOTAL		
TOTAL SCORE		

8. ENVIRONMENTAL SUSTAINABILITY Please enter the number of	Number of
units in which the following features are incorporated	units
Energy efficiency	
Meets Building Code of Australia requirements (or equiv.)	1 x %
Exceeds Building Code of Australia requirements (or equiv.)	1 x %
Dwelling features	
Roofinsulation	1×%
Renewable energy source	1 x %
Water meters	1 x %
Water efficient taps and showers	1 × %
Water efficient toilets	1 x %
Grey water recycling	1 x %
Water butt	1 x %
Room temperature control	-1 x %
Designed to incorporate convective ventilation	1 x %
Designed to allow cross-ventilation	1 x %
Thermal mass responds to local climatic conditions (High thermal mass construction in	1 x %
regions with significant diurnal range. Low thermal mass construction in regions with low diurnal range).	
Effective shading	1 x %
Maintenance and materials	
Pre-finished surfaces such as brick and cladding maximised, applied surfaces minimised	1
Lightweight timber exteriors	-1
Use of building materials with low embodied energy (e.g. concrete)	1
Locally-sourced materials	1
TOTAL	
TOTAL SCORE	

## Any other comments:



# **Appendix 2: Tenants survey**

6 October 2010



BUILT ENVIRONMENT

Dear resident,

I would like to invite you to participate in a university research project about the sustainability of Australia's new affordable housing projects.

Choosing to participate in this survey is an opportunity for you to contribute to research about the design and management of affordable housing projects. The questionnaire should take no longer than **10 minutes** to complete and can be returned with no cost to you by using the prepaid envelope enclosed.

Your housing provider will not be able to see your individual responses which will be collected by the research team at the University of New South Wales. <u>Your response and personal details will be kept completely confidential</u>. The Information Statement attached at the end of this survey outlines how the information you provide will be used as well as how your confidentiality will be assured. Continuing with the survey indicates that, having read and understood the information provided in the information statement, you have decided to participate.

Findings from this research will be available online on its completion on the website of the Australian Housing and Urban Research Institute (AHURI) at: www.ahuri.edu.au

If you have any questions, please do not hesitate to call or email llan Vizel, our contact person for this project at i.vizel@unsw.edu.au or 02-9385-6037.

I look forward to receiving your response, and would like to thank you for your time.

Sincerely, Vivienne Milligan City Futures Research Centre Faculty of the Built Environment University of New South Wales

# Affordable housing tenants' survey



BUILT ENVIRONMENT

1. How long have you lived at your current address?

Less than 6 months 6-12 months 13-24 months 25 months or more

How satisfied are you from the following features of the housing project in which you live:

	Very satisfied	Satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Very dissatisfied	I
The way you are treated by the housing provider's staff	0		0	D	0	
The overall design of your home	0	0	O	D	0	
The overall condition of the inside of your home	0	D	0	D		
The overall condition of the outside of your home	D	0	D	D	0	
The amount of privacy your home has	0		D	D	0	
Safety in your home	0	0	O	O	0	
Exposure at home to noise from outside	0	0	0	0	0	
Access to natural light at home	0	0	0	0	0	
Ability to cool home when needed	0	0	0	0	0	
Ability to heat home when needed	0	0	0	0	0	
Ability to ventilate home when needed	0	0	0	0	0	

	Very satisfied	Satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Very dissatisfied
The overall condition of the building, including public areas	0	0	0	0	Ο
The maintenance service you have received since moving into your home	0	0	0	D	0
Ability to make adaptations to the inside of your home when needed	0	0	0	0	D
The social atmosphere in the housing project	0	0	0	0	0
Your overall satisfaction with the location of your home	0	0	0	0	0

3. How satisfied are you from the availability, accessibility and quality of the following services in your local area?

	Very satisfied	Satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Very dissatisfied	Not Applicable
Aged Care Services	0		0	0	0	0
Public Toilets, Bus Shelters and other amenities	0	0	0	0	Ο	0
Police and security		0		0	0	0
Community events	0	0	0	0	0	0
Health services	0	0	0	0	0	0
Libraries and Information Services	0	0	0	0	0	0
Parks, Gardens & Playgrounds	0	0	0	0	0	0
Sport and Recreation	0	0	0	0	0	0
Parking	0		0	D	0	0

	Very satisfied	Satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Very dissatisfied	Not Applicable	
Youth Services	D	0	0	0	0	0	
Public transport	0	0	0	0	Ο	0	

 In the last three months, have you been involved in any of the following activities? Tick all that apply

Sporting / Recreation Group	0
Religious group	0
Arts / Crafts group	0
Environmental group	0
Seniors group	0
Neighbourhood Residents association or committee	0
Housing project tenant's committee	0
School Council	0
Community College / Adult Education	0
Local neighbourhood events	0

How many people (including yourself) in your household fit into the following age groups? (Please write the number in the box next to each relevant age group)

0-4 years old	
5-17 years old	_
18-34 years old	_
35-54 years old	_
55-64 years old	
65 years or older	_

Are you or anyone in your household of Aboriginal and/or Torres Strait Islander descent?



- 7. In which country were you born?
  - a. If you were born overseas, how many years have you lived in Australia?

Less than 4 years	0
4-9 years	Ο
10-19 years	Ο
20-29 years	Ο
30 years or more	0

8. What is the main source of income of your household? (Tick only one option)

Wages/salary	Ο
Age pension	Ο
Disability pension	Ο
Newstart allowance (Unemployment)	0
Other government pension/benefit	0
Noincome	0
Other (please specify)	Ο

14. Do you or any other member of your household own a car?

Yes	
No	0

15. What is your household's weekly rent?

# Participation in a focus group and a prize draw

16. A focus group will be held with a number of your neighbours. This will be a 90 minutes discussion facilitated by one of our researchers. Participants in the focus group will enter a draw for one of four \$50 Coles gift vouchers. Would you like to participate in the focus group?

Yes	0
No	0

If you answered yes, please provide your contact details below.

Name;\_\_\_\_\_

Full address;....

Telephone no.:

Thank you for taking the time to fill in the survey!

# **AHURI Research Centres**

AHURI Queensland Research Centre AHURI RMIT Research Centre AHURI Southern Research Centre AHURI Swinburne-Monash Research Centre AHURI UNSW-UWS Research Centre AHURI Western Australia Research Centre AHURI UWA Research Centre

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