

AGED CARE IN AUSTRALIA

A report prepared for
Carabott Holt Architects

FORWARD

Authors

Darragh O'Brien
BArch Sc. Dip Arch (Hons.1)
PhD (pending)

Francis Grey
B Econ. B A.

Design

Joel Collins
BDes Vis.Comm (Hons.1)
MDes (Research)

This report has been prepared by the Architectural Research Consultancy (ARC) on behalf of Carabott Holt Architects. The background research included a review of:

- The American Institute of Architects (AIA): Design for Aging review (2009)
- 9 Australian Housing and Urban Research Institute (AHURI) papers
- 5 Design text books
- 215 peer reviewed, academic papers

For further information, please see the References section.

In addition to the above, there are three significant publications that stand out as being highly significant within the Australian context, and they are summarised in this document:

- The Australian Government Department of Health & Aging technical paper on: The changing dynamics of residential aged care (April 2011).
- Olsberg, D. and Winters, M. AHURI report No. 88: Aging in place: intergenerational and intrafamilial housing transfers and shifts in later life (October 2005).
- The Productivity Commission Inquiry Report: Caring For Older Australians (June 2011).

This report is intended to inform preliminary discussions about existing and future trends in Aged Care Housing, and is based entirely on a limited review of existing literature. As such ARC cannot be responsible for the accuracy of the original research included here. Although all care and attention has been taken in the analysis of existing data, the scope of the review is also limited. Further research and analysis is essential before any significant investment is considered.

The report is also intended for internal use by Carabott Holt Architects and therefore the images used do not have copyright clearance for wider publication. The written component of this report is copyright of the Architectural Research Consultancy (ARC).

CONTENTS

04	Introduction
06	The Evidence
	<i>Department of Health and Aging – Technical paper (2011)</i>
	<i>AHURI report No. 88: Aging in Place (2005)</i>
	<i>Productivity Commission Inquiry Report (2011)</i>
17	The Economics of Aging in Place
22	New Strategies
28	Case Studies: Victoria.
31	Conclusion
34	References

The aging population is increasing as a percentage of the whole population.

The majority of elderly Australians wish to age in their own homes—in their own neighbourhoods.

Overall costs of aged care will escalate due to increased demand.

It is currently estimated that the population in Europe will grow steadily older, to the point that by 2050 there will be as many adults over the age of 60 as there will be between 20 and 59 years of age.¹ In Australia, the Productivity Commission Inquiry (PCI) has estimated that by 2050, over 3.5 million Australians will use aged care services each year.

With an increase in the number of people who reach advanced old age, the risk of them becoming dependent on ongoing nursing care also increases disproportionately. This problem is compounded because the aging of society will be accompanied by a parallel decline in the level of support provided by families. Fewer children are being born. Many have moved away from their home environment to find work, while the older, less mobile generation remains where they are. In addition, the proportion of women who work has risen, resulting in less capacity for informal assistance.² In countries where professional services are widely available, older people are showing a strong preference for non-family support—especially when they require personal or long-term care. Most gerontologists agree that in future, the needs of dependent elders will be met primarily by professional carers.³

As a consequence, it has now widely accepted that not only will the number of dependent elderly people rise; the cost of services for the elderly will escalate rapidly, caused by an increased demand for affordable care and support services. In Australia, the Productivity Commission into aged care services published its findings in June 2011 and has highlighted the following:

- The aging population is increasing as a percentage of the whole population.
- The majority of elderly Australians wish to age in their own homes—in their own neighbourhoods.
- Evidence is mounting about the health benefits of strong social/ community connections.
- In cost-benefit terms, mandatory application of universal design standards for all new housing is not warranted however, voluntary adoption should be encouraged.

1 German Federal Statistical Office, 11'' coordinated population projection, in part interpolated (2006); empirica

2 Krings-Heckemeier M.T. (2009) New Forms of Living for the Elderly; in Feddersen and Lütke (eds) (2009) pp.22-26. A contention supported by Gaymu et al (2007); Spiess and Schneider (2003) & Ettner (1995)

3 Gaymu et al (2007); Daatland and Herlofson (2003).

Private nursing home occupancy rates continue to drop.

Location has become more important than emotional attachment to home.



A review of additional research also indicates the following significant trends:

- Occupancy rates in Aged care homes have dropped significantly in private aged care homes.
- The age of entry into aged care homes has increased, but the length of stay remains the same.
- The current aging population places more importance on location and lifestyle than they do on an emotional attachment to 'home'.

In this document, we hypothesise that the desire to age-in-place represents a willingness to embrace change and a growing desire for autonomy in later life, while preparing for our increasing frailty, health and safety issues as we advance into old age. Available evidence suggests that the trend in occupancy rates of private aged care homes will continue downwards. The question remains: what purpose-built housing strategy will provide elderly Australians with the capacity to balance their needs and desires?

As a result of our literature review, four significant publications stand out as being highly significant within the Australian context, and they are summarised in this document:

- The Australian Government Department of Health & Aging technical paper on: *The Changing Dynamics Of Residential Aged Care* (April 2011)
- Olsberg, D. and Winters, M. AHURI report No. 88: *Aging In Place: Intergenerational And Intrafamilial Housing Transfers And Shifts In Later Life* (October 2005)
- The Productivity Commission Inquiry Report: *Caring For Older Australians* (June 2011)
- Commonwealth of Australia: *Living Longer, Living Better*, Canberra (2012)

2.1.0 THE DHA TECHNICAL PAPER (2011)

This paper concentrates on two significant trends that have developed since the turn of the 21st century:

- There has been a steady decline in occupancy rates for aged care homes.
- There has been an increase in age of entry to residential aged care during the same time period

2.1.1. Occupancy Rates

An aged care home's occupancy rate is the proportion of operational places that are occupied by care recipients. Occupancy rates are driven by demand and supply side factors. According to the Department of Health and Aging, the demand side factors include the size of the population in an aged care home's catchment area that require residential aged care, which in turn depends on the age and frailty profile, and socio-economic characteristics, of the population in the catchment area. Supply side factors include the quality of, and prices charged by, the aged care homes as well as the extent of competition (number of residential places servicing the catchment area) and the presence of substitute services (for example, the number of community care packages servicing the catchment area).⁴

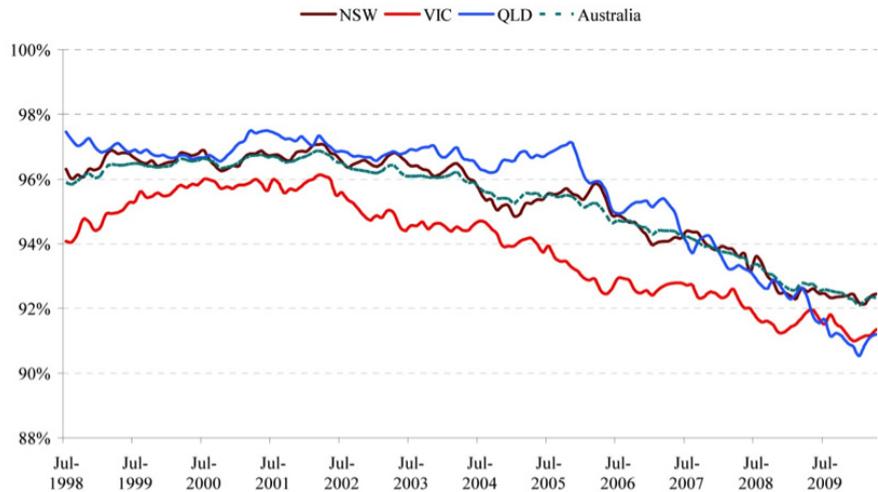
Over the last decade, the average level of occupancy for aged care homes has been declining. As Figure 1 indicates, across Australia there was a

⁴ Australian Government Department of Health & Aging. Excerpts from a technical paper on "the changing dynamics of residential aged care" prepared to assist the Productivity Commission Inquiry *Caring for Older Australians*. April 2011

small increase in average occupancy rates between July 1998 (95.9 per cent) and March 2002 (96.9 per cent), with a steady decline since then to an average of 92.3 per cent in April 2010.

Figure 1: Average Occupancy Rate: Monthly. NSW, VIC, & QLD July 1998–April 2010

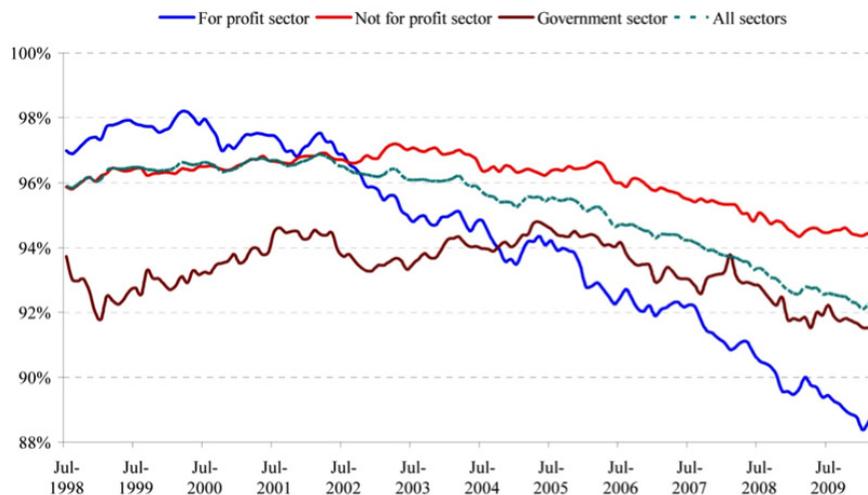
Source: Department of Health and Aging (2011)



The decline in occupancy rates has not however been uniform across the residential aged care sector. As Figure 2 shows, the decline has been most dramatic in the for-profit sector, where occupancy peaked in 98.2 per cent in March 2000 and has been declining steadily since April 2001, with an average decline in occupancy since then of 1.0 percentage points per year. Currently, the average occupancy rate in the for-profit sector is 88.9 per cent. Over the last twelve months, occupancy rates in for-profit sector have, on average, been 3.4 percentage points below the national average.

Figure 2: Average Occupancy Rate: Monthly by Sector. July 1998–April 2010

Source: Department of Health and Aging (2011)



Increasing age at entry will result in demand for services that are not increasing as rapidly as the population is aging.

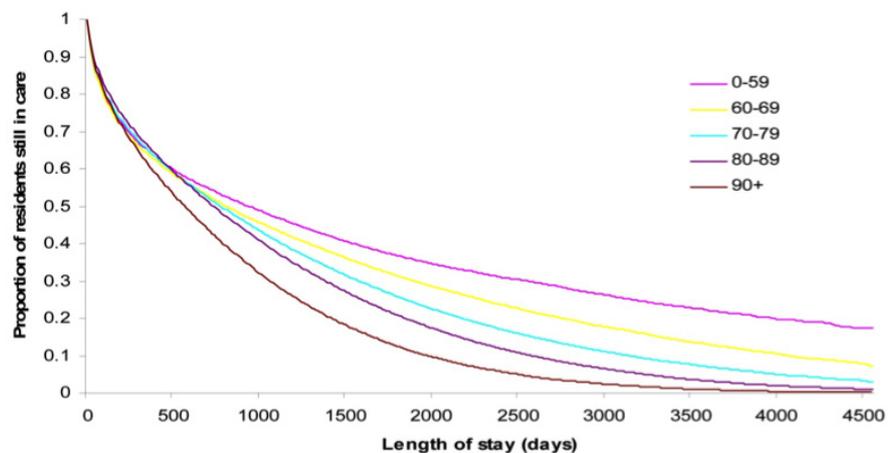
2.1.2. Entry into Residential Care

In 1997-98 the average age of entry into residential aged care for a female was 82.8 years; by 2008-09 this had increased to 84.3 years. For males, over the same period, the average age of entry increased from 79.5 years to 81.6 years. The inter-quartile range of the age at entry has been narrowing. While both the lower and upper quartile ages at entry are increasing, the lower quartile is increasing at a faster rate than the upper quartile. The DHA report concludes that *increasing age at entry will result in demand for services that are not increasing as rapidly as the population is aging.*

Underlying the increasing age at entry has been a change in the age-specific first ever admission rates that have been decreasing at younger ages for both males and females.

Figure 3: Length of Stay in Permanent Aged Care by Age of Entry (days)

Age at Entry	25th Percentile	Median	75th Percentile
0-59	160	930	3150
60-69	150	800	2280
70-79	170	770	1840
80-89	190	730	1590
90+	160	570	1220



Although the entry into residential care has increased, the length of stay over the period 1997-98 to 2008-09 has been, on average, virtually constant. According to the DHA report, (Fig. 3) the median length of stay was about

700 days for people admitted in 2007-08, and there has not been any significant change in the median over time. There is little evidence to suggest that length of stay is affected by being born in Australia or overseas. The median length of stay is 720 days for residents born in Australia and 680 days for those born overseas. (DHA report p.24)

Although there is widespread acceptance of a significant and sustained increase in the global aged population, it also appears that people are entering into residential care much later in life. Although this may suggest a potential reduction in demand for aged care services, because of increased longevity due to improved health, the time spent in care remains primarily the same. Demands on the care system will therefore increase exponentially with the increase in population.

The decline in occupancy rates, coupled with delayed entry to nursing homes is offered as evidence of an increased desire for autonomy amongst the aging population. It is apparent from the following research paper that this trend is likely to continue in coming years.

2.2.0 AHURI REPORT NO.88: AGING IN PLACE: INTERGENERATIONAL AND INTRAFAMILIAL HOUSING TRANSFERS AND SHIFTS IN LATER LIFE. (OLSBERG AND WINTERS, 2005).

This significant project, involving more than 7,000 Australians aged over 50 across the country, provides strong evidence of a significant shift in the attitudes of our current aging population. According to this study, the emotional concept of 'home' has become less important than the benefits of 'place'. Location is now the primary symbol of identification because it provides access to "those cultural sites where lifestyles can be enjoyed and displayed and cultural capital can be accumulated." (p.20)

Although two thirds (64.6%) of respondents in this study indicated that they wanted to stay in their present home and wanted to 'age in place', when asked about the reasons for remaining in their present home, surprisingly few (20.9%) spoke of emotional attachment to the home itself. Most respondents simply wanted to remain in the *same location*—pleasure in and familiarity with the area and its facilities were regarded as important factors contributing to people's day-to-day lifestyle. Home-owners, both with and without a mortgage, were more inclined to wish to stay (p.34). Many respondents stated that they were anxious about moving, citing the following reasons to stay in place:

A study of 7000 Australians over the age of 50 provides evidence of a shift in attitudes to aging.

Location and lifestyle has become more important than emotional attachment to home.



- Remaining in their home was one way not to have to make difficult decisions about making a move to a retirement village.
- The problem of accommodating the household effects accumulated over many years was considered to be significant (p.36)

“I want to stay in my home as long as I can. The new units are too small and I have so much stuff that I have accumulated over the years and would not want to part with.” — male (68 years)

“If you are not moving, rising prices can only enhance the value that can be dispersed eventually to the kids and grandkids.”
—female (62 years)”

“People say we should downsize to make it easier for our children, but we are not about sitting in a tidy house waiting for death. We have hobbies, particularly our garden, that keep us happy.” — male (67 years) (p.36)

2.2.1 Intentions To Move

Despite some understandable concerns, many respondents had expectations about moving in the future. More than one third of respondents (34.8%) indicated that they expected to move in the foreseeable future. Housing tenure was particularly important, with more than two thirds (68.8%) of those renting privately expecting to move and almost half the home-owners with a mortgage also expecting to move (44.3%). Similarly almost half the Baby Boomers in the 50-59 age cohort (42.1%) expect to move, as will those still living with family (42.3%) and those still working full-time in the paid workforce (47.2%). Across all categories, those who expected to move considered that they would move either to a smaller house or to move location. Respondents who live alone (28.3%) and older respondents (51.4%) stated that they expected to move for reasons of health or disability—

“We intend to move to a two bedroom unit within the next 4 years. We want to be in walking distance of some shops, with a hospital not more than 10 minutes away and on a flat site. I don’t want to leave this area but my husband would like to move away from this busy suburb and this is causing a bit of conflict at present.” — female (69 years) (p.42)

Almost 35% of all respondents had expectations about moving in the future.

Nearly half of all baby boomers expect to move to a smaller house or more desirable location.

2.2.2 Moving in With Children

The prospect of moving in with children provoked remarkably consistent but negative responses from participants in this study—both in the national survey, subsequent focus groups and internet chat sites. Very few respondents (4.2%) stated they had or would move to live with family or to downsize to release money to help children or other family (2.8%... years) (p.45) One of the limitations of this research, however, has been the small numbers of participants from culturally and linguistically diverse backgrounds. It is possible that the response to this topic would have been more positive if the sample was more representative. This is recognised as a common problem in research where participants speak English as a second language. Nevertheless, the shift away from a traditional dependence on children towards a more autonomous form of aging is highly significant.



2.2.3 Perceived Benefits of Aging in Place

Baby Boomers (respondents under 59 years of age) indicated that they are comfortable with moving for lifestyle reasons as opposed to wanting to stay in one place for whatever reason. Indeed, for them the notion of aging in place was likely to conjure up images of immobility and old age, something which is not yet part of their cultural vocabulary. (p.79)

The research casts significant doubts over widespread commonsense perceptions that older people are generally resistant to change.

Interestingly, this research casts significant doubts over widespread commonsense perceptions that older people are generally resistant to change and residential mobility. One in three of all respondents had moved in the previous five years, with the largest proportion moving location. One in three of all respondents also said they expected to move in the foreseeable future. The most outstanding feature of responses from this mainly home-owning population was the almost uniform definition of the home as a conduit to a person's future lifestyle choices. Home-owners spoke of their home offering them a diversity of choices for the future, four out of five indicated that owning a home means that one is free to make decisions about how one lives and that it represents an investment for the future. Three quarters also saw the home as an asset that they could sell or borrow against to provide for their needs in old age, whether in the form of basics such as healthcare or for lifestyle pursuits. (p.80)

The shift Olsberg and Winters are observing is from the home itself, as the material and symbolic foundation of personal and family identity, to the notion of 'home as location', "a place which provides access to cultural sites where lifestyle and consumption can be enacted, witnessed and shared by

Those who move most successfully were those who had moved to a place which was familiar to them.

Around 83% of Australians over the age of 65 own outright—or are in the process of buying—their own homes.



Many respondents expressed reluctance about purchasing a unit in a privately-operated retirement village.

others. In short, the shift is from home ownership as an end in itself to home ownership as a means to an end, in this case access to lifestyle.” (p.81)

Many participants commented, their house move in the past represented a lifestyle decision, moving as some said to “a better place” or to “warmer weather” or to “access better recreational facilities.” *Those who had moved most successfully were those who had moved to a place which was familiar to them;* because of acquaintances in the area—friends who had already moved there and encouraged them to do the same.

2.2.4 Attitudes to Retirement Villages.

According to the PCIR, the vast majority (around 83 per cent) of Australians, aged 65 and over, own outright —or are buying—their home, while about 14 per cent are renting (p.276). The commercial priorities and authoritarian management structures of private retirement villages were seen as particularly unacceptable to many of these respondents (p.97). Nursing homes were regarded as anathema to be avoided at all costs. This research demonstrated that while those people who had moved to a retirement village were satisfied with their choice, many respondents expressed a general reluctance about purchasing a unit in a privately-operated retirement village for reasons such as:

- Distrust about the terms and conditions of entry to a retirement village.
- The standard of management of retirement villages.
- The perceived lack of control and loss of independence by residents and unit holders.

Most particularly there was distrust expressed concerning the lack of regulation of service provision and of maintenance payments to villages. Through new initiatives announced in April 2012, it is apparent that the Australian Federal Government intends to address this situation however, with adequate care support, it appears that the vast majority of elderly people choose autonomy over the safety of segregated facilities.

2.2.5 A Return to Community

According to Olsberg and Winters, the phenomenon they have observed can be seen as a return to the concept of community. *“This is not the traditional family-based neighbourhood community; rather it is a set of emerging consumer classes, groups of people who find commonality in lifestyle and consumption patterns.”* This finding is borne out by the productivity Commission and by new trends developing in Europe and the United States.



This is not the traditional family-based neighbourhood community; rather it is a set of emerging consumer classes, groups of people who find commonality in lifestyle and consumption patterns.

What is clear is that the new elderly do not want to 'disappear' from the world into nursing homes of the homes of their children.

The most successful moves were acknowledged by respondents who had formed 'intentional communities'. Those new consumers pride themselves on their cultural literacy, as it were, as to the choices they make about where to live and what to buy. At the more affluent end, documented reasons include access to galleries, restaurants and a beachside café culture. This study also provides preliminary evidence of 'aspirational' groups who regularly partake of the wide range of shopping and recreational facilities in the outer suburbs of our major cities. These phenomena are no longer the domain of young however, further research would be necessary to generate more detailed data about the factors that influence decisions. What is clear is that the new elderly do not want to 'disappear' from the world—into nursing homes or the homes of their children. They want to enjoy their lives within a chosen location and an integrated community, with access to the support services that make all of that possible.

The value of a major cross-sectional study, such as this, lies in it provides clues to the ways in which social transformations are experienced in the real lives of individual men and women, and how those transformations impact upon the family values and relationships, personal identities and material aspirations in society. As such, Olsberg and Winters suggest they can only ever be seen as a benchmark of what is happening in society at one time. What is needed is research which builds upon such a benchmark to assess and evaluate how these attitudes change over time. Longitudinal studies are important to achieve such assessments and evaluations. (p.100).

2.3.0 THE PRODUCTIVITY COMMISSION INQUIRY REPORT: CARING FOR OLDER AUSTRALIANS (2011)

The Productivity Commission Inquiry Report (PCIR) acknowledges the growing body of literature on aging and aged care that highlights the significant effect of housing and social inclusion on the health and wellbeing of older Australians.⁵ It also highlights the overwhelming preference of people to age in their own homes and communities (The Benevolent Society 2008).

From an economic policy perspective, many submissions to the PCIR also referred to the reductions in health and aged care costs when people are able to age in their own homes and communities and so defer the time of their life at which they enter residential care.⁶ The report suggests however, that this benefit may only be evident for purpose built dwellings. Analysis

⁵ (AIHW 2009a; Holt-Lunstad et al. 2010).

⁶ AARP 2008; ECH, Eldercare and Resthaven, sub. 100.

Social Networks, activity & access can help protect people from the negative impact of stressful life events.

Strong social ties have been linked to lower depression for older adults.

Connectedness to others is a key dimension of well-being.

Non-institutional, congregate living options for older people are emerging as alternatives to retirement communities.

of Illawarra Retirement Trust customers, for example, showed that on average, seniors living in a purpose built residential community require access to both Residential Aged Care (RAC) and Community Services (CS), later in life when compared with their community peers living in un-modified accommodation. When accessing RAC the difference is as much as four years, whilst for those accessing CS the difference is two years.⁷ Although such statistics are promising and potentially informative, further longitudinal research is necessary to fully understand the causal factors involved.

2.3.1 The benefits of Social Connection

Many participants in the PCIR noted the importance of social inclusion in terms of well-being. In their submission, the Benevolent Society suggests that:

Social dimensions feature strongly in older people's perceptions of their wellbeing. Social networks, activity and access to confidants can help protect people from the negative impact of stressful life events and are associated with higher quality of life and life satisfaction and better physical, mental and emotional health. Conversely, social isolation and loneliness in old age are linked to a decline in physical and mental wellbeing. Life events such as bereavement and loss of mobility may trigger social isolation, especially among people who are more at risk. (2010, p. 3)

A growing body of research supports the contention that inadequate social support is associated with an increase in mortality, morbidity and psychological distress. One Japanese study, for example, found that older people who reported a lack of social contact were 1.5 times more likely to die within three years than those with higher social support (Sugiswawa et al. 1994). In their research on intergenerational contact, Kaplan et al (2006) found that not only did children benefit from participation in intergenerational activities with seniors, but a majority of seniors [87%] were observed to gain significant emotional benefit from regular contact with children. In more recent studies, strong social ties have been linked to lower depression for older adults via emotional, functional, and financial assistance (Mair, C.A. 2009). There are differing views in the literature about the extent to which particular types of relationships matter in terms of a person's sense of wellbeing but, there is general agreement that 'connectedness to others' is a key dimension of wellbeing.

⁷ (IRT, sub. 356, p. 13) PCIR p.276

Some participants in the inquiry called for mandatory universal design standards to be embodied in the Building Code of Australia.

The Commission acknowledged that new social housing is now embracing design standards aimed at delivering age-friendly housing.

2.3.2 Design consequences of Aging in Place

In their submission to the Productivity Commission, Australian Homecare Services observed that innovative, independent, non-institutional, congregate living options for older people are emerging as alternatives to retirement communities, independent living options and serviced apartments. (p.277)

Australia's aging population, and older people's strong preference to stay in their own homes as long as possible, will increase the need for housing that supports independent living, and associated home-based care. Submissions to the Commission raised various issues that affect older Australians' ability to remain living in their home of choice. Prominent among these were:

- Housing design which better meets the requirements of older Australians
- Availability of home maintenance and modification services
- Barriers to moving to a more appropriate form of housing
- Access to care services across all types of housing.

In recognition of the growing number and proportion of older Australians, with the attendant growth in age-related frailty and disability, some participants in the inquiry proposed the development of building regulations which required accessibility features or, that dwellings be built which could be easily adapted to achieve accessibility. This led to a call for mandated universal design standards to be embodied in the Building Code of Australia (BCA). For example, Physical Disability Australia Ltd argued that

... new, national legislation be enacted to ensure that all new homes are at a minimum accessible from the street and are built to accommodate future adaption and provision for people who may have mobility impairments. (sub. 96, p. 17) (p.277)

This view echoes that of aged care organisations more generally, which have called for reform along the lines of 'mandatory adaptable, accessible and sustainable design standards for all housing' (NACA 2009, p. 6).

The Commission also acknowledged that new social housing is now embracing design standards aimed at delivering age-friendly housing. For example, The Australian Government's Social Housing Initiative, has provided funds to state and territory governments for the construction of up to 19,300 new social housing dwellings by 2012, with 99 per cent of these to comply with universal design principles. The Commission endorses this emphasis, particularly given the relatively high proportion of older Austral-

The Productivity Commission concluded that mandatory application of universal design standards is not warranted.

Deficiencies in cost-benefit research into providing care in the home means that the true extent of savings is unknown.

The Commission called for more rigorous research to better inform policy and program delivery.

What form of purpose-built accommodation will be attractive to the increasing number of new elderly and who will pay for it?

ians who are social housing tenants (in 2009, 102,000 or 29 per cent of all public housing tenants were over 65 years of age (OPAHA 2009)).

In assessing the benefits compared to the costs, the PCIR concluded that, from the perspective of older Australians alone, mandatory application of universal design standards for all new housing is not warranted given the community-wide costs. Nevertheless the report recommends that voluntary adoption should continue to be encouraged. (p.280)

According to the PCIR, a widely held view is that providing care in the home is generally more cost effective than doing so in residential aged care. However, the commission also acknowledged that because of deficiencies in the cost-benefit research on this issue, the true extent of any savings is not known (AHURI 2008). As this view appears to underpin the allocation of progressively greater levels of budget expenditure on home and community-based care, the PCIR calls on the Australian Government to encourage more rigorous research to better inform policy and program delivery in order to achieve the most appropriate aged care and housing interventions (p.470). As the Commission has previously concluded in its report on *Trends in Aged Care*:

“... further research and analysis is required. This needs to be underpinned by better data than is currently available, if we are to move away from a largely static ‘stock’ view of aged care and develop a much better understanding of ‘flows’. For example, to investigate how the care needs of older people change over time; how these changes trigger interactions between different parts of the aged care system (and between the aged care system and the broader health and community welfare system); and how efficiently and effectively the care needs of older people are being met.” (Productivity Commission, 2008, p. 90)

It is now apparent that nursing homes are perceived as a choice of last resort by those who can support themselves economically and physically through the entire period of old age. This conclusion has been supported by a growing body of research and the results of the Productivity Commission Inquiry. In April 2012, the Australian Federal Government responded with the \$3.7 billion *Living Longer, Living Better* aged care reform plan, that will boost existing federal funding by \$577 million over five years. Although reports indicate overwhelming approval for the plan, questions remain: what form of purpose-built accommodation will be attractive to the increasing number of new elderly and who will pay for it?

In aged care, the buyers of services require increasing services as they age where eventually the demand for services overwhelms the ability to pay.

Architectural practices act in the support of developers building and operating successful residential aged care facilities (RAC). Theoretically 'successful' aged care facilities should meet and even anticipate the requirements of aging people for services that maximise their wellness for the given available resources. In short the developers are being incentivised, by government, on behalf of society, to meet societal requirements for aged care. In turn, the portfolio or stock of aged care facilities inherited by society, reflect a society's chosen and unwitting processes for the provision of aged care services.

3.1 ECONOMICS OF AGED CARE

The economics of aged care facilities (ACF) can be contrasted to the economics of housing. Markets for housing are regarded as relatively efficient. Within the regulatory framework suppliers and buyers interact to provide a level of service provision consistent with the buyer's willingness to pay and the supplier's willingness to provide. By contrast, in aged care, the buyers of services require increasing services as they age (in the standard model of aging) where eventually the demand for services overwhelms the ability to pay. The providers of services then have to be subsidised or supplanted by government to ensure an adequate minimal amount of care. In effect government is the insurer of last resort in the aged care market place. Without this intervention the 'marketplace' would fail to meet social norms.

The aim of the Productivity Commission (PC)—and economic intervention in general—is to ensure the aged care market place acts as efficiently as possible where efficiency is defined as maximising the satisfaction of the consumers for the least cost. Since government funds underpin the operation of the aged care marketplace, these funds direct and channel the flow of activity and investment in the sector. The incentive structures implicit in the deployment of these government funds, combined with the limited ability to pay of consumers, have shaped the aged care system we now have. Clearly the government is the dominant player and, despite a rising contribution from private individuals, they are likely to remain the dominant player, while the cost of aged care exceeds the private agent's ability to pay.

Rising productivity and longer working lives suggest that private agents will have greater resources to meet their own needs for longer. A key goal of any age care system must be to maintain the productivity (income generating potential) and healthy well-being (cost minimisation) of private agents for as long as possible through the aging process.

The LLLB package seeks to develop a more finely tuned aged care system more capable of meeting specific needs.

The package provides more support to the aging in place concept, and considerable resources to revitalise and expand Australian aged care facilities.

3.2 DELIVERY OF AGED CARE SERVICES

The standard institutionalised intervention of government owned facilities has gradually given way to the consumer oriented perspective apparent in the PC report. The PC is an economically focussed government agency providing advice to government on how to more efficiently achieve the goals of public policy. Whilst their views are not decisions by government they provide a benchmark that allows us to provide some forecast about the future trends in government policy. It is noteworthy that the PC report was preceded in 2010 by a report undertaken by Access Economics and sponsored by a group called National Seniors Australia. This report may well have been the source of the Government commitment to aged care at the 2010 election, which was immediately implemented through a PC review of the sector.

In April 2012, the government has announced its commitment to the 'Living Longer, Living Better' (LLLB) Package to address the recommendations of the PC report.

This multi-year package is a significant government initiative that has embodied the PC perspective to 'empower' the consumer of aged care services. In this way the consumer has greater power to act as the 'sovereign' decision-maker deploying private resources and publicly provided resources to meet their own aged care needs. The LLLB package seeks to develop a more finely tuned aged care system that is more capable of meeting specific needs. It has improved the feedback mechanisms that allow the aged care system to re-orientate as new initiatives and concerns come to light (My Aged Care website, Aged Care reform Implementation Council, Aged Care Financing Authority, Australian Aged Care Quality Agency, aged care quality ratings). The package provides more support to the aging in place concept, and considerable resources to revitalise and expand Australian aged care facilities. Significantly, the increase in the estimated average per bed per day from 1 July 2014 should, theoretically, make the provision of new buildings more economical for developers and providers. The decision to means test indicates a likely future trend that sees the number of aging people increase but, we suspect, an even faster increase in the numbers of aging people who can afford to provide a greater share of their care costs.

Providers will benefit from changes that free up the capital tied up in the family home.

There is a distinct emphasis on allowing elderly people greater flexibility to monetise their home flexibly to underpin their housing options in old age.

[^] Key regulatory changes are :
Removal of restrictions on numbers of beds and care packages.
Removal of the distinction between low, high and extra services.
Allowing providers to set the price for approved care and support services.

3.3 PC REPORT & SUBSEQUENT TRENDS: THE PROPOSALS AND THEIR IMPLICATIONS

The creation of separate, but linked, markets for accommodation, care, personal services and health—combined with some key regulatory changes[^] will mean:

- An incentive for each provider to offer a greater range of “packages” for the elderly to choose from; and
- An incentive for providers to make claims about how their packages differ to those of other providers.

Changes to funding mechanisms and bond arrangements will affect service providers in different ways:

- Providers will benefit from changes that free up the capital tied up in the family home, though individual providers may not gain direct access to this – the LLLB implementation seems to have tightened control of the bonds but has not removed them, hence they remain as a interest free source of capital for operators;
- Some providers will not do so well as manipulation and over-charging should be lessened.
- LLLB signalled a future increase in funding for capital provision, in anticipation of an expansion in the supply of accommodation.
- Providers are treated as businesses in both the government and PC report where the majority are not for profits (according to Access Economics) who would presumably prefer to be treated accordingly. Service providers should be aware of this distinction in dealing with the sector.
- There is a distinct emphasis in the PC report on allowing elderly people greater flexibility to monetise their home flexibly to underpin their housing options in old age. Whilst this has not come through the LLLB explicitly we suspect that it will be emerging from the ongoing evolution of this sector. The significance is that this will allow elderly people to ‘purchase’ or ‘access’ forms of accommodation in a continuum from the family home to RAC with room for many potential options and configurations in between.

As a result of the above changes, an expected increase in profitability is likely to lead to:

- Mergers and acquisitions.
- Smaller, innovative providers may be squeezed though increasing emphasis on quality may provide an opportunity to differentiate;
- Non-profit providers (e.g. church organisations) will also increase profitability:

PC forecasts growth in retirement villages though LLLB works hard to provide services to keep people at home.

LLLB and PC noted the role of the built environment in aged care and the need to improve the RAC and home environments.

Potentially this will allow them more room for expansion and/or innovation and, depending on competition from private sector, they may have to put more emphasis on collaborating across aged care sites.

Recognition of the preference for people to stay in their own homes and communities:

- LLLB changes are built on the assumption that demand is going to increase strongly based on demographic data.
- PC forecasts growth in retirement villages though LLLB works hard to provide services to keep people at home—in line with AHURI report no. 88.
- Separating the markets for accommodation, care, support services and health related issues (particularly dementia) may lead to more opportunities for developers to provide innovative, localised options; and
- LLLB and PC noted the role of the built environment in aged care and the need to improve the RAC and home environments. Neither addressed the issue of new aged care facilities (ACF) that might provide small scale, purpose built accommodation options somewhere between the home option or the RAC option. The new LLLB system is, however, an invitation to develop new housing options for an aging population.

The PC report and the LLLB package both acknowledge the need for more research in this area. The sheer scale of investment required to meet aged care requirements, in the order of \$9 billion dwarfs the proposed research budget of \$9.2m. This research budget represents an opportunity to explore the requirements for elderly people in a systematic manner to create appropriate forms of accommodation.

The aged care industry and LLLB and associated entities will need to examine:

- Vulnerability of the elderly as a central issue, especially in times of life changing decisions. The PC assumption of consumer rationality and choice must be explored in the context where the consumer does not determine the urban form which banishes all housing for elderly people to aged care facilities, with no alternative options;
- The range of housing options that could potentially be available, and how these might become available under its recommendations and what additional support might be required;
- Government will need to actively intervene to ensure the emergence of business models that go beyond market-driven approaches in meeting the needs of the elderly, especially in creating options that allow people

The aged care industry will need to examine the range of housing options that could potentially be available.

Government will need to actively intervene to ensure the emergence of business models that go beyond market-driven approaches in meeting the needs of the elderly

The significance of these changes for builders and operators of age appropriate housing is enormous.

to live more closely to their community while still receiving a high level of care. This is based on our understanding of how markets evolve, path dependence and supply capability (see other document on all these); and

- As part of this examination the explicit trade-offs between service delivery and the costs of care and the different urban aged care housing options will need to be explored.

The significance of these changes for builders and operators of age appropriate housing is enormous. The ability to build cost-effective age care facilities that also provide a sense of meaning, inclusion and contact, as well as appropriate care, affordability and location will determine the true market leaders in this sector. The baby boomer generation has already changed history a few times in its life span. It is likely that they will have a profound effect on the old fashioned 'hospitalised' model of aged care we are familiar with.

The existing accommodation pattern makes support more expensive, slows down the turnover and housing stock and puts huge pressure on families. This represents an opportunity for the providers of aged care accommodation.

New, innovative forms of living that foster self-organised arrangements and integrate forms of mutual assistance are now essential.

The concept of intergenerational living has been gaining popularity.

Assisted living strategies provide professional services on an as-needed basis.

The Social Scientist Marie-Therese Krings-Heckmeier⁸ argues that, in the interests of the elderly and of the public sector, it is now essential to develop “new, innovative forms of living that foster self-organised arrangements and integrate forms of mutual assistance (2009).” In addition, she argues it will be necessary to develop a variety of different offerings so that people with different needs can find an option appropriate to their requirements: the ability to remain independent for as long as possible and to make use of care and support only where absolutely necessary. Although assisted living developments have become more common, the concept of communal and intergenerational living has been gaining in popularity in Europe and the United States over the past 10 years.

4.1. ASSISTED LIVING / SERVICED APARTMENTS

The basic principle of ‘assisted living’ for the elderly is that each person lives with autonomy—within a place that they define as ‘home’—whether as tenant or owner. The design of the dwelling and fittings are conceived with the needs of elderly people in mind, for example taking into account possible mobility restrictions, so that they can still live independently even when in need of ongoing care and assistance. In addition, a series of professional services (including nursing care) are provided on an as-needed basis and are payable only when used. Ancillary services are provided in different combinations and extents and are usually covered by a service fee. According to Fedderson and Lüdtkke (2009) assisted living can be provided in a variety of different schemes:

- Housing schemes employing external service providers including outpatient health care and nursing;
- Housing schemes with their own staff who provide outpatient care;
- Housing schemes with their own dedicated nursing facilities;
- Housing schemes alongside a nursing home.

4.2 COMMUNAL FLATS, CO-HOUSING & INTERGENERATIONAL LIVING

In addition to self-organised communal housing projects, an increasing number of professionally-run housing projects with a communal arrangement are appearing on the market. In some communal projects, each resident has their own apartment and lives in close quarters with others, for example in a shared house or a community of neighbours. In communal flats, each resident has their own living area rather than a distinct

⁸ Krings-Heckmeier is also Managing director of the independent economic and social science consultancy: Empirica.

Over 93% of Dutch residents over 65 live independently within a single dwelling.

In the Netherlands, entire urban areas have been designated as residential care zones, or 'Woonzorgzone'.

The problem is that many different providers, with different budgets, have to take coordinated action.

In serviced settlements or quarters, support services are provided for all inhabitants, regardless of age.

apartment. Communal flats are often shared by older, less able-bodied people, for example as an alternative to a nursing home for people suffering from dementia.

A series of European case studies⁹ undertaken as part of the model project "innovative urban quarters for families and old people" describe approaches from different countries which focus on the integration of young and old at the level of the neighbourhood.

According to the Dutch Centre for Housing and Care¹⁰ over 96% of Dutch residents 55 and over and 93% of those 65 and over live independently within a single dwelling. In the Netherlands, residential care zones known as "Woonzorgzone" have been initiated since the turn of the 21st century. These are neighbourhoods that offer their residents optimal conditions for assisted living. The aim is that the residents can continue to live their own lives as they grow older and when they become less mobile. In some medium-sized towns (Leeuwarden & Spijkenisse) a decentralised zoning concept for the whole town has been developed.¹¹ The woonzorgzones include circular areas with round-the-clock care and a certain percentage of adapted housing within 200 m walking distance of integrated service centres. Outside these circular areas, general standards for housing adaptation, home help services, alarm-systems, practical services and investments in the safety and accessibility of public areas are also above the general standard. The problem is that many different actors with different budgets have to take coordinated action. In most cases, non-profit housing associations and local old age homes are the initiators.

Since the realisation of the first residential care zones, the term and concept of this form of accommodation has changed. They are now termed residential serviced settlements or quarters ("Woonservicewijken"). In this revised concept, care and support services are no longer solely for senior citizens but for all inhabitants in the neighbourhood. An example of such a settlement is the Woonzorgzone Moerwijk in The Hague.

In Denmark too, there is a long tradition of urban and housing policies aimed at social integration where old people can live in normal apartments.

9 Special report "Innovationen für familien- und altengerechte Stadtquartiere" _europäische Fallstudien", European case studies conducted by the University of Stuttgart, Stadtebau-Institut, Fachgebiet Grundlagen der Orts- und Regionalplanung, publication 2009.

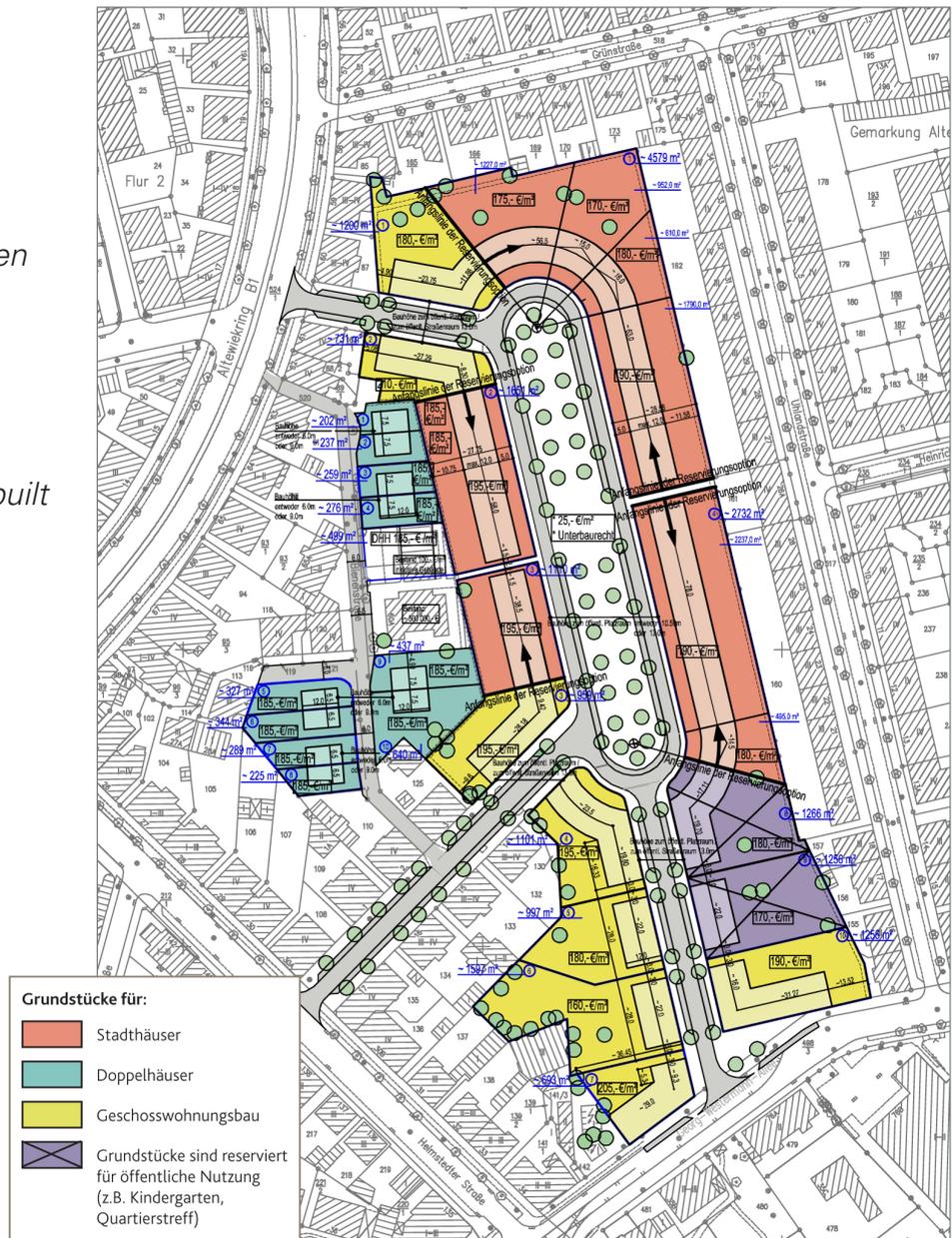
10 <http://kcwz.nl/english>

11 "Housing and Services for Older People in the Netherlands." Utrecht, 2003 Aedes-Arcades Kenniscentrum Wonen-Zorg. Jeroen Singelenberg

For this reason no dedicated housing schemes for old people have been built since 1987.¹²

St. Leonhards Garten

In Denmark, no dedicated housing schemes for old people have been built since 1987.



¹² Krings-Heckmeier is also Managing director of the independent economic and social science consultancy: Empirica.

St. Leonhards Garten



In Germany, housing for the elderly is eligible for grant funding where schemes are scattered throughout existing quarters.

According to Feddersen and Ludtke, the idea that older people live alongside younger people in their home neighbourhoods has been accorded high priority and is anchored in legislation. Housing for the elderly (which is accessible, equipped with alarm systems and so on) is eligible for grant funding and schemes are scattered throughout existing quarters.¹²

In Germany, current initiatives are examining how lessons from the aforementioned model projects can be transferred. In St Leonards Garten in Braunschweig, a former tram depot in the city centre is being converted into a new housing quarter for young and old.¹³

The architectural design of the scheme is planned so as to adapt to the changing structure of generations in the years to come. Approximately 30% of the units are designed to be accessible and adaptable for the changing needs of elderly residents. In addition, land is designated for public use: Community centre, Kindergarten, medical centre, etc.

¹² Feddersen and Lüdtkke (eds) (2009) *A Design Manual: Living for the Elderly*, Birkhäuser Verlag AG, Switzerland. pp.22-26.

¹³ www.braunschweig.de/stleonhardsgarten/index.html.

Carmelite Monastery

Source: Living for the Elderly



The garden acts as a community resource that freely connects dwellings because it is free of traffic.



Communal living is the central principle at the heart of the former Carmelite monastery in Pützchen, Germany. This intergenerational housing development continues a long-standing tradition of communal living in Monasteries.

The development consists of 31 apartments in the heritage building, 16 new terraced houses and 21 new apartments.

Most of the multi-level houses and apartments are occupied by families with one or two children. The single-level apartments are all designed to cater for the needs of elderly residents. An underground garage beneath the garden keeps the complex almost entirely free of visible cars and provides ease of access for residents. The garden therefore acts as a community resource that freely connects dwellings at ground level because it is free of traffic.

Silver Sage



The Community Centre is perceived by residents as an extension of their homes.

The intent is to promote affordable strategies that increase trans-generational social connections.

The 'Silver Sage' development is purpose built for an elderly community—within the context of a larger, multi-generational housing development in North Boulder, Colorado in the United States.¹⁴ Consisting of sixteen duplexes and attached homes, Silver Sage also includes a community centre with a commercial kitchen, large dining area, exercise rooms and two guest rooms for visitors. This facility is perceived by residents as an extension of their homes and is strongly connected to the central landscaped area, recreating the role of the 'village green'. Participatory design methods were adopted, with the intended residents having significant input into the site strategy as well as the detailed design of the homes and the community centre.

The intent of these new directions is to promote affordable strategies for the improved provision of aged care services, but also to increase the possibility of trans-generational social connections. The experiences of the model projects throughout Europe and the US may serve as an example of new directions for sustainable urban development in Australia—given that they are in-line with Australian research findings about the desires of our elderly population to age-in-place. It is also possible that urban qualities and housing tailored to the needs of elderly people can contribute towards strengthening social conditions for all generations.

¹⁴ Information obtained from <http://www.klmcondotownhouse.com/>

St. Mary's Housing Development

*This development
represents the
possibilities of
collaboration between
two different providers.*



Integrated, Intergenerational housing developments are not common in Australia. Many will include a portion of social and private housing and, as presented by the Productivity Commission, increased adoption of Universal Design principles for elderly residents. The following two case studies are the moving towards the international models—the closest being the proposed St Mary's Housing Development in Geelong. The second example is the Harmony Community in Dandenong. Although it was not planned as an intergenerational development, it places a strong emphasis on shared social facilities.

5.1 ST. MARY'S HOUSING DEVELOPMENT, GEELONG¹⁵

Centring on the restoration of the heritage-listed St Mary's Hall, this development is of interest—not only because of the proposed mix of housing, community and commercial facilities, but because it represents the possibilities of collaboration between two different providers. Initiated by Common Equity Housing Ltd (CEHL)¹⁶ the social housing component will be managed by CEHL's housing co-operative and the aged care component

¹⁵ Information & Image sourced from www.cehl.com.au

¹⁶ CEHL is a housing Association established to provide affordable, secure accommodation to those members of the community wishing to access co-operative housing. CEHL manages almost 2000 community housing tenancies across Victoria for low income households.

Of the 160 planned apartments at St. Mary's, approximately 60 will be sold to the private market to offset some of the development costs.

The design strategy for the Harmony Village, Dandenong, corresponds with Olsberg & Winters (2005) findings about the preferences of the aging population.

will be managed by Dousta Galla. The proposal for St Mary's includes:

- 160 residential apartments—including social housing for low income earners.
- Aged care for people aged over 55 years.
- Private residences.
- Commercial office space for CEHL, local not for profit agencies and private business operators.
- Medical consulting suites with associated gymnasium.
- Retail outlets including café, convenience store, florist
- Other resident services such as a laundromat.
- Substantial external open public spaces with play areas and landscaping features such as waterfalls and billabongs.
- Secure basement car parking.

Of the 160 planned apartments, approximately 60 will be sold to the private market to offset some of the development costs. The St Mary's proposal represents a shift towards integrated, inter-generational development as an evolution of the concept behind the Harmony Village in Dandenong, completed in 2011.

5.2 Harmony Village Dandenong¹⁷

CEHL in conjunction with the State Governments "Strategy for Growth in Housing for Low Income Victorians" completed the 'Harmony Village' development in June 2011. The contemporary nature of the design, with an emphasis on community, lifestyle and sustainability, corresponds with Olsberg and Winters (2005) findings about the preferences of the aging population.

According to CEHL, they purchased the site from the local RSL to develop 92 units for low-cost social housing; catering specifically to the elderly. The land was sold at below market value on the basis that CEHL take on around 30 elderly RSL residents currently living in sub-standard conditions at the Thuruna Site. The balance of the units were put into the Co-Op Program for social housing purposes. The RSL then relocated its bowls and social club facilities from the Herbert Street site to the Thuruna site. The 92 residential apartments are deliberately grouped in clusters comprising 76 two bedroom units and 16 one bedroom units.

¹⁷ Information & Images sourced from www.cehl.com.au



A major Community Building acts as an entry statement to Herbert Street and is intended to foster shared activities—both incidental and planned. The design intent is that the central position of the community facility and substantial open space will enable a shared ownership and democratic access facilities.

There is growing acceptance amongst the new elderly of a need to move from the family home to adaptable, purpose-built housing.

Future developments will integrate care support and new community facilities within the context of established communities.

In Germany, urban quarters are organised in such a way that informal support structures complement professional care services.

A European study undertaken in 2006 shows that the current and, even more so, the next generation of pensioners are willing to consider new forms of living.¹⁸ This conclusion is supported by Olsberg and Winters' report for AHURI (2005), where *65% of over 7000 respondents have indicated a strong desire to age in a place of their choosing, for its lifestyle benefit, not out of an emotional connection to the concept of home.*

There is growing acceptance amongst the new elderly of a need to move from the family home to adaptable, purpose-built housing. The trend is therefore towards autonomy, with an emphasis on social connection and lifestyle, but there remains a concern for personal health and safety because of growing frailty. Future developments will need to recognise and provide for this market by not only providing dwellings, but also integrated care support and new community facilities within the context of established communities. Sense of place becomes critical.

The current global discourse also focuses on forms of living in old age that not only make use of paid services provided on the market but also integrate means of informal support. To encourage the development of neighbourhoods as places for young and old alike, it is necessary to undertake both built projects in the context of wider social initiatives. In Germany in particular, sustainable urban development policies are accorded increasing importance. A German government report on the urban environment emphasises the importance of cities as a living environment for all generations where housing policy aims need to be aligned with those of urban developments.¹⁹ Following this initiative by the federal government, a series of municipalities throughout Germany have implemented new approaches to local neighbourhoods, promoting urban developments that give residents the chance to continue living in their neighbourhood until they die. The urban quarters are organised in such a way that informal support structures complement professional care services.

Given the desire for personal autonomy, limited government resources and the benefits associated with maintaining broad social connections, it is expected that the development of intergenerational community housing

18 Representative survey conducted by empirica among the 50 plus generations: "Die Generationen über 50 - Wohnsituation, Potenziale und Perspektiven", commissioned by the national headquarters of the Landesbausparkassen im Deutschen Sparkassen- und Giroverband, 2006. Download: www.lbs.de/publikationen.

19 Nachhaltige Stadtentwicklung - ein Gemeinschaftswerk", Stadtebaulicher Bericht der Bundesregierung, 2004. From Krings-Heckemeier M.T. (2009)

It is expected that intergenerational community housing will gain increasing strategic importance.

New housing should: —strive for flexible solutions.

—be located where some services are already available.

—encourage the exchange of services between young and old.

—represent a focal point from which existing services are augmented.

Developments with ease of access to a 'high-need' care facility could be attractive.

projects will gain increasing strategic importance in coming years. Without such innovative solutions, local municipalities will be faced with the negative consequences of demographic change, for example the aging of entire neighbourhoods without the necessary supporting infrastructure or the increasing financial burden of care provisions for the elderly. Case studies from Europe and the US suggest that such developments require not only community participation, but a generative structure, based on the following principles:

- New housing projects for old people, or major alterations to existing structures, should strive for flexible solutions that make it possible to use or convert normal dwellings so that their inhabitants are able to receive nursing care at home.
- New housing projects should be strategically located where services are available in the vicinity. Urban quarters can be organised in such a way that a "common care centre" can provide affordable services and round-the-clock cover for elderly residents, which can also be used by the entire neighbourhood e.g. medical centres, community halls etc.
- The integrative approach of multi-generational neighbourhoods represents a model for the future: combinations of different housing options together with an easily accessible living environment (following the principles of Universal Design). Neighbourhood housing should be arranged so that it encourages the exchange of services between young and old.
- Housing schemes for old people that are integrated into local neighbourhoods can represent a focal point from which additional services for members of the local community in need of care can be based. They can provide, for example, a midday meal for young and old alike as well as different forms of recreational activities, a meeting place or even a local cultural centre. The intention is that such facilities act as generators for the creation of social networks.
- Although it is apparent that lifestyle opportunities will be the primary attractor to new housing developments, given apparent concerns over potential frailty and/or dementia, it is hypothesized that developments with a 'high-need' care facility could also be attractive, particularly to aging couples. The principle is that if the need arises, one partner can continue to live at home while the other lives within 'walking distance'. Although existing research is clear on the reasons for the desire to 'age-in-place', little is yet known about the decision drivers of the demographic group who choose to move.
- In response to an increasing demand for care and support through paid services alone, it may be necessary to encourage and promote networks based on mutual assistance. If we recognise the help old people can give

In response to increased demand for care, it may be necessary to promote networks based on mutual assistance.

Older people are not a homogenous population, and their needs change as they age.

to other old people, “younger pensioners” are a potentially valuable source of voluntary help. Mutual support will only come about with the help of a formal structure and staffing, such as a residents’ association. Although this strategy is becoming popular in Europe and America, it has not been addressed by the Productivity Commission and it is difficult to comment on how it would work within an Australian social context.

Rigby et al (2010) and Hallberg (2004) remind us that older people are not a homogenous population, and their needs change as they age. It is therefore possible that the environmental needs of a 70-year-old may be different from those of a 90-year-old dying person. The environmental needs of older people also vary according to health, mental capacity, social and cultural background as well as gender, and these are all issues that merit further research and design consideration. In order for each person’s individual environmental needs to be addressed, future housing and service provision strategies need to be designed so that they could be easily adapted to meet the changing needs of residents and supported, by regular evaluations, to ensure that they are continuing to meet those needs.

Access Economics (2010) *The Future of Aged Care in Australia*.

Australian Government Department of Health & Aging (2011). Excerpts from a technical paper on: *The changing dynamics of residential aged care prepared to assist the Productivity Commission Inquiry Caring for Older Australians*.

Chon et al (2002) *Factors Influencing Residents Satisfaction in Residential Aged Care*. *The Gerontologist*. Volume 43, Issue 4. pp. 459-472.

Commonwealth of Australia (2012) *Living Longer, Living Better*. Canberra.

Feddersen and Lüdtkke (eds) (2009) *A Design Manual: Living for the Elderly*, Birkhäuser Verlag AG, Switzerland.

Gaymu, J. et al (2007) *Who will be caring for Europe's Dependent Elders in 2030?* In *I.N.E.D | Population (english edition) 2007/4 - Vol. 62 pages 675 à 706 ISSN 1634-2941*

Golant, S. M. (2003) *Conceptualizing time and behavior in environmental gerontology: A pair of old issues deserving new thought*. *The Gerontologist*. Oxford: Oct 2003. Vol. 43, Iss. 5; pg. 638

Gott, M. et al (2004). *Older people's views about home as a place of care at the end of life*. *Palliat Med* 2004; 18: 460–467.

Hallberg I. (2004) *Death and dying from old people's point of view. A literature review*. *Aging Clin Experiment Res* 2004; 16: 87–103.

Jones, A. Howe, A. Tilse, C. Bartlett, H. Stimson, B. 2010. *Service integrated housing for Australians in later life*. AHURI report No. 141.

Kaplan et al (2006) *Intergenerational Engagement in Retirement Communities: A Case Study of a Community Capacity-Building Model*. *Journal of Applied Gerontology* 2006 25: 406. DOI: 10.1177/0733464806292862

Krings-Heckemeier M.T. (2009) *New Forms of Living for the Elderly*; in Feddersen and Lüdtkke (eds) (2009) *A Design Manual: Living for the Elderly*, Birkhäuser Verlag AG, Switzerland. pp.22-26.

Mair, C. (2010) Social Ties and Depression: An Intersectional Examination of Black and White Community-Dwelling Older Adults. *Journal of Applied Gerontology* 2010 29: 667 originally published online 29 October 2009. DOI: 10.1177/0733464809350167

Olsberg, D. and Winters, M. AHURI report no.88 (2005): Aging in place: intergenerational and intrafamilial housing transfers and shifts in later life. The Productivity Commission (2011), *Caring for Older Australians. Final Inquiry Report*. Canberra.

Rigby, J. Et al (2010) *Palliat Med* 2010 24: 268 originally published online 19 November 2009 DOI: 10.1177/0269216309350253