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Balancing the need for affordable housing with the challenges of sustainable development in South East Queensland and beyond.

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Abstract

There is much talk of a housing affordability crisis in Australia, accompanied by a sense of a lack of sustainability of the current stock and new builds. I discuss the notions of housing affordability and sustainability in the current Australian context, to explain why indeed there is an affordability problem and how it is connected to that of sustainability. I then consider how this situation has come about, and what directions could be taken in addressing it. It emerges that the crucial point is the need for a cultural change in terms of expectations and approaches in achieving affordability and sustainability.

Keywords: *sustainable housing, affordable housing, public housing, housing crisis, Australia*

Introduction

Barely a week goes past in the media without talk of a housing affordability crisis in Australia. House prices shot up by around 20% year on year between March 2009 and March 2010 (Global Property Guide 2010). Although talk of housing being unaffordable is fairly widespread globally, overall, Australian house price increases have significantly surpassed those in other comparable countries. As a result, the affordability topic has taken centre stage in recent debates over political reforms in Australia, such as the high profile Henry Review of the taxation system (Henry Review 2009). International studies describe Australia as 'now the most unaffordable housing market in the English speaking world' when it was once 'the exemplar of modestly priced, high quality middle class housing' (Demographia 2010). As a result, Australian mortgage debt has increased significantly from 32 % of household disposable income and 20% of GDP in 1990, to 142% and 88% respectively as at June 2010.

This severe affordability situation is compounded, and to some degree caused, by serious sustainability issues in Australian housing. The links between affordability and sustainability are complex. On the one hand, sustainability measures, such as solar panels and water tanks, can be seen as a costly endeavour. On another hand though, it is clear that sustainable housing can be a basis of affordability: more energy and water efficient dwellings mean lower (or even no) bills; housing that is accessible by public transport means reduced oil dependency and less money spent filling up etc. My approach here is two-fold: showing that there is a problem with sustainability in Australian housing, and, secondly, that sustainability can and should become one of the pillars of affordability.

This paper is based on empirical research complemented by a systematic literature review, and a survey of current debates in the local and national press. Over 20 hours of interview material was collected from major developers, government agencies, architects, planners and academics specialised in housing and sustainability research, in Brisbane, Sydney and Melbourne[1]. This interview material, based around open-ended questions on perceived barriers to affordability and sustainability and suggestions to overcome them, provides experiential data from actors on the coalface of housing-related issues in Australia.

The aim of the paper is, firstly, to establish the reality of unaffordable housing in Australia, and situate it in relation to the debate around housing sustainability and its definition. Secondly, I will look at the dynamics of housing affordability, and how they link with the question of sustainability. Third and last, I will suggest ways of overcoming the gridlock, which seems to pit affordable against sustainable.

1) Assessing housing affordability and sustainability in Australia

1.1. A stark affordability problem

[1] The anonymity of sources has been preserved as requested.

Although talk of housing being unaffordable is fairly widespread globally, overall, Australian house price increases have significantly surpassed those in other comparable countries, with 1.5 million Australians officially in 'housing stress' (Tiley and Hill 2010).

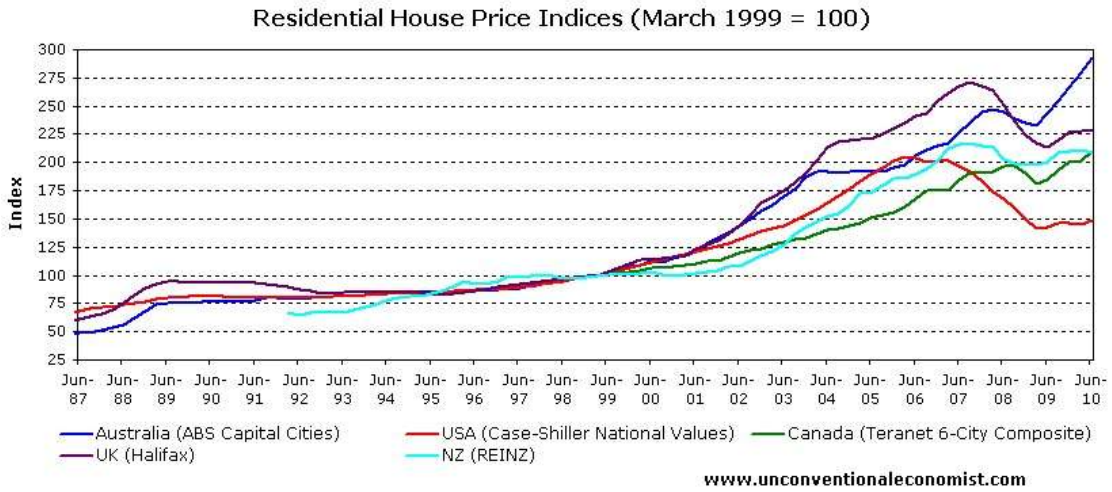

Figure 1: Index of residential house prices, 1987-2010.

Studies of housing affordability by the Housing Industry Association, Commonwealth Bank of Australia and the RBA, using the internationally recognised measure of the median multiple index (MMI: the ratio of median house prices over median earnings), rate most national markets as 'severely unaffordable', with an MMI of over 5.1, the affordability threshold being 3.

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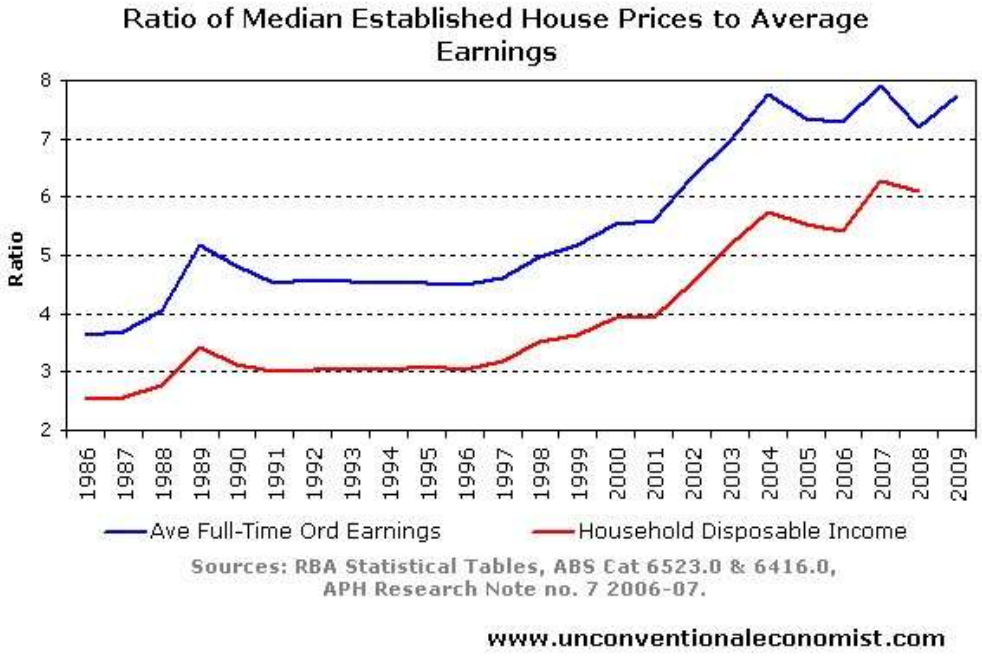

Figure 2: Ratio of house prices to earnings in Australia, 1986-2009

According to the same study, and a survey of house prices that I carried out, the USA and Canada remain the most affordable markets (national median MMI between 3.3 and 4.6), while the UK and New Zealand have median MMIs of 5.1 and 6.4 respectively. Australia tops the ranking with a whopping 7.1.

Australia's major cities are the least affordable, with Sydney second only to the extreme case of Hong Kong, Melbourne fourth, and Adelaide, a second-tier city, close behind London.

In Australia, 85% of metropolitan markets are severely unaffordable, as opposed to 7% in the USA. The latest analysis by property market experts shows that this trend will be exacerbated in the next few years, with median price rises of up to 20% by 2014 (BIS Shrapnel 2011).

1.2. Unsustainable housing?

Australia seems to be facing an urban sustainability crisis too, especially in high growth areas such as South East Queensland (SEQ), and the periphery of Sydney and Melbourne, where the accent is on master-planned communities on greenfield sites. Recent data shows that South East Queensland, for instance, is falling behind targets for the proportion of infill development deemed necessary in the regional development plan, with 30% achieved instead of 50% (Hallam 2011).

The contribution of housing to sustainability needs to be apprehended at two levels: that of individual dwellings, and that of the overall urban form that emerges from their aggregation. It is necessary to think of the need for transport between workplace, living places, and amenities. A compact, walkable city is inherently healthier, because it promotes walking or cycling, is more conducive to socialisation and stronger communities, and produces fewer GHG emissions. This has been established by American research over the last decade (Frank et al. 2003). This is not to say that suburban developments are necessarily soulless, morbid places, but the overall relationship is widely recognised in urban studies (e.g. Newman, Jennings, 2008). Greenfield developments also have a high potential impact on natural habitats and landscapes, and, since they often present a population/jobs imbalance, require lengthy commutes to employment centres, making them oil-intensive (Dodson, Sipe 2008).

Overall, 20% of GHG emissions in Australia are from housing. While there is an active debate over the relative energy-intensity of detached versus multi-dwelling forms of housing, with proponents of the former arguing that detached dwellings are less energy intensive per square metre (Residential Development Council 2007), this does not account for the fact that such dwellings are usually much bigger than multi-storey housing, nor for the energy consumed in transportation to and from such dwellings, which tend to be on the fringe. It is thus fair to say that a predominantly suburban or multi-centred city, which is the main thrust of current urban development in Australia, will not be a less carbon-intensive, more sustainable one.

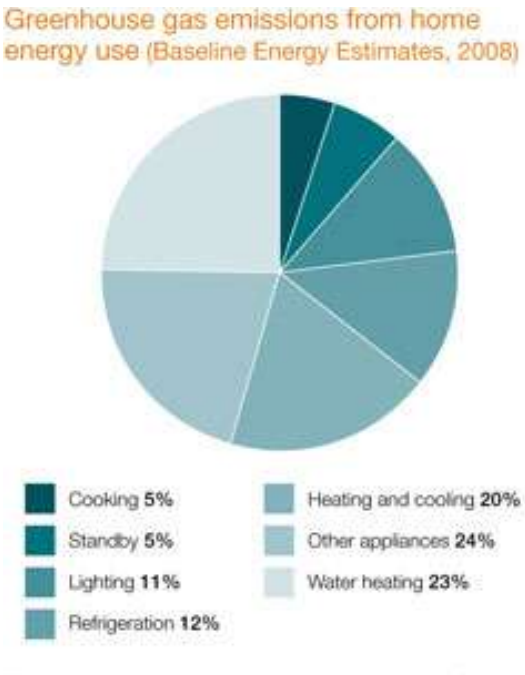

Figure 3: GHG emissions from home energy use

Greenfield, suburban developments also mainly feature energy-intensive housing due to poor design and orientation practices, further exacerbating the affordability problem for low to middle-income earners (Blair et al 2004). Master-planned communities can be poor on community features and other amenities. At the lowest end of the market, public housing oft fails to reach even the most basic definition of sustainability, that of its very physical fabric, with mounting reports of unacceptable levels of construction defaults that make some housing 'untenantable' (sic) (Hammond 2011).

Nor is greenfield development the only culprit, of course, as most housing in the country, including in high density buildings, is energy-intensive, and often poorly thought out in terms of its fit with local climatic realities. For instance, many dwellings in Brisbane and its region, especially those built in the last three decades or so, are not oriented North-South, which should be the case to avail of cooling summer breezes. Streets that took advantage of natural ventilation patterns have been 'walled' with new buildings. Although building on the coast in South East Queensland would be best in terms of climatic realities, government priorities are focused on urbanising (hotter) inland areas in the Ipswich area (Peter Skinner, personal communication).

Recent dramatic events, such as the Queensland floods of early 2011, have also emphasised the lack of housing sustainability on another level, that of disaster resilience. Poor siting decisions, underpinned by a rush to build linked to the housing boom and the lack of housing, saw building in areas that were known to be likely to flood in a major event. Likewise, scenes of destruction following cyclones in North Queensland show the need for a return to vernacular architecture that is adapted to the stark climatic realities of Australia.

Since around 80% of the housing stock we will have in 20 to 30 years' time has already been built, it is essential that what we build today features high levels of embedded sustainability. Otherwise, current building practices will compound an already severe situation.

Housing in Australia has clearly evolved in the last few decades towards declining affordability and, arguably, declining sustainability. There are also worrying signs that Australian housing is compounding the country's already high levels of energy intensity and carbon pollution, thereby making housing even more unaffordable and unsustainable in the future. How did this vicious circle come about?

2) A complex web of causes

It does not seem possible to name one central cause for these affordability and sustainability challenges; rather, explanations must be sought in a complex web of factors affecting the housing market in Australia.

2.1. Regulation and taxes

For some, the culprits in this affordability crisis are rising taxes and infrastructure charges, accounting for almost 44% of the price of a new house in New South Wales, 25% in Victoria and 24% in Queensland (Marcus 2011). Growth control measures (greenbelts, smart growth ordinances etc) have also played a significant role, with higher land prices the principal contributor to rapidly increasing housing prices. These land prices include the cost-increasing influence of land supply restrictions (such as urban growth boundaries), infrastructure fees and other land use regulations. In Australia, according to HIA (2011), 95 percent of the increase in inflation-adjusted costs from 1993 to 2006, were attributable to land, rather than construction. Add to this the GST of 10% (VAT) payable on new homes, and the home warranty insurance builders are required to take out (Marcus 2011). Interestingly though, somewhat less strictly regulated land use in Brisbane compared to Sydney, for instance, is still not enough to make the former much more affordable than the latter (MMI of 6.6 vs 9.6). Land regulation is therefore not enough, in the case of Australia, to explain the overall significantly reduced affordability.

2.2. Population and economic growth

For others, a growing population is to blame, and it is true that over the past 25 years the 1.4% annual population growth in Australia has been higher than the OECD average (Andre 2010).

However, this explanation is not satisfactory to explain local and regional differences within the country. For instance, Adelaide, the lowest demand major market in the nation, still features an eye-watering MMI of 7.1, higher than Brisbane's 6.6, where population growth has been higher in the last few years.

Supply has been extremely sluggish in responding to population growth, especially the growth which occurred pre-GFC (Yates and Berry 2011). The latest figures show that housing production dropped 20% over the last fiscal year (HIA 2011). This shortfall in supply is expected to continue into the next two decades (ABS 2010; NHSC 2010). However, tight markets are also a feature of the UK, France and parts of the USA, countries where the affordability crisis has not reached the Australian level, therefore this factor alone is not enough.

Blaming the growth of the economy is not enough: some of the most affordable markets in the USA exhibit especially strong economies, such as Fayetteville, AR-MO (MMI 2.2), which is the headquarters of the world's

largest retailer, Wal-Mart, and one of the highest demand metropolitan areas in the United States. Huntsville, AL and Ogden, UT are additional examples of especially affordable markets (MMI 2.2) that have much stronger than average economies and have strong inward domestic migration. South East Queensland, which has experienced some of the highest levels of population growth in the country in the last few years, boasts lower MMIs than Sydney, Melbourne or Adelaide, where growth has not been as strong. The IMF (IMF 2008) reported that Australia had a gap of 20% between its actual house prices, and the price level that could be explained by economic fundamentals.

2.3. Personal wealth and government strategies

Another factor contributing to low affordability in Australia is related to the centrality of real assets in wealth strategies in this country in comparison to others. Indeed, recent figures show that real assets form on average 65% of household assets in Australia, versus 51% in the UK and 32% in the USA (Australian Financial Review 2011). Thus, although the recent boom of house prices that ended in the correction of 2008 was a feature of most developed economies, houses have maintained and even reinforced their centrality in Australian wealth strategies, contributing to rigidly high prices. It is even arguable that Australian house prices continued to boom after 2007, averaging 8% per year between 2000 and 2010. This is the continuation of a long-term trend in the country of the sanctification of homeownership (Yates and Berry 2011), directly supported by massive government subsidies to homeowners.

Aside from homeowner subsidies, the history of the past few decades is one of government withdrawal from the provision of housing, with public housing declining dramatically since the 1990s, in favour of rebates for people to find accommodation in the private rental sector. However, the latter is the realm of 'mom and dad' investors due to relatively poor returns, and attempts to lure institutional investors have proven unsuccessful (Berry et al 2010; Berry 2002, Yates 1996). This evolution of government policy has undeniably had a detrimental effect on affordability for the more vulnerable households.

Australia's lack of affordability is far from straightforward, and is definitely not amenable to finger-pointing at one single cause. There is a web of mutually reinforcing factors at the root of the problem, which applies to the lack of sustainability too.

2.4. The lack of progress on sustainability

It is not my purpose here to define what sustainable housing is or could be. There is a vast, complex literature on the topic, summed up competently, among others, by Newman and Jennings (2008) and Newman et al. (2009). What I have noted in my research is a disagreement among actors over the meaning of the term and how to achieve it, although there is, at the same time, an overarching agreement on the fact that it is not currently being achieved (Blair et al 2004). This is what I analyse here.

There is first of all a misunderstanding of what 'sustainability' means in terms of housing and communities. Major commercial developers are quick to shift the talk from what they call 'environmental outcomes', to their contribution to building 'communities' and 'social sustainability', mainly through employment and shared facilities (community halls, recreation areas etc). This is what I call 'sustainability lite', a way for the industry to hedge whilst faced with uncertainties over customer demand and future government regulation. This also appeals to customers who want the outward positive connotations of sustainability without having to really change their lifestyles, especially without having to pay for it. Developers, indeed, lay the blame squarely with customers, who 'do not want sustainability' and seek affordability first and foremost. Government also gets a share of the blame for its 'red tape' and 'preventing developers from innovating'.

Major developers, and their financiers, are essentially geared towards one product, a cultural and political icon: the individual house on a plot of land, of 'Australia as Suburb' (Stretton 1970). The suburban, occupier-owned, detached family house was part and parcel of the socio-economic and political covenant of a wealthy, white and protectionist postwar Australia (White 1981; Greig 1997). Although the country has changed, the house on a plot of land remains a central descriptor of a certain way of life, and the default trope for many politicians and developers. However, with the unraveling of the postwar Fordist regime of accumulation, combined with concerns over the environmental and socio-political effects of oil-dependent suburbs (Greig 1997, Frost and Dingle 1995), this image has become increasingly distorted.

Developers have been endeavouring the squeeze this 'product', to use the industry terminology, on smaller and smaller lots to deliver 'affordability': such a house and land package can be had for around $300,000 in developments outside Brisbane, or around 4.5 times the median income, making this much more affordable than most housing, though still not affordable by international standards. Similar 'products' are available in Sydney and Melbourne. Builders are adept at churning out such products, whilst higher density, favoured by most proponents of sustainability, entails higher costs, regulatory burdens and overall greater complexity. A workforce with specific skills and regulatory approval is required for buildings higher than 4 storeys, whereas classic detached houses can be

built by the 'man in the ute[2]' builders, who come much cheaper. Regulatory health and safety burdens are also much more onerous for higher density builds, which also often lead to neighbourhood or political opposition, resulting in higher costs, uncertainty and lower profits. In essence, the regulatory system in Australia is stacked against building at higher densities (Yates and Berry 2011). Add to this a long history in Australia of a housing construction industry that has, by and large, failed to adopt industrial housing construction techniques (prefabrication) and relies heavily on subcontracting, with some very small firms (Greig 1997).

Developers are keen to insist that they deliver what the 'market' wants, meaning little dense/infill development, and very few experiments such as Vauban in Germany where cars are excluded as much as possible from the urban fabric and garages are optional on houses so as to reduce their cost (Sustainability Victoria 2011). There is a desire, in other terms, to stay within the paradigm of the stereotypical 'Australian dream' of a house on a piece of land, no matter how nominal this becomes when everything has to be compressed beyond recognition.

Government intervention, through the ULDA in Queensland, Landcom in NSW, or VicUrban in Victoria, pushes this logic of affordability to the maximum, with developments such as Fitzgibbon Chase in Brisbane offering house and land packages for $260,000, which is the most affordable option I have come across, though still above the MMI of 3. Again, the emphasis is strongly on the affordability dimension, with a spattering of 'sustainability' features (train station, parks, water-sensitive urban design etc), but little evidence of an effort to think outside the box to deliver a combination of affordability and sustainability: building orientation and materials remain standard, and the overall impression is that of a typical dormitory suburb, with slightly lower quality build and higher density.

Lastly, in 'social housing', with government subsidies for the least well off, construction values are skewed towards cheap materials and designs for the segment of the market that developers emphatically refuse to touch. Housing falls into the trap of 'cheap that looks cheap', with middling materials and designs that can act as a social stigma for dwellers, conflating 'affordable' with 'cheap', as such dwellings are not necessarily energy saving or well connected by public transport.

At the other extreme of the market, niche developers such as Land Matters in the Currimbin Valley in SEQ put the emphasis on an environmental definition of sustainability: totally off-grid for its water and power needs for instance, a ban on air conditioning, and land set aside for food production. Houses easily hit the $700,000 mark and are therefore for a wealthy few. The emphasis in this development is on the 'community' aspect, with a 'village hall' showcasing debates over ways of operating the development and how to further the 'vision' behind it. However, this could be seen as overbearing for many people, with a need to 'participate' and 'fit in' that demands specific types of social capital (ability and desire to debate, discuss, stay on top of issues etc), not to mention ample amounts of time and energy. Furthermore, a number of covenants restrict what can be built and how, which again may not make this a model that is easily replicable beyond a certain socio-professional target demographic. Without denying the achievements and inspirational value of such developments, they are clearly not the solution for 'the masses'.

It results from this preliminary exploration that the market is segmented, with 'deep sustainability' for a wealthy minority possessing the economic and social capital, and more or less superficial sustainability features for the rest of the market. At the bottom of the market, affordable means cheap, with little consideration of long-term costs. Any mention of this is met with a reference to people's 'freedom to live where they want' and an all-powerful 'market'. On the government side, there is a near-panicky attitude of having to supply housing 'for the masses', due to many years of lack of strategic planning and the need to address these matters urgently.

Clearly, this is a situation of gridlock and finger pointing: at developers, at government, at 'customers', at 'the market'. How can we go beyond this situation, and towards alternative patterns of housing and sustainability?

3) Beyond gridlock: sustainability as a basis of affordability

For analysts of the situation (see Newman, Jennings 2008, Newman et al 2009), housing affordability and sustainability are but two sides of the same coin: a sustainable house can directly contribute to affordability by reducing the need for energy use for heating and cooling, whilst sustainable housing siting practices would see a re-orientation of development towards infill and/or transit-oriented clustering to reduce oil-dependence. This requires a different way of envisioning affordability, as more than just the price of a house and land: the cost of getting to and from work, to social and family activities, can vastly outweigh the perceived 'savings' achieved by buying on the urban fringes. In other terms, cheap is not necessarily affordable, and this requires a range of cultural and psychological changes at several levels. For customers, on the one hand, who need to think beyond the 'Australian dream' of an oversized dwelling on a big plot of land, which can turn into an expensive trap; for developers, on the

[2] Australian slang for pick-up truck.

other hand, who need to move beyond their discourse of 'we supply what the market wants', as often this elusive 'market' is much more complex than developers perceive. A recent report by the Grattan Institute (Kelly et al 2011) has shown that house purchasers feel that their needs are not always taken into account by developers, who try to push the stereotypical large dwelling and garden. Many people would prefer smaller, more centrally located dwellings, but these are not necessarily available on the market. People's supposed 'preference' for a certain type of housing has a lot to do with what they are used to and with what they have been offered, and with conforming to a perceived norm (Townshend 2006: 507). This also applies, interestingly, to higher density dwellings in inner-city settings as well: policies designed to deliver increased density in Sydney, for instance, have consistently failed to appropriately explain who this housing is for, beyond vague references to 'satisfying the needs of a diverse population' (Bunker et al 2005). In other terms, housing supply seems deeply disconnected from housing demands, and people's 'needs' are defined very crudely at best, when they are not simply stereotyped based on past trends.

Thus, consumers and developers are not alone in shouldering the blame. Government's levers for influencing housing affordability are now limited, since the massive sale of publicly-owned housing that occurred from the early 1980s onwards (Paris 2007). In contrast to efforts in the postwar years to actively structure the housing market and industry (Greig 1997), the history of the last few decades has been one of government withdrawal. Furthermore, in Australia, social housing was never a centrepiece of housing affordability, and government efforts always focused more on the consumption side than the production aspect.

Indeed, government is essentially concerned with housing masses of people cheaply in terms of the immediate cost of the house and land package. The wider perspective on affordability is not seriously taken into account. Government is too deeply mired in the discourse of a housing 'crisis', and the need to 'deliver', that the quest for cheapness is sometimes pushed too far, leading to uninhabitable, uncomfortable dwellings that will not deliver value in the long term, and do not necessarily improve people's situation in terms of everyday affordability. To quote Bunker et al (2005), 'the policy frameworks of planners and governments and the production decisions of developers, financiers and investors largely determine the provision of dwelling stock (...), rather than the expressed preferences of households per se'. Housing options reflect people's choices only to a limited degree; powerful structural forces are at work in shaping space. Therefore, individual desires for sustainability and affordability do not necessarily 'trickle down' into the built environment.

Another key component of sustainability as a basis of affordability is related to housing design on the one hand, and funding mechanisms on the other.

Design and construction principles that espouse sustainability can be the basis of affordability, by reducing long-term dwelling construction and operating costs. One obvious avenue is climate-sensitive urban design, which in the case of subtropical South-East Queensland, for instance, means orienting buildings North-South the avail of cooling breezes and reduce the need for costly, energy-intensive air conditioning. Likewise, it also means that building in coastal areas, which are cooler, makes inherently more sense than building inland, which is the official priority in government plans, and will require greater recourse to air-conditioning. However, there has been a lack of communication between urban design and urban climatology over the last decades (e.g. MacKillop 2011), meaning that simple approaches combining sustainable and affordable are neglected. At the scale of individual buildings, small, simple design elements can make a big difference in daily operating costs and overall sustainability. An example is the way eaves are designed for passive shading and cooling. The recourse to natural lighting is another, as is the planting of gardens with native, drought-resistant species, to reduce a dwelling's water intensity. Examples of vernacular architecture embody these principles of passive design that make buildings more energy-efficient and comfortable, because they are adapted to their climate: verandahs, gables, air circulation are all present, for instance, in the traditional Queenslander architecture. Such simple, cost-effective design touches also feature prominently in the celebrated BedZed development in the UK, where careful consideration of the building's orientation, ventilation and thermal mass ensures significantly enhanced environmental and comfort outcomes (Goodchild, Warshaw, 2011). There are recent analyses of why many sustainability-enhancing innovations feature a disappointing take-up in the construction industry (Crabtree and Hes, 2009). The causes are more institutional than technological, centreing around value systems, communication, policy and pricing. Australian research on this topic echoes results of research carried in the UK (Dewick and Miozzo, 2002) and the USA (Burdock et al 2001), which all point to the conservative, fragmented nature of the housing industry as an impediment to innovation. Very little money is put into R & D in the housing industry, which is also poor at communicating and diffusing information about sustainability (Hocking 2003).

There is a common customer misconception, and to a certain degree in the development and construction industry as well, that good design is expensive, when in reality this is not necessarily the case. Misconceptions about energy-efficient and climate-sensitive houses as being the eccentric preserve of the rich do a lot to hinder the adoption of simple changes. Qualitative studies of consumer attitudes show that people do not want sustainability features to be a key selling point of a dwelling; rather, they wish for these features to be integrated seamlessly, without fuss, into

the end product. In other words there is a desire for 'normalisation' of sustainability attributes (Crabtree & Hes 2009). This limited willingness to pay for sustainability per se (Sibley 2004), does not mean that well-packaged sustainability does not sell: this is what came out of my interviews with major developers, who emphasised that sustainability sells when it is presented as a source of savings, through lower energy use for instance.

This highlights another issue: consumer demand for such products must grow for developers to want to supply, but also the way people use buildings must change. Technology and design, by themselves, will not make a building more sustainable and affordable to operate: a 50% more efficient showerhead, as mandated by current regulations in Australia, is not 50% more efficient if people take longer and longer showers; efficient heating systems are not efficient if people want indoor temperature to be 24 degrees in the winter so that they can walk around in shorts. These everyday examples of the power of small habits show they can undermine the best design and technology.

Changes in housing design also require new approaches to funding and ownership mechanisms and structures. Indeed, my interviews with developers revealed that banks fund what has worked before and are loath to venture into uncharted territories. This creates a vicious circle where mainly similar products are on offer, and of necessity get bought, since people need to live somewhere, thus confirming banks' original decision not to stray from accepted models etc. Innovative affordable and sustainable projects such as BedZed and Vauban were, in part, predicated on slightly heterodox funding and ownership models, for instance with shared ownership of housing, which banks do not tend to look upon favourably. In turn, daring approaches, which would not have been funded by traditional lenders, such as the absence of parking garages, came about in these developments.

Conclusions

There is a problem of unaffordable and unsustainable housing in Australia, predicated on a complex array of factors. This has led to finger pointing and an acrimonious, gridlocked debate. Meanwhile, housing remains expensive and not suited to the stark realities of the coming decades. Perhaps Australia can learn from abroad.

Global exemplars of combined affordability and sustainability include the Beddington Zero-energy Development in Greater London and Vauban near Freiburg in Germany (Newman, Jennings 2008; Goodchild, Walshaw 2011). These flagship developments came about through the combined actions of developers and public authorities that were dedicated to achieving sustainable and affordable outcomes from the outset.

In other words, an ethos and vision of affordable, sustainable housing were necessary to bring about such advances in the housing market, just as vision remains a central driver of sustainability in general (Newman, Jennings, 2008). This is not to say that such developments, and other similar ones that exist around the world, are outside of the realm of market-based housing provision, as many developers are wont to retort. On the contrary, these developments are profitable whilst being affordable and sustainable, but remain the exception rather than the norm. There is an ingrained conservatism in the housing market, on the part of developers, financiers, construction companies, government and, last but not least, consumers. Mental images of what housing should be will take time to change and adapt to the new realities of rising energy prices and transportation costs, but it seems that the weight of these factors is finally starting to bear on the public debate and people's decisions.

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