

# climate change and sustainability requires a radical rethink of the design of cities and housing

2006 may be said to be the year in which sustainability came to the fore. The combined impact of Al Gore's film *An Inconvenient Truth*, the Stern Report, the IPCC (international panel on climate change) and the physical impact of the drought were sufficient weight to change the public perception of the immediacy of this problem. With the exception of some "flat earthers" most accept the impact of greenhouse gases on climate change. But what will be the impact of climate change on the design of our cities and our housing? For some time, Bruce Mau and his institute (Institute without boundaries) have predicted that the rate of technological development in response to these issues will require what he calls "Massive Change"

There is no doubt that the extent of the impact is not yet understood. Energy uses that impact on climate change can be broadly broken into quarters: the energy that is used in housing, the energy that is used other in buildings and other infrastructure in our cities, the energy that is used to make food and fourthly, the energy used in manufacture. Thus half of all the climate change uses are derived from the shape and functioning of our cities. Thus we can forecast that our cities will need to undergo a massive change in order to address climate change, it will not be just some tinkering at the edges. We will have to see a radical rethinking of their entire structure rather than the current simplistic notions of the addition of some photovoltaic panels and some water tanks being a solution of the future.

It is reasonable then to ask what is the urban design framework and what are the housing policies that Australia has to deal with this crisis. In an ideal world, all three tiers of government would have a coordinated plan to address the next 20-50 years of urban growth. Let us start with a national policy, where increasingly there isn't one. It is a sad fact that only twice in the last 35 years, and only for two short periods has Australia had any semblance of a national housing policy. And remarkably, both occasions were when the Labor Party and in particular, it's Deputy Prime Minister had a strong conviction in this area. The first was under Tom Uren and the ill-fated DURD (Department of Urban and Regional Development) which left us not only with the paper white elephants of the regional growth centres, but also the diamonds of Woolloomooloo and Glebe where 19<sup>th</sup> Century urbanism was preserved and still provides one model of sustainable housing in our cities. The other was under

Brian Howe, whose crowning achievement was the Local Government and Community Housing Program (known colloquially as LoGCHoP) which provided funds for all manner of housing that lay outside the conventional uni-family home, such as housing for cooperatives, students, extended intergenerational families and so on.

It is sad to reflect that none of the four parties in Australia's National politics have any semblance of a coherent plan for our urban development or housing. The Liberals have never had one, the Labor Party, as I have pointed out, have had only two fleeting experiments, the Greens have filtered it solely through the limited anti-progress view that they have, and in this, as in all things the Democrats are irrelevant.

By contrast, many OECD countries have substantial and detailed policies that govern the growth of their urban areas, particularly in Europe and Scandinavia. Perhaps it is because of the pressing needs of their urban areas, but an overarching policy that looks at population growth, immigration, change in demographics and the physical limitations of the city together with the available infrastructure on a national level provides a plan to go forward with. In this regard, the annual and five yearly housing plan in the Netherlands is a shining exemplar.

At the State level, urban and housing issues are concentrated on the "Big Five"; Sydney, Melbourne, Brisbane, Perth and Adelaide. The irony here is that although the State Governments are seated in these cities, they were created to control much larger areas.

Thus the State Governments feel responsible for preparing a plan for a State area when more than 80% of the population live in the capital city (even true in Queensland, if Brisbane is extended north to Noosa and South to the Gold Coast).

The urban areas are fragmented into a few or in most cases, many councils. This can vary from Brisbane where upwards of one million people are under one Council area to Sydney which is fragmented into over 50 council areas, the smallest of which can be for 10,000 people living in 4,000 houses (Hunters Hill). (in this context it is worth noting that all of Tasmania has about the same urban significance as Baulkham Hills Shire Council).

Historically then, the cities, do not have the governance that would provide a master plan for its development. Which is not to say that plans have not, at times, been forthcoming. For instance in Sydney, there has been the County of Cumberland plan of the 1930s and the strategic plan of the early 1970s and today the lemma Government plan to have a plan for the plan.

It may well be said that in Australia urban design is not taken seriously. There is no significant centre of study, nor any significant plans that give any evidence that the physical form of our cities is in any way being planned; rather it is being allowed to evolve. The only evidence of any concerted thought about housing is in relation to tax regimes. Tax on the family home, which is common in many countries, is absent in Australia. This has distorted the growth and ownership of houses to give Australia one of the highest rates of home ownership in the world (75%) but one of the most unsustainable built forms.

One aspect of this evolution of urban design is the marked difference in the way in which Sydney and Melbourne have developed. Melbourne follows a classic North American pattern with a heavily developed downtown, CBD, with high-rise towers laid out within a grid, this is then surrounded by inner suburbs of high density from the 19<sup>th</sup> Century. It is this ring of suburbs which were deserted when the population fled to the suburbs in the U.S. that is so eloquently portrayed in Jane Jacobs book *The Death and Life of Great American Cities*. Whilst this blight has continued in many North American cities it is to Australia's good fortune that a series of circumstances, not least of which was the National Labor Party intervention in the early 70s that focussed attention on these areas and helped retain some areas and promote the gentrification that has seen them become the most desired areas within the city. Surrounding this 19<sup>th</sup> Century city is another annulus of housing which we may describe as the Federation, or, Queen Anne belt of housing built from 1900 through the interwar era of the 30s, 40s and 50s. Surrounding this again in a further annulus is the post World War II growth of planned and semi planned suburban sprawl. In Melbourne the fringes of this three quarter circle around the bay are being pushed out on all sides, down the Mornington Peninsula, out towards the Dandenong's, North along the Hume Highway and West through Caroline Springs towards Backers Marsh. A section through this city would show housing of predominantly 1-2 storeys from the outer edge rising towards a 2-4 storey area closer to the city and then steeply rising in the core towards the 30-50 storey towers that predominate not only the city grid, but the area of South Bank (Eureka Tower: 88 storeys) and Docklands.

By contrast, Sydney has a different form altogether, for a start, the CBD is only half the physical area. Bounded by Circular Quay, the Botanic and Hyde Park area, the former Breweries to the South and the Pyrmont water to the West the area is almost half that in the large grid of Flinders, Spencer, Franklin and Spring Streets in Melbourne. Nevertheless, this same tiered arrangement can also be discerned in the concentric rings of 19<sup>th</sup> Century, early 20<sup>th</sup> Century inter-war and post-war development. However there are significant differences in the rise of satellite cities within Sydney. The two largest of these are North Sydney, which often goes unremarked but is said to be the sixth largest CBD within Australia, and Parramatta, a city centre dating from the very origins of the city. More recently there have been a series of growth areas added to this that have no equivalent in Melbourne. In particular, the St Leonards to Chatswood growth corridor, the satellite development at Penrith, the growth areas at Liverpool and Campbelltown and the evolution of a suburban centre into a quasi city centre at Hurstville. These areas act as mini cities and are far more substantial than Clover Moore's idiotic idea of villages. They are indeed cities and should be treated as such.

As a consequence, there is a marked difference in housing form between Sydney and Melbourne. Both cities have inner urban housing towers, although Melbourne's towers are further apart and have more gracious areas at the ground level, while Sydney has some areas of greater density than some parts of Manhattan, without the saving grace of the diversity and richness of retail and semicommercial space at the base of the buildings. In both cities, this increased density has significant ramifications and benefits in terms of the sustainability of the city, in this regard, it should be noted that some commentators have proposed that New York may well be regarded as one of the greenest cities in the world rather than one of urban blight.

Both cities also have suburban developments at the fringe on Greenfield sites although in Sydney's case, the number of sites is starting to be substantially constrained by the availability of the land for two reasons: the physical constraints of the topography, rivers, the "Sandstone Curtain" of the Blue Mountains and bushland areas, and the environmental lobby which is restricting the development of former pastoral land and bush and in its conversion to housing.

The interesting middle ground is the rise of the so-called medium density housing. This is typically housing from 2-10 storeys which occupies brownfield sites (former industrial or commercial uses) or

as replacement for single family houses on large blocks of land. These can take the form of apartment blocks which are modern versions of the 3 story walk-up or the 8-10 storey core lift developments. A typical example is the Moore Park to Victoria Park development in Alexandria and Zetland. An equally interesting but far less visible development is what we may term the six pack: the ideal is to take a small house, usually an inter-war or 1960s house that sits on a large site well in excess of 1,000sqm and by removing that house, replace it with 6 townhouses or apartments. Often two or more sites are combined to give rise to 12-20 of these townhouses and apartments often mixed together on the same site. These developments are common throughout many Council areas in Sydney as a response to the State Governments requirement for an increased density of housing through its urban consolidation program. In fact this form of housing may well be providing over a third of current dwelling stock being equal in size to the other two thirds of greenfield sites, and large scale apartment buildings, but it is the fact that it is not well recognised as a large scale movement yet it is occurring in almost every suburb that gives it its interest. It is often resisted by local environment and community groups where their opposition may be seen along the lines of the urban terrorism concept of FISH (Fighting In Someone's House).

A typical example would be the Parramatta Valley, in particular, the suburbs of Telopea, Dundas and Ermington. Environa Studio has been involved in the preparation of almost a dozen schemes in this area over the last three years, with some mixed success. Whilst the housing is sound in terms of its commercial potential and there are a number of developers keen to build it, meaning that there are a very large number of potential purchasers, the housing has been resisted by the local residents who

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#### Detached houses

It is curious that Allana McTiernan, the Minister for Housing in Western Australia, is currently seeking to destroy the only climatically appropriate and well evolved housing designs in an Australian city, in Perth, other than the tropical houses of Darwin.