

Housing Expos and the transformation of industry and public attitudes

A BACKGROUND REPORT FOR
TRANSFORMING HOUSING: AFFORDABLE HOUSING FOR ALL
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Executive Summary

We continue the provocation that, although Australia has some of the best housing research in the world, we are trailing behind many other countries with more proactive and coordinated approaches to affordable housing.

The key message in this paper is that a Housing Expo or Demonstration Project is not just a mechanism for public dissemination of new ideas but is a means for developing the necessary conversations and consensus between key industry, not-for-profit and government stakeholders in affordable housing.

Demonstration projects developed as a result of solutions competitions will help test strategies and ideas which extend beyond design and construction to include a range of land capture and financing strategies. That said construction and design are at an interesting tipping point within Australia with new prefabrication strategies being produced.

The paper reviews the use of Housing Expos and Demonstration Projects from the past and present to make an argument for their use in Victoria. In Victoria we suggest there is a case for several demonstration projects given affordable housing might be best developed at many scales from small secondary dwellings to medium or high density developments.

Key Question:

How might demonstration projects support a partnership approach to affordable housing innovation bringing together industry, not-for-profit organisations and government to test new housing typologies, land capture strategies, financing and construction technologies in a risk-averse market?

Outline

Throughout the 20th Century and at the start of the 21st Housing Expos have been utilised to promote, develop and showcase innovation in design and to engage the public in new ideas on housing. Germany has a long tradition of using housing exhibitions to test new ideas in housing design and urban living. And more recently in the Nordic region of Europe, Housing Expos in Sweden and Finland have demonstrated how ideas on sustainability have influenced new approaches to housing in a wider city-regional context. This paper draws together international precedents in order to explore the potential of housing expos or demonstration projects to be transformational change agents inspiring industry and consumer confidence in innovation with a particular focus on affordable housing.

Demonstration housing developments, housing expositions, display houses, housing fairs and housing competitions are utilised internationally in various ways to promote, develop and showcase innovation in housing design and construction. Housing fairs, display houses and competitions are well tested in Australia but housing expos and demonstration housing developments are less familiar. In this paper, the terms Housing Expo and Demonstration Project are used interchangeably.

The paper begins by reiterating the challenges facing Australia in terms of affordable housing with the provocation that Australia is trailing behind many other countries with more proactive and coordinated approaches to affordable housing. The body of the paper is structured into three parts. We first look to *the past* to explore local and international case studies. We then do an international horizon *scan* to consider the impact of *recent* housing expos and demonstration projects. We finally look to the *future* to explore what role might be played by a housing expo.

The key message in the paper is that Housing Expos or Demonstration Projects are not just a mechanism for public dissemination of new ideas but are a means for developing the necessary conversations and consensus between key industry, not-for-profit and government stakeholders in affordable housing.

Affordable housing in the Australian context

Australia's population is both expanding and ageing with most growth occurring in capital cities. Melbourne's current housing context is one where significant household growth combined with poor and declining housing affordability is putting pressure on urban systems and exacerbating social and environmental problems. Within this context, the two dominant models of housing supply: outer-suburban detached housing and high density inner urban apartment development, are failing to address key aspects of housing need or a metropolitan transition to sustainable urbanism.

Australia has some of the best research on housing provision and housing affordability in the world. Carolyn Whitzman, in an associated paper demonstrated how other cities are successfully

implementing partnerships across the private and government sectors to address the issue of housing affordability. To affect a similar transformation within Victoria, this paper builds a case for demonstration projects as a way to support innovation through partnerships across sectors and provoke public discussion.

Part One - Looking back

Temporary Exhibitions, Expositions and World Fairs

The Great Exhibition in London of 1851 began a series of international expositions that have explored the intersection between manufacturing, design and culture, promoting new understanding, more sophisticated consumer expectations, and enduring legacies. For example, the temporary erection of the Eiffel Tower for the 1889 Paris World Fair placed engineering and civic symbolism at the heart of discussions about future innovations, and secured permanent status.

Australia's participation in Expo 1967 in Montreal was significant due to being the first international exposition which Australia had attended since 1939 New York World's Fair. With architect Robin Boyd as exhibition designer, the featured exhibits of the Australian Pavilion composed a revised self-representation of our nation as advanced and independent in front of an international audience (Darlan-Smith et al, 2008). Modern architecture and interior design were elements of the exhibit, with the pavilion designed by architect James Maccormick, and futuristic 'sound chairs' designed by Grant and Mary Featherston where visitors could sit back and listen to audio discussions about Australia's future.

Temporary events such as these international Expos feature high attendance together with media exposure and are frequently positioned to encourage public sentiment to move with changed economic or political times, for example to profile a country's expertise in manufacturing, engineering or agriculture (Roche 2000, 8 –11).

As with the example of the Eiffel Tower, these temporary events frequently leave permanent legacies. Seattle's 1962 Century 21 Exposition is an excellent example of expos as powerful agents of urban transformation (Berger, 2012), having helped spread the ideas of monorail – which was designed as an urban mass transit demonstration – and revolving restaurants to the world, as well as delivering a major civic centre which was a major component of an existing city plan. The US Government used the Expo as a venue to demonstrate the nation's scientific prowess to the world, committing over \$9 million chiefly to build the NASA-themed United States Science Exhibit which is now the Pacific Science Centre.



Figure 1 Inside the Australia Pavilion are Sound Chairs designed by Grant and Mary Featherston
Source: <http://architectureau.com/articles/letters-9/>



Figure 2 Seattle's Needle and Monorail remain as legacies today.
Source: <http://www.ultraswank.net/event/century-21-seattle-worlds-fair-1962/>

Permanent Demonstration Housing Projects

There are also significant international precedents of permanent demonstration housing projects. Two of the most famous are in Germany.

The first known as the Weissenhofseidlung was built in 1927 for the Deutscher Werkbund exhibition with land and financing provided by the City of Stuttgart. Twenty-one buildings designed by seventeen European architects housed sixty dwellings. Approximately half a million visitors came to see the Werkbund Exhibition over a three-month period. The exhibition aimed to showcase “Neues Wohnen” (New Living) in terms of economy, functionality, construction and technical fittings and furnishings and was built in 21 weeks using innovative construction techniques. Although relatively modest in scale, the Weissenhof Estate was the antecedent for a new wave of housing typologies which were adopted internationally and heavily influenced by modernism. International connections resulting from the exhibition led to the formation of CIAM (Congrès Internationaux d’Architecture) in 1928. In 1958 the whole estate was formally recognised for its heritage value. The Weissenhofsiedlung remains a significant architectural landmark in housing design. It still draws around 30,000 visitors a year to the site. The houses were designed by leading architects who were later to become leading figures of the modern movement including, Ludwig Mies Van Der Rohe, who oversaw the project, Le Corbusier, Walter Gropius and Dutch architect J.J.P. Oud.

In the early 1950s of a divided Berlin, West Berliners were appalled by the rise of the large scale socialist-style apartment buildings of East Berlin. As a clear point of differentiation between the two sides of Berlin, the West decided to host a permanent housing exposition that was both visionary and political in its agenda. Interbau ‘57 was announced with the theme ‘City of Tomorrow’, and prize winners presented their modernist vision of a masterplan with more freely positioned apartment buildings set within parkland, instead of the regimented barrack-like block developments of the existing city. By the end of the 1957 exhibition period, only half the planned apartments had been completed so a host of international architects – including Oscar Niemeyer from Brazil, Arne Jacobsen from Denmark, Alvar Aalto from Finland and the German Bauhaus founder Walter Gropius – became involved in delivering the remaining 35 apartment buildings.

Perhaps most relevant to any future Melbourne projects is that the collection of buildings displayed a rich variety of responses to the brief allowing both visitors and residents to experience new ways of living. Both projects also informed the design of many subsequent housing projects across the world. The projects are not without controversy. The Weissenhof was intended as a prototype for workers’ housing but fittings were beyond a worker’s budget. The Interbau ‘57 prototype of high-rise apartment blocks set in gardens has not been a successful solution for social housing.

As demonstrated by this brief contextual overview, the idea of demonstration projects exploring different themes to nurture and inspire change is not a new one. Most of these projects have left permanent, important legacies that explore innovations of their day. Government support has been an important part of these events, both politically and financially, as has the involvement of designers, inventors, the private sector and other participants.

Part Two - Looking around

Over the past 15 years, some of the most compelling case studies for demonstration housing projects as change agents have hailed from Europe. They have involved innovation, new typologies, and essential partnerships including government, private sector, investors, and design professionals. A series of recent case studies are framed in later pages in terms of objectives, delivery and outcomes.

What now follows are themed turning points which have a particular relevance to our current situation in Melbourne.

Critical reconstruction

In the 1970s and 80s a reaction to the large scale programmes of comprehensive redevelopment of the post-war era led to a reappraisal of the potential adoption of more traditional forms of housing and a growing interest in the urbanism of the 'city'. Many cities across the world affected by de-industrialisation and a loss of population in the inner-city began to regenerate these areas with a mixture of infill development, adaptive re-use of non-residential building fabric and new housing based on a mixed use urban-block structure. A highly influential exploration of this approach was put into practice at the **Internationale Bauausstellung (IBA)** in Berlin which ran from 1979-1987 and involved the active restoration of the historic fabric of the city as a guiding principle for contemporary inner-city redevelopment. An emphasis on public realm, the street, the neighbourhood structure and a reinterpretation of existing housing typologies provided a template for mixed use regeneration which has been adopted in many cities including Glasgow and Rotterdam. Berlin's IBA can also be seen as a marker of important aesthetic and intellectual shifts at this time, such as the emergence of post-modernism, and was applied in the context of an 'urban village' dominated by social housing.

'Green' urbanism

In the 1990s and 2000s the impact of climate change began to influence housing design and many cities have brought forward new policies and action-plans aimed at reducing carbon footprints and minimising resource use. The emphasis in 'critical reconstruction' seen at the IBA has been expanded to promote walking, cycling and green infrastructure as design factors in a move towards 'ecologically' focused urbanism. **Malmo's Bo01 'City of Tomorrow' Expo from 2001** (see case study) has provided an outstanding and internationally renowned example ecologically based regeneration situated on Malmo's post-industrial waterfront. Bo01 has demonstrated that good quality housing can be developed in partnership between public and private sectors and moreover how a strong commitment to renewable energy, green roofs and sustainable water management can be used to enhance the attractiveness of the housing and neighbourhood. Other Scandinavian cities such as Stockholm and Copenhagen (to which Malmo is strategically linked by the Oresund Bridge) have achieved international recognition for setting and achieving extraordinary environmental standards and carbon reduction based around walking, cycling and regional public transport strategies.

Hammerby Sjostad, originally planned to be Stockholm's Olympic Village in 2004 (Athens won the bid), is another example of a waterfront redevelopment and has defined international best practice for 'eco-town' development, exploiting new ways of recycling energy, waste and water.

Scotland's Housing Expo in 2010 (see case study), which aimed at raising the quality of housing and promoting sustainable design, was heavily influenced by the quality of these achievements in the Nordic countries, in particular by the Finnish housing fairs.

Linking infrastructure to place-making

A focus on 'place-making' and good strategic planning is also evident in the Dutch VINEX housing programme which ran from 1995 to 2005 and has resulted in the construction of 455,000 new homes, generally built as urban extensions to existing cities and mainly concentrated in the 'Randstad'. Although technically not an Expo the commitment to the key principles of connectivity, compact cities, design quality and affordable housing supply (30%) make the VINEX programme a unique combination of vision, strategy and delivery. All projects are well connected to existing settlements by public transport and walking/cycling routes and are protective of the limited areas of open green space in the central 'Green Heart' of the Netherlands. Up-front investment from central and local government in infrastructure and land assembly has attracted significant private sector investment whilst at the same time delivering the target of 30% of the new housing being affordable. The Eastern docks of Amsterdam, the former docklands in Rotterdam and new settlements on reclaimed land such as Ijburg all provide high-density housing suitable for families and other groups which have been based on strong, design-led masterplans. In many of these developments and particularly in the new town of Almere, custom-build has enabled occupiers to become involved in the design process and has in many cases introduced an impressive variety of innovative house-types based on user input.

Melbourne Echoes

Throughout the development and renewal of first world cities during the eras of industrial and post-industrial capitalism, housing Expos and demonstration urban precincts have played an important role in proposing and promoting new visions of urban life. Initially focused on improving standards of living for a growing middle class and more equitably distributing the benefits of urban life, more recent examples have sought to respond to new awareness of the limits of urban growth and to rethink the urban condition itself.

The Housing Expos briefly surveyed here have coincided with but have also helped to precipitate key turning points in the development of urban settlements. Crucially, they have highlighted the role of housing design in urban transformation. The turning points identified chart the progress of housing design in the modern city from its engagement with improving living standards and advancing the autonomy of the individual, towards more social and ecological concerns. The influence of these seminal demonstration sites can be detected in most large cities throughout the developed world, including Melbourne.

Melbourne modern: Robin Boyd and the Small Homes Service

Among the most successful exponents of modern domestic architecture in Australia was Robin Boyd. Boyd's contribution was not only to interpret European modernism to the Australian urban context but also to communicate architectural ideas effectively to a broad public. From 1947 to 1953 Boyd was Director of the Royal Victorian Institute of Architects' Small Homes Service and used this as a vehicle to disseminate modern ideas about the home to a wide audience. The Small Homes Service allowed people to purchase, for a modest fee, working drawings and specifications for a small home, the construction of which they would need to arrange themselves. The designs were modern and their public acceptance was supported by Boyd's writing a weekly column in *The Age* newspaper, which extolled their benefits. Very different to Stuttgart, the Small Homes Service nonetheless served a similar purpose. The plans were on display at a public venue in central Melbourne. Initially this was the State Electricity Commission's showroom on Flinders Street but for most of this period the public face of the Service was in Myer's retail emporium. This constantly evolving public exhibition of modern homes proved very popular, with 1000 people visiting during the first nine days (Serle 1995). As the homes were built (10% of new homes built in metropolitan Melbourne just before 1950) this effected a transformation of public acceptance, expectations and the capacity of the building industry. Also highly influential were two full-scale demonstration houses that Boyd designed for display in the Royal Exhibition Building. The 'House of Tomorrow', exhibited as part of the Modern Home Exhibition of 1949, and the Small Homes Service 'Sunshine House', displayed at the Better Homes and Housekeeping Exhibition of 1951, were both well-visited and challenged public opinion.

Postmodern Melbourne: The Ministry of Housing's infill housing programme

Another important development in the local conversation about architecture and urban housing was precipitated in the early 1980s by the Victorian Ministry of Housing. Prior to this time, public housing had been delivered either as detached suburban housing or through the deliberate demolition of whole blocks of inner urban housing and their replacement by prefabricated high-rise towers. This approach to urban renewal, along with the freeway construction programme which accompanied it, had become discredited elsewhere in the world and was the target of vigorous urban protest movement in Melbourne. In response, the Ministry of Housing switched to a policy of spot purchase and restoration of existing houses, combined with careful infill projects more sensitive to the scale, language and grain of existing urban contexts. Architect John Devenish, who had just overseen the internationally acclaimed Woolloomooloo Renewal Project in central Sydney, was appointed to lead the new programme. Younger, local architectural practices were engaged to design the infill projects and critically translated the scale, form and ornament of the historic fabric. The Berlin IBA had a profound influence on the urban and architectural ideas expressed through this local policy. The emphasis on urban integration, revaluing and reinterpreting traditional urbanism, and the pursuit of diversity and the particular rather than repetition and the universal, owe much to international debate in which the IBA was pivotal. The body of work produced by the Ministry of Housing between 1982 and 1985 functioned as a kind of open air exhibition of revived urbanism and architectural postmodernism in Melbourne.

Green Melbourne?

It is interesting then to contemplate how the movement to green urbanism has impacted housing in Melbourne. Bo01 and the other European examples are urban brownfield regeneration precincts on a large scale that, in addition to demonstrating sustainable housing, also manage energy, waste and water at the precinct scale. Substantial inner-urban, ex-industrial sites in Melbourne have also undergone regeneration but not within an over-arching green urban agenda. Some individual projects, however, have sought to take on the role of demonstrating, testing and showcasing these principles at a smaller scale. The Inkerman Oasis project, a redevelopment of a council depot site at the City Port Phillip and run as a PPP, pioneered on-site water recycling and management. Westwyck EcoVillage, the adaptive re-use of a former Brunswick primary school site as a medium density residential community, has adhered to strict ESD principles in pursuit of 'one planet living' and has functioned as an urban demonstration project for sustainable development and good design through regular open days and other public engagement events. Living Places, a public housing redevelopment project in Dandenong, consists of fifteen houses with high environmental performance at both the dwelling and site scale. It was the result of an open design competition run by the Office of the Victorian Government Architect (OVGA) and the Office of Housing and had a wider ambition of demonstrating social and environmental sustainability in a suburban context. The Sustainable Affordable Housing Initiative (later Habitat 21) resulted from another design competition, organised this time by the OVGA and VicUrban (later Places Victoria), and sought to influence the environmental performance of detached project homes. The six winning designs were constructed as a display village on a housing estate being developed by Places Victoria

Scotland – Homes of the Future, Glasgow 1999

“A NEW MODEL OF URBAN LIVING”

Background – Purpose of Expo

Over the past 30 years, the city of Glasgow has successfully used design Festivals to help to rebrand the city’s image and post-industrial identity, for example through the Glasgow Garden Festival in 1988 which focused on landscape design. In 1999 Glasgow became the UK City of Architecture and Design. The Glasgow 1999 Festival aimed to celebrate excellence in architecture and design from around the world; to promote awareness in the people of Glasgow, its communities, organisations and business of the cultural and economic importance of the design process; and to highlight new thinking to help position Glasgow as a major European city of ideas. ‘Homes for the Future’ on Glasgow Green was a key legacy project from the ambitious and well-funded 1999 programme and was intended to showcase an innovative and ground-breaking approach to new build housing close to city centre of Glasgow. The GDA, Scottish Homes and the Glasgow City Council worked with Glasgow 1999 Ltd to develop the management structure and funding assistance required to deliver a complex project and open this up to the public.

Key objectives

- To transform and regenerate a derelict infill site which had become a dangerous eyesore facing onto Glasgow Green as part of a three phase development plan
- To become one of three key built legacy projects from Glasgow’s UK City of Architecture Festival programme (another being the creation of The Lighthouse, Scotland’s Centre for Architecture)
- To provide a mix of property types of urban character – challenging the traditional typology of the tenement and provide 100 homes for both rent and sale
- To provide opportunities for emerging practices to become involved in a landmark project of the 1999 Festival programme
- To create innovative design and construction partnerships between developers and architects on each plot and engage house-builders in a master-planned design led process
- To enable the public to view alternative models of inner city living from a 3 bedroom mews houses to apartments with external terraces facing Glasgow Green

Project Delivery

The project was overseen by the 1999 Festival Company Ltd and masterplanned by Page and Park Architects a Glasgow based practice. Page and Park’s guidelines for the site indicated a mix of accommodations of various tenures, sizes and budgets. It specified the need to address the scale of the site, with an appropriately urban character, rather than a suburban one. It also specified that individual houses should address the issues of barrier free access, low energy and different living and working combinations. Involving 7 architects (both established and emerging) and 5 developers, Homes for the Future provided a successful range of housing typologies and design approaches. The scheme has a strong sense of urban grain and as intended was one of the most important projects to emerge from Glasgow’s year as UK City of Architecture and Design.

Outcomes

- Homes for the Future met its objectives of providing unique cluster of innovative development which engaged the public imagination and helped to transform an important fringe area of the city.
- The development has raised the quality of development in this area of Glasgow, although the planned later phases have not proceeded to the original timescales
- Over time the project has knitted well into fabric of city and provides good connectivity to Glasgow Green
- Most of the housing was sold before completion and property values on the site have increased significantly



Figures 3, 4 *Homes for the Future* apartments overlooking Glasgow Green, Glasgow, Scotland.

Source: Ian Gilzean

Scotland – Housing Expo, Inverness 2010

“A SUSTAINABLE HIGHLAND SETTLEMENT”

Background – Purpose of Expo

Scotland's Housing Expo, in Inverness showcased over 50 house designs of the future to the public and aimed to make good design and sustainable features commonplace in every home. The Expo is based upon similar models found in mainland Europe, and particularly Finland where historically the housing fair concept has proven very successful in stimulating quality design and innovation for housing. Inverness, the ‘capital’ of the Highlands, is Scotland’s fastest growing city, but much of the new housing development taking place there was considered to be of poor quality when contrasted with European examples of new settlement design. With Highland Council as the key sponsor and with the support of the Scottish Government and other partners a commitment was made in 2005 to develop plans for a national Housing Expo in Inverness, which opened to the public in August 2010.

Key objectives

- putting into practice learning from the Nordic countries (e.g. Finnish Housing Fair)
- to showcase innovative, sustainable housing and place-making to a wide audience and help change attitudes towards house and place design;
- to stimulate the construction industry in terms of consideration of design led housing solutions and high quality home-grown and manufactured skills, materials and products;
- to investigate and trial new ways of thinking about places, design and materials.

Project delivery

A mix of 50 private and affordable social housing for rent built for the opening of the Expo. The private housing was self-financing and was built for sale after the Expo had concluded. 20 units of affordable social housing was supported by a Scottish Government Housing grant. The masterplan for the site was based on the dense, close knit and intimate street pattern found in traditional Highland settlements. A design competition run by RIAS enabled architect/developer teams to be selected for each plot. 33,000 visitors attended the site during the course of August 2010. An education and activity programme was run for young people as well as a month long seminar programme for professionals.

Outcomes

- The Expo raised successfully awareness of housing design challenges and the need to continue to innovate and a political level – it helped sustain interest in what architecture policy was achieving and after the 2011 election a commitment was made the new SNP majority government to renew Scotland’s architecture policy (‘Creating Places’ was published in June 2013) and The Expo was highlighted as good practice model in the Scottish Government’s vision for housing over the next decade *Homes fit for the 21st Century*
- The Housing Expo highlighted the need for a more work to be done on creating sustainable Scottish supply chain there has been a continued to focus on this issue e.g. The Scottish Government together with Scottish Enterprise has invested £7.5 million in setting up the

Scottish Centre for Construction Innovation with – also based at The Lighthouse. This has been established to connect industry and academia and continue to develop knowledge and expertise on themes such as off-site manufacture and modern methods of construction. It opened in October 2014.

- House-builders, particularly medium scaled Scottish firms, are much more aware of the need to address issues relating to low carbon design, place-making and innovation as important factors in their business success and are investing in these areas
- The integration of Scottish Government policies on urban-design (e.g. Designing Streets) and green infrastructure which were tested at the Housing Expo are now becoming more mainstream and in particular were applied to full effect in the delivery of the Commonwealth Games Athlete's Village completed in 2014 in Glasgow

The integration of Scottish Government policies on urban-design (e.g. Designing



Figure 5-9 Scottish Housing Expo –low carbon housing in a masterplan inspired by Highland settlement patterns

Source: Ian Gilzean

Sweden, Malmo Bo01 'City of Tomorrow'

INNOVATIVE 21ST CENTURY WATERFRONT LIVING

Background – Purpose of Expo

Bo01 - City of Tomorrow is an entirely new district in the Western Harbour area of Malmo with residential buildings as well as offices, shops and other services. This area was historically the location of the Kockums shipbuilding works however, following the decline of the company the area was left largely abandoned. A SAAB factory was founded in the 1990s, but soon closed. An expo on Ön in Malmö was planned for 2000, however following the council's acquisition of the Western Harbour in 1996, it was decided that this former industrial area would be a more suitable location for an Expo. It was created as part of the European Housing Expo in 2001 and the vision for the area is notable for its sustainable character and the way in which the waterfront location has been enhanced.

Key objectives

- to regenerate the Western Harbour area of Malmo in a ground-breaking way with an emphasis on high-quality permanent housing solutions, architectural diversity and well resolved urban spaces.
- for the district to be an internationally leading example of environmental adaptation and social sustainability of a densely built urban environment.
- to put Malmo on the international map
- to act as a driving force in Malmö's development towards environmental sustainability.

Project Delivery

Head architect Klas Tham for Bo01 envisioned a network of streets with a broken-up character, much like that of the inner-city of medieval towns (which Klas Tham had analysed in detail to get the scale and proportions of street correct). This was intended to have a dual purpose, a) to break up the urban environment allowing for a more pleasant experience, and b) to offer shelter to residents by breaking up the harsh sea winds. Malmö's city architects developed a detailed programme and plan to which the consultants and developers needed to conform to in order to get developments approved. Monthly lectures for the developers, the municipality and other partners maintained a focus on the vision for the new district. Private sector developers, who have been responsible for the physical realisation of the district, were urged to think holistically and to show consideration for the surroundings in relation to the individual housing units. Compliance with the quality programme was important to maintain the vision and unique character of Bo01 and this became a shared learning process. The success of Malmö was about doing simple things well and getting developers on board and buying into the vision and the process. The central principle of Klas Tham's design for Bo01 was that the urgent shift to addressing the need for long-term sustainability will only be possible when the sustainable route is regarded not only as the wisest option, but also as the most attractive one.

Outcomes

- Malmo has overseen the transformation of the island from a polluted industrial zone to an environmentally-conscious district with 600 homes and associated business and recreational areas with the docklands regeneration as an internationally significant ecological quarter
- Malmo's Western Harbour has become flagship example for dense urban development with social sustainability built in
- The ecological strategy was successfully integrated into market-led development processes

- The private sector embraced the holistic nature of the development and met the conditions of building leases set out to meet the city's quality programme
- The masterplan for Västra Hamnen very successfully exploits the natural waterside advantages
- Bo01 has been highly praised internationally as an exciting, ambitious and thought-provoking success, and the people of Malmö have embraced the district, especially its harbour promenade.



Figure 10-12 Malmö – innovative sustainable housing and masterplan regenerating a former dockland area

Source: Ian Gilzean

Finland - Finnish Housing Fairs

ANNUAL SELF-FUNDED HOUSING FAIRS

Background

The Finnish fairs have been held in a different municipality each year since 1970 and are permanent developments consisting of a master-planned site with a series of plots containing one or more dwellings designed and constructed by different designer/constructor teams. Some fairs include plots for blocks of flats and there are usually also community facilities included in the project. Responsibility for planning, constructing the project and organising the fairs lies jointly with the Finnish Housing Fair Co-operative and the municipality which has been selected by a competitive process to hold the fair in that year. The Housing Fair Co-operative was initially funded by the banks that are represented on the board of the organisation, but it no longer receives any external funding. It has, however, accumulated significant reserves, some of which it uses as up-front investment in facilities and attractions at the fairs. This is fully recovered in the Co-operative's share of ticket sales and income from the commercial organisations which exhibit their products at the fairs. The fairs are run as commercial enterprises and the financial reserves also provide protection from any unforeseen financial losses which could occur if expected visitor numbers are not achieved. In Finland, the sites for fairs are already in the ownership of the sponsoring municipality. The Housing Fair is the best known of a series of Fairs which occur in Finland annually:-

- organised by Finnish Housing Co-operative company since 1970
- commercial set-up: financially independent: not part of Finnish architecture policy
- competitive selection of different municipalities each year
- Housing Fair must be connected to development strategy of town/city
- different themes each year: sustainability, accessibility, etc. to encourage innovation
- up to 200,000 visitors over 4 weeks
- temporary facilities during fair
- houses sold and occupied after fair
- 75% of income from ticket sales
- publications, building information boards, community involvement and commercial exhibitions are aimed at promoting the event and engaging with the public

Part Three - Looking forward

In the previous two sections we explored housing expositions, such as the Scottish and Finnish Housing Fairs, to understand their success, the reach of their impact, where the impact has been most influential, and other lessons that have been learned. Locally, we examined projects and events that have captured the imagination of the general public as well as design and development communities to understand, and consider how the positive benefits can be amplified and more targeted to support sustainable shifts in market perception and consumer demand. In this section we begin by outlining some of the big housing issues in Australia to provide a context for consider the benefits of a housing expo in the local context.

Melbourne's big housing issues

Access to high quality affordable housing is increasingly difficult. There is a critical shortage of well-located affordable housing for rent or ownership in Australian capital cities, leading to housing stress, long commutes, and negative impacts on health, environmental sustainability and economic productivity (Yates & Milligan 2007; Newton & Glackin 2014). Land costs drop away in urban fringes but so does access to infrastructure such as public transport and services such as education and healthcare. While new construction of detached housing for home-ownership has decreased from 75% in the 1980s to 68% in 2011, it is still the predominant option (Dalton, Wakfield & Horne 2011).

Within the context of our changing demographics there is also need to consider more agile housing solutions today to enable independent living in the future. Historically Australian renters and buyers have tended to move their residential location as their household structures and housing needs change. Moving house may be less viable or desirable for an aged population with established community links. Arguably a more desirable solution for many might be an apartment or house design with the agility to adapt to changing needs over time.

Diversity of housing choices, tenures and sizes in socially diverse communities will contribute to the health of our cities. Addressing strategies for age-friendly cities alongside child-friendly cities will require political will, new planning strategies, community education and new design and construction options. There is potential to align new development models with increased housing choices which benefit by tipping points occurring in the construction industry. Precedents from overseas will help inform decision-making. Within this context, we argue that demonstration projects might be considered for the testing and communicating of innovative affordable housing options.

The potential of demonstration projects in Australia

The potential of demonstration projects remains relatively unexplored in Australia with a small number of notable exceptions. In the context of Australia's arguably risk-averse residential market, this paper considered the case for Australian demonstration projects as a means of stimulating and exchanging new possibilities for housing development in general and affordable housing in particular. Housing expos help shift cultural expectations by encouraging industry to test out new

designs, construction, materials and sustainability; engaging a wide audience in new housing typologies; and utilising sites which might otherwise not attract a mainstream market.

In learning from precedents, we suggest there is a case for creating a Melbourne Housing Demonstration Project(s) that:

- innovates housing typologies to support changing demographics within the context of Australia's ageing population,
- links design into issues of community and place-making,
- includes examples of affordable and innovative construction,
- demonstrates viable examples of land-value capture and investment,
- demonstrates sustainability using life-cycle costing strategies and
- challenges the Australian perception that high density family living is undesirable.

The potential of Industrialisation and the construction sector

Australia currently supplies around three per cent of housing as prefabricated. In contrast over eighty per cent of the Finnish Housing Expo housing is prefabricated. In Japan, prefabricated construction is perceived as higher quality than in situ construction. The recently established PrefabAUS peak body sees potential for prefabrication to expand to bring consumer advantages in terms of efficiency, time and quality. Links between product volume and economies of scale could be helped by developing viable solutions for the affordable housing sector but the negative stigma associate with Australian prefabrication needs to be first addressed. Demonstration projects of prefabricated houses such as those developed in Germany [<http://www.musterhaus-online.com/>] and Japan [<http://www.sekisuihouse.com.au/residential>] would help shift the public perception of prefabrication as second rate.

Developing 'solutions competitions' as a partnership process

Within the context of demonstration projects we argue design and ideas competitions can also act as change agents. We challenge the notion of competitions as linear problem-and-solution strategies with competitors simply responding to the needs of the competition sponsor. Instead we suggest that competitions can be strategically conceived to leverage knowledge between academia, consumers, government and industry using the competition brief as an educative tool aimed at shifting knowledge within our design, development and finance communities. In this sense, competitions might be less about seeking solutions and more about driving cultural change using what is effectively a form of crowd-sourcing.

A design and development solutions competition as part of the housing expos has several advantages. Effectively a form of crowdsourcing, the competition would ensure a broad selection of solutions. But competitions are also a way to gear knowledge and shift cultures within the design

and development industries. A carefully developed brief based on international best practice would become an educative document.

More of the same is not the solution

For Australian housing, more of the same is not the solution. Housing is increasingly unaffordable, suburbs are spreading and our population is both ageing and cities are growing. With a projected decrease in household size it is anticipated that 6.5 million extra dwellings will be required. An increasing proportion of the population will be post retirement age and therefore an increasing number of people are likely to have reduced health and mobility. This has urgent design implications as we are currently building houses and apartments which will still be in use in 2050. We need to design for tomorrow as well as today.

Over time, design competitions and demonstration projects might be developed across a range of scales from small 'secondary dwellings associated with detached houses, to agile housing able to adapt to changing needs, to medium density and high density apartment developments. The land capture paper focuses on medium and high density developments as they involve a complexity which needs exploration. Changing the way detached houses are designed is an issue linked primarily to design and public education rather than financing and land capture. A detached or semi-detached house designed for a family client should be able to be adapted without major alterations to different housing occupants as demographics change but also as the household changes over time. Likewise apartment buildings might better accommodate families using layouts that have the flexibility to be utilised over time in a range of ways.

Likewise the issue of secondary dwellings should not be discounted. Granny flats and laneway housing has been a supplier of thousands of housing units in Vancouver (City of Vancouver 2014), NSW has reviewed its complying development codes to provide certainty and flexibility including provisions for houses to accommodate secondary dwellings such as granny flats using as of right provisions (NSW Government 2010). This 2010 review supported the provision of secondary dwellings with a principal dwelling attached to or detached from the main house. Approvals can be gained within ten days using compliant development provisions. They cite a 2003 study which showed 6,400 secondary units in Sydney in 2001 with most being one bedroom but nearly half with two to three bedrooms. The average occupancy was 1.8 persons and the median rental was 33-50% lower than rents paid by similar households in other dwellings. The study concluded that over 26,000 Sydney dwelling had the potential to have secondary dwellings.

As household composition changes another area for consideration is providing incentives for sole occupants in large houses to either subdivide or relocate to release the many empty bedrooms across our major cities.

Discussion

This paper and the Transforming Housing initiative attempt to tackle the paralysis in action that has led to a crisis in neighbourhood development, housing design and diversity of choice underpinned by affordability and technological innovation. We make the case for a Demonstration project or Housing Exposition where evidence shows that these can be a catalyst for change. The city of Melbourne's recent 'Homes for People' Housing Strategy is one example, which helps to identify

what in many cities would be referred to as a crisis. The conventional boundaries between organisations, departments, public and private procurement, policy makers and disciplines have for too long actively hampered progress and positive planning for a changing demographic and the time for action is now, to help overcome these problems.

We are proposing so much more than an architectural solution. The best of our case studies recognize the importance of place-making to unlock opportunities, build vibrant communities and contribute to a flourishing economy while at the same time recognizing that to achieve positive change we require new partnerships involving government, private sector, investors, and design professionals.

This paper welds together an interdisciplinary approach, theoretical analysis, historical study and particular case studies which help to offer a way forward. Importantly we are asking the fundamental question of, 'how do we want to live in a future Victoria'? The question is not about design in isolation but about how citizens are catered for and how places are shaped through built form, open space and access to amenities. An Exposition or Demonstration project offers a chance to break the mould, offer alternatives, test ideas and embrace diversity. Victoria has attempted to address some of these issues in the past and we have a duty to recognize and take forward these important built legacies that over time have been forgotten.

In 1976 David Yencken, Graeme Gunn and John Patterson published, 'A Mansion or No Home'. The book began as a report for the Urban Development Institute of Australia (UDIA) on the consequences of planning standards and their impact on land and housing. David Yencken (Entrepreneur), and Graeme Gunn (Architect) along with John Ridge (Builder), had established 'Merchant Builders Pty Ltd', 11 years earlier in 1965 in an attempt to tackle issues of design quality and choice but more importantly affordability. The authors of 'A Mansion or No Home' were reacting to their experience of development standards and methods of regulation as major limitations on the ability of designers and builders to fit new built form to social functions. Standards they argued sought to prevent the bad but they argued the by-product of standards was instead limiting innovation and the pursuit of economy. They argued that a "better future for Australian cities in the late twentieth century depends upon a clearer understanding of the pernicious effects of many current standards. Incentives rather than more restrictive standards are the effective means of achieving better, cheaper and fairer development". Zoning, Lot Sizes, Density, Neighbourhood Character, Open Space, Streets and Drains, Aesthetics and Reform are also explored in a book that should be revisited in the context of the Australian City in 2015. Over the last 50 years the population has grown, our communities have changed, the built form has evolved and the city limits have stretched both outwards and upwards. As 'A Mansion or No Home' stated in its opening page, "Australia sits at a turning point. With the dream slipping from our grasp and increasingly under challenge, we face fundamental issues of equity between ownership of home and rental of home. Either way, the permissible minimum is too much and too expensive for too many". And just as the book was not intended as a magic wand neither is this paper or the proposal to support a Demonstration Project or Housing Exposition. Instead both are directed towards provoking thought and discussion among those who control or influence the shape of our urban future.

The crisis we face should be our primary incentive.....

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