Title

NSW Architects Registration Board

Byera Hadley Travelling Scholarship for Recent Graduates 2003

Affordable Housing

Michael Zanardo B.A.Arch B.Arch (Hons 1) UTS

26,158 words

Project Abstract

To investigate methods of delivery of affordable housing in Sydney by undertaking case studies of affordable housing in Amsterdam and comparing the history of affordable housing in these two cities.

Executive Summary

Sydney is undergoing a prolonged crisis in housing affordability. With the 'Australian dream' of homeownership no longer achievable for many, the need for more affordable housing in Sydney's housing climate is crucial. It is both timely and appropriate to look at examples overseas to see what can be learnt. The city of Amsterdam suggests itself as an obvious choice and a prime candidate for investigation.

The purpose of this paper has been to investigate how to improve the delivery of affordable housing in Sydney *from an architectural perspective*. To achieve this, case studies of affordable housing in Amsterdam have been examined to ascertain whether they offer any suggestions on ways to proceed. This analysis has been set against a backdrop of a comparative history of built affordable housing in each city, over the past one hundred years, in order to understand any particular cultural factors which may have influenced built outcomes. Attention has been given to illustrating affordable housing projects and positioning them in time within a broader socio-economic, political and town planning history, so that they may be considered an extension of that information.

The structure of the paper is in three parts. The first part presents a comparative history of affordable housing in Amsterdam and Sydney divided into three distinct time periods. For each period, the presentation of historical information for Amsterdam, and then Sydney, is documented sequentially. This is followed by a comparison section which provides an overlay of interpretation and develops themes for further consideration. The second part is a discussion section which draws together these themes to analyse the successes and failures of affordable housing in Sydney, gauged against the achievements of Amsterdam. The third section concludes the paper by assessing the adequacy of affordable housing that we are currently providing. It suggests how Government can assist in the delivery of affordable housing and makes recommendations as to what might be appropriate architectural responses to affordable housing and what the potential role of architecture in its delivery may be.

Acknowledgements

My appreciation goes to the NSW Architects Registration Board, formerly the Board of Architects of NSW, for seeing fit to bestow the Byera Hadley Travelling Scholarship Graduand award upon me and for giving me the opportunity to conduct this research.

Many thanks go to my mentor for this project, Dr Vivienne Milligan, for the generous amount of time she has given me, for access to her thesis and extensive library of papers on affordable housing that form much of the background understanding for this paper, for her friendly advice and her limitless enthusiasm for affordable housing.

Thanks to Russell Olsson, my former employer, who gave me leave to commence this paper, and who has always lent an expert ear to discussions of all matters urban and housing. Thanks also to Kim Crestani, my current employer, who gave me leave to complete this paper and who has a genuine long-term professional commitment to this subject.

A thank you to Philip Thalis and Peter John Cantrill, my university lecturers in Urban Studies for four years at UTS, whose lectures inspired my interest in this topic.

I am grateful to Emile Spek, Willy Houwen and Martin Fredriks, all in Amsterdam, for their insight into the Dutch affordable housing scene and their geniality. I am grateful also to Derek Bebbington in Sydney, for his advice and a local perspective.

To my parents, Claude and Margaret, for their time and care put into the proof reading of this paper, and for their continuing, enduring support of my endeavours.

And lastly to my wife, Olivia, my travelling companion and partner in life, thank you for your company, for your patience and for loving me the way you do.

Michael Zanardo
Sydney, 2006

Index

Scholarship Intent

The intent of this paper is to investigate the topic of affordable housing and how it might be delivered in Sydney. The low level of affordable housing activity in Sydney and indeed Australia, with only a few isolated examples to draw on, suggested the need to look overseas for workable models. Whilst this study could equally have been performed in the UK or USA, The Netherlands recommended itself strongly for numerous reasons. Primary among these is the proud tradition the Dutch have of quality affordable housing dating back to the turn of the last century, a tradition that has been sustained, proactive and successful, up until the present day.

Although the title of the paper 'Affordable Housing' may suggest a central architectural interest, it is a field that is currently dominated mainly by other professions. For a long time, the delivery of affordable housing in Sydney seems to have been tied up with policy-making and its history most fully recorded by disciplines other than architecture, especially in the areas of social and public policy, urban geography and town planning. This impression can be gained simply through the sheer weight of material that has been produced by these fields which, by contrast, is noticeably lacking in contemporary Australian architectural discourse. There appears, therefore, to be a strong role for architecture to play in the shaping of affordable housing. It can, and should, be able to respond to the determining forces in ways which are appropriate and give a meaningful and long-lasting form to them.

This paper has two main goals. The first is to draw together a comparative history of built affordable housing in Sydney and Amsterdam over the last one hundred years, illustrated and positioned in time against the aforementioned disciplines, so that it may be understood as an extension of that information. A method of uniform comparative analysis has been used, so that an understanding can be formed of the various cultural and political factors that may influence particular architectural outcomes. The second goal, is to use this history to give background and perspective to what Sydney has achieved in terms of affordable housing in the past, what we are implementing currently and to suggest where we may go in the future.

Undertaking this research has proved to be thoroughly enjoyable. It has been a way of coming to understand my own city in more depth and getting to know another one intimately, a city that I have now become fond of. It has also further engaged me in the issue of affordable housing, a topic that I would like to pursue, both through further tertiary study and in the professional arena. I truly believe 'affordable housing' to be a subject worthy of far more consideration, research, promotion and action. I hope that my efforts here, in some way, come to have a life beyond these pages and can be of benefit to the architectural profession and wider industry.

Scholarship Summary

The scholarship was awarded on 4 December 2003. In January through to March 2004, I undertook preliminary readings, particularly on the subjects of 'affordability' and 'the history of Dutch Housing', in order to acquire a working knowledge of the subject matter before departure. Consultation was had with my mentor for this project, Dr Vivienne Milligan, to discuss the potential outcomes of the paper and organise contacts in Amsterdam. Dr Milligan's PhD Thesis 'How different? Comparing housing policies and housing affordability consequences for low income households in Australia and the Netherlands' has proved an essential text and forms much of the background understanding to the topic of this paper.

The tour commenced in The Netherlands on 18 April 2004 and lasted for a duration of twenty-six days. During that time three formal interviews were conducted in Amsterdam. These were with Mr Emile Spek, Director of Property Development for *Ymere*, Amsterdam's largest housing association; Mr Wily Houwen, Associate of *Rudy Uytenhaak Architectenbureau*; and Mr Martin Fredriks, Associate of *Zeinstra van der Pol Architectenbureau* (by email correspondence). Speaking to the representatives of these companies, who are at the forefront of affordable housing design and procurement in Amsterdam, provided a valuable overview of the subject from a local perspective and gave insight into the workings of their system currently. Each interview was semi-structured, with a range of questions fielded and responses given, followed by a general discussion concerning details of their companies' projects. I was fortunate that the interviewees had a masterful command of English and that they generously and willingly gave their time to speak or correspond with me across a broad range of issues relating to affordable housing.

Although the intention of my original submission was partly to 'undertake case studies in *The Netherlands*', it became apparent that this ambition was too broad, and that Amsterdam should become the focus for this study, a city-to-city comparison with Sydney. Amsterdam offered a complete and well-documented record of affordable housing dating from the turn of the last century through to the present day. It also offered exemplary and well-maintained built examples not to be found so intact elsewhere in The Netherlands. Planned day trips were made by foot, bicycle, tram, bus, train and boat, each day visiting specific housing projects that had featured in Amsterdam's housing history, as well as newer projects that may have been suitable as case studies. By and large, inspecting the actual sites and witnessing the quantity and consistent design quality of these projects was astounding. It was an experience which provided insights that would not have been possible from a literature study alone. These trips were also particularly memorable, affording me the opportunity to explore different parts of Amsterdam each day travelling from the *Plantage* district, to the city centre's southeast, where I was based. Each housing project, when visited, was documented photographically and all available information collected.

Exhibitions specifically on housing were attended at the *Amsterdams Historisch Museum*, the *Museum Het Schip* in Amsterdam, and the *NAi (Nederlands Architectuurinstituut)* in Rotterdam. Sources of specialist information were also sought out and utilised including the *De Zuiderkerk* Housing Information Desk, *ARCAM* (*Architectuurcentrum Amsterdam*), the *IJ-Burg* Visitors Centre, several development display suites for new projects, and *Architectura & Natura* bookshop. Two full days were spent researching at the *Gemeente Amsterdam Dienst*

Wonen Documentatiecentrum (The Amsterdam Municipality Housing Documentation Centre). It is commendable that the Dutch devote so much energy to making information on their built environment easily accessible. It is a practice which raises the general awareness of architecture in the public's mind and a practice which Sydney could well replicate and benefit from enormously.

Back in Sydney, this information was supplemented by additional, incremental research over the following two-year period. I was able to interview Mr Derek Bebbington, Development Manager of City West Housing, regarding his Association's work and discuss the projects City West had constructed in Ultimo-Pyrmont and Green Square. He also made available a copy of his Masters thesis which thoroughly documents City West Housing's history and importantly points to some of the limitations and difficulties experienced in the actual implementation of the City West affordable housing scheme. The continuing work of City West Housing provides the best example of affordable housing delivery in Sydney, possibly Australia, and is worthy of more investigation and publicity for its achievements.

In June 2005, I attended the National Affordable Housing Conference in Sydney for two days, as one of very few delegates representing the architectural profession. Although illuminating in many respects, most of the sessions revolved around the topics of policy, planning and economic mechanisms that would allow affordable housing schemes to come into being. This may have been due to the difficulties Sydney experiences in initiating affordable housing projects and as such these may have been the most pertinent themes to deal with at such a forum. This was also clearly reflected in the constituency of the audience, most of whom were representatives of Local or State Government, community housing groups or development companies. The lack of architects in attendance signalled that currently architecture plays a very small role in the field of affordable housing, a field in which I believe it could surely contribute more in shaping the direction of.

On trips to Adelaide and Melbourne during the scholarship period, I investigated the efforts of the Adelaide Affordable Housing Company and the Port Phillip Housing Association by visiting their completed projects, which were equivalent in quality and interest to the high standards produced by City West Housing in Sydney. During this time, I was also an entrant in the 'Adelaide Affordable Eco Housing' Competition (in association with Russell Olsson), for a project of thirty units at Whitmore Square, in Adelaide. We received a commendation for our efforts and were able to test some of our ideas regarding what form we thought would be appropriate for Affordable Housing to take.

In terms of historical information regarding affordable housing in Sydney and Amsterdam, I have attempted to be exhaustive in the collection of material, with a thorough literature review of available sources in print, periodicals and on the web. This, together with original research that was undertaken as a final year student at UTS, with my colleagues Olivia Zanardo (nee Napoli) and Michael Hala on the topic of the NSW Housing Commission, I have been able to amass a library of documents on which to draw.

It has taken much time to sort, collate and process the information collected to prepare this paper. In its writing, a major challenge has been the preparation of the comparison between the

two cities. Although information for both places is available in abundance, the sources are in most respects not alike in focus or content. Amsterdam has a consistently documented and thorough record of its built architectural history of housing, very much focussed on design and available translated into English in many publications specifically dedicated to this topic. By contrast, Sydney has very little in the way of published architectural histories on its housing, social or otherwise, and its chronology and content has had to be pieced together from many sources. This historical compilation is a particular aspect of my paper that I think, with further elaboration, could go some way to meaningfully filling a significant gap in current knowledge.

I believe that the findings of this paper have been worthwhile and that I have contributed a perspective on the role that architecture can have in affordable housing and its delivery in Sydney. The Byera Hadley Travelling Scholarship has given me motivation and inspiration to become involved in the field of affordable housing and to see this issue through to more tangible outcomes. Out of this work, two further projects have already begun to formulate. The first would be to document the history of affordable housing projects in Sydney much more thoroughly and architecturally than space permitted here. Through architectural drawings, photos and data I would like to produce a compendium of 'One-Hundred Years of Affordable Housing in Sydney', possibly as part of a further tertiary qualification. The second project would be to promote the work of City West Housing as an exemplary Affordable Housing model, perhaps through an exhibition and catalogue. In any case, my aspiration is that the work here continues to expand and take shape in other directions to become a body of knowledge useful in a practical way to the architecture profession and the wider associated industries.

Introduction

Sydney is undergoing a prolonged crisis in housing affordability. Sydney is the least affordable city in Australia and actually rates as one of the top ten most unaffordable cities in the world[1]. In 2003, statistics showed that first home buyers were paying record amounts for their first property, contributing over 40% of their income in mortgage repayments[2]. Five years earlier, in 1999, it had been reported that more than two hundred and fifty thousand households in Sydney '(paid) so much of their income in rent and mortgage repayments that they do not have enough left to meet the other necessities of life'[3]. In 2006, with ever-escalating interest rates, many are choosing not to enter the housing market at all. With the 'Australian dream' of home ownership no longer achievable for many, the need for more affordable housing in Sydney's housing climate is clearly crucial.

At the outset, the term 'affordable housing' should perhaps be defined. A common colloquial misconception of the term is that 'affordable housing' is housing that is 'cheap to build'. This is most often not the case. In housing discourse, the word 'affordable' has to do with the affordability of the dwelling *for its occupants*. It is a relative term. Housing is 'affordable' if the household has the ability to meet the costs of other basic needs such as food, clothing, transport, medical care and education, after it has met the costs of its housing. Housing costs include mortgage repayments, or rent, plus other regular household outgoings. If the household struggles to provide the other basic needs for its members after housing costs, it can be deemed to be in 'housing stress'. A common gauge for the amount of money a low-to-moderate income household can devote to its housing costs without causing 'housing stress' is 30% of its gross income[4]. Another factor in the total equation is that the housing must be 'appropriate' for the household in terms of its size and its location. If a household has to live in a dwelling that is too small or too far away from their place of work in order to meet housing costs, this is also a situation causing 'housing stress'. Therefore 'affordable housing' is reckoned in the relationship between the household composition, the cost of the housing and the adequacy of the dwelling[5]. Additionally, it should be noted that the term, 'affordable housing' is often used as a label for particular housing that has been *made* 'affordable' by virtue of intervention in its provision, usually by Government, typically social housing.

The affordability of housing is of vital import to society as housing is normally the single largest investment made by a household over the course of its life[6]. The problem of affordability, if not addressed, can directly affect the adequacy and location of housing which eventually has consequences for the broader economic and social opportunities of the household members and therefore their quality of life. It is significant then, that the number of households in Sydney who are unable to afford appropriate housing, measured as housing

---

1 **Saurine, A.,** 'Hard to afford', *www.dailytelegraph.news.com.au*, Friday 27th January 2006

2 **Wade, M.,** 'Buying a home has never been such a stretch', *The Sydney Morning Herald,* Sydney, Tuesday 26th July 2003, p1

3 **Holliday, S.,** 'Urban Design Affordable Housing Affordable Solutions', Architecture Bulletin, *RAIA,* Sydney, October 1999, p8

4 **Centre for Affordable Housing,** *www.housing,nsw.gov.au/Centre+For+Affordable+Housing,* 2006

5 **Milligan. V.R.,** 'How Different? Comparing housing policies and housing affordability consequences for low income households in Australia and the Netherlands' *Faculteit Ruimtelijke Wetenschappen, Univeriteit Utrecht,* Utrecht, 2003, p70

6 **Milligan. V.R.,** *ibid,* p58

costing less than 30% of its gross income, is approximately one-quarter of the population[7]. Given this, it is even more remarkable to register that the NSW public housing system provides for just one-twentieth of the population[8], that is, only one in five of those in housing stress.

It is in this context that the term 'affordable housing' has also come to have an additional meaning beyond describing public 'social' housing stock. 'Affordable Housing' is now used as a title to designate a diversity of affordable housing projects that have been provided privately by groups that are distinct from the traditional public housing system. In its current inadequate state, the Government's public housing system specifically aims to assist those on the lowest incomes and, increasingly, combines its accommodation with other welfare support services[9]. 'Affordable Housing' on the other hand has the advantage of being able to assist any of the population who are in 'housing stress'. Schemes are typically not-for-profit and run by Local Government, the private sector, the not-for-profit sector or community, religious or charity groups and usually require certain eligibility criteria for the selection of occupants. Often, Affordable Housing is targeted at 'key workers' such as police, childcare and aged-care workers, nurses, transport workers and teachers, who have low-to-moderate incomes and have difficulty finding affordable housing close to their workplaces. Providing housing for these people in unaffordable areas can promote economic and social integration and create a diverse local workforce that is of benefit to the wider community[10]. To date, few affordable housing programmes of note have been implemented in Sydney, or even elsewhere in Australia. It is both timely and appropriate to look at examples overseas to see what can be learned.

In many other cities, systems of Affordable Housing have been instituted with great success. The city of Amsterdam suggests itself as an obvious choice and a prime candidate for investigation. The Netherlands' reputation for its liberal social attitudes is world-renowned and the Dutch have historically had a strong tradition of providing affordable housing for their population. Continuously over the 20th century, and up until the present day, a noteworthy quantity and quality of successful affordable housing has been produced in Amsterdam that is impressive by any standard. Details of these projects have been internationally published and critically acclaimed as outstanding innovative housing projects, notwithstanding the fact that they also comprise Affordable Housing.

It is worthwhile to note that Amsterdam also serves well as a comparable city to Sydney, in many respects. Both play roles as the largest major city in an advanced western capitalist country that has dependent export-orientated economies. Both have relatively small populations with similar demographic projections[11]. Both Sydney and Amsterdam are cities set on rivers with dense city centres and now redundant seaports. Physically, both have numerous

---

7 **Holliday, S.,** *op. cit.,* p8 - '(of) the 50% of all lowest income households (in Sydney)...In every local Government area in Sydney over 50% of low income households renting privately were paying more than 30% of their income in rent at the 1996 Census. In most areas the proportion was 60-70%.'. This figure has likely fluctuated, but would have remained in this order of magnitude.

8 **Holliday, S.,** *op. cit.,* p8 - 'a very small proportion (6%) have been housed in public housing'

9 **Gregory, J. and Campbell, J.,** 'New South Wales Public Housing Design – A Short History', *New South Wales Department of Housing*, Sydney, 1996, p20-21

10 **Centre for Affordable Housing**, *op. cit.*

11 **Milligan. V.R.,** *op. cit.,* p20

brownfield and industrial foreshore sites that are being renewed through development, coupled with significant areas of suburban sprawl. Both cities have experienced similar socio-economic cycles during the past century and have had to deal with significant population growth. And both, importantly, have been forced to address the provision of affordable housing on a large scale, albeit in very different ways.

The purpose of this paper has been to investigate how to improve the delivery of affordable housing in Sydney *from an architectural perspective*. To achieve this, case studies of affordable housing in Amsterdam will be examined to ascertain whether they offer any suggestions on ways to proceed. Necessarily, this analysis needs to be set against the backdrop of a comparative history of built affordable housing in each city in order to understand any particular cultural factors that may have influenced the built outcomes. Attention will be given to illustrating affordable housing projects and positioning them in time within a broader socio-economic, political and town planning history, so that they may be considered an extension of that information.

The structure of this paper is in three parts. The first part presents a comparative history of affordable housing in Amsterdam and Sydney divided into three distinct time periods. These are: Pre World War II (1900-1945), Post World War II (1946-1980), and the Modern era (1981-2006). The periods selected represent general phases of Western history which parallel periods of pivotal change in ideas about architecture and urban design and the delivery of housing. For each period, Amsterdam and then Sydney, is documented sequentially. These sections are intended to stand discretely as the presentation of historical information. Each period is then followed by a comparison section between the two cities, which provides the overlay of interpretation and develops themes for further consideration.

The second part is a discussion section which draws together these themes and analyses the successes and failures of what Sydney has achieved in terms of affordable housing in the past. These are then gauged against the affordable housing achievements of Amsterdam and examined to see what lessons can be learned.

The paper concludes by assessing the adequacy and effectiveness of affordable housing that we are currently providing in Sydney and will suggest how our tiers of Government can assist in the delivery of affordable housing. It will make recommendations as to what might be appropriate architectural responses to affordable housing and what the potential role of architecture in its delivery may be.

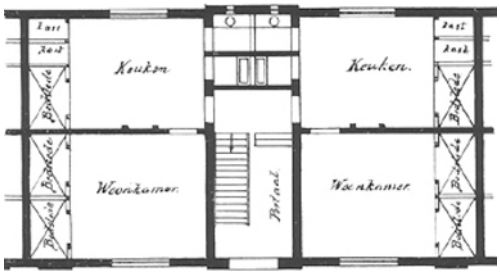
Amsterdam 1900-1945

The end of the nineteenth century saw a significant migration of population from outlying areas into the city of Amsterdam due to a shift in employment from agriculture to trades, services and industry. This substantial urban population growth led to increased pressure on the city for housing estates to be built to accommodate the workers[12]. In 1877 a city extension plan had been drawn up by city engineer J. Kalff, to extend the city southeast, south and west, outwards immediately beyond the city's perimeter canal, the *Singelgracht* [fig 1]. However the development of this area was not managed by a central authority and being entrusted to private developers and the housing that was built was substandard in most respects. This could be witnessed in areas such as *De Pijp,* where narrow streets and long shallow perimeter blocks made for depressing and shabby housing[13]. Living conditions worsened, housing became slums and ill health was rampant. At the turn of the century, calls were made for a statutory framework to be instituted to guide public housing. In response, the Housing Act of 1901 was passed by the National Government[14].

[fig 1]
Plan Kalff
showing extension plan shaded
Hoeven, C., van der and Louwe, J., 'Amsterdam Als Stedelijk Bouwwerk - Een Morfologische Analyse', 2003, p35

The purposes of this Act were fourfold. Firstly, it required Municipalities with more than ten thousand inhabitants to draw up expansion plans to their cities. These were to guide development, to ameliorate the effects of overcrowding[15]. Secondly, it set design guidelines and building regulations which prevented substandard housing being built. The Act limited the intermixing of factories and housing and prohibited rooms without fresh air, such as bed alcoves, from being constructed[16] [fig 2].

[fig 2]
One room dwellings with bed alcoves
Kloos, M., 'Formats for Living Contemporary Floor Plans in Amsterdam', 2000, p15



These regulations were strengthened by the first modern 'building code' passed in 1905, which specified requirements for the external form of the building and all of its internal provisions, including the minimum number of rooms, air ventilation and window sizes improving the quality of living[17]. Thirdly, it gave municipalities the power of the condemnation order, which

---

12 **Ibelings, H.,** '20th Century Urban Design in the Netherlands', *NAi Publishers,* Rotterdam, 1999, p6

13 **Physical Planning Department, City of Amsterdam,** 'Planning Amsterdam - Scenarios for urban development 1928 - 2003', *NAi Publishers*, Rotterdam, 2003, p39

14 **ARCAM,** 'Architectural Map - Amsterdam', second revised edition, *Stichting ARCAM/Stadsdrukkerij*, Amsterdam, 1998

15 **Buch, J.,** 'A Century of Architecture in the Netherlands 1880 / 1990', *NAi Publishers*, Rotterdam. 1990

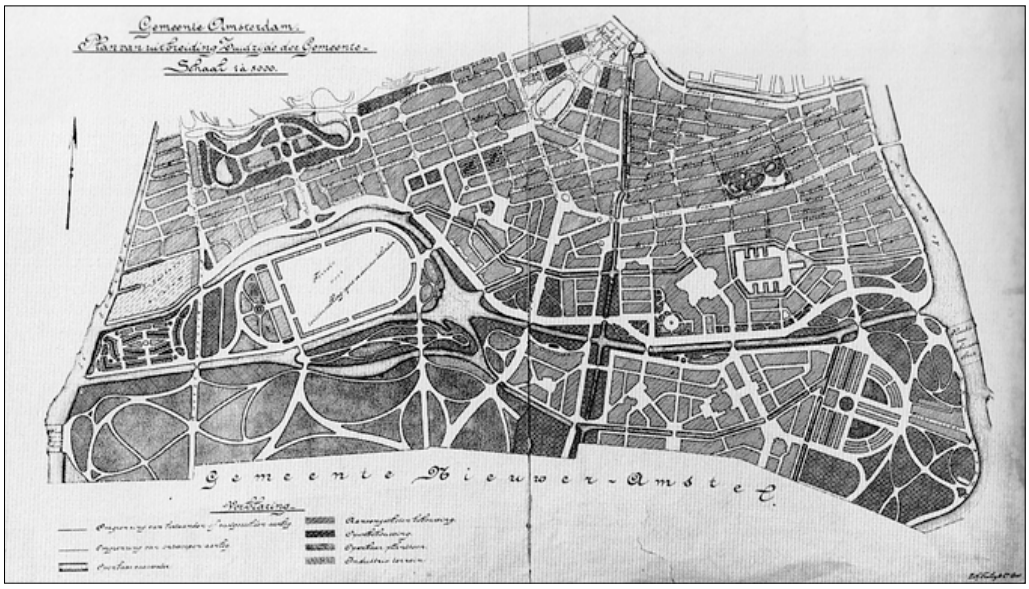
16 **Ibelings, H.,** 1999, *op. cit.*, p7

17 **Physical Planning Department, City of Amsterdam,** *op. cit.*, p40

early on proved fairly ineffectual, only making its presence felt decades later. Lastly, and perhaps the Housing Act's most important legacy, was that it made possible the financing of housing projects. For the first time, the Municipalities and approved not-for-profit Housing Associations, who had to register to be eligible, were able to access National Government subsidies to build housing[18]. These projects' purpose would be to provide housing for workers at affordable rents.

Amsterdam's first extension plan under the Act was drawn up by H.P Berlage in 1900-1905 [fig 3]. Although the plan set in place some of the urban design elements that would make the final plan a success, the first scheme proved not to be viable as it had too few dwellings and too much space. It was not implemented[19]. Housing construction was slow to start. It took time for groups to be recognised as Housing Associations under the Act and land that was planned for development was scarce. The Municipality, however, undertook projects on its own land in order to tackle housing shortages that were at their most acute in the overcrowded slum areas[20]. These first housing projects were typically small, sober in style and cheap to build.

[fig 3]
First Berlage Extension Plan
Hoeven, C. van der and Louwe, J., op.cit., p36



The first project to be finished under the new building codes was in 1909 on *Van Beuningenstraat,* designed by J.E. van der Pek for the Rochdale Housing Association[21] [fig 4]. It was four-and-a-half storeys high, contained twenty-eight dwellings and was built to the specification of the law. All bedrooms had fresh air, the living and sleeping areas were separated and each unit had its own bathroom[22] [fig 5]. The project represented a marked improvement in the provision of environmental amenity, sanitary facilities and space provision in housing design by modern standards.

18 **IISG** 'Digitaal Museum van de Volkshuisvesting' *www.iisg.nl/volkshuisvesting/index* (web based translation)

19 **Ibelings, H.,** 1999, *op. cit.*, p6

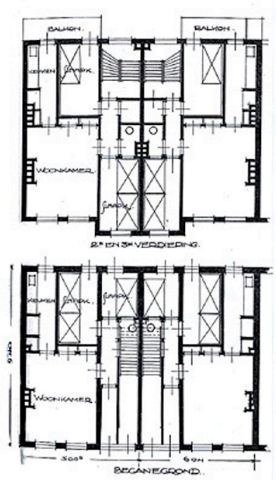
20 **Ibelings, H.,** 1999, *op. cit.*, p7

21 **Buch, J.,** *op. cit.,* p65

22 **IISG,** *op. cit.*

[fig 4] left
Van Beuningenstraat
by J.E. van der Pek
Ibelings, H., '20th Century Urban Design in the Netherlands', 1999, p14

[fig 5] right
Plan of *Van Beuningenstraat*
IISG, 'Digitaal Musuem van de Volkshuisvesting', www.iisg.nl/volkshuisvesting/index



By 1910 there was still little visible evidence of the Housing Act. However pace gathered and with exception being made for the duration of World War I, by the end of the decade, Amsterdam was swept by a veritable wave of public housing, despite the subsequent material shortages[23]. In 1914, H.J.M. Walenkamp designed the *Zaanhof* workers' housing complex in neighbourhood of *Spaarndammerbuurt* to the northwest of the Amsterdam in a part of Kalff's extension [fig 6]. It was partly three, partly four storeys and encircled a generous courtyard that served as a park for residents. It was a 'picturesque' design that nostalgically recalled a village-like atmosphere[24]. Stylistically it was a backwards looking project but as a building type and an urban design strategy, it was a precursor of what was to follow.

[fig 6]
***Zaanhof* workers housing**
by H.J.M. Walenkamp
looking towards *Het Schip*
Photograph by M. Zanardo, 2004

M. de Klerk designed three housing blocks for workers on *Spaarndammerplantsoen* between 1913 and 1920. The first was for the *Hille* Housing Association [fig 7], the second two for the *Eigen Haard* (One's Own Hearth) Housing Association [fig 8]. The third block, known as *Het Schip* (The Ship), directly across the street from the Walenkamp's *Zaanhof* housing, provided one hundred and two dwellings, absorbed an existing school in the block's perimeter and incorporated within it the public functions of a residents' association building and post office

23 **IISG,** *op. cit.*

24 **Buch, J.,** *op. cit.,* p60

[fig 7] left
Housing complex on *Spaarndammerplantsoen* for *Hille* Housing Association by M. De Klerk
Photograph by M. Zanardo, 2004

[fig 8] right
First housing complex on *Spaarndammerplantsoen* for *Eigen Haard* Housing Association by M. De Klerk
Photograph by M. Zanardo, 2004

[fig 9]. It is one of the best known examples of the *Amsterdamse School* style and whilst now considered a modern masterpiece, due to its individuality, the project was at the time stylistically controversial. Given the project's brief, it came to be criticised for its 'over-exuberance' [25]. The significance of its 'style' was that architecturally it exhibited a great amount of elevational variety compared to that of other housing complexes of the time. These were instead characterised by an austere regularity that did not give expression to the individual dwelling within the whole[26].

[fig 9]
***Het Schip* by M. De Klerk view of corner with post office**
Photograph by M. Zanardo, 2004

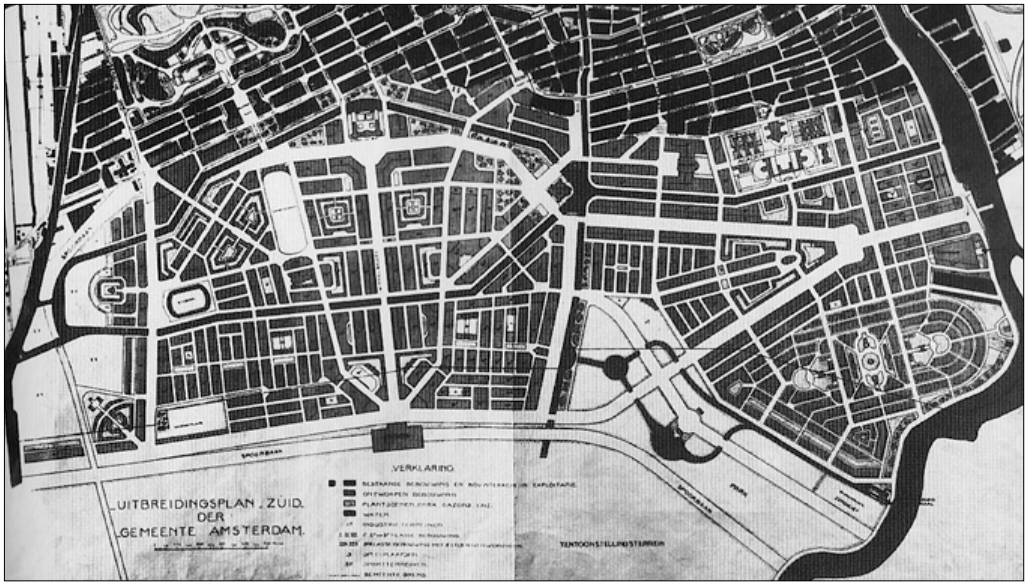
H.P. Berlage's second expansion plan for Amsterdam of 1915-17 owed its existence to the Housing Act, requiring Municipalities to draw up revised expansion plans after ten years [fig 10]. This plan, which came to be known as *Plan Zuid* (South Plan), was more realistic and more radical in density[27]. This extension to Amsterdam was developed as a coherent spatial composition of generous streets, squares and public gardens, primarily formed by large continuous perimeter housing blocks. The blocks were based on repetitive unit layouts, with

25 **Buch, J.,** *op. cit.,* p74-77

26 **Ibelings, H.,** 1999, *op. cit.*, p21

27 **Ibelings, H.,** 1999, *op. cit.*, p22

[fig 10]
Second Berlage Extension Plan
Hoeven, C. van der and Louwe, J., op.cit., p37



the exception of some types especially designed for the elderly and for singles. They were characterised by the uniformity in their height and construction material. Construction of *Amsterdam Zuid* began in the 1920s and was not finished until just before World War II, during which time it maintained most of its key features[28]. With the favourable financing provided by Local and National Government, Housing Associations were able to consider building whole street frontages and even entire blocks, thereby bringing to fruition the intentions of *Plan Zuid*[29]. By 1925, Amsterdam had fifty-eight Housing Associations in operation[30].

One of the first projects built in *Amsterdam Zuid* was for the socialist *De Dageraad* (The Dawn) Housing Association in 1919-22, designed by M. de Klerk and P.L. Kramer [fig 11]. It is now considered to be the peak of the *Amsterdamse School* style in architecture, but is a subdued version of expressionism, a fact that is often attributed to disapproval of the excesses of De Klerk's previous projects[31]. It is a large project containing a total of three hundred and fifty workers' dwellings and forms a symmetrical composition, with three intersecting streets that terminate in a monument dedicated to the workers.

[fig 11]
Housing complex for *De Dageraad* on *P.L. Takstraat* by M.De Klerk and P.L. Kramer
Photograph by M. Zanardo, 2004

In 1921 the Housing Act was amended. It gave planners much stricter zoning instruments to prevent unwanted uses coexisting with the separation of living and working functions. In reality, though, it simply reflected what was already standard practice[32]. The amended Act also dramatically decreased funding for subsidised housing after the exuberance of the 1910s. This

28 **Buch, J.,** *op. cit.,* p58-60

29 **IISG,** *op. cit.*

30 **Physical Planning Department, City of Amsterdam,** *op. cit.*, p40

31 **Buch, J.,** *op. cit., p*77

32 **Ibelings, H.,** 1999, *op. cit.*, p39

induced a prolonged slump in social housing for the second half of the 1920s. An interest in new ways of achieving efficiencies in construction, to reduce building costs, began to emerge.

Concrete was used on a large scale for the first time. *Betondorp* (literally Concrete Village), a garden village to the city centre's southeast was laid out by J. Gratama and G. Versteeg in 1922-28 [fig 12]. Half of it was built in the style of a traditional Amsterdam garden village with face brick walls, pitched roofs and portal gates. The other half was constructed using eleven different experimental concrete systems. This resulted in dwellings with an angular appearance, flat roofs and white painted facades. Each construction method was entrusted to a

[fig 12]
***Betondorp* showing traditional and modern treatments**
Photograph by M. Zanardo, 2004

separate team of architect and builder and the best methods of concrete construction were determined by comparison across the results. The results only concluded however that concrete deteriorated rapidly in the damp Dutch climate. Consequently, the experiment in construction became more symbolic of the desire for progress than actually providing effective alternatives[33]. Meanwhile, from 1923-26, H.T. Wijdeveld was completing housing either side of the *Hoofdweg*, one of the last projects under the previous revision of the Housing Act, in Amsterdam West[34] [fig 13]. It comprised workers' housing organised into two formidable

[fig 13]
Housing complex on both sides of the *Hoofdweg* by H.T. Wijdeveld
Photograph by M. Zanardo, 2004

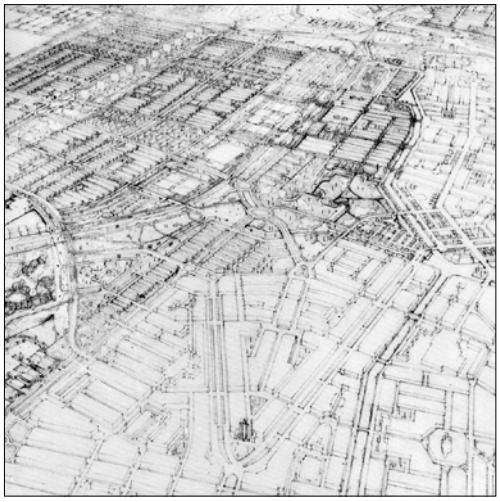
33 **Buch, J.,** *op. cit.,* p141-142

34 **Buch, J.,** *op. cit.,* p103

opposing street walls which very strongly defined the public domain. The horizontal banded articulation of the facade gave preference to accentuating the length of the building wall, choosing to subsume the expression of individual stairwell entries and units within.

The regional development of cities was discussed at the 1924 International Garden City and Town Planning Association conference held in Amsterdam. For the first time the extent and ambition of urban planning was considered beyond Municipal boundaries[35]. In 1931, regional planning was given official status under the Housing Act, allowing Municipalities to set up joint committees to draw up regional plans. In planning terms, Amsterdam came to be seen as actually more than a city. It became part of the agglomeration of cities in the province of South Holland dubbed the '*Randstad*' ('Rim-city') which included the other major cities of Rotterdam, Utrecht and The Hague[36] [fig 14]. Housing demand and supply was for the first time considered at a regional level as well as at the city scale.

[fig 14]
Map of the *Randstad* with urbanised areas shaded
Wikipedia., en.wikipedia.org, 2006



[fig 15]
Detail of the Amsterdam General Extension Plan by C. van Eesteren
Physical Planning Department, City of Amsterdam, 'Planning Amsterdam - Scenarios for urban development 1928 - 2003', NAi Publishers, Rotterdam, 2003, p41

Even Berlage's completed *Plan Zuid* had still not alleviated the housing shortage. The Amsterdam General Extension Plan was drawn up by C. van Eesteren in 1934 but was put on hold because of World War II [fig 15]. It was one of the most complete Functionalist town plans ever made. It was based on the ideas of 'Functional City' town planning as discussed in the 1933 CIAM conference, also convened by van Eesteren. Under this regime, the city would be separated into four functions only: home, work, recreation and traffic. Ideas about hygiene were coined in the phrase 'light, air and space'. In terms of housing type, this meant the best way of achieving amenity was through long thin blocks running north-south, facing east-west, far enough apart not to cast shadows on each other in winter[37]. They would contain a minimum number of dwelling types to enable mass production and would provide car parking on the ground plane. Early examples of open row housing were constructed in *Bos en Lommer,* designed by Merkelbach and Karsten in 1938 [fig 16], and in *Slotermeer* to the west, designed 1939 by the Public Works Department[38]. This type of open row housing, as an

35 **Ibelings, H.,** 1999, *op. cit.*, p38

36 **Ibelings, H.,** 1999, *op. cit.*, p52-53

37 **Ibelings, H.,** 1999, *op. cit.*, p53-54

38 **Ibelings, H.,** 1999, *op. cit.*, p54

alternative to the closed block, would become the face of social housing in countless post-War schemes[39].

[fig 16]
Housing in *Bos en Lommer* by Merkelbach and Karsten
Ibelings, H., op. cit., p63

During German occupation, the Functionalists kept alive the idea of housing as a socio-cultural task and continued to pursue solutions to the housing shortage. Whilst very little building work was carried out, urbanists and architects addressed themselves to the country's future, post-war[40].

39 **IISG,** *op. cit.*

40 **Ibelings, H.,** 1999, *op. cit.*, p66

Sydney 1900-1945

Sydney at the turn of the century had just begun to shake off the effects of the Depression that had enveloped the nation in the 1890s. Hideous slum areas had been created by cheap substandard terrace housing, built by speculators to cash in on the workers' predicament. There was no system of public housing, so the only options were home ownership or private rental at the mercy of a landlord.[41]

Sydney's first social housing is arguably at Miller's Point where the Sydney Harbour Trust owned dwellings for their workers on land resumed by the State Government's Rocks Resumption Board after the plague in 1900. Initially the Sydney Harbour Trust had control of only one hundred and fifty-two properties but by 1901, its portfolio had grown to eight hundred and three as a result of transfers from the resumption[42]. In 1906, the Local Government Act was adopted which enforced reasonable building and health standards on the construction of housing, including minimum room sizes, light and ventilation[43]. In 1908 the City Council and local associations agitated for the provision of working class housing and the Trust began to build accommodation for its workers. At first, these dwellings involved the rebuilding of terraces, such as those on Windmill Street[44], but new housing types soon began to be investigated. These projects notably include thirty-six flats, two storeys in height, in the north-south portion of High Street in 1910, which incorporate a kindergarten at the centre of the composition as well as a further sixteen flats turning the corner on High Street and four flats above shops on Argyle and Street[45] [fig 17], and the mixed-use apartments built in Argyle Place in 1911[46] [fig 18], both attributable to H.D. Walsh, Engineer-in-Chief of the Sydney Harbour Trust. In 1910, the Government Architect W.L. Vernon also designed twenty-seven

[fig 17]
High Street flats
by the Sydney Harbour Trust
Photograph by M. Zanardo, 2006

41 **Hayward, D.,** 'The Reluctant Landlords? A History of Public Housing in Australia', *http://www.infoxchange.net.au/rhchome/iurhc/s0202*, 1995

42 **Gregory, J. and Campbell, J.,** *op. cit.*, p2

43 **NSW Department of Housing,** 'The History of public housing in New South Wales',*www.housing.nsw.gov.au/history*, 1998

44 **Gregory, J. and Campbell, J.,** *op. cit.,* p17

45 **Cantrill, P.J. and Thalis, P.,** 'An Urban Laboratory' in Content 2, 'Housing & City', *FOG Publications*, Sydney, 1995, p130

46 **Gregory, J. and Campbell, J.,** *op. cit.,* p19

[fig 18]
Argyle Street mixed use apartments by the Sydney Harbour Trust
Photograph by M. Zanardo, 2006

flats in Lower Fort Street whose plans resembled those of semi-detached houses, stacked three high, arranged either side of open stairways[47] [fig 19]. All of these projects are remarkable for their variety in housing type which was driven by a desire to develop an alternative to the attached terrace type that had become synonymous with rats and disease. Such was the stigma attached to the terrace type that it would not be built again as social housing for over fifty years[48].

[fig 19]
Lower Fort Street flats by W.L. Vernon
Photograph by M. Zanardo, 2006

The Royal Commission of 1908-09 recommended that the Government should provide workers' housing by remodelling slum areas and acquiring housing in the suburbs[49]. Following this, the Housing Act was passed in 1912, which established the Housing Board, Sydney's first public housing authority. It was charged with developing new housing types, using new materials and demonstrating how to implement model workers' housing projects[50]. It was also able to advance money for the construction of homes and the purchase of existing dwellings. During its twelve years, the Board built eight hundred and eighteen homes for sale and provided cash to build five hundred and sixteen more[51]. The Board was only briefly involved in Miller's Point, including the construction of a group of sixteen dwellings, shop and baby health clinic in 1913, in Cumberland Street, designed by W.H. Foggitt, the Housing Board's

47 **Cantrill, P.J. and Thalis, P.,** *op. cit.,* p130

48 **Gregory, J. and Campbell, J.,** *op. cit.,* p17

49 **Spearritt, P.,** 'Sydney's Century – A History', *UNSW Press,* Sydney, 2000, p19

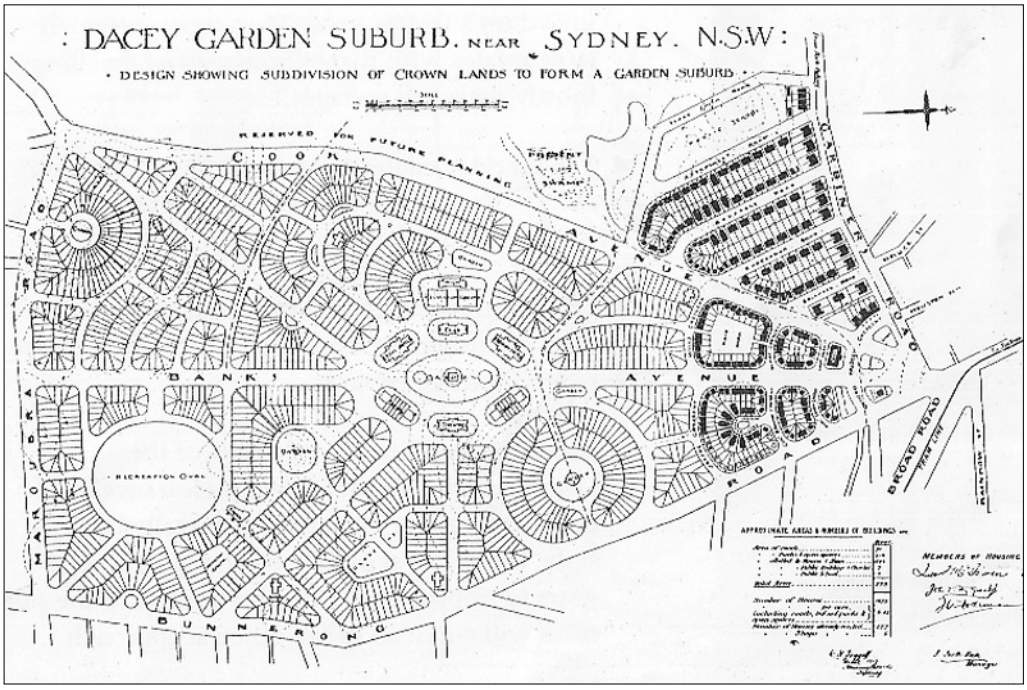
50 **Gregory, J. and Campbell, J.,** *op. cit.,* p2

51 **NSW Department of Housing,** 1998, *op. cit.*

[fig 20]
Typical house in Gladesville project one of left few in original condition by W.H. Foggitt
Photograph by M. Zanardo, 2006

architect[52]. Following this, the Housing Board developed a modest subdivision of detached houses in Gladesville [fig 20], some housing at Bunnerong and a group of houses in Stockton, Newcastle[53]. However, soon they came to concentrate their efforts on the Dacey Garden Estate at Daceyville planned by J. Sulman and J.F. Hennessey in 1912. This was a new suburb based on Garden City principles and located to the city's south east [fig 21]. It included three hundred and three cottages and

[fig 21]
Daceyville Garden Suburb Plan with completed portion shaded by J. Sulman and J.F. Hennessey
Gregory, J. and Campbell, J., 'New South Wales Public Housing Design – A Short History', New South Wales Department of Housing, Sydney, 1996, p3



[fig 22]
Early semidetached dwelling by W.H. Foggitt
Photograph by M. Zanardo, 2006

semidetached houses for rent, six shops, a baby clinic, a public hall, a park and an electricity substation, all that was needed for a complete community, with designs prepared for these by W.H. Foggitt. Dacey Garden Suburb was Sydney's first purpose-built housing estate, containing possibly Sydney's first planned cul-de-sac and was in many ways the precursor to the estate planning of the 1950-60s[54]. The early semidetached dwellings were constructed of face brick but were seen to be too expensive [fig 22]. The later free-standing cottage types used cheaper materials and were usually of rendered rough cast finish. The project had not been fully realised, however, when the Housing Board was

52 **Cantrill, P.J. and Thalis, P.,** *op. cit.,* p131

53 **Spearritt, P.,** *op. cit.,* p21

54 **Gregory, J. and Campbell, J.,** *op. cit.,* p3-4

disbanded on the grounds of faulty administration in 1924 and the project was turned over to the State Government[55].

[fig 23]
Last remaining house from Matraville Soldier's Garden Village located within a Department of Housing development
Photograph by M. Zanardo, 2006

Another housing scheme, the Matraville Soldiers' Garden Village, was built with voluntary labour, on a gift of Crown Land, to the south of Daceyville, and comprised ninety-three rental cottages. The Village was eventually transferred to the Housing Board to be administered[56] [fig 23]. A separate Commonwealth initiative of 1918, the War Services Home Scheme, provided returned servicemen with generous loans for purchasing or constructing their own home. By 1929, loans had been made for over eleven thousand houses, almost half of which were used to acquire existing dwellings.[57]

In 1912, the NSW State Parliament amended the Local Government Act to empower Councils to undertake their own housing schemes which would replace terraces on slum sites that were already cleared. Of all of Sydney's Local Government bodies, only Sydney City Council utilised these new entitlements. Sydney City Council built the Strickland Building in Chippendale for its workers in 1913, designed by the City Architect R.H. Broderick[58] [fig 24].

[fig 24]
Strickland Building by R.H. Broderick
Photograph by M. Zanardo, 2006

It contained sixty-seven apartments and eight shops over three storeys and, in its time, was reputed to be the densest residential building in Sydney. Its design made provision for private bathrooms, rooftop laundries and garden areas generally not found in the terraces it replaced. Following its success, a competition was held for the neighbouring block, however the winning

55 **Spearritt, P.,** *op. cit.,* p21

56 **Spearritt, P.,** *op. cit.,* p20-21

57 **Spearritt, P.,** *op. cit.,* p35

58 **Jahn, G.,** 'Sydney Architecture', *The Watermark Press,* Sydney, 1997, p98

scheme had not been built when the outbreak of World War I stopped any further progress on the project[59].

Post World War I, in 1920, the New South Wales Legislative Assembly Select Committee reported further on slum conditions. Its findings, in the context of a burgeoning town planning discipline, suggested that the urban environment acted as a determinant for social behaviour which strengthened the case for clearing and reconstruction[60]. Post-war, Sydney City Council built thirty flats either side of a slender courtyard, in Dowling Street, Woolloomooloo designed by Peddle and Thorp in 1925[61] [fig 25]. Ways Terrace, a project designed by Professor L. Wilkinson in response to a competition, followed in the same year with forty-one dwellings constructed in Point Street, Pyrmont[62] [fig 26]. This series of attached four-storey buildings were discernible for an archway which spans a street and its Mediterranean influenced styling. Ways Terrace was only ever partially completed, its second stage was not undertaken and in its

[fig 25]
Dowling Street flats
by Peddle Thorp and Walker
Photograph by M. Zanardo, 2006

[fig 26]
Ways Terrace
by Prof. L. Wilkinson
Photograph by M. Zanardo, 2006

59 **Carpenter, E.M.,** 'The Urban Apartment', *Advanced Study Report, BArch University of Sydney*, Sydney, 1990, p97-103

60 **Hayward, D.,** *op. cit.*

61 **Block, C.,** 'Living Apart', *Advanced Study Report, BArch University of Sydney*, Sydney, 1991, p48

62 **Carpenter, E.M.,** *op. cit.,* p103

incomplete form, it unfortunately reinstated less dwellings than it cleared[63]. The last housing project Sydney City Council constructed is known as the Alexandra Group on Pyrmont Bridge Road, Camperdown, designed in 1927 by R.H. Broderick [fig 27]. Originally intended to fill the whole block[64], this incomplete scheme is a collection of stout, solemn two-storey walk ups, containing twenty-three dwellings and a shop, forming a strong street wall around a central garden space. All of the Council's projects were rented to Council employees in the poorer

[fig 27]
Alexandra Group
by R.H. Broderick
Photograph by M. Zanardo, 2006

wards[65]. When this Council was dismissed in 1927 and was replaced by Commissioners, other planned housing projects were shelved and potential sites were used instead for commercial purposes[66]. With the onset of the Great Depression in 1929, no further public housing, Local or State, was built again in Sydney until the mid-1930s.[67]

In lieu, the Government initiated other courses of action in order to stimulate construction and provide people with means to gain access to housing. In 1923, the State Government had passed the Cooperative Community Settlement and Credit Act, allowing for the formation of cooperatives and building societies and in 1928 the Government's Savings Bank Act enabled banks to begin lending money to home builders[68]. It was hoped that these two measures would provide finance to those of low and moderate income thus allowing them to build their own homes. This type of access to home ownership did provide a solution for some families but it was unable to help those with lower incomes, as they could not afford the repayments.

Due to the Depression, widespread poor living conditions prompted the establishment of the Homes For The Unemployed Trust in 1934, which erected crude, substandard dwellings for the most needy families[69]. They were built in outlying suburbs and, although they provided basic shelter, they would certainly be considered substandard today. In 1936 the Housing Slums Investigations Committee found that the enduring inability of the private housing market to

63 **Student Presentation,** *Undergraduate UTS student work,* Sydney, 2004

64 **Block, C.,** *op. cit.,* p50

65 **Spearritt, P.,** *op. cit.,* p22

66 **City of Sydney Council,** *www.cityofsydney.nsw.gov.au/investigator,* 2006

67 **Spearritt, P.,** *op. cit.,* p22

68 **NSW Department of Housing,** 1998, *op. cit.*

69 **NSW Department of Housing,** 1998, *op. cit.*

adequately house low income people meant that *'the only adequate solution at the present time is for the State to assume the burden'*[70]. The Housing Improvement Act of 1936-37 allowed for a project in Erskineville to be constructed and to be let out to low income families. The project signalled the return of the State Government to the provision of housing for the first time since 1924[71]. M.E. Herman and W.R. Richardson designed fifty-six dwellings that were distributed in seven two-storey row buildings, built with their short ends to the street, providing only footpaths to front doors [fig 28]. This innovative layout, borrowed from contemporary

[fig 28]
Erskineville Flats by
M.E. Herman and W.R. Richardson
view of longitudinal courtyards
Photograph by M. Zanardo, 2002

European practice, completely inverted the traditional relationship of the dwelling to the street. Each of the dwellings had three rooms and a 'sleepout' verandah and provided communal laundries, drying areas and pram parking separate from the units. Again, the proposed scheme was only less than half completed in its originally intended form[72].

By the outbreak of World War II in 1939, Australia was in need of one hundred and twenty thousand new dwellings, the majority of which were required in New South Wales. The Housing Act was amended in 1941 to address this severe shortage of housing and in 1942 the New South Wales Housing Commission was born as a direct result[73]. The Commission was directly answerable to the Minister and acted in the capacity of an independent Government Department. It amalgamated the functions of the Housing Board, Homes For The Unemployed Trust and the Daceyville and Erskineville projects, becoming a single entity responsible for all of the State's previous endeavours. It had two simple purposes, being to build more dwellings and to remove slums. The Commission's first projects were to build houses in country areas for those employed in the war effort[74]. Once the War was over however, the Housing Commission's impact on Sydney was destined to become much more profound.

---

70 **Hayward, D.,** *op. cit.*

71 **NSW Department of Housing,** 1998, *op. cit.*

72 **Carpenter, E.M.,** *op. cit.,* p168-173

73 **NSW Department of Housing,** 1998, *op. cit.*

74 **NSW Department of Housing,** 1998, *op. cit.*

Comparison 1900-1945

Amsterdam and Sydney were not alone when they entered the twentieth century with significant pressure on their cities to house many more people than was possible. In order to alleviate the housing pressures and its consequent effects of ill-health and declining social standards, both cities sought immediate solutions to their housing problems, as is evidenced by the policies which they enacted in the first decade of this period.

The differences in the legislation brought down are significant. Both Amsterdam and Sydney put in place measures enabling the resumption and clearance of slum sites, allowing the worst housing to be demolished. They both also wrote laws controlling the physical parameters of design and construction in order to improve the amenity of the housing that was to replace these slums.

The Dutch, however, took two additional measures. Firstly, they made the requirement that their Municipalities draw up plans to demonstrate how further city expansion would take place, required them to implement their plans and later to review their progress. Amsterdam prepared a series of cogent urban designs which would strongly guide and manage housing development over this period. Sydney had no such formal requirements or plans and appears to have responded in a piecemeal and reactive way, choosing to concentrate on the worst areas to redevelop one at a time. This divergent approach would continue throughout the period. Amsterdam would undertake detailed planning at both the city and regional levels, a consideration Sydney had not engaged with yet, even at a city wide scale.

Secondly, the Dutch put in place a system for the funding of housing, accessible by not-for-profit Housing Associations, that would prove to have longevity in providing and maintaining affordable rental housing stock right up until the present day. By contrast, the Australians, whilst attempting several significant, though isolated, rental housing projects in this period, did so as a solely Government venture that appears to have fluctuated in accordance with the prevailing policies of the Government of the day. It is certain that many of the projects were not completed and several of the bodies that administered housing production were disbanded. The systems for ongoing funding which were put in place, being initiatives via banking and loans, indicate that the preference was for housing to be delivered privately rather than through Government. This difference of private ownership versus public rental, set in place almost one hundred years ago, is one of the primary factors, culturally, politically and economically, that still influences affordable housing in Sydney to this day.

Architecturally, both Amsterdam and Sydney produced high quality enduring affordable housing projects, designed by professionals who came to be recognised as some of the finest minds of their time. Sydney's projects are notable for their variations in type, producing many interesting permutations of the terrace, semi-detached and flat types which would still be considered novel today. Amsterdam's housing was much braver and heroic in the outward expression of its forms, influenced as it was by the force of Modernism that was then sweeping Europe. Across the breadth of housing produced at this time, however, the housing tended to repeat tried and tested typologies in plan. In both cities, the denser and taller projects were the more progressive in type and style, with the lower density projects erring on the side of being stylistically nostalgic, though not without their own typological innovations. The smaller-scale

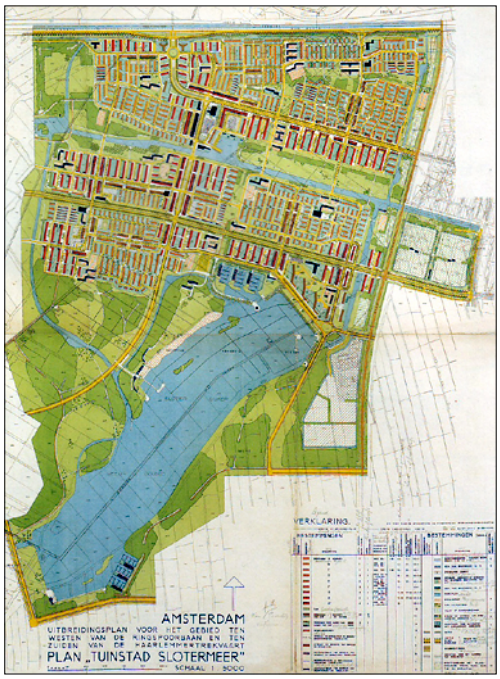
projects also tended to be the ones used as testing grounds for new construction technologies and efficiencies. It is worthy of mention that a portion of the earlier housing schemes included a variety of non-residential uses, an important idea about richer mixed-use cities, that seemed to decline after World War I.

Amsterdam 1946-1980

The immediate post-War housing shortage in the Netherlands was estimated to be three hundred thousand dwellings. The lack of housing was proclaimed 'public enemy number one' but shortages of money, materials and manpower hindered progress[75]. Even when the economy had regained its pre-War levels by 1950, the supply of housing lagged far behind. The State regulated the building industry heavily by issuing licences for construction. At this time about half of all building production in the Netherlands was for additional social housing[76].

While other cities in the Netherlands had been devastated by bombing during the War and required extensive reconstruction, Amsterdam had not been damaged and the new housing that was to be built was done so in the empty land outside of the city centre. The first obvious step for Amsterdam was to fill in the areas of the 1935 General Extension Plan that had yet to be realised[77]. Where planning had been previously used to control and steer development, it was now used to proactively stimulate housing[78]. The suburb of *Slotermeer* in the *Westelijke Tuinsteden* (Western Garden Suburbs), laid out in 1939, had made a modest beginning before the War and was selected as the place to start post-War construction[79]. Its plan was revised and republished in 1952 with some alterations [fig 29]. These included new housing controls enforcing broader units for more daylight access and a change in the dwelling mix, requiring less row houses in favour of more four to five storey housing blocks. These were intended to ensure building efficiency benefits. The total number of dwellings, however, was reduced from eleven to ten thousand[80]. The buildings were planned as 'open row subdivision', as opposed to the closed blocks of Berlage in *Amsterdam Zuid*. The spaces between the rows were public open space.

[fig 29]
Plan of *Slotermeer* by the Public Works Department
Ibelings, H., op. cit., p82



After *Slotermeer*, *Frankendaal* was laid out to Amsterdam's east in 1947-51 by J.H. Mulder, with the buildings designed by M. Stam, B. Merkelbach, C.J.F. Karsten and P. Elling[81]. It was planned as a variation of the open row layout and set two 'L'-shaped blocks opposing one another to form a repeated series of more defined central courtyard spaces. These spaces, however, like the open row layout, remained publicly accessible. The *Geuzenveld* project

75 **Ibelings, H.,** 1999, *op. cit.*, p84

76 **Ibelings, H.,** 1999, *op. cit.*, p84

77 **Buch, J.,** *op. cit.,* p278

78 **Ibelings, H.,** 1999, *op. cit.*, p84

79 **Ibelings, H.,** 1999, *op. cit.*, p68

80 **Buch, J.,** *op. cit.,* p278

81 **Buch, J.,** *op. cit.,* p279

followed in 1953-58 and was an attempt to improve the urban design quality of a new expansion area by testing several approaches at once [fig 30]. The six well regarded architectural firms of W.M. Dudok, B. Bijvoet, J.H. van de Broek and J.B. Bakema, W. van Tijen, T. Lammers, and M. Stam with B. Merkelbach, each teamed with a different Housing Association, were employed to design six separate districts. Significant bureaucratic interference in the design process, however, meant that many of the innovations suggested by these teams were altered by the Government in favour of much less radical proposals[82].

[fig 30]
Housing in *Geuzenveld* by W. van Tjien
Ibelings, H., op. cit., p82

These new suburbs were all organised around the 'neighbourhood concept'. This was an alternative to the traditional neighbourhood layout which was not replicable because it did not meet the densities urgently required, nor allocate adequate space to the automobile. The 'neighbourhood concept' was a social idea about making cities, which involved organising people into 'clusters' of buildings around central spaces, which would form neighbourhoods of about twenty thousand. A number of neighbourhoods formed a 'district', which in turn would form a 'borough', such was the scale of construction[83]. Each neighbourhood would be comprised of a balanced mix of residents of different age and social groups, with the aim of engineering a functional community. The mix of people was determined by the quantity of the different types of dwellings that were provided. Extended families and the elderly would live in the low-rise buildings accessible from their own porch. Young families, couples and singles would occupy medium-rise flats which were accessed by a gallery, or units with a 'through sun-room'[84]. These three dwelling types became the basis for all of the social housing of the period and were gradually perfected to suit standardised construction[85].

With the completion of the suburbs of *Slotervaart* and *Osdorp* to the city's west and *Buitenveldert* and *Amsterdam Bos* to the south in the late 1950s, the General Extension Plan had been fulfilled. Additional structure plans for further expansion areas were drawn up for *Amsterdam-Noord* [fig 31] and *Zuidoost* [fig 32] and were appended to the 1935 Plan in order

82 **Buch, J.,** *op. cit.,* p280-281

83 **Ibelings, H.,** 1999, *op. cit.*, p69

84 **Ibelings, H.,** 1999, *op. cit.*, p84

85 **Kloos, M.,** 'Formats for Living – Contemporary Floor Plans in Amsterdam', *ARCAM/Architectura & Natura Press*, Amsterdam, 2000, p20

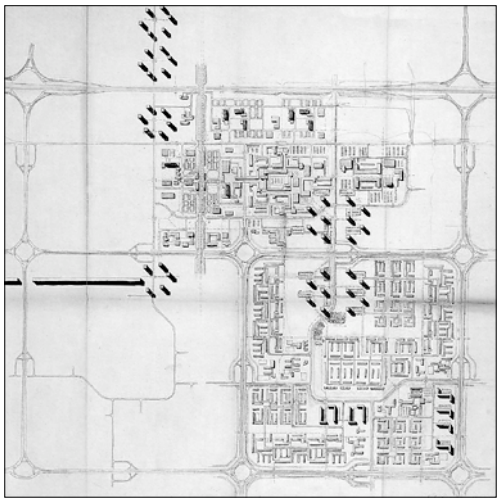
[fig 31] left
***Amsterdam-Noord* Structure Plan**
by the Public Works Department
Physical Planning Department, City of Amsterdam, op. cit., p77

[fig 32] right
Structure Plan *Amsterdam-Zuid*
and *Zuid-Oost*
by the Public Works Department
Physical Planning Department, City of Amsterdam, op. cit., p77

to accommodate more new dwellings[86] . Some of these schemes used high-rise flats of six to fifteen storeys, for example *Sloterhof* by J.F. Berghoef in 1955 but these were atypical for this decade[87]. As the growth in prosperity became more noticeable towards the end of the 1950s, the need to regulate the building industry declined, allowing both the size and quality of dwellings to increase slightly.

The First Report on Spatial Planning made in 1960 marked the formal introduction of national planning to the Netherlands[88]. In 1965 the Spatial Planning Act came into force and was quickly followed by a Second Report on Spatial Planning. These put in place a comprehensive system of planning, with firm legal and administrative boundaries at the Local, Regional and National levels. They aimed to distribute population and prosperity throughout the Netherlands, so as to reduce the disparity between the *Randstad* and the rest of the country. The Second Report put forward the notion of 'clustered dispersal' which walked a line between undesirable suburban sprawl and the complete concentration of density[89]. It was under these plans that some of the villages neighbouring the *Randstad* were selected to become towns so as to absorb some of the population growth from the major cities. The towns of *Lelystad* [fig 33] and *Almere* (located 26km and 56km from Amsterdam respectively) built on the *Flevo* polder to Amsterdam's north, were constructed in the 1960-70s for this very purpose. In practice, these places became dormitory towns lacking transport, employment and entertainment to sustain their new populations up until the late 1980s[90].

[fig 33]
***Lelystad* development plan**
by C. van Eesteren
Ibelings, H., op. cit., p113



86 **Physical Planning Department, City of Amsterdam,** *op. cit.*, p76-81

87 **Ibelings, H.,** 1999, *op. cit.*, p84

88 **Ibelings, H.,** 1999, *op. cit.*, p104

89 **Ibelings, H.,** 1999, *op. cit.*, p105

90 **Ibelings, H.,** 1999, *op. cit.*, p124-125

Housing developments in the 1960s differed little in strategy from the previous decade, except they were often larger in scale. Improved pre-assembly processes, bigger projects and fewer labourers on site meant more dwellings could be constructed in a faster timeframe. Efforts to standardise, normalise and rationalise the construction process into 'systems' became the norm[91]. To Amsterdam's southeast an entire new borough for one hundred-thousand people was constructed in a single project in *Bijlmermeer*, designed under the direction of G.S. Nassuth of the Public Works Department in 1962 [fig 34]. Hailed ambitiously at the time as 'the City of Tomorrow', the design was in keeping with the neighbourhood concept but was at

[fig 34]
Aerial photo of *Bijlmermeer* by G. Nassuth and the Public Works Department
Ibelings, H., op. cit., p123

such an unprecedented scale that it required the involvement of sixteen different Housing Associations to manage and build it. The layout was based on a 'honeycomb' pattern, a departure from the typical strictly orthogonal open rows. Its buildings reached to a consistent ten storeys in height, defining hexagonal spaces which were meant to be 'intimate' courtyards [fig 35]. Car traffic was rigourously separated and only foot and bicycle paths were provided to traverse the vast open spaces. It was intended for the *Bijlmermeer* project to house white collar workers. However, a preference of these workers for lower-density housing and the lack of a planned train connection that was not installed until many years later[92], meant that the area soon became a ghetto for ethnic minorities and lower-income workers. Particular among these

91 **Ibelings, H.,** '20th Century Architecture in the Netherlands', *NAi Publishers,* Rotterdam, 1995, p84

92 **Ibelings, H.,** 1999, *op. cit.*, p105

were Surinamese who left the former Dutch colony, to seek refuge in the Netherlands, after it was granted independence in 1975[93].

[fig 35]
Flats in Bijlmermeer by G. Nassuth and the Public Works Department
Photograph by M. Zanardo, 2004

By the 1970s, even as it was being completed, the *Bijlmermeer* project had become the target of increased criticism. The consequences of 'systems' building on such a large scale were being felt. The monotony and inhospitability of the 'concrete jungle' had reached its limit. The public's reaction was to focus again on the ideals of small scale and village-like 'sociability'[94]. The idea that different households with different needs required housing choice gained currency.

At the same time, the inner city areas were being redeveloped. Often the process here involved completely clearing run down areas. The new streets or buildings constructed in their place, however, often paid little respect to what was neighbouring or what was there previously. As a consequence, many people were displaced and building setbacks and heights were awkwardly altered. This attitude met with growing resistance and led to a paradigm shift in redevelopment projects during the 1970s. The city was thought of again as a place to live, especially for the less well-off and a culture of protest and socialist ideals set people about protecting their built environment. The planned demolition of the old working-class *Nieuwmarkt* area, in order to drive a highway and metro through the city, sparked the 'Metro Riots' of the early 1970s[95]. The outcry was loud enough that, instead of complete demolition and reconstruction, the new buildings took into account their context and respected the existing building lines and heights. *Nieuwmarkt* went on to become the first big 'Urban Renewal' project in the Netherlands and the people's feelings were captured in the political slogan 'Building for the Neighbourhood'[96]. The architects A. van Eyck, T.J.J. Bosch and P. de Ley, in consultation with the community, designed buildings which had commercial space and shops at the ground floors and incorporated a large amount of low cost housing throughout [fig 36]. Of note is the Pentagon housing scheme, by van Eyck and Bosch, built in 1983, which derives its name and shape from

93 **Mak, G.,** 'Amsterdam - A Brief Life of the City', *The Harvill Press*, London, 2001, p299

94 **Ibelings, H.,** 1999, *op. cit.*, p124

95 **Mak, G.,** *op. cit.,* p300-302

96 **Milligan. V.R.,** *op.cit.,* 133-134

[fig 36] left
Typical *Nieuwmarkt* urban renewal streetscape
Photograph by M. Zanardo, 2004

[fig 37] right
Pentagon housing complex by A. van Eyck and T.J.J. Bosch
Buch, J., 'A Century of Architecture in the Netherlands 1880 \ 1990', NAi Publishers, Rotterdam, 1990, p 324

existing building lines and rises six storeys to surround a courtyard[97] [fig 37]. Subsequently, Government urban renewal funds were used to purchase existing dilapidated private housing to be refurbished as social rental accommodation rather than for demolition[98].

97 **Buch, J.,** *op. cit.,* p323

98 **Milligan. V.R.,** *op. cit.,* p133-134

Sydney 1946-1980

Post-War demand for housing outstripped supply, with material shortages hindering the construction of new homes. In 1946 the Commonwealth lent funds to the States under the first Commonwealth State Housing Agreement. It was the first time the Federal Government had provided funding for State public housing[99]. The most urgent task was to provide temporary housing for the very needy. The Housing Commission negotiated with the Commonwealth to take over wartime establishments in order to provide shelter through the adaptation of military huts. By 1951, over two thousand temporary dwellings for the poor had been improvised at locations such as Herne Bay (renamed Riverwood because of negative associations), Beverly Hills, Lilyfield, Merrylands, Ryde and Frenchs Forest. Gradually, these dwellings became emergency housing and then the sites were redeveloped as purpose-built Commission projects[100]. In these early years, Sydney City Council returned to building housing financed by the sale of commercial properties. The thirteen storey John Byrne Flats in St Johns Road, Glebe and the ten storey Johanna O'Dea Flats in Pyrmont Bridge Road, Camperdown [fig 38] completed by 1960 were the largest examples of this[101]. Ryde Council became the second council to build housing under the Local Government Act and constructed six hundred houses for servicemen between 1946 and 1952 in Meadowbank, Denistone and Gladesville[102].

[fig 38]
Johanna O'Dea flats
by Sydney City Council
Photograph by M. Zanardo, 2006

In 1945, the Local Government Act had been amended to establish the Cumberland County Council. Its report of 1948, the County of Cumberland Plan, was the first metropolitan plan in Australia to ever become a statutory document. The Plan set out the orderly development of the post-War suburbs and the encirclement of urban districts within a 'girdle of countryside'. This 'green belt' was to ensure ready access to rural surroundings for the people of Sydney for all time. It argued for additional urban districts, separate from the Central Business District, each with a centre for business, entertainment, cultural activity, educational facilities and scope for local employment all to be made through zoning controls. A coordinated rail and road network would link the city with urban and rural districts, thus providing both radial and

99 **NSW Department of Housing,** 1998, *op. cit.*

100 **Spearritt, P.,** *op. cit.,* p95

101 **City of Sydney Council,** *op. cit.,*

102 **Spearritt, P.,** *op. cit.,* p165

circumferential traffic. It was a brave plan, however it was never to fully take shape. The growth of population was twice what was predicted, exacerbated by a significant inflow of European migrants, and the Plan relied on the coordination and cooperation of the various State Governmental departments, which tended to act independently and in isolation, and ignored the new Council's intentions[103].

[fig 39]
Orphan School Creek estate by NSW Housing Commission
Gregory, J. and Campbell, J., op. cit.,, p5

After a slow start, the Housing Commission commenced a massive building programme in the 1950s. Housing estates were planned in 'neighbourhood' groups of two hundred to two thousand cottages, the earliest of which was located at Orphan School Creek in Canley Vale [fig 39]. It was a demonstration project and was planned so that each lot was generous in site dimension combined with a small site coverage to assure the public that the housing would not be substandard. Other estates followed at Villawood, North Ryde, Dundas Valley, Maroubra [fig 40], Seven Hills (the first stage of the new satellite town of Blacktown), Ermington and Rydalmere, in ever-increasing size[104]. This growing need for large parcels of land foreshadowed the Commission being one of the first agencies to breach the 'green belt' area in order to open up new developable land.

[fig 40]
Stuart Mould Place estate built on former Maroubra Speedway site by NSW Housing Commission
Photograph by M. Zanardo, 2002

To overcome material shortages, alternatives such as fibro, instead of weatherboard, were introduced and even experimental, prefabricated houses were built[105]. Although there were many different types of house constructed, the advances in the design of these cottages were often very modest and mostly aesthetic. Gable and skillion roofs were introduced to complement the standard hipped roof and help with streetscape interest. Car ports were added

103 **Spearritt, P.,** *op. cit.,* p93

104 **Gregory, J. and Campbell, J.,** *op. cit.,* p5-6

105 **NSW Department of Housing,** 1998, *op. cit.*

and new front fence designs were developed. The detached cottage was the mainstay of the Commission up until the 1960s, when the town house was introduced.[106]

In 1956, the Commonwealth State Housing Agreement was amended to promote mass home ownership. The Federal Government redirected one-third of social housing funds to building societies and allowed the sale of public housing by the State. Of all new construction, only one-fifth was earmarked for social rent, while the rest was for sale at attractive affordable rates through the Rural Bank[107]. The fact that the Commission was building the detached cottage type was ideal for this purpose.

In 1951 L. Wilkinson was appointed the Commission's architectural advisor and one of the five board members, along with architect F.W. Turner. Under their influence, the Housing Commission began exploring the apartment building type. The first block of flats constructed was of three storeys, in Nicholson Street, East Balmain in 1951. By 1953, Greenway in North

[fig 41]
Greenway apartments
by NSW Housing Commission
Photograph by M. Zanardo, 2006

Sydney was underway [fig 41]. It was the Commission's largest project to date, rose up to eleven storeys over four blocks and contained three hundred and nine flats. The building was fitted out with special facilities such as a lift, laundry drying cabinets and garbage chutes. One hundred and seventy-five units in the Robert Mahoney Place project followed at Balmain [fig 42] in 1953 with a further one hundred apartments being constructed in the Goucher Court project in Manly in 1954[108].

[fig 42]
Robert Mahoney Place
by NSW Housing Commission
Photograph by M. Zanardo, 2002

By the 1960s the scale of production had escalated. As confidence grew, the 'Great Estates' were planned and constructed on Sydney's southwest fringe, building on the perceived success of the smaller precedents. Green Valley was to house twenty-five thousand people in six

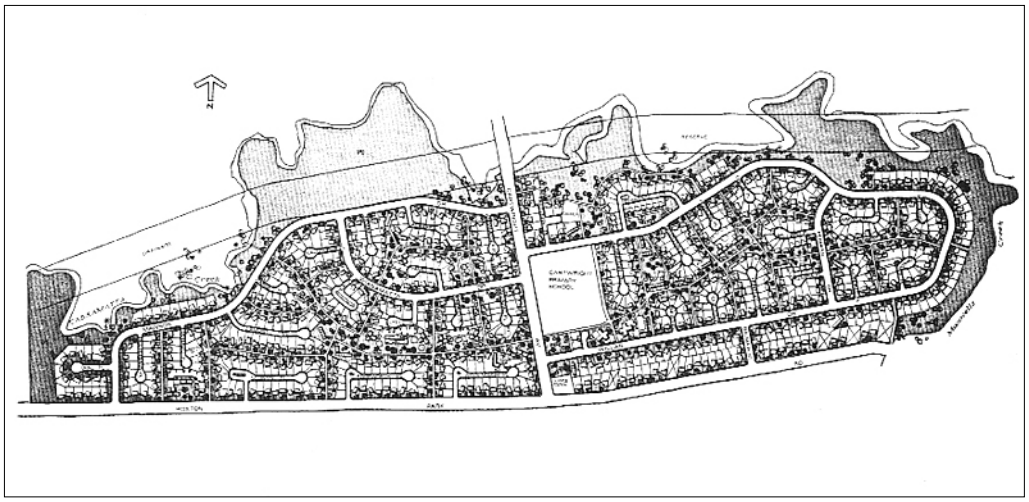
106 **Gregory, J. and Campbell, J.,** *op. cit.,* p12

107 **Hayward, D.,** *op. cit.*

108 **Gregory, J. and Campbell, J.,** *op. cit.,* p14

thousand dwellings[109] and included specially designed houses for the disabled and the elderly[110]. In 1963, the last suburb of Green Valley to be planned, Cartwright, was laid out in the Radburn style, the first time this had been done so in Australia. Borrowing from its North American namesake, it separated vehicular from pedestrian traffic as far as possible [fig 43].

[fig 43]
Cartwright estate
by NSW Housing Commission
Gregory, J. and Campbell, J., op. cit.,, p7



Each of the six Green Valley suburbs was planned to include its own school, recreation area and shopping centre, with land set aside for churches and civic amenities. In 1963, Mount Druitt was being planned as a satellite town to accommodate thirty-two thousand people. It was the first project of this scale to use the townhouse type. Concurrent with the development of these great estates was the abandonment of an underlying geometric planning structure[111]. More and more planning began to respond to a car orientated community, presupposing the move towards personalised transport for all.

[fig 44]
Mixed use development
at Ermington
by NSW Housing Commission
Photograph by M. Zanardo, 2002

Alternative initiatives in dwelling type were trialled throughout the period. 1962 saw a new type of terrace house constructed at Matraville and 1963 witnessed patio houses constructed at Riverwood and a new row house type built in Chullora. All of these non-standard types were designed by external architects[112]. An experiment had also been made in 1948 with a mixed use project of shops with two storeys of apartments above at Westmead, designed by E. Sodersten and with similar projects at South Granville and Ermington [fig 44]. As the Commission became more established however, it preferred to avoid the integration of different uses in a single building because it involved more expensive non-systematised construction[113].

---

109 **Gregory, J. and Campbell, J.,** *op. cit.,* p7

110 **NSW Department of Housing,** 1998, *op. cit.*

111 **Gregory, J. and Campbell, J.,** *op. cit.,* p7

112 **Gregory, J. and Campbell, J.,** *op. cit.,* p18

113 **Gregory, J. and Campbell, J.,** *op. cit.,* p19

Additional amendments to the Commonwealth State Housing Agreement (CSHA) in 1961 entrenched the shift from public housing to home ownership. This privatisation has been cited as 'the effective end of a genuine public housing system in Australia' [114], however many other forces can be seen to be contributory. These included an historic lack of tenure alternatives and the negative connotations associated with landlords and rental, a strengthening economy and wage growth and a plentiful supply of cheap land alongside the predisposition towards home ownership already at play[115]. The dwellings that were sold tended to be those of the best quality and in the best locations [fig 45]. Those that were left were the dwellings which posed the biggest liability in terms of maintenance and the unpopular, denser types such as townhouses, walk ups and high rise, which presented a difficulty due to issues of title[116].

[fig 45]
Housing Commission dwellings sold to the private market in Lane Cove. House on left in original condition, house on right has been extended.
Photograph by M. Zanardo, 2006

In the middle-ring suburbs, the construction of apartments was steady. In 1961, Blandville Court was constructed on Victoria Road, Gladesville, designed by Edwards, Madigan and Torzillo for the Commission [fig 46]. It contained one hundred and forty-one apartments and

[fig 46]
Blandville Court by Edwards, Madigan and Torzillo
Photograph by M. Zanardo, 2006

was six storeys in height. Located on a steeply sloping site, not uncommon in Sydney, it was accessed from street level direct to the fourth floor, effectively a three storey walk-up and avoiding the need for mechanical lifts. This site selection strategy was used in several other

114 **Hayward, D.,** *op. cit.*

115 **Milligan. V.R.,** *op.cit.,* p83-84

116 **Gregory, J. and Campbell, J.,** *op. cit.,* p8

projects of the time to build large projects while saving on circulation costs. The site had formerly belonged to the adjacent Gladesville Hospital and had been transferred to the Commission for their use[117]. H. Seidler designed a project at Eastlakes in 1963 that contained two hundred and twenty-five units in two nine storey tower slabs which were innovative for their access every second floor shared from a single lift core [fig 47]. It was built at the eastern

[fig 47]
Eastlakes apartments
by H. Seidler
Photograph by M. Zanardo, 2002

end of the former Rosebery Park Racecourse, whilst a similar 'sister' project of two hundred and forty-three apartments in nine storeys was designed at the western end by Oser Fombertaux & Associates in 1965. The area between them was subdivided for single storey detached housing[118].

[fig 48]
Generic apartment block
by NSW Housing Commission
Photograph by M. Zanardo, 2002

A range of three storey walk up flats were developed in 1964, based around a central courtyard idea and the first of these was built at South Coogee[119]. For the most part, though, flats were systematised for large production, as the cottages had been, designed to be sited repeatedly rather than be site-specific. Generic rectilinear and Y-shaped blocks were designed particularly for this system of repetition [fig 48]. It is interesting to note that pensioner housing escaped this system and has always been individualised. Aged care was not often built by the Commission. Instead, it was constructed by private developers to whom the Commission would donate land[120].

In the inner city, higher density schemes continued to replace slums on clearance sites. Entire communities were relocated. As the Commission became more confident, these schemes grew larger in scale, the high point being the demolition of hundreds of terraces throughout Redfern,

---

117 **Zanardo, M., Hala, M., Napoli, O.,** 'The NSW Housing Commission 1960-1970', *Undergraduate UTS student work,* Sydney, 2002

118 **Zanardo, M., Hala, M., Napoli, O.,** *ibid*

119 **Gregory, J. and Campbell, J.,** *op. cit.,* p16

120 **Gregory, J. and Campbell, J.,** *op. cit.,* p20

Surry Hills and Waterloo to be replaced by walk up flats and later high rise[121]. In 1960, John Northcott Place, designed by Samuel Lipson and Kaad, was Australia's largest high density housing scheme to date when built, completed with four hundred and twenty-nine dwellings distributed throughout twelve-to-fifteen storey wings to house over twelve hundred people. It was serviced by just four lifts. [fig 49]. In 1961, William McKell Place, designed by Morrow and Gordon Architects, was built in Redfern and provided one hundred and eighty-four more apartments in two joined eight storey tower slabs[122] [fig 50]. This spate of high rise projects

[fig 49]
John Northcott Place
by Samuel, Lipson and Kaad
Photograph by M. Zanardo, 2002

[fig 50]
John Northcott Place
by Samuel, Lipson and Kaad
Photograph by M. Zanardo, 2006

culminated in the Endeavour Project in Waterloo of 1972 by Stafford Moor and Farrington, where two thirty storey towers, 'Matavai' and 'Turanga' [fig 51], and four seventeen storey slabs of severe concrete were built in a park-like setting.

121 **Gregory, J. and Campbell, J.,** *op. cit.,* p10

122 **Gregory, J. and Campbell, J.,** *op. cit.,* p15

[fig 51]
The Endeavour estate
by Stafford, Moor and Farrington
Photograph by M. Zanardo, 2006

By 1970, the slum clearance programme had cleared seventy-four acres of land and demolished 1430 houses only to be replaced by 3472 units. The late 1970s saw the last gasp of slum clearance with the Commission returning again to a lower scale of construction. Notable examples of this are the six storey flats 'Drysdale' and 'Dobell' in Waterloo [fig 52], as well as the Sirius project in the Rocks[123] [fig 53].

[fig 52] left
Drysdale and Dobell flats
by NSW Housing Commission
Photograph by M. Zanardo, 2006

[fig 53] right
Sirius apartments
by NSW Housing Commission
Photograph by M. Zanardo, 2006

The 1970s saw the development of the 'Corridor Estates' in Sydney's southwest, between Liverpool and Campbelltown. These suburbs, including Macquarie Fields, Minto, Claymore and Airds, followed the Radburn pattern used in Cartwright but became medium-density suburbs of townhouses, as opposed to low-density detached cottages. These projects, like the ones before, were considered model examples of their kind at the time. Park areas, schools and shopping centres were incorporated in their layouts, and all were completed before the residents moved there[124]. However, as they remained stranded in the outer reaches of the metropolitan area and were incapable of being separately titled and sold to the private sector. They developed the problem of unemployment and have since remained solely as public housing, unable to transition to mixed tenure as the previous estates had.

123 **Gregory, J. and Campbell, J.,** *op. cit.,* p16

124 **Gregory, J. and Campbell, J.,** *op. cit.,* p8

In 1972, under the direction of a new Federal Government, the policy of concessional sale of newly built Commission properties funded through the CSHA was terminated. Since its inception, two-fifths of the dwellings the Housing Commission had built had been sold into private ownership[125]. In 1973, the Commonwealth signalled its interest in public housing again by intervening in State and Local urban renewal projects through the short-lived Department of Urban and Regional Development[126]. The first project it was involved with was in Glebe, where a sensitive approach was taken to the existing low-scale fabric by using types such as the 'big house type' which comprised five units under a single roof[127]. Later, the Department worked with the State Government and Sydney City Council in Woolloomooloo to insert new dwellings which were appropriate in scale and type to their surrounds. During this period also, the NSW Housing Commission was introduced to the idea of rehabilitating existing terraces, something it had never previously tried[128]. It was under this Government that funding for public housing was also significantly increased but means testing for tenants was introduced[129]. In 1975, DURD was disbanded with another change in Federal Government, however the State Government continued to intervene in the urban land market, especially when major State or Federal sites came up for sale. In 1976, the Land Commission, commonly known as Landcom, was set up to purchase, subdivide and sell new housing blocks in order to stabilise land prices and encourage home ownership[130].

125 **Hayward, D.,** *op. cit.*

126 **Milligan. V.R.,** *op.cit.,* p94

127 **Gregory, J. and Campbell, J.,** *op. cit.,* p12

128 **Gregory, J. and Campbell, J.,** *op. cit.,* p10

129 **Milligan. V.R.,** *op.cit.,* p104

130 **Spearritt, P.,** *op. cit.,* p100

Comparison 1946-1980

After World War II, both Sydney and Amsterdam faced widespread housing shortages on an unprecedented scale. The Governmental response had to be broad and swift even though it would be executed in the context of material and monetary shortages. While Sydney undertook emergency housing and small scale projects, Amsterdam was able to move immediately into large scale projects that had been initiated before the War. This was an available course of action only because strong planning controls and urban design had already been established as a framework. The sites were also unencumbered relatively greenfield sites. By contrast, Sydney only gazetted its first metropolitan plan in 1951 and so was initially able to respond only reactively, operating with some difficulty within already occupied areas.

With the upturn in each country's economy by the beginning of the 1950s, both cities had an unprecedented quantity of housing construction underway. In Sydney, the projects were predominantly low-density, detached housing estates in the middle-to-outer suburbs. In the denser inner areas, there were with limited forays into mostly small apartment buildings. However, in Amsterdam, the projects were almost exclusively medium-density apartment buildings and row housing estates built in large suburb-sized parcels, several thousands of dwellings at a time, primarily in areas to the near west and southeast of the city centre.

It is important to note at this point the differences in scale of the territory each city was working within. The housing built in Amsterdam was all located within a twenty kilometre radius around the city centre[131]. This is equivalent to an area in Sydney which would incorporate only the Eastern Suburbs, the Inner West, the Lower North Shore and south to the airport. To consider that some of Sydney's early estates were over thirty kilometres from the city centre is to understand that this is the same distance from Amsterdam to Utrecht, and that The Hague is the same distance as Penrith, and Rotterdam the distance to Picton[132]. Putting this scale into perspective then, the proximity to an established major centre becomes a critical point of appraisal[133].

It is reasonable to compare Sydney's 'Great Estates' and 'Corridor Estates' of the 1960s as equal in ambition and scale to Amsterdam's *Westelijke Tuinsteden* and *Zuidoost,* both having being designed to house tens of thousands of people in single projects. However, to comprehend that the density at which the Sydney projects were built was far less and their distance from the city so much further, is to appreciate how much more compact and sustainable Amsterdam had been planned to be. This can be attributed to the foresight evident in the preparation of long-established planning documents and to the value the Dutch place on their land. Sydney, on the other hand, had long suffered from lax planning and an attitude that land supply was endless, which eventually allowed such a wide dispersion of suburban areas, without providing transport to them or access to employment and services. All of these factors

131 **ARCAM,** 1998, *op. cit.*

132 **Sydway**, 'Greater Sydney & Blue Mountains Street Directory', Edition 10, *Sydway Publishing*, Sydney, 2004

133 For the purpose of comparison, however, the physical differences between Amsterdam and Sydney should also be explained. The Greater Sydney Region today is home to 4.2 million people, whilst Greater Amsterdam contains only 1.5 million, about one-third the population. However, while Sydney occupies its territory at a density of 345 people per square kilometre, Amsterdam is more than ten times denser, at 4431 people per square kilometre. Today, regular commuting within the networked conurbation of the *Randstad*, which is comprised of the four Dutch cities above, is typical. Combined, the cities of the *Randstad* have a population of about 7.5 million. **Wikipedia.,** *en.wikipedia.org,* 2006

impact directly on the adequacy of housing, as previously discussed, which is an essential component of affordability.

Perhaps the most important point of difference, again, in terms of the supply of affordable housing, is the eventual tenancy of the dwellings. Amsterdam Municipality and its collaborative Housing Associations during this period produced a significant body of housing which formed up to an astounding 90% of the total dwellings in Amsterdam, that were to remain affordable through the rental tenure[134]. Sydney, by contrast, introduced mechanisms specifically to promote the sale of dwellings into private ownership, reducing the quantity of social rental properties to around 6% of the total dwellings in Sydney. Compare this to the figures that suggest that it is approximately one-quarter of income earners in the population who require affordable housing[135].

It must be said that both Amsterdam and Sydney were successful in the short term in providing affordable housing to a large number of people. However, by choosing the path of home ownership, Sydney made the affordability of its housing only single-generational, that is, the affordability only assisted the first owner. After that, the houses could be and were resold for a profit. It is important to note that the detached housing type was key in allowing this to happen. Housing on separate Torrens title lots poses no barrier to individual sale. In some ways this has been a positive in that the vast, low density estates have, over time, been able to become mixed tenure and have avoided the ghettoisation of some of the townhouse or apartment building estates which remain solely in social rent. On the other hand, it has allowed developments in 'desirable suburbs', such as Hunters Hill or Strathfield, to be almost entirely sold and on-sold, effectively displacing social tenants to less desirable areas. The effect of the depletion of rental stock through sale in Sydney becomes ever more telling as generations pass.

In terms of architecture, Sydney could be regarded as having a richer, more interesting built history, given the propensity towards many smaller developments that experimented with a wider variety of housing types, responding to diverse locations. Yet Amsterdam might be considered more effective in urgently providing a quantity of housing, given the scale of projects and the process of refinement in designing and constructing in systems. In both cases, they experimented with the modernist 'open city' model to different extents, yet mostly with the same effect. Extreme projects like the *Bijlmermeer* in south east Amsterdam and the Endeavour Estate in Waterloo, Sydney, have demonstrated how this idea of urban planning, characterised by undefined open space and the death of the traditional street, can fail.

The active slum clearances in Sydney of the 1950-60s do not appear to have a direct parallel in Amsterdam but the results are comparable in scale and density to the housing projects the Dutch developed on primarily greenfield sites. The slum clearance projects represent only 2% or 3% of the total dwellings constructed by the Housing Commission but even so are a firmly recognisable face of public housing in Sydney. For the most part, these projects designed by the Commission or reputable Sydney architects, were interesting resolutions in type and circulation, and were constructed well enough, however there remains the perception that these

134 **Oosterman, A.,** 'Housing in the Netherlands – Exemplary Architecture of the Nineties', *NAi Publisher*s, Rotterdam, 1996, p13

135 **Holliday, S.,** *op. cit.,* p8

projects foster social ills. Whilst this may be so, it is argued here that, along with the consistently underprivileged demographic that inhabit the buildings, the worst characteristic of these buildings is that they are identifiably 'different' in appearance, creating stigma. The same is not apparent in the Amsterdam projects because the buildings are the norm, not the exception.

The 1970s saw a significant change of direction in terms of housing provision, especially in the inner city built-up areas. Negative public opinion about wholesale clearance of old areas, and the scale of the buildings replacing them, manifested itself as political backlash. In Amsterdam, the Metro Riots brought about a change in thinking from 'reconstruction' to 'renewal'. In Sydney, the 'Green Bans' were a similar type of response by the Builders Labourers Federation, however they were held more in aid of preserving the existing environments than conserving them[136]. In both places a more sensitive approach to new development became prevalent, which respected the existing urban fabric and even extended to the renovation and reuse of existing buildings. Often new buildings drew on the physical features and housing types of their neighbours in an interpretative manner. In most cases this approach has been more successful, due to the fact that it tries to assimilate into its built environment.

136 **Spearritt, P.,** *op. cit.,* p240

Amsterdam 1981-2006

The 1980s saw the idea of the 'compact city' promoted, where mixed functions and high-densities were desirable both economically and in terms of transport. The 1988 Fourth Report on Spatial Planning required that new development be in, or as close to the city centre as possible. There was to be no more expansion, only straightforward concentration[137]. After a decade of 'village urbanism', the city had come back into fashion and the perimeter block was rediscovered as a building type. C. Weeber designed the masterplan for *Vesnerpolder* in *Zuidoost* for sixteen perimeter blocks of social rental housing [fig 54]. The blocks were realised by several architects from 1980 to 1986, the largest by Weeber himself. Each block is dimensionally much larger than its typical *Amsterdam Zuid* counterpart and is publicly accessible, allowing for car parking and the sharing of the central courtyards which provide various leisure functions[138].

[fig 54]
Aerial photo of *Venserpolder* by C. Weeber
Ibelings, H., op. cit., p144

There were also exceptions. The *IJ-Plein* masterplan by the Office for Metropolitan Architecture in *Amsterdam Noord* in 1982, revisited the modernist approach and returned to the open row, though reinterpreted by the interspersion of urban villas [fig 55]. The masterplan was executed by various architects, with OMA retaining only the easternmost, longest row of housing and triangular commercial building to design within their own office. The project is one hundred percent social rental housing and is arranged in long row blocks aligned perpendicularly to the *IJ* River. They do not permit water views, although a street along the water's edge allows public access to the *IJ* for all[139].

[fig 55]
Street along the water's edge *IJ-Plein* housing by Office for Metropolitan Architecture
Photograph by M. Zanardo, 2004

In 1986, for the first time, the Municipality altered its position of providing almost exclusively social rental housing by actively encouraging a portion of the market to move to home ownership. 'Building for the neighbourhood' became 'Building for the market'. In a period of sustained prosperity, the policy switch to allow for the demand for individualised housing was rationalised as 'giving the people a say'. It was also designed to curb the further exodus of the higher income bracket to lower-density outlying areas. In 1995, with the withdrawal of all

137 **Ibelings, H.,** 1999, *op. cit.*, p137

138 **Buch, J.,** *op. cit.,* p364

139 **Buch, J.,** *op. cit.,* p376

government subsides to build affordable housing, Housing Associations effectively went from being housing providers to being development agencies[140]. The construction of new owner-occupied dwellings was driven by the sale of social rental stock, mainly old inner-city units. The reduction of social rent accommodation in Amsterdam was set on a path to move steadily from 90% down towards 35% by 2010[141]. This final figure was deemed to be satisfactory to provide housing to the proportion of population who required housing assistance. However the total decline in numbers did not reflect a cessation of new affordable housing construction. Affordable stock was still actively renewed and done so quite typically in projects of mixed tenure, though not usually provided within the same building.

An appendix to the Fourth Report on Spatial Planning was released in 1990 which coined, from the Dutch document title, the acronym *VINEX*[142]. These *VINEX* sites were to accommodate an additional one million dwellings across the Netherlands by the year 2005 and Amsterdam was to deliver its fair share. This target was later revised downwards to six hundred thousand, with *VINEX* construction commencing in the mid 1990s[143]. Land with redundant uses, such as former industrial and dock lands, were earmarked for redevelopment and the existing features of these sites were incorporated wherever possible[144].

Amsterdam's *Oostelijk Havengebeid* (Eastern Docklands) project was one of the largest *VINEX* projects in the Netherlands, providing for eight thousand dwellings at the density of one hundred dwellings per hectare. Initial work started with the *Abattoirterrein* and *Veemarkt* areas to the southern part of the site in the late 1980s. Five hundred and fifty social rental dwellings were designed, including those by F. van Dillen and L. Lafour with R. Wijk and incorporated some business uses[145] [fig 56].

[fig 56]
***Entrepotbrug* housing**
by Atelier PRO
Photograph by M. Zanardo, 2004

140 **Bullivant, L.,** 'Working the Programme: Designing Social and Affordable Housing in the Netherlands' in Architectural Design (AD) Vol 73 No 4 'Home Front – New Developments in Housing', *Wiley Academy*, London, July/August 2003, p13

141 **Netherlands Ministry of Housing, Spatial Planning and the Environment,** *international.vrom.nl,* 2006

142 VINEX is the acronym for *Vierde Nota Ruimtelijke Ordening Extra*

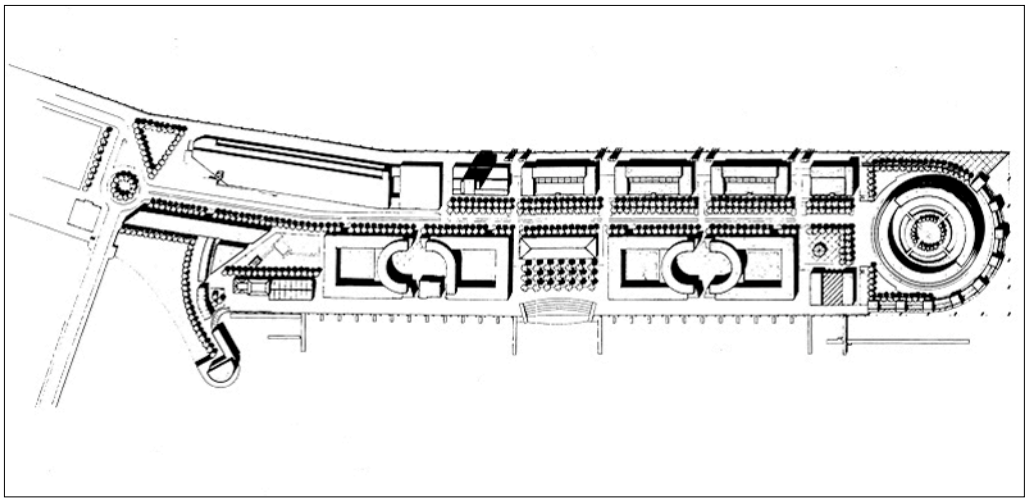
143 **Ibelings, H.,** 1999, *op. cit.*, p154

144 **Ibelings, H.,** 1999, *op. cit.*, p137-138

145 **Abrahamse, J.E. et al,** 'Eastern Harbour District Amsterdam - Urbanism and Architecture', *NAi Publishers,* Rotterdam, 2003, p35-36

The masterplan for *KNSM-eiland* by J. Coenen followed in 1989. It was a plan that pursued a very strong form and a monumentality that would have been inconceivable in the 1970s and had not been seen since the 1920s [fig 57]. Large bold geometric housing blocks and a number of existing smaller converted harbour buildings flanked a broad central tree-lined boulevarde.

[fig 57]
***KNSM-eiland* masterplan**
by J. Coenen
Abrahamse, J.E. et al,
'Eastern Harbour District Amsterdam - Urbanism and Architecture',
NAi Publishers, Rotterdam, 2003, p57



[fig 58]
Emerald Empire apartments
by J. Coenen
Photograph by M. Zanardo, 2004

Strong street walls of solid building meant that dwellings received either a view of the water or of the central green space. With *KNSM-eiland,* the Municipality pursued for the first time a housing programme that was not exclusively social rental housing, having only a proportion of the masterplan translating to affordable housing. Coenen himself designed the circular ring of owner-occupied residential apartments at the tip of the island in the most prestigious part of the layout[146] [fig 58].

In 1991, the *Woningdienst Amsterdam Afdeling* (Amsterdam Housing Service Department) released the '*Woonatlas*' (Housing Atlas), a document which was to strongly influence the direction of housing design in Amsterdam. Whereas previously the attitude was to design 'neutral' and flexible floor plans able to be adapted by any tenant, the atlas now recommended fourteen different types of housing, directed at specific users. As the general demographic tendency of Amsterdam was for the population to increase but the household to become on average smaller, the new floor plans included plans catering for singles, couples, the elderly and share accommodation[147].

Java-eiland was next in 1992. A part of the *Oostelijk Havengebeid,* it had a masterplan prepared by S. Soeters. It differed significantly from *KNSM-eiland* by using, not large free standing buildings but a series of attached six to eight-storey apartment buildings. These were arranged like oversized Amsterdam canal houses to surround a courtyard containing smaller buildings and communal parks [fig 59]. Each apartment building was planned to accommodate

146 **Abrahamse, J.E. et al,** op. cit. p58-61

147 **Bontje, L. and Jolles, A.,** 'Amsterdam – The Major Projects', *City of Amsterdam*, Amsterdam, 2000, p70

[fig 59]
***Java-eiland* central courtyard masterplan by S.Soeters**
Photograph by M. Zanardo, 2004

a single type of dwelling as described in the *Woonatlas*, a portion of these being social rental stock and each building was expressed differently in elevation to reflect this. Soeter's own firm designed seven of the buildings on the island[148]. One of the key features of the layout was the four new transecting canals that divide the island into five parts, connected by pedestrian bridges and a vehicular street on one side. Along these canals, smaller, true canal house types were repeated in alternate combinations to provide a more 'human scale'. These, however, are owner-occupied dwellings and are expressive of their individual owners.

The paired islands of *Borneo* and *Sporenburg* were conceived of as a 'sea of dwellings' in a masterplan by West 8 in 1996[149] [fig 61]. One hundred dwellings per hectare were to be provided in long streets of narrow four-metre wide, three storey, back-to-back terraces. This low scale was compensated for by four large-scale, judiciously placed 'meteorite' buildings to make up the density. Of the two thousand one hundred and fifty dwellings to be built, one third were allocated as social housing and distributed throughout the scheme. Over thirty architects were involved in the realisation of the project, amongst them a who's who of Dutch architects

[fig 60]
Aerial Photo of *Borneo* and *Sporenburg* masterplan by West 8. *KNSM-eiland* is right foreground and *Java-eiland* right background
Abrahamse, J.E. et al, op, cit, cover image

148 **Bontje, L. and Jolles, A.,** *ibid*, p93-94

149 **Maar, B. de,** ' A Sea of Houses - The Residences from New Deal on Borneo/Sporenburg', *THOTH Publishers*, Bussum, 1999, p12

as well as several prominent foreign architects. The masterplan is characterised by very strict controls concerning height and the palette of materials that can be used, providing a high level of visual cohesion to the urban composition. Most of the gardens belonging to the terraces are internal or rooftop, with only limited public green spaces on the island for residents to enjoy. For this reason, the water body between the islands was conceived of as a 'blue' park with two striking red bridges crossing the water to take advantage of this [fig 61]. In *Scheepstimmermanstraat* on the *Borneo-eiland* an experiment with a new concept in housing took place. Sixty lots were allocated to home buyers who, in association with a shortlisted architect, were allowed to design their own ideal home[150] [fig 62]. The experiment was a great success but at the same time demonstrated just how far the new Dutch dream for individualised owner-occupied housing had come.

[fig 61] left
Bridge between *Borneo* and *Sporenburg* by West 8
Photograph by M. Zanardo, 2004

[fig 62] right
***Scheepstimmermanstraat* on *Borneo* with individualised market housing**
Photograph by M. Zanardo, 2004

Smaller adaptive reuse projects such as the *Gemeente Waterleidingterrain*, on a former water treatment site to Amsterdam's immediate west, had to work more closely with the existing surroundings [fig 63]. K. Christiaanse, in 1994, masterplanned six hundred dwellings over six hectares, half of them as social rental housing, a quarter subsidised owner-occupied and a quarter market housing[151]. Christiaanse contributed three of the eighteen buildings, alongside others by DKV, Neutelings Riedijk, Meyer & van Schooten, and Zeinstra & van der Pol. The

[fig 63]
***Gemeente Waterleidingterrain* housing masterplan by K. Christiaanse**
Photograph by M. Zanardo, 2004

150 **Bontje, L. and Jolles, A.,** *op. cit.*, p131-137

151 **Bontje, L. and Jolles, A.,** *op. cit.*, p88-90

masterplan had a strong environmental agenda that included the retention of the water tower and historic buildings on the site for community uses, allowed no vehicular traffic onto the site, relegated car parking to the block's perimeter, specified a limited palette of sustainable materials for construction and, appropriately, incorporated a grey water recycling system[152].

In the established city centre areas, urban infill projects took place. A typical example of these is the Duinker van der Torre designed series of twelve social rental apartment buildings for Amsterdam Municipality in *De Pijp* in 1993[153] [fig 64]. With a total of one hundred and four social rent dwellings and eleven market dwellings between them, each building was a careful infill using materials and detailing that were complementary to the surrounds, but also read collectively as a group of projects exploring variations along a single theme. They are notable for their consistency and sensitivity to their surroundings.

[fig 64]
Apartments in *De Pijp*
by Duinker van der Torre
Photograph by M. Zanardo, 2004

Infill also took place in historical areas such as the *Meerhuizenplein* project by L. van der Pol in *Amsterdam Zuid* completed in 2002 [fig 65]. It was comprised of four blocks of housing, four-to-five storeys in height, addressing four streets and fronting a square. One-third of the dwellings were social rental, the remainder owner-occupied, with many of the displaced long time residents being able to return to the new dwellings once they were constructed[154]. It was a particularly successful project architecturally, being simultaneously respectful and interpretative of its heritage Amsterdam School neighbours, whilst maintaining an individual expression and strong urban form.

[fig 65]
Apartments in *Meerhuizenplein*
by L. van der Pol
Photograph by M. Zanardo, 2004

Historical renewal and infill even took place in the oldest inner-city areas, an example of which was a couple of minute projects in *Jordaan* by Claus en Kaan in 1993 [fig 66]. On both sites,

152 **Christiaanse, K. et al,** 'Kees Christiaanse', *Uitgeverij 010 Publishers,* Rotterdam, 1999, p48-51

153 **Platvoet, L.,** 'Steppen Door de Nieuwe Stad - Amsterdam Zuid' (web-based translation), *Uitgeverij De Balie*, Amsterdam, 2000, p19-48

154 **Beukers, E. and Bekaert, G.,** 'Liesbeth van der Pol', *NAi Publishers,* Rotterdam, 2002, p212

[fig 66]
Apartments in *Jordaan* by Claus en Kaan
Photograph by M. Zanardo, 2004

one of a pair of canal houses was demolished to be replaced by an uncompromisingly modern building whilst the other was retained and renovated[155]. The abstraction and neutrality of the modern addition ensured it receded into the streetscape and sat comfortably. With only three small social rent dwellings in one project and five in the other, the projects can be considered part of the Municipality's intention to ensure that each and every space available was used for quality housing. No project was too small.

At the other end of the scale, new suburbs were developed along modern Garden City principles including *Nieuw Sloten* [fig 67] and *De Aker*, both substantial developments to the city's southwest outskirts towards *Schipol* airport. Mostly these projects were comprised of

[fig 67]
Aerial photo of *Nieuw Sloten* masterplan by DRO
Photograph by M. Zanardo, 2004

[fig 68]
New infrastructure and housing in *Bijlmermeer*
Photograph by M. Zanardo, 2004

market housing, to help redress the balance of social rent to owner-occupied dwellings in these post-war suburbs but each included a proportion of new social housing to help renew the stock[156]. Similarly, in an exercise in 'urban renewal', several of the high-rise slabs in the *Bijlmermeer* were demolished to make way for low-scale development and simultaneously took the opportunity to reinstate a component of vehicular traffic [fig 68]. These were again by and large market housing, with a component of social rental

155 **Ibelings, H.,** 'Claus en Kaan Building', *NAi Publishers,* Rotterdam, 2001, p90-92

156 **Bontje, L. and Jolles, A.,** *op. cit.*, p158

stock, planned and constructed in a bid to socially rebalance the neighbourhood[157]. In addition, during the 1990s, several of the pre-War and post-War housing estates received a well-deserved face lift, however in the process of doing so, tended to lose a lot of their characteristic open space[158].

[fig 69]
***IJ-Burg* under construction masterplan by Palmboom & van den Bout**
Photograph by M. Zanardo, 2004

In 1999, construction of the new islands of *IJ-Burg* was started in the *IJ-Mee*r to the east of Amsterdam, not by the traditional method of reclamation, rather through a process of 'pancake' sand depositing. The six interconnected islands were designed by Palmboom & van den Bout to accommodate eighteen thousand new, low-to-medium rise dwellings at sixty dwellings per hectare [fig 69]. Non-residential space was integrated for entertainment and employment functions, enough to sustain seven thousand jobs. The project is being realised through several consortia composed of Housing Associations, property developers and investors, in partnership with Amsterdam Municipality, who are forming the land and building the infrastructure. Serviced by bus, tram and eventually train, it will effectively become an extension of the city[159].

The Netherlands Ministry of Housing, Spatial Planning and the Environment declared that a further three hundred and sixty thousand more dwellings were required to be built in the Netherlands over the period 2005-10. Forty-three thousand of these are slated for Amsterdam[160].

157 **Bontje, L. and Jolles, A.,** *op. cit.*, p131-132

158 **Bontje, L. and Jolles, A.,** *op. cit.*, p107-108

159 **Bontje, L. and Jolles, A.,** *op. cit.*, p165-170

160 **Netherlands Ministry of Housing, Spatial Planning and the Environment,** *op. cit.*

Sydney 1981-2006

[fig 70]
Villawood estate
by NSW Housing Commission
Gregory, J. and Campbell, J., op. cit.,, p9

The 1980s witnessed the Housing Commission's return to smaller scale development. Their activities in slum clearance and high-rise construction came to a halt, as did their involvement in low-density estate planning. With high interest rates and large debts causing the forfeit of these major projects, the Commission turned its attention to the maintenance of its existing stock, concentrating on renewing its older projects. The first of these redevelopment projects was in Villawood, where two typical blocks of fibro cottages were replaced with a single block of Radburn style townhouses[161] [fig 70].

At the same time, in continuation of their programme begun in the 1970s, the 'Urban Renewal Group' within the Commission was undertaking substantial work on their inner-city and historic properties. At Woolloomooloo, they experimented with many novel low-rise housing types, and made adjustments to the public domain, including street closures, though not always with great success[162]. Amongst them, one of the more successful projects was on Cowper Wharf Roadway designed by McConnel Smith and Johnson in 1985 [fig 71]. It contained

[fig 71]
Cowper Wharf Roadway mixed use
by McConnel Smith and Johnson
Photograph by M. Zanardo, 2006

sixteen dwellings above shops at street level, directly opposite the Woolloomooloo Finger Wharf. Its three storey facade is sympathetic in design to the original building types of the area and follows the curved boundary alignment of the site, strongly defining the street[163]. In projects at Glebe, Daceyville and Millers Point, their work mainly involved the rehabilitation of their existing stock, though some limited new infill projects were built. A scheme at Wentworth Park Road, Glebe, constructed in 1983, combined the use of terraces with

161 **Gregory, J. and Campbell, J.,** *op. cit.,* p9

162 **Thalis, P. and Cantrill, P.J.,** 'Dilemmas of urban housing' in Architecture Australia, *Architecture Media Australia Pty Ltd*, Melbourne, April 1992, p27

163 **McConnel Smith and Johnson**, *www.msjgroup.com.au,* 2006

apartments in one project[164]. In Daceyville, a new version of the 'big house' type, which accommodated several units within the appearance of one large house, was constructed [fig 72] along with a modern semi-detached type[165]. What was learnt about housing typology in these places was then applied to urban renewal work in Waterloo, most interestingly in 1988 with a pair of projects by Cox Richardson Taylor and P. Myers [fig 73] built opposite each other in Walker Street. Both are three storey buildings containing twenty-four dwellings, the ground-level units being effectively row houses with 'piggy back' apartments sitting over the top of them[166]. This unusual type was effective in both increasing density and providing housing choice within a single project.

[fig 72] left
Big house type at Deaceyville
by NSW Department of Housing
Photograph by M. Zanardo, 2006

[fig 73] right
Walker Street apartments
by P. Myers
Photograph by M. Zanardo, 2006

The Commission's later renewal projects tended to focus on the middle-ring suburbs consisting of ageing nondescript fibro houses. For these projects, with the increasing preference for the townhouse type, the Commission's ubiquitous three storey walk up was all but abandoned, in order to deliver the required housing density increases and renewed stock[167]. A project completed at Casula, however, used a semi-detached type instead of the townhouse for similar yields. The semi-detached gained popularity in the 1980s due to its ability to achieve increased density, an advantage which ideally suited the introduction of dual occupancy codes throughout Sydney[168].

During the early 1980s, The Housing Commission began to outsource more of its design and construction to private architects and builders, rather than use in-house staff. The rationale for this was that new public housing design should become less identifiable by its appearances. It was a conscious shift from the results of the engineering-biased skills that the Commission had favoured in the 1960s-70s towards a stronger concern for desirable aesthetics. It also coincided with the need to downsize and achieve greater efficiencies internally within the Commission[169]. The first modern terrace houses were constructed at Cunningham Street, North Sydney in 1981, in partnership with North Sydney Council [fig 74]. This project included the provision of

---

164 **Gregory, J. and Campbell, J.,** *op. cit.,* p20

165 **Gregory, J. and Campbell, J.,** *op. cit.,* p15

166 **Thalis, P. and Cantrill, P.J.,** *op. cit.,* p26-29

167 **Gregory, J. and Campbell, J.,** *op. cit.,* p16

168 **Gregory, J. and Campbell, J.,** *op. cit.,* p17

169 **NSW Department of Housing,** 1998, *op. cit.*

[fig 74]
Cunningham Street terraces by NSW Housing Commission and North Sydney Council
Photograph by M. Zanardo, 2005

a multi-storey public car park with roof top tennis courts, situated across the street, and allowed a car parking dispensation for the development. The terraces were each four metres wide and sensitively scaled at two storeys high with a gable detail that concealed the upper floor within the roof form[170]. Apart from the obvious 1980s material choice and colours, they appear as regular market housing, unrecognisable as a Commission project.

The revision of the Housing Act in 1986 caused a major restructure in public housing provision. The NSW Housing Commission and Landcom were amalgamated with the 'Home Purchase Programme' and 'Mortgage Relief Scheme' to be subsumed within the new Department of Housing[171]. Under this new regime, the Department began to concentrate on housing provision for clients with physical, intellectual or psychiatric disabilities and the construction of women's and youth refuges, hostels, group homes, childcare and community centres and Aboriginal housing, which all required specialist design or modification to existing properties. In the same vein, housing was also designed for other Governmental departments and functions including the Defence Forces, Police, Electricity Commission, Forestry, Maritime Services Board, Teachers and Public Servants, as required[172]. In a general sense, the shift was towards producing housing for single and couple households and for those who could not find accommodation for themselves in the private market. The nuclear family was no longer to be the prime target for assistance.

However, when the Department of Housing did build new projects in the 1980s, it preferred to concentrate on infill housing in better located inner-urban areas, rather than operate at the suburban fringes. When this occurred, it often involved the controversial use or sale of State land in order to realise a financial gain on the housing.

A former container terminal in Mort Bay, Birchgrove was earmarked for redevelopment by the State Government in 1980 [fig 75]. In 1985, K. Maher designed a medium-density mixed-use townhouse and apartment scheme for the Department on the north portion of the site, the

170 **Gregory, J. and Campbell, J.,** *op. cit.,* p18

171 **NSW Department of Housing,** *op. cit.*

172 **Gregory, J. and Campbell, J.,** *op. cit.,* p20

[fig 75]
Mort Bay courtyard housing
by K. Maher
Photograph by M. Zanardo, 2006

remainder of the site becoming Mort Bay Park. The project was based around a courtyard access model but was not realised as conceived. The built scheme was lacking the planned community centre and shop at its core and budget cuts meant that essential landscaping was omitted. Whilst originally intended as a public housing scheme, sixty percent of the dwellings were sold into private ownership in the following years[173].

It is interesting to note that Sydney City Council had tried to sell their housing stock to the State Government in the late 1970s, however at that time, the Commission had refused to purchase them. In 1988, however, the Department acquired all of the Sydney City Council housing in Chippendale, Woolloomooloo, Pyrmont, Camperdown and Glebe by way of direct transfer when the City Councillors were replaced by State Commissioners[174]. Housing numbers were also boosted through spot-purchase programmes of existing dwellings at this time.

[fig 76]
Low-rise pensioner units
by Travis McEwen Group
Photograph by M. Zanardo, 2006

In 1991, a design for the former Crown Street Women's Hospital site in Darlinghurst was prepared by F. Stanisic, then of Travis McEwen Group [fig 76]. The one-hectare site had been sold into private ownership to deliver a project of one hundred and forty-four private dwellings arranged around a courtyard and swimming pool, in a perimeter block of varying height. There were also to be ninety-two public housing pensioner units, clearly separate, distributed in low-rise buildings along neighbouring streets[175]. This project was characterised by strong, heavy street walls which rise up to seven storeys in height, having no set back. The walls strongly define the public domain, in a type much more common to European cities than to Sydney.

---

173 **Korsanos, A.,** 'Housing and the Public Realm', *Advanced Study Report, BArch University of Sydney*, Sydney, 1993, p139

174 **City of Sydney Council,** *op. cit.,*

175 **Planning New South Wales et al,** 'Residential Flat Design Pattern Book', *New South Wales Department of Urban Affairs and Planning*, Sydney, 2001, p6-7

[fig 77]
Bowman Street project
by NSW Department of Housing
Photograph by M. Zanardo, 2006

The 1990s saw renewed interest in the apartment type, particularly lower rise with hydraulic lifts that were both cheaper and offered obvious accessibility benefits to tenants. Also, the potential of mixed-use buildings was again being explored for use in strategically well-located positions near centres and public transport hubs[176]. Under this rationale, the Department designed a complex of terrace houses, shops and apartments in 1992, at Bowman Street, Pyrmont [fig 77], adjacent to Ways Terrace. The project is constructed of face brick and incorporates concepts of flexibility in plan, to allow shops on the ground floor to be converted to apartments if needs be[177].

In 1991, the Commonwealth initiated the 'Building Better Cities Programme', with a political change in Federal power once again motivating an interest in urban development and housing. In Sydney, the scheme focussed on the redevelopment of Pyrmont, where, through the cooperation of all tiers of Government, significant improvements in housing and transport were made. Under this programme, the not-for-profit housing association 'City West Housing' was later set up with seed funding of $50M in 1994. Ongoing funds were secured through a share of the revenue on State land sales in Pyrmont. Also, additional funds was procured via the mechanism of 'inclusionary zoning', which required developers preferably to incorporate a percentage of affordable housing within their project, which did not happen, or else to provide an equivalent financial contribution in lieu[178]. The role of City West Housing was to manage the allocated dwellings, or to invest the funds in new developments, which it did laudably. City West now manages three hundred and eighty-one units with a further one hundred and thirteen units due to be completed construction in 2006[179].

[fig 78]
Macarthur Street apartments
by Tonkin Zulaikha Greer
Photograph by M. Zanardo, 2006

The housing in Macarthur Street, Ultimo designed by Tonkin Zulaikha Greer in association with R. Simpson in 1994, is one successful example of City West's endeavours [fig 78]. It contains thirty-two dwellings in two blocks, addressing a front street and rear lane. Its height steps from six to two storeys, with a strongly contextual design approach. An internal courtyard captures north sun over the lower buildings and solar collectors on the

176 **Gregory, J. and Campbell, J.,** *op. cit.,* p16

177 **Gregory, J. and Campbell, J.,** *op. cit.,* p20

178 **Bebbington, D.,** 'Is the City West Affordable Housing Company a Replicable Model for Affordable Housing?', Dissertation for the Masters in Housing Studies, *The University of Sydney Faculty of Architecture, Planning and Allied Arts*, Sydney, 2001, p4

179 **Centre for Affordable Housing**, *op. cit.*

[fig 79]
Mary Ann Street project by Allen Jack and Cottier with Design 5 Architects showing new rear lane
Photograph by M. Zanardo, 2004

roof generate hot water for the apartments[180]. In Mary Ann Street, Ultimo, Allen Jack and Cottier, with Design 5 Architects, rennovated seven historic terraces and one cottage and designed twelve new apartments in 1994 [fig 79]. The design managed to preserve a heritage streetscape whilst incorporating modern dwellings within. A new lane was also built to the rear to provide an address for the new units[181]. Also of note are the Wattle Street apartments designed by Woods Bagot with R. Prescott in 2000 [fig 80]. There, fifty-seven apartments are provided within an eight storey building, which boldly addresses the street corner with a curved metal-clad corner balcony element. The units incorporate environmentally sustainable design principles, utilising solar chimneys for passive climate control and for assisting with cross ventilation when windows are shut to ameliorate traffic noise[182]. Since inception, City West Housing has expanded its boundaries and is now active in both Waterloo and the Green Square area.

[fig 80]
Wattle Street apartments byWoods Bagot with R. Prescott
Photograph by M. Zanardo, 2002

The Mant Report, handed down in 1992, resulted in a major restructure of the Department of Housing when its findings recommended, amongst other concerns, that all non-housing functions must be shed[183]. From the mid-1980s on, in response to high demand and limited funding, increasingly the Department was concentrating on the provision and management of housing only for those most in need. Effectively the Department was transformed a welfare housing agency. By 1996, the Department owned a total of one hundred and thirty thousand dwellings and still had another ninety-three thousand applications on their waiting lists. Thirty-eight thousand further households were assisted by the receipt of rental assistance for a dwelling in the private market[184]. In 1998, the State Government set up the Ministerial Task

180 **Planning New South Wales et al,** 2001, *op.cit.,* p14-15

181 **Bebbington, D.,** *op.cit.,* Appendix No Seven

182 **Bebbington, D.,** *op.cit.,* Appendix No Three

183 **NSW Department of Housing,** 1998, *op. cit.*

184 **Spearritt, P.,** *op. cit.,* p101

Force on Affordable Housing to look into ways that affordable housing supplies could be improved[185]. The group made sensible findings and suggested ways forward, however, to date, most of their recommendations remain unimplemented.

In this context, the source of affordable housing necessarily became more diversified, with housing opportunities becoming available through alternative programmes under the CSHA, providing a variety of short and long term accommodation. Eligibility for such schemes was determined by the bodies that managed the housing, either Housing Associations, Housing Cooperatives or Church Housing and were often organised within geographical boundaries, although sometimes by social 'group'. Within time, this housing became a viable alternative to the public system and started to compete with the Department of Housing for State funding to operate, maintain and extend their schemes. Because they were privately organised and motivated, they came to act as an efficiency benchmark for public housing.

In 2000, the State Government announced the Design Quality Programme and introduced State Environmental Planning Policy 65 with the aim of improving the quality of apartment buildings in New South Wales. These initiatives included legislation to mandate that only registered architects could design apartment buildings. They also set up expert Design Review Panels in order to advise Council approval authorities on the merits of particular schemes[186]. Several of the later City West Housing projects have had to undergo the scrutiny of this legislation to gain approval, as will other future projects.

At the turn of the new century, the upgrading of housing estates was once again placed on the agenda, both urban and those at the suburban fringe. The first to receive attention was the 1930s Erskineville Estate, for which the Department of Housing prepared a feasibility and masterplan for renewal, attempting in the process to capitalise on the site's land value[187]. The project understandably did not progress, due to strong pressure from elderly residents who did not wish to be relocated. 2004 saw the State Government assume control of the Redfern Waterloo area. Under a special Act, Government made itself the sole Authority charged with the responsibility of revitalising the area through planning and urban renewal. The area includes many Department of Housing holdings which the Redfern Waterloo Authority has committed to retain. It also includes the RED (Redfern Everleigh Darlington) area which will provide affordable housing for the Aboriginal community through the Aboriginal Housing Company[188]. In 2004 and 2005 respectively, both of the Housing Commission's Bonnyrigg and Minto estates began the process of renewal. Plans were prepared to improve their layout, upgrade the parks and public domain and build new housing. A key component of both of these plans was to integrate private dwellings into the public housing in order to rebalance the social mix[189].

---

185 **Ministerial Task Force on Affordable Housing,** 'Affordable Housing in New South Wales - The Need for Action', *John Thrift Publishing,* Sydney, 1998

186 **Planning New South Wales et al,** 'Residential Flat Design Code', *New South Wales Planning Department*, Sydney, 2002, pi-iii

187 **Morris, L.,** 'City plan to open rich areas to workers', *The Sydney Morning Herald*, Sydney, Thursday 4th July 2002, p3

188 **Redfern-Waterloo Authority,** *www.redfernwaterloo.nsw.gov.au,* 2006

189 **NSW Department of Housing**, *www.housing.nsw.gov.au*, 2006

In recent years, there has been a resurgence of the issue of affordable housing, as housing prices have continued to climb. The State Government set up the predecessor to the Centre for Affordable Housing in 1999, to assist Government and other groups to find responses to the affordable housing issue. State Government also assisted potential first home buyers by abolishing stamp duty under the First Home Plus Scheme, for cheaper properties. A Federal one off First Home Owner Grant was also made available to be put towards the purchase cost of a property bought by any first-time owner[190]. The State also endeavoured to make a contribution by ensuring the timely release of new land in Sydney's northwest and southwest, in order to relieve pressure on land prices[191].

At a local level, Councils have become more involved. Waverley, Willoughby, Sydney City, South Sydney and Parramatta Councils have all initiated or attempted to implement fledging schemes with differing levels of success. In 2004, the Metropolitan Strategy for Sydney was released by State Government. It acknowledged the need for affordable housing, though how it intends for it be delivered remained unresolved[192].

190 **Office of State Revenue,** *www.osr.nsw.gov.au,* 2006

191 **Sydney Metropolitan Strategy,** *www.metrostrategy.nsw.gov.au,* 2006

192 **Sydney Metropolitan Strategy,** *ibid*

Comparison 1981-2006

In the previous periods, both Sydney and Amsterdam could be said to have had levels of success in providing affordable housing for their populations through different types of tenure, Amsterdam through social rental housing, Sydney through private home ownership. In this period however, it is telling what the consequences of this critical difference have been. In Amsterdam the quality, quantity and variety of affordable housing has continued relatively strongly, even as Amsterdam has embraced open market housing for the first time. In contrast, it seems that Sydney was exhausted by the 1980s and, apart from a couple of individual projects, its provision of affordable housing has been in a state of steady decline.

The issue of the proportion of *new* dwellings that were provided as affordable housing should be highlighted. Even though Amsterdam was actively reducing the proportion of affordable housing it provided, it still aimed to maintain over one third of its housing as affordable. This figure is roughly equivalent to the statistical proportion of the population that require it. However, in Sydney today, the Department of Housing stock comprises only six percent of stock across New South Wales[193], providing a fraction of what is required, and not all of it located in Sydney Metropolitan Area.

This state of low supply may be attributed, in part, to the method of delivery. Amsterdam has benefited from its decision one hundred years ago to partner with not-for-profit organisations for the delivery of housing. Even as these organisations become more akin to private developers today, their social charter, their increasingly valuable asset base and their breadth and depth of experience and their capacity in construction sustains the required quota of affordable dwellings across numerous providers. Sydney, however, has suffered from having only one primary source of affordable housing, The Department of Housing, which has now become marginalised to the point of being a welfare organisation. In terms of targets or quotas for affordable housing, the Government remains silent. Even with community housing initiatives managing a small percentage of housing, Sydney has very few bodies actually constructing new affordable projects. One exception to this is City West Housing, whose building programme and affordable housing provision have been exemplary. To put its achievements in perspective though, one needs to look at the affordable housing clauses in the planning documents that allow City West to build its projects. They allocate just three percent of floor space to affordable housing and only allow City West to operate within limited areas. This will equate to less than a thousand new affordable dwellings in Sydney when allocated. Although these dwellings are crucial additions to the stock, in well-located places, overall this is still far from adequate.

Both cities during this period undertook major renewal work on many of their historic properties dating back to 1900, as well as on their post-War stock which was coming up to fifty years of age and was in need of maintenance. In both places, this brought about reflection on the architectural and urban approach to housing, with much of the new design work rejecting modernist principles and returning to and reinventing older traditional typologies. In Sydney, renewal comprised the majority of work from this period, the most interesting of which was performed in the historic areas. However the vast majority of work was unremarkable reconstruction or renovation of suburbs of fibro housing. In Amsterdam, the urban renewal of

193 **Holliday, S.,** *op. cit.,* p8

their existing estates formed only a portion of their affordable housing activity. Commonly this involved improving the open row estates by upgrading existing stock and infilling with new market housing to improve the social mix. The most demonstrative of these projects is in the *Bijlmermeer* where high-rise demolition and low-scale medium-density reconstruction took place alongside extensive urban and transport restructuring.

The remainder of housing that Amsterdam built ranged from tiny inner-city terrace sites right through to entire new suburbs and even to creating new islands on which to build housing. In between were spot infill projects, projects rebuilding historic areas, projects on redundant State sites, industrial adaptive reuse projects and waterfront projects. In summation, all possible scales and scenarios were considered for housing, most including a component of affordable dwellings. During this period the same range of sites was developed just as exhaustively in Sydney but, instead, almost exclusively for the speculative private market and often for premium prices. Unfortunately, the number of projects using these kinds of sites for affordable housing in Sydney are few and far between. In the past twenty-five years, the Dutch have completed innumerable affordable housing projects of high quality and architectural interest, so much so that this modern housing now competes with traditional canal housing as the buildings which tourists visit in Amsterdam. It can only be concluded that Sydney has demonstrated a poverty of ideas or initiatives on the affordable housing scene, perhaps both, and has had relatively very few good housing projects constructed as a result.

It should be noted that the housing in Amsterdam is seen as a qualified success. Many Dutch commentators are highly critical of the path that affordable housing has taken in the Netherlands and particularly in the city of Amsterdam. The success of affordable housing on the back of market housing has had serious consequences. As a general trend, many of the properties that are sold to reduce overall affordable stock are those in the city centre, which are typically old, have maintenance problems and very high land values. They are sold out of public ownership into the private market in order to build more profitable, larger market dwellings in the surrounding areas. There is considerable antagonism towards this situation, as the land, once sold, is very unlikely to return to public hands. This means that the city centre will no longer belong to the people and at the rate this transfer is happening, it will become almost impossible to reverse[194]. This phenomenon is a regular occurrence in Sydney when the Government sells public sites to private developers for speculative gain. It has even been an issue with projects that have a component of public interest, such as with the Mort Bay and Crown Street projects mentioned above.

As far as direction from State Government is concerned, Sydney primarily continues to pursue single-generational solutions to its affordability problem, stemming from the perceived overwhelming preference for home ownership. Large land releases at the suburban fringe are supposed to relieve property prices, however the dwellings built in these locations are under-serviced and are distanced from employment, transport and entertainment, which all contribute to lack of 'affordability'. Also, the use of grants and tax reliefs may be of assistance for some to purchase their home, but they do not assist a significant proportion of the population who cannot afford to service a mortgage at any price. It seems that the lack of affordable *rental* housing in Sydney is its greatest deficiency and a problem that it should address.

194 Interview with **E. Spek,** *Ymere,* Amsterdam, 2003

Discussion

By comparing Sydney to Amsterdam and using Amsterdam as a benchmark for achievement, it is possible to see that Sydney has had a measure of success in providing affordable housing for its population over the past century, with many and varied and some outstanding housing projects being built. It is also possible to observe that in the most recent twenty-five year period, the powers that be have increasingly faltered to deliver adequate affordable housing. This insufficiency is gradually widening the gap between the rich and the poor leaving ever more people unable to obtain suitable accommodation.

In the past, the impetus to build affordable housing had come about through drastic circumstances. Sydney, at the turn of the century, was spurred into action by plague and disease to clear slums and rebuild housing stock with better amenity. Post World War II, Sydney responded to the critical shortage of housing through mass-building programmes, to increase the number of new dwellings to cater for the population boom. Today, we have no such stimulus and our affordable housing stock quietly and gradually diminishes. Sydney is clearly beginning to suffer from a critical 'supply-side' shortage of rental dwellings, that is, there are now not enough appropriate dwellings at reasonable rents to support the demand for them. The solution to this, in short, is that we need to build more affordable rental housing.

Some of the most successful projects built in Sydney have been some of the earliest projects it undertook. In the 1900-20s, Sydney acquired a collection of projects which exhibit a lot of the qualities necessary for good affordable housing. In general, their attributes are that the buildings are well located, that the rents are controlled, that the benefits of these two characteristics are maximised through density, that the building keeps to the existing urban grain and pattern of the area it is built in and that the buildings are not radical departures in type from the traditional stock. It is these qualities that have made buildings like those in Millers Point, the Strickland Building and Ways Terrace stand the test of time as good affordable housing. It is likely too, that some of the later projects that rediscovered traditional typologies, such as in Woolloomooloo and Glebe, as well as the work of City West Housing, will come to be thought of in this way in the years ahead. In Amsterdam, these qualities hold true as well, though one could add that the architectural style employed in the design of housing embodied the social aspirations of the Dutch and raised the design of housing above city fabric to the 'heroic'. This seems an extraordinary result, probably only possible when the vast majority of new construction in a city is for the specific purpose of social housing, an occurrence that was unlikely ever to happen in Sydney.

The less successful projects in Sydney fall into two categories. The first and largest are the estate developments that were built at the suburban edges of Sydney. Unlike Amsterdam, which has developed the benefit of critical mass through controlled planning and limited expansion, Sydney sprawled at its edges, making it a very large, comparatively low density city. Even when Sydney put controls in place to restrict the geographical limits of development, such as the Green Belt plan, these controls were ignored and construction continued to devour our seemingly endless land supply. Amsterdam's advantage as a compact city is, that by virtue of shorter commuting distances, it is able to provide transport, employment, education and entertainment to its population more efficiently within the city. Some of Sydney's estates are isolated from such services and their inhabitants consequently

suffer difficulty from lack of proximity to necessary facilities. Where this is true, the problem can also be exacerbated by the estate layout and type of dwellings provided. Where Radburn planning was implemented and where townhouses were built on 'super lots', or both, these suburbs have tended to suffer on most counts from this non-traditional layout, compared to housing on individual lots in typical street patterns. The loss of street address and passive surveillance, the lack of connection to surrounding areas and the inability to separately title properties have all contributed negatively. It is fair to say, however, that the estates served their purpose at the time and had they been completed with all of the infrastructure intended to support them, and allowed to develop a mix of tenure and incomes, they may have been much more successful.

The second, much more localised type of unsuccessful projects are the slum clearance estates, for instance those in Redfern, Waterloo and Surry Hills. The scale of apartment blocks and their modernist aspirations of being object-buildings set in open space have failed to become good housing. There are several obvious architectural reasons for this. Their lack of engagement with the street to provide address, the ambiguous ownership of their open spaces, which creates safety issues, and their strong aesthetic that makes them instantly identifiable as social housing. This, along with allocation policies that tend to over concentrate poverty and disadvantage in these projects, all go towards attaching stigma.

It is revealing that large scale projects of this kind, in both Amsterdam and Sydney, have had to undergo significant renewal processes. There are three primary reasons for this. First is that the construction technology used was relatively cheap or new, sometimes unproven, and has degenerated over time, requiring a lot of maintenance. Secondly, the modernist planning regimes have needed to have their streets and public spaces altered to make stronger connections to their surrounds, often being supplemented with new buildings of different typologies to assist with this connection. Thirdly, the homogeneity of the social mix of inhabitants in these projects has need to be altered through the introduction of private dwellings to establish a more balanced community. A testament to all of these problems is the *Bijlmermeer* project in southeast Amsterdam, though the Dutch have taken steps in response to each issue and the area is now improving.

For better of for worse, the Government has had the ability to strongly influence the provision and direction of affordable housing through planning. In Amsterdam and across the Netherlands, the Government has historically guided development through strong planning documents which have set housing targets and directed where and how affordable housing should be delivered, generally with good results. It is this type of foresight that is sadly lacking in Sydney due to what seems to be lack of political will to commit to long term projects. State Government today has no plan in place which sets goals for affordable housing, let alone for it to be spatially distributed or coordinated with other essential services. A couple of rare exceptions to this in the past have been the work of the Department of Urban and Regional Development in the 1970s and the Building Better Cities Programme in the 1990s. In these instances, the development of affordable housing and associated services was led from the top down by Federal Government. For the most part though, the Federal Government does not play its part either, as it fails to provide adequate funds through the Commonwealth State Housing Agreement for New South Wales to improve its social housing. From time to time affordable

housing has come about via the endeavours of motivated Councils although this is often limited to small scale initiatives and restricted to within Local Government Area boundaries.

Conclusion

It is not surprising from this investigation, that Sydney needs to find alternative means to deliver affordable housing. The public housing system has dwindled to the point that it provides housing to only five percent of the population and the State Government continues to persist with policies that promote home ownership. This is leaving a large group of people not catered for in between. For the most part, this demographic must currently 'make do' in the private rental market, in unaffordable or inappropriate dwellings, for lack of any other choice. Increasingly, housing for these people is being provided by the 'not-for-profit' sector, independently of Government. Current practice for these cooperatives and associations tend towards the management of spot-purchased housing stock rather than actively building new affordable dwellings. Exceptions to this are Housing Associations like City West Housing who operate similarly to the Dutch Housing Associations, by primarily developing their own stock as well as managing it. Much can be learnt by studying the successes of the one hundred year old system in Amsterdam and much drawn and deduced from examining the buildings it has produced.

History has shown us that for affordable housing to be built, its procurement must unquestionably be facilitated and subsidised by Government. For it to have longevity, it must remain in rental tenure and must not be sold into private ownership without being replaced by new stock. For the housing to be most effective it should be equitably spatially distributed to serve the areas that require it and that, in turn, can sustain it. To ensure that it is built, there should be a consistent State-wide legal requirement to incorporate affordable dwellings in all development or, alternatively, make financial contributions towards its construction, for example through inclusionary zoning. A three percent allocation to affordable housing, as specified for Pyrmont and Green Square, is only a token amount and not at all commensurate with demand. The targets for building affordable housing should be set higher so that between public housing, Affordable Housing and the lower end of the private market, the demand for housing of the lowest one-quarter[195] of income earners is satisfied. Having a much broader base of affordable housing and having it incorporated anonymously within market projects, will also assist in reducing the stigma attached to housing assistance, which is not prevalent in Amsterdam, but is endemic in Sydney.

Affordable housing is defined by the nexus between household composition, the cost of housing and the adequacy of the dwelling. As such, the location of the dwelling is a fundamental component of adequacy. This will mean that Sydney will increasingly have to embrace higher-density living, rather than the low-density 'Australian dream', so that affordable housing can be located near employment, education and entertainment and if not, at least close to good transport to these services. Ideally, the relationship should also be reciprocal, in as much as the jobs that the tenants perform should be jobs needed by the place where they live. Good examples of this reciprocity are the projects in Pyrmont immediately adjacent to the Sydney CBD. In terms of housing type, the dwelling plans designed should reflect changing household compositions, including an increasing proportion of smaller dwellings for single and couple households. This can be guided by good policy and illustrative documents such as Amsterdam's *Woonatlas,* which suggests unit types, and New South Wales'

195 **Holliday, S.,** *op. cit.,* p8

SEPP65 Residential Flat Design Code and Pattern Book which sets out guidelines, with examples, for improving apartment quality.

Since the price of land is such a large component of housing cost in Sydney, the Government should intervene, as it has done in Amsterdam, to assist in site acquisition, so that Housing Associations do not have to compete openly for land in the private market. As in Amsterdam, when public land is sold, first preference should be given to Housing Associations willing to build affordable housing not-for-profit. A second preference might be given to private developers who are willing to incorporate affordable housing governed by legal mechanisms. Government could even consider preparing design and approvals on their sites before sale in order to derive better financial returns and to direct the resulting use of the land. This would be attractive to developers as it would avoid excessive red tape and prohibitive holding costs[196]. The opportunity to perform direct land transfers from one State department to another, as happened with Blandville Court, Gladesville in the 1960s, should also not be discounted. To do any or all of the above, Government should first perform an extensive land audit so that it can manage its land holdings strategically and holistically.

Given the scarcity and value of land, it is important for it to be maximised, within reason, when developed. Each and every opportunity should be grasped. Planning dispensations by Local Government could assist by allowing, for example, smaller minimum dwellings, or less, or no car parking provision, given the location. State Regional Environmental Plan 26, which governs Pyrmont, currently gives similar allowances to City West Housing. The approvals process could also be merit-based to allow extra floor space or height for inclusion in affordable projects, as has been trialled in the Waverley Council Local Government Area. It is important, though, that the architecture always remains compatible and in step with its surroundings, a critical lesson that the failures of modernist planning and architecture have taught us. An urban design approach is appropriate for this reason. Master planning large sites can set in place good principles about connecting with the city in the public domain, environmental strategies and initiatives, and suitable building types and forms to use. Good Dutch examples of this are the *Gemeente Waterleidingterrain* and *Borneo Sporenburg* projects, where one architect set the framework for many others to work within. In terms of approvals, this step-by-step approach could give more certainty to what is achievable, potentially saves approval time and produces better housing.

In terms of architecture, affordable housing should be respectful of its surroundings and inconspicuous in its environment, becoming a ‘background’ building in the city, subsumed by its neighbouring context. Successful housing often draws on the predominant typomorphologies of the area to maintain a similar grain and feel to the built environment. This is true, even with increased densities. These types have also been tried and tested and through a process of ‘survival of the fittest’ found to be suitable for their location. Affordable housing therefore needs to be site specific, responding to its location in order to make the most of available frontage, orientation and building control parameters. When affordable dwellings are to be incorporated within private projects this should be done without giving preference to the private dwellings in terms of views or orientation. The case studies show, though, that while the integration of affordable housing and market housing within the same project is a positive

196 Interview with **K. Crestani,** *Order Architects,* Sydney, 2006

step, a mix of affordable and market in same building, or strata plan, is likely to be unsuccessful. Even so, ways and means should be found to encourage such mixed-tenure projects as they are representative of the larger community on a smaller scale. Also, where appropriate, a mix of uses should be incorporated in projects, such as in *Het Schip* in Amsterdam or the Strickland Building in Sydney. Some of the more recent, larger Dutch projects have been criticised for neglecting to include non-residential uses, for example *Borneo Sporenburg*, an omission which is to the detriment of living quality for the inhabitants.

To increase the duration of service the buildings can offer, affordable housing projects should be built for robustness and durability so that over the life of the building, maintenance costs are minimised. In Amsterdam, buildings are often kept for thirty to fifty years before being 'rolled over' to the private market and replaced by new dwellings in another project. This also allows the stock to change over time in line with demographic demand. Also, once they possess a substantial portfolio, Housing Associations should aim to work counter-cyclically to sell high and buy low, thus using market fluctuations to their advantage[197]. Economic advantages may also be gained from environmental initiatives because affordable housing is a long term proposition. The inclusion of upfront, relatively high costs such as solar panels, grey water recycling and insulation, actually become financially beneficial as they assist in keeping costs down for tenants and Housing Associations over the life of the building.

One of the most important findings of this paper is that affordable housing can be provided at all scales and in all places and situations. There is no physical barrier to its construction. All it takes is *political will* and motivated groups to make it happen. Once Government can be convinced of its need and is willing to back its delivery, anything is possible.

The role of architecture in affordable housing is to find the appropriate form and response to this need, once established. Architecture is often considered to reflect the time, place and climate of its conception. Hopefully, in the near future, Sydney can look forward to a new generation of housing projects, shaped by architects, which mirrors our concern, which hopefully we all share, of housing people affordably.

197 Interview with **E. Spek,** *Ymere,* Amsterdam, 2003

Bibliography

Abrahamse, J.E. et al, 'Eastern Harbour District Amsterdam - Urbanism and Architecture', *NAi Publishers,* Rotterdam*,* 2003

ARCAM, 'Architectural Map – Amsterdam', second revised edition, *Stichting ARCAM/ Stadsdrukkerij*, Amsterdam, 1998

ARCAM, 'Architectural Map – IJburg 2004', *ARCAM*, Amsterdam, 2004

Baljon, L. and Pflung, M., 'Nieuw Sloten - Garden City of Today', *THOTH Publishers,* Bussum, 2001

Barbieri, S.U. and Duin, L. van, 'A Hundred Years of Dutch Architecture 1901-2000 - Trends Highlights', *Uitgeverij SUN,* Amsterdam, 2003

Bebbington, D., 'Is the City West Affordable Housing Company a Replicable Model for Affordable Housing?', Dissertation for the Masters in Housing Studies, *The University of Sydney Faculty of Architecture, Planning and Allied Arts*, Sydney, 2001

Beukers, E. and Bekaert, G., 'Liesbeth van der Pol', *NAi Publishers,* Rotterdam, 2002

Block, C., 'Living Apart', *Advanced Study Report, BArch University of Sydney*, Sydney, 1991

Bontje, L. and Jolles, A., 'Amsterdam – The Major Projects', *City of Amsterdam*, Amsterdam, 2000

Bouw-en Woningdienst Amsterdam Afdeling, 'Woonatlas Amsterdam', *Bouw- en Woningdienst Amsterdam Afdeling Produktontwikkeling***,** Amsterdam, 1991

Buch, J., 'A Century of Architecture in the Netherlands 1880 \ 1990', *NAi Publishers,* Rotterdam*,* 1990

Bullivant, L., 'Working the Programme: Designing Social and Affordable Housing in the Netherlands' in Architectural Design (AD) Vol 73 No 4 'Home Front – New Developments in Housing', *Wiley Academy*, London, July/August 2003

Cantrill, P.J. and Thalis, P., 'An Urban Laboratory' in Content 2 1996 'Housing & City', *FOG Publications*, Sydney, 1995

Carpenter, E.M., 'The Urban Apartment', *Advanced Study Report, BArch University of Sydney*, Sydney, 1990

Centre for Affordable Housing, *www.housing.nsw.gov.au/Centre+for+Affordable+Housing,* 2006

Christiaanse, K. et al, 'Kees Christiaanse', *Uitgeverij 010 Publishers,* Rotterdam, 1999

City of Sydney Council, *www.cityofsydney.nsw.gov.au/investigator,* 2006

Gregory, J. and Campbell, J., 'New South Wales Public Housing Design – A Short History', *New South Wales Department of Housing*, Sydney, 1996

Gregory's, 'Street Directory of Sydney & Suburbs', 1st edition reprint 2006, *The Australian Guide Book Co*, Sydney, 1934

Hallwag, 'Nederland Road Map 1:200,000 with Distoguide', *Hallweg International*, Bern, 2002-2004

Hayward, D., 'The Reluctant Landlords? A History of Public Housing in Australia', *www.infoxchange.net.au/rhchome/iurhc/s0202*, 1995

Hoeven, C. van der and Louwe, J., 'Amsterdam Als Stedelijk Bouwwerk - Een Morfologische Analyse' 2nd Edition, *SUN,* Nijmegen, 2003

Holliday, S., 'Urban Design Affordable Housing Affordable Solutions', Architecture Bulletin, *RAIA,* Sydney, October 1999

Housing Commission of New South Wales, 'Homes for the People', *Housing Commission of New South Wales,* Sydney, 1947 Facsimile copy reprinted by *New South Wales Department of Housing*, Sydney, 1996

Ibelings, H., '20th Century Architecture in the Netherlands', *NAi Publishers,* Rotterdam, 1995

Ibelings, H., '20th Century Urban Design in the Netherlands', *NAi Publishers,* Rotterdam, 1999

Ibelings, H., 'Claus en Kaan Building', *NAi Publishers,* Rotterdam, 2001

IISG, 'Digitaal Musuem van de Volkshuisvesting', *www.iisg.nl/volkshuisvesting/index (web-based translation)*

Jahn, G., 'Sydney Architecture', *The Watermark Press,* Sydney, 1997

Kloos, M., 'Formats for Living – Contemporary Floor Plans in Amsterdam', *ARCAM/ Architectura & Natura Press*, Amsterdam, 2000

Korsanos, A., 'Housing and the Public Realm', *Advanced Study Report, BArch University of Sydney*, Sydney, 1993

Maar, B. de, ' A Sea of Houses - The Residences from New Deal on Borneo/Sporenburg', *THOTH Publishers*, Bussum, 1999

Mak, G., 'Amsterdam - A Brief Life of the City', *The Harvill Press*, London, 2001

McConnel Smith and Johnson, *www.msjgroup.com.au,* 2006

Milligan, V.R. et al, 'A Practical Framework for Expanding Affordable Housing Services in Australia: Learning from Experience', *Australian Housing and Urban Research Institute - Sydney Research Centre*, Sydney, 2004

Milligan, V.R., 'How Different? Comparing housing policies and housing affordability consequences for low income households in Australia and the Netherlands', *Faculteit Ruimtelijke Wetenschappen, Univeriteit Utrecht*, Utrecht, 2003

Ministerial Task Force on Affordable Housing, 'Affordable Housing in New South Wales - The Need for Action', *John Thrift Publishing,* Sydney, 1998

Morris, L., 'City plan to open rich areas to workers', *The Sydney Morning Herald*, Sydney, Thursday 4th July 2002

Netherlands Architecture Institute, Rotterdam., 'Living in the Lowlands – The Dutch Domestic Scene 1850-2004', *NAi Publisher*s, Rotterdam, 2004

Netherlands Ministry of Housing, Spatial Planning and the Environment, *international.vrom.nl,* 2006

NSW Department of Housing, 'The History of public housing in New South Wales', *www.housing.nsw.gov.au/history*, 1998

NSW Department of Housing, *www.housing.nsw.gov.au*, 2006

Office of State Revenue, *www.osr.nsw.gov.au,* 2006

Oosterman, A., 'Housing in the Netherlands – Exemplary Architecture of the Nineties', *NAi Publisher*s, Rotterdam, 1996

Physical Planning Department, City of Amsterdam, 'Planning Amsterdam - Scenarios for urban development 1928 - 2003', *NAi Publisher*s, Rotterdam, 2003

Planning New South Wales et al, 'Residential Flat Design Code', *New South Wales Planning Department*, Sydney, 2002

Planning New South Wales et al, 'Residential Flat Design Pattern Book', *New South Wales Department of Urban Affairs and Planning*, Sydney, 2001

Platvoet, L., 'Steppen Door de Nieuwe Stad - Amsterdam Zuid' (web-based translation), *Uitgeverij De Balie*, Amsterdam, 2000

RAIA NSW Chapter, Architecture Bulletin October 1999 'Affordable Housing', *RAIA NSW Chapter*, Sydney, 1999

Redfern-Waterloo Authority, *www.redfernwaterloo.nsw.gov.au,* 2006

Saurine, A., 'Hard to afford', *www.dailytelegraph.news.com.au*, Friday 27th January 2006

Spearritt, P., 'Sydney's Century – A History', *UNSW Press,* Sydney, 2000

Sydney Metropolitan Strategy, *www.metrostrategy.nsw.gov.au,* 2006

Sydway, 'Greater Sydney & Blue Mountains Street Directory', Edition 10, *Sydway Publishing*, Sydney, 2004

Thalis, P. and Cantrill, P.J., 'Dilemmas of urban housing' in Architecture Australia, *Architecture Media Australia Pty Ltd*, Melbourne, April 1992

Wade, M., 'Buying a home has never been such a stretch', *The Sydney Morning Herald,* Sydney, Tuesday 26th July 2003

Wikipedia., *en.wikipedia.org,* 2006

Zanardo, M., Hala, M., Napoli, O., 'The NSW Housing Commission 1960-1970', *Undergraduate UTS student work,* Sydney, 2002