

AUSTRALIAN INSTITUTE OF URBAN STUDIES

SEMINAR

HOUSING STRATEGY FOR SYDNEY
(BASIC CONSIDERATIONS)

By

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1 Introduction

At the end of 2005, the NSW State Government announced that a strategic plan for Metropolitan Sydney would be presented to the public and this ultimately became available in the latter part of January 2006. Given the remarks attributed to the former planning minister, Knowles, that there was no intention by the State Government to produce such a strategic plan for the Metropolitan Region, this was something of a surprise. Moreover, as the author together with Kelvin Auld had spent some considerable time preparing a document intended to galvanise the production of a strategic plan by the State Government, in one sense this was a very welcome step forward. However in another, initially at least, there was a distinct impression that these efforts had been rendered abortive.

However, now the full document is available, concerns that were ventilated in the document prepared by the author, appear not to have been dealt with to any significant extent. Moreover, it was perceived that basic assumptions relating to population growth and location appeared to have been subsumed into a general policy of accommodating the bulk of future growth within the existing metropolitan built up area. This leads to a fundamental question as to, "what sort of city do we want to see created during the next 30 years." Perhaps just as fundamental is the question, "Is such an approach feasible in the longer term, given the physical constraints that apply to the growth of Sydney, particularly when coupled with entrenched citizen attitudes in relation to high density redevelopment".

2 Environmental Character

A review of the planning documents that have been prepared since the end of the Second World War and commencing with the County of Cumberland scheme, reveal an on-going concern with the environmental quality of the Metropolitan Region and the way in which it should grow in the longer term.

Initially, the notion of containing the growth of the Metropolitan built up area within a "Green Belt" had as its counterpoint, the acceptance of large-scale redevelopment of perceived obsolete residential accommodation, particularly around the city core. When this model proved extremely unpopular with landowners around the perimeter of the metropolitan area, political pragmatism intervened and the County of Cumberland "Green Belt" was lost forever. What followed were efforts to disperse residential population to satellite urban areas relatively close to the edge of the existing metropolitan zone and from this came Campbelltown (now Macarthur) and Mount Druitt.

The social and economic problems that arose, particularly in the Mount Druitt, Blacktown area, were drivers in the first significant attempt to decentralise urban Australia after 1970 by the Whitlam government. This was initiated through the auspices of the Department of Urban and Regional Development, DURD. For mainly political reasons that are well-documented in the history books, this experiment in decentralisation was not a success and had the very unfortunate consequence of tarnishing such an approach to overcoming urban problems, right up to the present time.

In more recent times, in an exercise of planning pragmatism, efforts to contained the remorseless sprawl of residential development around the perimeter of the Metropolitan Region,

have been attenuated through a policy of "urban consolidation". This expression could be taken as code for redevelopment of existing obsolete uses on so-called "Brownfield" sites. Over a 20 year period, this approach has seen significant areas of industrial and commercial land used for residential purposes and now it is claimed by the development industry that the supply of this type of land is effectively exhausted.

It is in this context that we now see a metro-strategy document which embraces the notion that between 60 and 70 per cent of future development will be encouraged (constrained or forced) to occur within the existing built-up area and the residual 30 per cent being catered for in perimeter development zones to the north-west and south-west of the existing urban area. Again the directly related and quite fundamental question to be asked is, whether such an approach is likely to be successful, quite apart from what sort of environmental character will such an approach have in a city which at present is quite low density in character.

3 Strategic Options

To answer this simple question inevitably involves no simple answer because in the context of Sydney and the County of Cumberland Plain, there are inherent constraints to the extent of land that is available, not only where it is built up but also where at present it is not. However, in simplistic terms, it is apparent that, in the future, Sydney can increase in density by building up into the air as well as expanding around its perimeter with a characteristic low-density sprawl of housing. While this might be seen to solve the problem of increasing population in the Metropolitan Region and its demand for housing over a protracted period, in the ultimate there are explicit constraints to how far such solutions can go.

With regard to the peripheral expansion solution, the escarpment of the Blue Mountains provides a physical barrier particularly when seen coupled with the Hawkesbury Nepean river system. Moreover, as the city expands, demands for recreational space associated with developments west of the Sydney Orbital may well have to be accommodated in a progressively narrower belt of land that follows the course of the river.

In relation to the high-density, high-rise solution, how far such an approach can go is likely to be dictated by the environmental preferences of the citizens of the existing built-up area. Whether the well developed distaste for taller buildings that is found within most parts of urban Sydney at present (the NIMBY syndrome), will be attenuated by time and experience is something for future planners, particularly in local government, to grapple with. One can anticipate that it is likely to be a very uncomfortable relationship given the level of redevelopment currently exposed in the metro-strategy document.

What is now quite clear from the over 340 pages of the Metro's strategy is that the third option of population decentralisation has received only the most cursory of examinations. Indeed, what is presented as a linear growth corridor running through Gosford and Wyong towards the lower Hunter, seems simply to repeat the structure plan ambitions of the Sydney Regional Outline Plan of 1968. To that extent this proposal appears to the author to constitute no more than a form of "structured sprawl" and therefore does not conform to the notion of an organised and coherent expansion of urban centres away from the existing urban conurbation and to which, dispersal and relocation of population is likely to be possible.

4 The Metro-region - Opportunities

While the opportunities to locate population away from Sydney in the regional parts of New South Wales have been explored in recent research and have been made explicit in the separate graphical presentation to the AIUS, the extent to which this option will become necessary remains a function of the extent to which the existing approaches at State Government level are likely to be successful. In this regard, it is noted that for planning

purposes, the Metro-strategy has adopted a period up to 2031 and the assumption is made that, during this time, the Metropolitan population will have grown to approximately 5.3 million people.

While such a population projection is no doubt something over which demographers can argue endlessly, a significant note of caution is appropriate given the current pattern of world population growth and its capacity to impinge on Australia in the longer term. It is quite possible, that the Tampa affair represents only the first insignificant wavelet of a Tsunami of population pressure, perhaps initially from the Pacific islands suffering from progressive inundation but later from other parts of South-east Asia and the Middle East as a response to a permanently unstable and embattled social environment.

Irrespective of whether the Sydney Metropolitan Regional population reaches 5.3 million persons at 2031 or significantly more, does not really matter for it is clear that, in the end, the city will run out of land. Then the extent to which increasing population can be accommodated will be very much a function of the environmental tolerance of the existing population. Bitter experience both in local government and the judicial system suggest to this author that the level of tolerance is likely to be considerably less than is presently being assumed by the planning bureaucrats and the current planning minister.

5 Population and Density – Redevelopment Impacts

As demonstrated by scientific experiment many years ago using laboratory rats as an indicator, overcrowding produces aggressive and anti-social behaviour. While one cannot be absolutely sure that urban populations will mirror the behaviour of such creatures, recent experience at Maroubra suggests the analogy is closer and less comfortable than one would wish to see.



Source: MetroStrategy

Figure 1 Redevelopment in the City Region

What is now patently clear from an examination of the Metro-strategy is that a significant increase in the level of population is proposed in the existing urban area, in the main catered for in a number of commercial nodes associated with transportation links. Again, the extent to which this will be appropriate is likely to be a direct function of the form of development that will arise in the context of the strategic ambitions expressed in the plan.

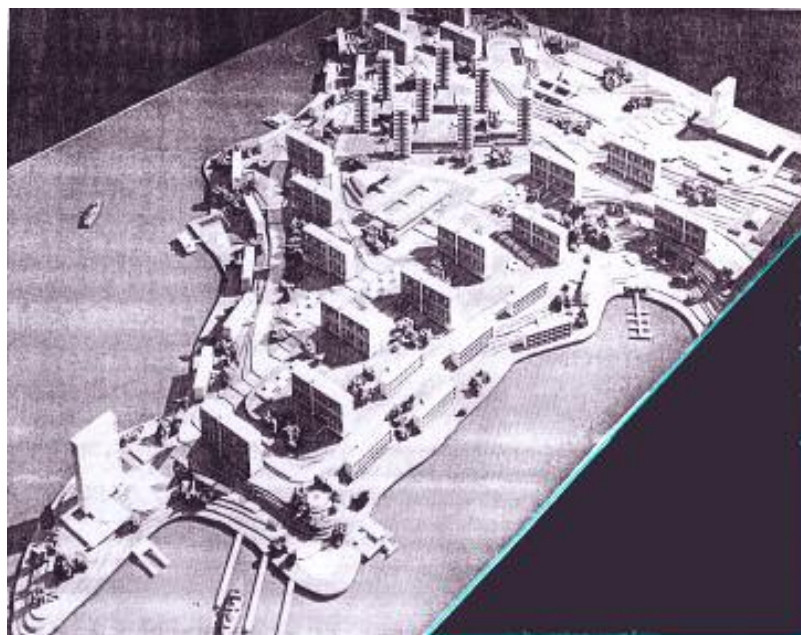
As has been shown in the accompanying graphical presentation, **Figure 1** above, the strategy appears to propose the injection of over 300,000 persons into the existing urban area, designated as the City of Sydney, Inner North, Inner West, and East. This is the area outlined in blue in **Figure 1** above.

In an endeavour to fully appreciate the potential impact of this number of people on a fully built up area, two examples have been examined which constitute the type of development that could be expected to arise out of a redevelopment strategy as embraced by the MetroStrategy. The first example has involved an analysis of a site and building which will be fully familiar to the public: the Blues Point residential tower building.

6 The Blues Point Tower – North Sydney

Reference to material held at North Sydney library reveals that the Blues Point tower constitutes the sole remaining component of a far more ambitious urban redevelopment scheme proposed by a consortium of architects and planners which included Harry Seidler, Lyle Dunlap, Harry Howard and others. This is shown in the accompanying illustration, **Figure 2**, which reveals that a significant part of the North Sydney Municipality was intended to be demolished and redeveloped by this consortium: evidently this was before the days of conservation.

In addition it is apparent from the key to this project, that the site now occupied by the Blues Point tower was intended for a tourist hotel. Further, the scheme proposed that tower blocks generally would be located well to the north along the edge of Lavender Street and at a significantly higher elevation than the site ultimately used to accommodate the tower building as built close to the tip of McMahons Point.



Source: Stanton Library

Figure 2 Redevelopment Scheme for McMahons Point and Lavender Bay area

Further reference to the material held at the Stanton Library has furnished an allotment plan which shows the relationship of the tower building to its site and the car park structure at its northern end. Further, figures in an article provided in an architectural magazine of the period, reveals the site area to be just under 7000 square metres. The allotment plan is given in **Figure 3** below together with a plan of the typical floor of the tower building. See **Figure 4**.



Source: Stanton Library

Figure 3 Site layout



Source: Stanton Library

Figure 4 Typical Floor Plan

As the typical floor plan, **Figure 4** above, shows, there are four two-bedroom units on every floor together with a single bedroom unit and two bed-sitting room units. Assuming that the two-bedroom units would accommodate approximately 2.3 persons per unit, the one-bedroom unit two persons and the bed-sitting room units, on average, 1.5 persons, this leads to a building population of 312 persons in the 22 storey tower. Given the area of the site at 6957 square metres, this produces 22.3 square metres per person and accordingly the site density is in the vicinity of 440 persons per hectare. In passing, it can also be deduced that the floorspace ratio of this project is approximately 1.5 to 1.

While in terms of contemporary Sydney, this level of population density would be considered to be very high, it is equally apparent that as compared with extremely crowded cities like Hong Kong, the land utilisation is quite low. Again to achieve some impression of the implications of reduced building spacing as might be expected with Hong Kong style setbacks, an exercise has been undertaken to look at the density of a 22 storey tower set on a site with setbacks in accordance with AMCORD recommendations. These have suggested a separation of 12 metres as being necessary to achieve a minimum level of privacy where living rooms face each other across a boundary. This configuration appears to generate a site population density of 3745 persons per hectare at a floorspace ratio of 13.78 to one. Again this would be on the basis of a total population for the tower of 312 persons.

With these two extremes established, it is possible to create a table relating population density in people per hectare to floorspace ratio and constituting an updated version of the material contained in the old Department of Planning Bulletin dealing with residential density. This is attached as an annexure.

7 Newington Residential Development (Mirvac)

The second residential redevelopment to be considered is sufficiently recent and well-known as not to require the type of analysis undertaken for Blues Point Tower. It is enough to provide the basic statistics for this project and to acknowledge that it is generally considered to be an admirable project in terms of environmental impact and the facilities provided for its occupants. An aerial view of the project as it was in 2000 is given in **Figure 5** below.



Source: Mirvac

Figure 5 Aerial View of the Newington Project looking East

As will be recalled, the Newington development was created as an adjunct to the Olympic Park which can be seen in the illustration above lying immediately to the east and separated from the housing by a canal which leads north to the Parramatta River. Five years after the aerial photograph was taken, the canal is now a heavily vegetated area of parkland and a pleasure for passing cyclists.

Newington Site and Population Data

Total Site Area	70 hectares
Total Number of Dwelling Units	1907 Units
Houses	1175
Residential Flats	732
Total Population (Mirvac figure)	5000 people

Overall Occupancy Rate	2.62 persons per unit
Total Floor Space	322,394 square metres
Floor Space Ratio	0.46 to 1
Open Space component	6.7 hectares

Reducing the site area by the component of open space leads to a figure of 63.3 hectares and accordingly the site density is approximately 79 persons per hectare. This could be seen as lying at the lower end of the medium density range of residential accommodation. To that extent, Newington could not be seen as indicative of the level of residential redevelopment that would be required to achieve the level of population growth in the existing city area and as anticipated in the metro-strategy for the metropolitan area.

8 Land Requirement for 320,000 Persons

Based on figures contained in Appendix 4 to the Department of Urban Affairs and Planning Bulletin, "Residential Densities", of 1998, it is possible to determine that the land area of the localities described above (City of Sydney, Inner West, Inner North and East) have a total area of 24,617 hectares.

Further, given a suggested population increase of 320,000 persons by a 2031, and applying the differential residential densities contained in the table previously referred to and annexed, it is possible to show that the demand for land would range from between 2666 hectare at a population density of 120 persons per hectare and 80 hectares where the population density is 4000 persons per hectare. The latter density reflects the AMCORD minimum setbacks as might be found in Hong Kong, whereas the population density at 120 persons per hectare is that presently found in places like Paddington. Applying the density as found at the existing Blues Point tower site at 400 persons per hectare, this would lead to an area of 800 hectares being required for a population increase of 320,000 persons. By comparison, if one applied the residential density that is to be found at Newington, clearly the demand for land would be five times greater which would equate to 4000 hectares.

Further, relating this range of population densities and land requirement to the aggregate land area of the localities, reveals a range of percentages between over 10 per cent and 0.32 per cent for the very high-density case, analogous to Hong Kong. However, it is to be noted that more recently the State Government has suggested that, rather than the proposed redevelopment occurring in 100 per cent of the suburban area suggested, only 20 per cent of the area would be affected. If this were to be the case, evidently the percentage components suggested above would rise quite significantly in relation to the reduced area. Certainly, with such an arrangement, there would be less redevelopment impact on the remaining 80 per cent.

Given the apparent scarcity of land suitable for redevelopment in the existing metropolitan area, it seems inevitable that significantly higher densities of development will have to be accepted if anything approaching the strategic ambitions of the Metrostrategy plan are to be realized. In this context, it is appropriate to note that the redevelopment that is occurring in Ku ring gai, resulting from State Ministerial pressure, is based on a Floor Space Ratio in the vicinity of 1.5 to 1 and has precipitated intense local citizen agitation and objection.

The inevitable reaction to development forms that would result from 4 or 5 to 1 Floor Space Ratio do not take a great deal of effort to imagine and this could be assumed to be the minimum reaction to the present metro-strategy redevelopment proposals, even assuming that there will be a concentration on land in existing commercial zones. On this basis, Hong Kong and Shanghai seem to be very probable models for future metropolitan Sydney based on the current strategy. See **Figure 6** below.

The inevitable consequence of this analysis and the associated figures, is to highlight the extent to which environmental concerns are bound to arise in the context of redevelopment and directly associated with the residential density that may apply to specific sites as well as whole suburban areas and commercial centres. What the land availability will be on the one hand and what the public tolerance of high-rise building will be on the other, no doubt will impinge directly on political decision-making at the time. The lessons of history tend to suggest that if the public reaction is sufficiently heated, then political pragmatism will insure that the unpalatable will not occur, particularly if an election is looming in the not-too-distant future. This is particularly the case in marginal seats in a political sense.

For reasons such as these, this author is particularly pessimistic that the suggested target of 60 to 70 per cent of expanded population will be able to be accommodated in the existing urban area. It is this perception that has led directly to the search for a further rational and palatable option which appears to be available in a policy of decentralisation to appropriate rural towns, provided with modern telecommunications facilities.



Source: Burrell

Figure 6 Housing in Hong Kong

9 The Third Option – Decentralisation

Having discussed the existing options being pursued in the Metro-strategy of controlled perimeter expansion coupled with significant redevelopment of the existing urban area, it is appropriate to turn briefly to the alternative approach which includes a significant element of decentralisation.

What unfortunately has become abundantly clear after five years looking at this possible solution to Sydney's woes, is the extent to which earlier and abortive efforts have "sullied the waters". It is apparent that there is a general perception that economics rather than planning policy are likely to determine what will happen in the future, however unpalatable will be the

environmental consequences of adopting such a “laissez-faire” approach. While no doubt a rather old-fashioned way of expressing the problem, it appears to this author that planning and politics inevitably succumb to the well-known dictum, “Plus ca change, plus c’est la meme chose” or, “the more things change, the more they stay the same”.

In this context it is really rather depressing to find just over 40 years ago, Professor Denis Winston expressing the opinion that the population of Sydney was emulating the behaviour of the Gadarene swine and was in the process of “galloping down hill to perdition”. Forty years of escalating traffic congestion and urban redevelopment claustrophobia could be seen as having produced a city which is significantly less environmentally desirable than was the city of 1965, despite all the funds that have been poured into roads construction and rebuilding. In that respect, the learned Professor seems to have been justified in the fears that he expressed at that earlier time. Therefore, if it is possible to produce a better outcome than is likely to arise from a further 30 years of planning and economic pragmatism and incrementalism, then it is suggested that appropriate steps should be taken now rather than in 10 years' time when the situation has become effectively intolerable and irreparable.



Figure 7 Networked Sydney and Region

In this context, the model for future Sydney that has been advocated by the author via the example strategy document prepared in conjunction with Auld, has promoted the notion of a networked urban region in New South Wales, with Sydney remaining as the principal node. This network would extend to include a number of existing urban centres, particularly on the eastern coast, and would be based on the rapidly expanding capabilities of the Internet and

referred to as Hypercommunications. In this regard, the particular technology that is being expanded at the present time is high quality digital audio visual facilities, which will allow simulated face-to-face communications and desk top meetings to occur, regardless of the location of the participants. This capability will have the capacity to render geographical location an issue to be determined purely in terms of economic advantage. This is seen as likely to be of significant interest to business enterprise. The suggested networked Sydney Region is shown in the accompanying **Figure 7** above.

10 Conclusions

There can be little doubt that Metropolitan Sydney has entered a phase of serious structural and social problems intimately associated with its growth over the last 20 years and the mode of response to the demand for housing as presently applied by the State Government. In this regard, the preparation and a presentation of a strategy plan to guided future development of them metro-region is superficially a step to be applauded. Certainly it is something that has been sought by professional planners consistently over the last three to four years.

Perhaps inevitably, now that the strategic outline is available for perusal, fundamental issues going to population growth and an appropriate housing response have come into sharp focus. In particular, the environmental repercussions of one component of the strategic policy involving large-scale urban development has been considered in this paper.

In this regard, grave reservations have been expressed based on, amongst other things, practical experience as to the likelihood that the scale of redevelopment proposed in the strategy can in fact be achieved in the period up to 2031.

Therefore it is suggested that the Metro-strategy as it has now entered the public domain, should be treated as a first draft open for public discussion and, in particular, one requiring careful analysis in relation to population targets and location for housing, including land availability and potential environmental impact.

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Density Considerations in Managing Residential Land..., Montgomery, A., Saunders, A. and Chortis, J. Department of Planning and Infrastructure, WA. 2003

The Limits to Urban Consolidation, Searle G., University of Western Sydney, 2003

AMCORD Urban – Guidelines for Urban Housing, Department of Health, Housing and Community Services, Canberra, 1992

ANNEXURES

BLUES POINT DEVELOPMENT AS BUILT

length	lr	b	b	b	b	lr	walls	total
inches	188	110	92	92	110	188	28	808
metres	4.78	2.79	2.34	2.34	2.79	4.78	0.71	20.52

depth	lr	b	b	lr		walls	total
inches	284	204	204	284		28	1004
metres	7.21	5.18	5.18	7.21		0.71	25.50

gross floor **523.37**

site area
 sqare feet **74890**
 square metres **6,957.45**

22 floors
at 523 m2 **11514.24**

FSR actual **1.65**
to 1

Unit Type	Person	No.		Pop
	per dwell.			

Two Bed.				
Units / Floor	2.3	4		9.2

One Bed.				
Units / Floor	2	1		2

Bedsitters	1.5	2		3
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Population per floor **14.2**

Total tower population **312.4**

Person/m2 **36.86**

Site area per person **22.27**

Site Density - 22.27 m2 per person in 10000m2 **440.529**
pph

BLUES POINT TOWER - AMCORD MIN. SETBACK SITE

length		lr	b	b	b	b	lr	walls	total	site setback	site
inches		188	110	92	92	110	188	28	808		
metres		4.78	2.79	2.34	2.34	2.79	4.78	0.71	20.52	6	26.52
depth		lr	b	b	lr			walls	total		
inches		284	204	204	284			28	1004		
metres		7.21	5.18	5.18	7.21			0.71	25.50	6	31.50
gross floor									523.37		
site area											835.52
22 floors at 523 m2											11514.24
FSR											13.78
Unit Type	Person per dwell.	No.								Pop	
Two Bed. Units / Floor	2.3	4								9.2	
One Bed. Units / Floor	2	1								2	
Bedsitters	1.5	2								3	
Population per floor										14.2	
Total tower population										312.4	
Site area per person										2.67	
Site Density - 2.67 m2 per person in 10000m2										3745.32 persons per hectare	

BASED ON BLUES POINT DEVELOPMENT

POPULATION DENSITY PPH	TOTAL AREA PER PERSON	FLOOR SPACE AT 36 M2 PER PERSON	FSR	OCCUPANCY RATE PERSONS PER DWELL	DWELLING DENSITY DPH
40	250	32	0.13	3.00	13.33
60	166.67	32	0.19	3.00	20.00
80	125.00	32	0.26	3.00	26.67
120	83.33	32	0.38	3.00	40.00
160	62.50	32	0.51	3.00	53.33
200	50.00	32	0.64	3.00	66.67
240	41.67	32	0.77	2.50	96.00
280	35.71	32	0.90	2.50	112.00
320	31.25	32	1.02	2.50	128.00
360	27.78	32	1.15	2.50	144.00
400	25.00	32	1.28	2.50	160.00
480	20.83	32	1.54	2.30	208.70
600	16.67	32	1.92	2.30	260.87
800	12.50	32	2.56	2.30	347.83
1000	10.00	32	3.20	2.30	434.78
1200	8.33	32	3.84	2.30	521.74
4000	2.50	32	12.80	2.00	2000.00

SITE REQUIREMENTS FOR SYDNEY CENTRAL REGION

POPULATION INCREASE	DENSITY IN PPH	METRES PER PERSON	LAND AREA	HECTARES NEEDED	DENSITY IN PPH
320000					
	120	83.33	26665600	2666.56	120
	200	50	16000000	1600	200
	400	25	8000000	800	400
	800	12.5	4000000	400	800
	1000	10	3200000	320	1000
	4000	2.5	800000	80	4000

LGA	POP DENS pph	AREA Ha
Sydney	20.7	673
Botany Bay	17.9	2004
Randwick	33.9	3642
Waverley		924
Woollahra	43.0	1242
Ashfield	49.9	835
Burwood	42.0	706
Canada Bay	28.5	1998
Leichardt	47.1	1289
Strathfield	18.9	1433
Lane Cove	29.7	1054
North Sydney	53.6	1049
Ryde	23.8	4053
Willoughby	25.0	2257
Hunters Hill	21.8	579
Mosman	31.2	879

Total Area of inner LGAs **24617**

Increase in Population by 320000 at Pop Density in PPH	Hectares needed	% of existing land
120	2666.56	10.83
200	1600	6.50
400	800	3.25
800	400	1.62
1000	320	1.30
4000	80	0.32