SPREAD CITY – LEARNING TO LIVE WITH IT

THE PROBLEM IS OBVIOUS - ISN'T IT?

The over use of politically correct but over-simplified concepts only propagates misunderstandings and distortion. 'Urban Sprawl' is one such term that we have freely come to use pejoratively as it is synonymous with failure. It is facile to attempt to over simplify the complexities of urban expansion, distinguished as it is by such a wide variety of urban outcomes and derived from an even wider variety of inter-related causes. By its association the expression has come to summarize conveniently so much of what we don't like about the changes to metropolitan cities worldwide.

A familiar characterization of the concept of urban sprawl is that of a relentless and indiscriminate subjugation of the countryside by urban blandness, born of expediency but dying from its disaffection with all around it. Invariably the process itself is criticized as being wasteful, sporadic and apparently unplanned. Correspondingly there is lamented the widespread reduction of the rural hinterland substituted for by a 'Limbo Land' that is neither rural nor urban. Not only is it the loss of the urban hinterland but also the apparently seamless coalescence of urban areas one with another that completes the apparent tragedy. Think no further than the urban concentrations on the east coasts of China, USA and Australia for example, centred around Guangdong, New York and Sydney.

Discomforting as the consequences of urban change may be due to the impacts of sprawl, there appears to be much less effort expended on examining the causes than there is to laying the blame for the results. The truth is that the urban experience is meant to be lived through a process of adaptation to change, not denial and entrenched defence against it.

The lack of adequate provisions for both social and engineering infrastructure is seen as shortsighted and therefore a self evident failure of any government planning system that allows 'Spread City' to happen at all.

The blame for the unwarranted changes focuses readily on unprecedented urban population growth. This translates into concern for having too much of everything that is not wanted, such as too much demand for the too little available services already: be it the condition of roads, the proximity of health services, the network of education institutions - or too much competition for the limited capital funding available. Not to mention the loss of open space both scenic and recreational as well as the loss of agricultural land and natural fauna habitats: all because of the demands made by people who, it is thought, should not be there to begin with.

Unfortunately for some segments of the metropolitan community the consequence of more distant city living does not necessarily mean a change to their way of earning a living, just greater travel time due to limited available public transport or greater reliance on private transport to centralized locations for work.

Accepting for a moment the generalized nature of those criticisms to be true, then that might be thought justification enough that the concept of urban sprawl has no legitimate role in the urban process, even if it was given a more flattering name. Perhaps before doing so we should acknowledge that as a response to population growth urban formation through sprawl is not novel just to our times. The magnitude of the population numbers involved is unique. But throughout our history settlement, the phenomenon of contained urban populations bursting their bounds is anything but new. If city sprawl as a phenomenon is only repeating itself then should we not ask why and then what insights might be applied?

If a lingering objective remains to achieve a city metropolis of a finite urban population, before pushing further growth to more remote locations, then the history of such attempts provides little comfort for the prospect of success. As a contrived social engineering solution such forms of solution as an antidote to sprawl have not been adopted extensively in democratic countries. Where decentralization was sustained, notwithstanding the contentious experimental New Towns Policy of the British Government, that had its own unique set of terminal problems stretching over generations.

Deliberate decentralization of some of Australia's concentrations of urban population growth, by directing it away from the south eastern seaboard, has been policy of successive governments in the past and up to the 1970s, but it failed miserably in its application in the case of the State of New South Wales of which Sydney is the capital.

Speaking historically, even before the failed attempts at containment of urban population through policy alone failed, there was initially dependence upon physical containment: that being an obvious means of distinguishing discrete settlement bounds and the added comfort of everyone knowing their place. Adoption of the walled-city approach to settlements whether in the East or the West is a concept that always finds favour with the tidy-minded.

The reality of those times demonstrates why this physical design approach was of such limited application to the design solution of expanding cities today. We have all grown up with the stories about the defenseless peasants who hurriedly sought refuge within the city walls in times of threat. And where did these early day commuters live but outside the town walls. As the early settlement 'sprawlers' it is their ancestral legacy to urbanization that has survived. On the other hand the few remaining walls do so only as monuments to the limit of the scope for containment of populations by physical means, thereby marking an era that will not return and a non-solution to city sprawl.

Apart from not retreating into the city for refuge, the economic interdependence between a city and its hinterland has not changed over time. Urban sprawl remains the manifestation of a persistent phenomenon and is fundamental to any explanation of the world histories of urban formation. Sprawl so called therefore bears closer examination as to the factors that drive it. The nature of its interdependence is now far more than simply just one between agriculture and urban synergies.

This then is a more useful starting point for a more insightful examination of urban sprawl as a phenomenon: going beyond simple belief that some good common purpose might be served if it could be eliminated.

WHAT IS THE ALTERNATIVE?

In 1700 London had a population of 500,000. In the next 200 years the city had grown to be the largest city in the world and by 1900 had reached a population of 5 million. In not a lot more than half the time it took London, Sydney will have grown to about 5 million sometime within the next 20 years (Yan Song, 2007). Australians, along with Israelis, distinguish themselves as belonging to the two most urbanized populations in the world, but with the rest of the world catching up, the changes in experienced developing countries are acute. In China, for example, the annual rate of urbanization between 1978 and 2002 increased from 17.9 percent to 30.1 percent (Yan Song, 2007)

It is accepted that for the first time in the world's history the combined population will be more urban than rural by 2010. Not only is urbanization increasing as a phenomenon worldwide, the scale of the bigger concentrations is getting bigger and in those places it is happening faster than ever, nowhere more so than in China where the urban population is widely predicted to increase by 300 million within the next 25 years.

A combination of widespread accelerating growth of urban populations, their relative levels of magnitude and the increasing examples of coalescence of smaller cities challenges all previous comprehension of metropolitan living. It means that sprawling cities and conglomerations, the likes of the few we see today, will continue to multiply and be the dominant feature at the forefront of our professional attention.

Confronted by a picture of remorseless urban development, spreading lava-like across the land, it prompts the question what should be the alternatives? An obvious response is accelerated redevelopment concentrated on the existing urban fabric, to both renovate and conserve land and thereby best accommodate the excess urban demand. As a more compact result it might be expected to be more efficient and encourage a more sustainable public transport system.

Greater efficiency in the provision of service utilities in redevelopment areas has not been proven. Public transport begets density demands that mostly alienates the urban dwellers that cause it which begs the question of what form of city should be the most desirable as an objective? In the case of Sydney for example the stated growth objective equates to about a two-thirds / one-third division of new housing provided in either existing urban areas versus Greenfield sites; an orderly accommodation of a still sprawling city.

Urban renewal experiences in the 1950s and 60s in the USA and inner city development in China since the 1980s are of comparative interest to illustrate that the limitations to any widespread application are endemic to the process regardless of cultural and developmental differences. Both governments have applied the carrot of subsidies of one kind or another but both still had to rely upon their authority *to make large scale private or quasi-private investment attractive* (Yan Zhang and Ke Fang, 2004) for urban renewal.

America it is observed now rarely evidences urban renewal as part of current planning practice but instead '*since the 1980s, cities have increasingly relied on the property industry to attract investment* (Yan Zhang and Ke Fang, 2004) This suggests that capacities to absorb urban population growth through urban redevelopment will continue to be constrained by the commercially selective choices of locations, serving the more elite bands of a market driven society.

In noting the failure of the Federal Program in the United States, constrained though it was by *checks and balances…China's inner city redevelopment will most likely continue at a much faster speed, on a larger scale, and at a greater magnitude* (Yan Zhang and Ke Fang, 2004). The difference is that central city redevelopment in China is *fuelled by emerging local elites.* The call now beginning to be heard is for a more *context-sensitive approach* whereby the first priority is the *well being of the citizenry … … informed by an ever evolving understanding of the political economy of urban change* (Yan Zhang and Ke Fang, 2004).

Goaded by the profit motive China is serving a narrower interest through its central city redevelopment but it still remains one that is not an effective long term antidote to the ills of widespread urban dispersal.

Whatever and wherever the system of city renewal is adopted, neither government nor private investment can afford the cost of redevelopment unless both interests work in tandem. The slower timing to achieve acceptable rates of community disruption will always extend beyond the commercial profit timeframe. To sustain the interest of private investors it means distortion of the timing of any program in favour of short-term returns. Adverse political fallout is an assured consequence of urban renewal and though it will be weathered, it is a constraint that no government, including China, can ultimately afford not to temper by limiting urban redevelopment applications.

There is no better example of constraint on city redevelopment by an 'informed citizenry' than the Sydney legislation that encourages substantial political interest in the determination of development approvals. The slow rate of turnover of sites for redevelopment is a prime motivator for outward bound development pressures.

Overall, the factors that drive the spread of a city remain just as relevant to the considerations of inner city redevelopment and their consequences just as broadly felt. Urban renewal is as socially disruptive due to change amongst old communities, if not more so, as any consequences of change due to urban sprawl and the creation of new communities. Economic imperatives and social adjustment, along with the provision and expansion of engineering infrastructure are reflected in competing political agendas, all of which combine to frustrate a perfect world of theoretical capacities and manageable timeframes. But where today's planning solution has to rely upon expediency to mitigate pressures of population growth the alternatives suggest that other than an accessible hinterland, there is no better option.

SYDNEY SYNTHESIS

Notwithstanding the orderly and well documented historic planning efforts to structure its urban growth, the Sydney region provides a ready casebook to demonstrate why so-called urban sprawl is inherently indispensable to sustaining the modern urban growth process as the most viable means of absorbing large growing populations. But it is a means to an end and not to be mistakenly judged as an end in itself.

For over the past 70 years Sydney has been the constant subject of a variety of formal city plans, averaging one about every 12 years, and all designed to accommodate its continued population growth. Starting with the County of Cumberland Plan of 1948 when the city expansion was first to be curtailed by its own 'green belt'. This short term measure had to be abandoned after the Commonwealth Government refused the required funding for the planned satellite towns beyond the green belt that were intended to absorb the future growth in population (Meyer, 2005).

There followed the Sydney Regional Outline Plan, published in 1968, that focused on rationalizing the consistent patterns of growth identified around a string of selected existing larger centres along already existing rail lines, seen as corridors - not so much a plan as an endorsement of the latent framework on which to structure an emerging metropolis.

Metropolitan planning then found a preference for establishing management frameworks in the period following the relatively slow implementation under the Sydney Region Outline Plan. Consequently there was a shift from traditional planning with its emphasis on mapping. Supplanted by an emphasis on co-ordination within the traditional planning functions such as transport, communications and most notably water and sewerage reticulation. Planning became more transparently a political process as a result.

More recently in 2005 the Metropolitan Strategy Plan was adopted with the title 'The City of Cities' a reference not intended as a boast to the world but a reference to the widened regional planning approach, focused conceptually at least, on the intensification of six dispersed city centres acting as a regional centre. Contrasting examples of patterning of city sprawl, arising from very different circumstances, can be found in China. 'Urban villages' (Chengzhong Cun) have emerged in Shenzhen, for example, where in 2000 there were 241 urbanizing villages housing over 2 million inhabitants, spread throughout a population of 9 million (Yan Song, 2007). The physical environment may be poor, but as an outcome of China's rapid urbanization, they are little different to the first waves of public housing in Hong Kong in the 1950s, though in this case the sponsorship depends upon collective land ownership held by rural villages, rather than direct investment from central government.

The experiences of both countries demonstrate that city sprawl follows an inherited network of settlements and is not as unstructured as the term might have us believe.

Plainly, despite the legitimate efforts to plan and the implementation of professional standards of control, we are now presiding over what can be seen as the institutionalized growth of urban sprawl, encompassing a city housing 4.2 million people with an urban footprint (1,687m^2) the size of London (1579 m^2) with a population of 7.6 million. Sydney as The City of Cities now, by design, exemplifies the coalescence of existing small towns, villages and communities into what is by any definition urban sprawl. It thus contradicts the assumption that sprawl is unintended when, in fact, in the Sydney case it follows from the deliberate accumulated policies of government and is sustained by an embryonic framework of existing settlements.

As important as the framework of the existing settlement patterns is as a network, Sydney owes a great deal to the prevalence of a diverse array of residential environments when compared to other cities, due to the urban relief produced by the retained areas difficult to build on because of topography, which have subsequently become an 'urban bushland' asset, as well as having the benefit of a long, accessible shoreline as its eastern perimeter.

The total sum of our urban infrastructures does not of itself define a growing sustainable urban population. The achievement of sustainable city growth is not just a function of efficiencies and the recycling of resources. In the circumstances of urban population growth, urban sprawl is not an unsustainable response to that need, but is one that maintains the rate of population absorption without threat to the viability of the city as a socio-economic entity. Sydney population growth has demonstrated that sprawl can achieve such an outcome successfully, despite what is seen to be the blight of the repetitious suburbs spreading from the coast ever further west to the foot of the Blue Mountains. Sydney for example in Mercer's 2008 Worldwide Quality of Living Index was rated as the world's tenth most' liveable' city (Mercer, 2008).

Meanwhile the centre of Sydney, despite its spread to infill the Cumberland Plain, continues to identify with its harbour image, as the focus of its historic beginnings. In fact the actual demographic centre of the now sprawling metropolis has moved some 25 kilometres to the west of its place of beginning to the once suburban centre of Blacktown.

Notwithstanding the punctuation due to national parks north and south, Defence Department lands and intervening waterways, Sydney is nevertheless central between the cities of Newcastle 170 kilometers to the north and Wollongong 100 kilometers to the south and the smaller towns and communities that surround them. The magnitude of those combined populations does not rival the better known concentrations local to China or America for example. But the evident framework has been laid for growth to maturity through future waves of development focused on regional sub-centres and successively increasing densities of populations. Which only follows the most outstanding example of this form of late 20th century metropolitan synthesis that being Tokyo – Yokohama with its combined urban metropolitan population in the order of 35,000,000.

The relevance of comparisons between the Australian and the concentration of Asian examples, constituting about one third of the world's largest urban agglomerations, serves to highlight the differences but otherwise magnifies the importance of universal factors systemic to the process.

TAKING A REALITY CHECK

Urban development is not a static concept explained by comparative aerial photographs.

Sprawling city growth varies widely, not only in magnitude, between countries throughout the world. The lessons to be learned from those different places are not as dissimilar as the differences in the population changes alone might suggest. Divining the common generators underlying sprawl, as a response to accelerated urban growth, allows for the more distinctive local factors to be highlighted and the anatomy of this trans-continental urban phenomenon to be better appreciated. Factors influencing the Sydney outcome will also resonate with those experiencing even more dramatic numerical changes. The common quest is to understand better the process of urban restructuring into the 21st century within a concept of sustained sprawl.

The Sydney metropolitan outcome demonstrates, for example, how a change in political emphasis on the importance of one factor over another modifies the complexion of rapid urban expansion. In the course of Sydney's changing policy shifts and responding plans there has been considerable scope for political intervention, with opportunity provided readily by three tiers of government to be satisfied, as well as growth in the importance of public participation. Intrinsic as politics are to the planning process it usually leaves a legacy of disjointed outcomes for urban development when incoming governments discontinue, modify, contradict and disrupt the implementation of the policies of their predecessors.

The Sydney experience with a tug-of-war over infrastructure priorities has meant a halting, stop-start process of sprawl that has advantaged growing sophistication amongst constituent interests and a slowing of activity while competing agendas are resolved. The preservation of remnant bushland and forests, protection of native fauna; wider demands for public transport; pre-requisite decontamination of land and the transfer of government controlled land for private development are but a few examples.

The long held division between the public and the private sector as the provider of public utilities has blurred through the emergence of joint public – private agreements to build, maintain and manage infrastructure facilities, an outcome unheard of, say, in the 1940s but now the way of the future that will accelerate metropolitan rates of expansion.

Constant investment in inter-regional highway upgrades fosters changes to essential warehousing provisions from being a local activity to centralized distribution centres that supply goods 'just in time'. Fresh vegetables, even if no longer grown locally, still get to the markets on time thanks to the distribution system compensating for what would otherwise be locationally disadvantaged sources. It is axiomatic that an expanded transport network will cause the geographic expansion of any city to flourish.

Ecological awareness has insinuated itself not only through more precautionary land use analysis and safeguards to secure our ecosystems, but it arises also out of extended concern for sustainable controls of waste management. Rivers as a source of life are no longer just a convenience to be exploited as a drain and tool of commerce. Though retention in some places of the natural environment helps to differentiate our built environment it also inevitably reduces the areas available for development and in doing so extends the developing arenas still further.

Heritage values are not only employed to safeguard the inherited worth of items created by previous generations. A moral tenet of the preservation cause has been the role adopted as defender against development and arbiter of what is appropriate to be built by the current generation. Replacement opportunities for new are subsequently lost due to the slowing of the redevelopment approval process. The conservative values thus exercised make it harder to abuse the built environment but at the same time more expensive to safeguard it. The value of retained building legacies, as punctuation of the contemporary urban landscape, again has high value as an element of differentiation to help counter the monotony attributed to sprawl. Nevertheless, it makes the conservation cause no less a contribution to sprawl.

The workforce, by contrast, has become more mobile. Workplace choices are not as constrained spatially as it was when the divisions between white and blue collar work locations were simple. The IT industry, or the internationally mobile workforce that serves it, is a new invention and the divisions between white and blue collar occupations have blurred considerably. This is the case worldwide where only China and Canada have not experienced a decline in their blue collar workforce.

Housing policies have likewise been fashioned by lifestyle changes that colour the expectations of the residential populations. Sydney sustains many dispersed locations and accommodates various densities and lifestyles, contributing significantly to a wide geographic spread, satisfying not only a means to accommodate the pressures of growth but also providing opportunity for lifestyle amenity not otherwise affordable in the city proper.

Contributing to the array of visual incongruities within the sprawl of any metropolis are dispersed examples of large area private Master Planned Estates in various forms but where you can live your dream. These can be more readily recognized elsewhere as 'Gated Communities', typically in America, but even more contextually obvious when observed in developing countries. Though in Australia Master Planned Estates usually don't come with gates, their attraction to the market is the same, namely the isolation that is provided from the surrounding community (McGuirk and Dowling, 2007). In the Australian context this form of estate does not conform to the norm and goes beyond the earlier typologies suggested by Blakely and Snyder's (1997) work. The primary motivation is not the fear of the surrounding community but *an explicit connection*

between intentions and imagery which encourages socio-spatial polarization (Kenna, 2007). Living behind a 'Keep Out' sign is more attractive than having to adjust to locational realities, and therefore localized indifference to the wider environment for living is not unusual.

For Sydney all this has meant greater fluidity for the localized real estate market due to changing perceptions about what constitutes an 'industrial area' as opposed to, say, the employment opportunities offered by an 'office park'. The expanding urban fringe now offers employment opportunities previously denied when such outer business and residential locations were more synonymous with banishment.

What then is to be learnt from the Sydney experience about how to visually translate urban sprawl into good urban design? Can our spreading cities ever be shaped to be made legible, in the same way we have come to read the more established urban environment?

The English architect Cedric Price first drew his analogy between urban form and a cooked egg back in the 1960s, first as a boiled egg and then a fried egg to explain urban growth patterns ranging from walled cities to suburbia surrounding the city centre. Then came the omelet, to explain the other dotted 'bits' representing the inclusion of centres. However, the analogy falters by trying to explain any metropolis just by how it looks. Even then, for most of us, what a city actually looks like is not readily explained by the imaging of its metropolitan area. The scale is too large at the metropolitan level for any observer to correlate limited first-hand observations on the ground with the aerial view encapsulated by a metropolitan plan. But if we cannot, does it matter to our appreciation of a living in city if our metropolitan bearings as a whole are vague?

As residents we identify our home cities by association with its iconic images. In the case of Sydney it is almost enough to sentimentally identify with an out of scale edifice in the form of a bridge and a sculptural novelty in the form of an Opera House. After that we probably identify personally with a very local area of greatest familiarity, wherever it may be, but not within the amorphous metropolitan fabric of the city to which we orientate, but to which we cannot personally relate.

The value of urban design to good city planning diminishes exponentially as the viewer moves outside the scope of immediate comprehension. An aerial depiction of segments of metropolitan wide sprawl can be arresting for its sheer size but of itself is hardly horrifying. By the time we can meaningfully describe an environment for, say, its negative visual qualities, we are already engaged at a level of detail that is likely to be confined to lengths of street frontage and of an intimate scale. Such snapshots go to make up only part of the collective metropolitan area.

Urban sprawl remains predominantly a process of urban change. Therefore, lamenting the lack of definition as a characteristic urban design failure of urban sprawl is more of an intellectual pursuit of an aesthetic value better applied at the architectural level, and will always be elusive. The ultimate success between the inter-related mature city with its youthful expansion is the real measure of continued approval.

A city can be aesthetically satisfying without delivering the more comprehensive level of design satisfaction demanded from a building. Therefore it is only the evolutionary end of the process that warrants final aesthetic judgement. How the success of the process itself is to be monitored provides the real guidance as to the likely success of the final outcome, that is when the new city and the old city become integrated as the stable fabric of a bigger city and a recognizable further indeterminate edge lies beyond.

The city as a soufflé is therefore a better analogy - one that captures the appropriate emphasis on the importance of process to the success of the final outcome. How it eventually looks is dependent upon preparation and ultimately how long it can sustain itself without collapsing.

LOOKING OVER A NEW HORIZON

In response to unprecedented rates of population change urban sprawl is not only inevitable, it is indispensable to sustaining urban development.

Urban development is foremost a process, a function of the stimulus to change. It is the scale of the change that now commands such attention. However the spatial extent of the phenomenon is not the problem. Of itself urban sprawl in isolation of the city that spawned it, is not deserving of condemnation as an innate failure to plan correctly. A growing urban fringe is the time honoured means by which cities have always expanded. Therefore, we do our contemporaries an injustice and our professionalism a discredit when we fail to challenge the popular mindset when such views are misplaced and opportunity for explaining better what it means to be urban is foregone.

The inter-related complexities of contemporary urban developments, one of man's crowning achievements, are manifested in many varied ways amongst our many different cultures. But it would also appear that there is much that is common as a root cause of 'urban sprawl'. But as it is here to stay our efforts would be better directed to understanding it rather than finding means to eliminate it.

In the future context some things won't change. For example, funding for urban infrastructure will always be inadequate due to timing and annual budget constraints. It will always be cheaper to build new services in the under-developed fringe than to dig up and renew existing utility services to meet new demands.

Short term political priorities and even longer term shifts in community values will be disruptive to the goals that inevitably change in the lifetime of any land use plan. Land use options are enhanced on the extended urban fringe simply by reason of easier land acquisition. After that the future depends upon what is allowed to be done with it, thereby highlighting sprawl as the outcome of a deliberate joint effort policy between the public and the private sector. Political priorities are usually best served by action and sprawl is an inevitable response to expediency.

Established communities wherever they are will be just as reluctant to change as ever. The social impacts of change wrought by the high density residential displacement within lower density inner city locations will always be resisted. Meanwhile accommodating demand pressures will continue to rise. Grafting new communities into areas within and beyond the urban fringe in turn has its own sets of social problems. Urban renewal can always be justified by its access advantages bringing with it the higher densities necessary for viable public transport. But the process will always be more expensive, relatively slow and confined to relatively limited areas of achievement. Community costs due to change will be relatively high whether a 'Brownfield' or a 'Greenfield' approach is taken. Urban sprawl, orderly sometimes, disorderly mostly, is here to stay.

As demand shifts to white collar from blue collar jobs it makes sense to concentrate higher residential densities closer to those work opportunities: hence the growth in demand for prestigious offices to accommodate central city employment. But this need not be a foregone conclusion. Regional sub-centres, Business Parks, 'office hubs' and independent individuals

working with only their computer and not location dependent all represent employment alternatives that otherwise give the urban fringe a renewed employment attraction; as well as provide a potentially more agreeable low density place to live. What was the distant fringe for some will no longer suffer the disadvantage of distance.

The reality is that urban development is ultimately about the recycling of land. The results at any one time are due to inconsistent rates of land use change. Achieving the appropriate disposition of land uses within the fringe depends upon our understanding of their longevity and differentiation between those uses that are rather short or long term. Such differentiations will better identify what is essential to the enduring urban framework and future urban development success, leaving what remains to be tolerated, as an otherwise evolving consequence that will eventually redevelop through urban intensification over time, in much the same way that urban development has progressed in the past. Think, for example, of the stories our parents tell of their childhood and places where they grew up and how that has now changed.

The fact remains that the problem of 'Spread City', no matter the country of its application, when viewed from the various physical, economic, temporal and political standpoints will respond to a similar analysis of the dynamics of the changing land use process, one that goes beyond just lamenting the physical outcomes. In all cases our metropolitan spread on the ground is the outcome of the system that caused it. Any collective analysis will inevitably demonstrate the need to prioritize how change is best managed, then to capitalize on such understanding and hopefully dispel the clouded judgements based merely on over-used concepts such as 'urban sprawl', based upon presumptions of political correctness.

Therefore, accepting that the inferior visual characteristics of the fringe will continue to be reflected by disjointed land uses, there are still four determining factors that should be given priority, making it possible to structure a sprawling urban fringe as intrinsically sustainable.

Firstly, by classifying land uses as to their permanence and the form of land tenure, it can provide greater assurance of a predictable mature city outcome. But the form of land title should not be an end in itself. Properly structured it is the nature of the use and facility provided that would determine which classification a particular use belongs to, thereby achieving an essential goal of linking land use with investing. The city hinterland, its appearance notwithstanding, remains as always an economic lung of the city corpus.

Secondly, it may be assumed that there is usually at least some inter-regional transport connections in place, both road and rail, with a need to foreshadow additional transport corridors to follow. Such provisions can be regarded as permanent constraints with only limited flexibility available to their redirection and longer term influence on any extensions, whatever their inconvenience to future planning.

Thirdly, by their nature, natural landscape features of ecological or scenic interest cannot be otherwise duplicated or relocated. Provision for their retention should be made an essential prerequisite in order to achieve a measure of identity within the urban spread In addition to such unique open space there is also strategically located land that has inherent utility because of its interconnectivity with other activities, including those with recreation potential, waterways for example. Altogether such land is never cheap, it is never cheaper to put in place than at the earliest opportunity. Its value to the future is priceless. Once quarantined for public purposes such land is relatively easily defended against subsequent claims for its reduction.

Subdivision of land must preserve areas of larger holdings. Without adequate provision for large scale industrial and institutional relocation requires large scale subdivision. It is not enough to simply quarantine areas for future industrial development through land use zoning alone. In the case of Sydney's sprawling west, the failure of the ability to amalgamate serviced parcels of industrial land of adequate size has cost employment opportunities where they are most needed.

The greater land area remaining can then develop, redevelop and change at varying rates over the intervening decades, largely for residential purposes and without serious strategic urban limitations on the generations to follow.

The world will still be a better place even knowing that the otherwise visually disjointed pattern of growth will continue to evolve, consistently integrating with the permanent urban environment it grew from due to much the same reiterative process - a result that is both sustainable if not entirely legible; integral to what came before it and a foundation for successive generations of the urban fringe to follow.

Who could not learn to live with that?

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