A New Frontier?

Comment on Sustainable Urban Development Initiatives
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In a very short space of time 'sustainability' has become the new frontier to reach and cross. The difficulty however is that this borderline is so elusive and difficult to delineate. It is somewhat like identifying a border in very rugged and wild terrain. Each survey team places it in a different position, and has a different set of 'rules' as to how it should be mapped out in the first place. Without rigorous adjudication, the boundary ends up being accepted as being where the most assertive parties claim it is and behave with great conviction. There are various groups claiming to have fixed this line for everyone to observe. However, invariably the arguments and reasoning for how to achieve and measure sustainability are based on a potentially more narrow and self serving set of values and outcomes, than may otherwise be considered necessary to achieve true sustainability.

It would appear that the development industry view of sustainability is currently very inwards focused (dealing largely with the issue of sustainability within the discreet boundary of new development, rather than the broader issues of sustainability and smart growth). Consequently, it is suggested that those who are not entirely convinced that the built environment sustainability line has been firmly drawn must speak up, otherwise the new benchmark might end up well short of the target.

UDIA is one party making strong claims to knowing just where this new frontier exists. It is taking a commendable leadership role in marking the territory. Various attempts as well as concrete proposals have been made in measuring and assessing various levels of achievement and compliance. Proposals are out for discussion. (Stewart, B. Star system a uniform solution for sustainability, Urban Developer, Issue 3 2004, p4) As a general observation, there is primary attention to qualities such as energy use, water utilization, environment protection, waste management and materials use. This is typical of a number of approaches to ratings. One quality which seems to get scant attention is how a project / development / building impacts on some of the broader urban fabric, including impacts from increased travel distance to services, links to public transport infrastructure and issues of demand, reliance on private (over public or alternative) transport, and impacts on natural values and quality of life, as well as issues of rebates for infrastructure and other non-urban issues. The need for urban development to adequately address these issues in arguing/demonstrating the broader uptake of 'sustainability' is particularly pertinent, as regional planning mechanisms are also seeking to address and respond to the broader impacts of increasing urban development, and the question of whether this continued growth is in fact 'sustainable'.

UDIA is in partnership with the EPA's Sustainable Industries Division in developing sustainability initiatives for the state. The Division's newsletter 'The Compass', Issue 9, June 2004, p 12 says "enormous development pressures are being felt and the region runs the risk of serious urban sprawl with its consequent environmental and resourcing impacts." Part of the brief for the newly created Office of Urban Management is to prevent continuous urban sprawl with its negative consequences for overall quality of life. Yet, look at many of the much-lauded subdivision projects almost anywhere in the state and suburban sprawl goes marching on. The UDIA itself has argued against elements of the Regional Plan, on the basis that it potentially limits the amount of available land which is available and MUST be developed to cater for our growing population, rather than

advocating smarter infill development which makes more efficient use of existing resources and infrastructure, and provides for upgraded facilities where required.

A case in point is Riverside Gardens (in Townsville), recipient of UDIA's award as best Masterplanned Development for 2004. Over its 207-hectare area, the 1900 dwellings will offer residents a gross space of a little over the traditional ¼ acre each at a density of 9.1 dwellings per hectare. No doubt the rationale is that the market is still strong for this kind of living and less sprawling developments receive their recognition too. However, if sprawl is beginning to be seen as a negative trend, as it seems to be, then factors other than merely domestic energy and water use will need to be given regard.

The Australian Government's Department of Environment and Heritage has produced the NABERS (National Australian Built Environment Rating System) system of assessment, which can be used to assess the sustainability performance of individual buildings and structures (including domestic houses). The website for the Commonwealth Department of Environment and Heritage (www.deh.gov.au) identifies that NABERS has been developed to:

- Rate the environmental performance of operational commercial office buildings and residential homes.
- Provide separate ratings for commercial office base buildings and commercial office tenancies.
- Provide an explicit and consistent rating system methodology, with a clear performance-based structure and methodologies and defaults where necessary.
- Provide a realistic rating scale that recognises and rewards current performance levels, and encourages and promotes best practice.
- Take into account both building *and* user considerations, so that the impact of occupant behaviour on the environmental performance of the built environment is recognised.
- Allow for voluntary self-assessment, with the option of seeking a certified rating from an accredited provider if desired.
- Use measured quantities as the primary means of assessment. Where measurement is not feasible, then practice-based or default scores are acceptable in some categories.
- Contain appropriate normalisations for factors such as climate and occupancy pattern.

The system is intended to measure the following 'elements' associated with construction, use and management of our built environment:

- *Energy use and greenhouse emissions* - Energy-related greenhouse emissions are a key factor in increasing the levels of carbon dioxide in the atmosphere, leading to human induced climate change. How buildings are operated can affect their energy demand significantly.
- *Refrigerant use (Global Warming Potential and Ozone Depletion Potential)* - Refrigerant use in commercial buildings is a significant contributor to greenhouse emissions and ozone depletion. Choice of refrigerant is a key determining factor.
- *Water use* - Building users can be major water consumers, but users can also adopt practices to harvest water sustainably and effect considerable reductions in overall water demand.
- *Stormwater runoff* - The built environment has altered the natural stormwater and infiltration flows in many areas, with adverse impacts on marine life, and on freshwater environments. Buildings and their sites can be designed to minimise this disruption to natural stormwater flows.

- *Stormwater pollution* - Poorly maintained sites and uncontrolled stormwater runoff is one of the principal routes for pollutants such as oil, chemicals and excess organic matter to enter our waterways.
- *Sewage outfall volume* - The volume of sewage sent out from buildings into the sewer system affects both the size of water treatment facilities, and the load on the existing sewage infrastructure, leading to the greater likelihood of overflows into the environment.
- *Transport* - Transport is a major source of Australia's greenhouse emissions. The location of buildings and the transport choices of those who use them make a considerable difference to transport-related emissions associated with buildings.
- *Landscape diversity* - Appropriate land use practices and landscaping can ensure that a building can help make a contribution to overall biodiversity, by using land efficiently and by creating potential habitat.
- *Toxic materials* - The use of toxic materials in buildings and on their sites can be avoided in many cases. If toxic materials are used, their potential for environmental damage and adverse impacts on human health is considerably reduced if the correct handling, storage and disposal practices are in place.
- *Waste* - Waste contributes to resource depletion and a range of pollutants and emissions. The reduction of waste minimises the area needed for landfill, and reduces the environmental impact of overall materials throughput.
- *Indoor air quality* - It is important for the long-term health of building occupants that a building provides a satisfactory level of indoor air quality. Good indoor air quality is essential for occupant satisfaction, health, and productivity.
- *Occupant satisfaction* - as well as minimising impacts to the wider environment, buildings must also provide a comfortable working or living environment for those who use them.

Of particular relevance in considering how to curb urban sprawl is the proposed measurement of provision of Transport (particularly alternatives to the current reliance on private vehicles), and Landscape diversity (including the retention of existing landscapes over the creation of an engineered landform which is easier to build the standard slab construction house, which seems to have become the norm).

Here is at least a start to consider how we use land and what implications development has on urban transport and movement.

If urban sprawl is still one of the major threats to the nation’s environmental health, then we need to start including evaluation criteria for things like Car dependence, walkability, urban and community amenities, cycling ease, street connectivity, overall impact on biodiversity (not just within the estate), impact on urban footprint, employment availability, land use efficiency, social equity and inclusion.

Much of the so called ‘environmentally friendly’ development is not much more than the business as usual model with a few frills (except that our housing construction is less climate responsive than the ‘traditional’ house, and relies much more on air conditioning to provide for comfotable living). Much is made of various water conservation practices. Let us not forget that most of these were par for the course as little as 50 years ago – water tanks, septic systems and limited hot water.

Many of our leaders have already widely proclaimed that business as before is no longer an option.

Something is surely better than nothing but we are not going forward, just messing up the continent and the world at a reduced rate – we are going backwards a little more slowly than before.

We have to ask, "what are the ratings for?" A better informed choice for prospective purchasers; to be able to compare; to assess and evaluate lifestyle impacts; to make contingent decisions which make provisions for the future?

The UDIA has suggested a voluntary standardised, incentive based 'star system' to provide for uniformity for new developments in achieving sustainability. The voluntary approach is suggested because, "*It is clear that a coercive model would be strongly opposed by the development industry as it will have economic consequences which are detrimental to the industry and the State economy".* The model is described as having been developed to address the shortcomings in the existing Sustainable Urban Development Program, which was administered by the UDIA in partnership with the QLD EPA Sustainable Industries Division.

The identified impediments to the existing program included a lack of economic viability for sustainable development for the development industry (or perception thereof), and a lack of understanding and direct assistance from Local Governments in assessing sustainability inclusions in new urban developments. It is also perceived that there are risks (financial and otherwise) to the developer associated with sustainable inclusions such as increased costs and premiums, and long payback periods on investment, which may or may not be able to be passed onto the purchaser at the point of sale. The proposed 'new' model therefore requires:

- Consumer awareness and support for sustainable inclusions;
- A (voluntary) commitment to and adoption of sustainability inclusions by the developer at the earliest stages of development;
- Encouragement and support by Local Authorities (including a range of incentives to developers to encourage uptake); and
- Government support for communication and education to all involved parties.

The proposed system further relies on a standardised 'branding' whereby sustainability features within a development are identified to consumers by a series of icons which relate to key criteria (such as improved energy and water use efficiency).

It is difficult to see how the proposed system differs from the existing situation, and how the existing difficulties of education of developers, consumers and decision makers, and encouraging developers to undertake voluntary measures are addressed to any greater degree under what is proposed by the uniform 'star system'. It is also difficult to see how without any form of genuine reporting mechanism back to the development industry and decision makers, how the benefits achieved by those developers who adopt a more sustainable approach can be communicated to the market, industry, and decision agencies.

Presently in Queensland, there is no minimum requirement for urban development to achieve sustainability standards. This is unlike NSW and Victoria which have implemented minimum standards for things such as energy efficiency, water efficiency, waste reduction etc., further linked to a ratings system (Basix, First Rate respectively) which provide a more standardised method of measuring compliance. Any move to set a minimum standard of compliance in Queensland would seem to be met with opposition, due to the perception that it will cost more to developers, and that costs may not be able to be passed onto consumers – even more pertinent given that reports currently indicate that the housing market is facing a downturn.

However, the benefit of a minimum standard in sustainability inclusions is that it establishes an even playing field for all competitors. In addition, a minimum standard infers a reporting mechanism and a degree of accountability, which appears to be lacking in a voluntary system such asi is proposed.

Currently there are a number of development projects in Queensland that are incorporating sustainability to varying degrees, but there is little in the way of reporting or information that identifies and quantifies the savings and benefits achieved. Additionally, without evidence of those benefits, there is little solid information (other than marketing spin) to clearly demonstrate the benefits to potential buyers, and therefore inform them of the savings (financial and environmental) that can be achieved (including recognition of lifecycle costs/benefits).

The UDIA suggests that a process of educating the community of the benefits of sustainable living should be the responsibility of Government. As long as sustainability is purely voluntary, without genuine products for purchasers, education alone cannot guarantee the greater uptake of sustainable development. While it is acknowledged that education and consumer awareness is a significant aspect in encouraging the greater uptake of sustainability, the development industry must take a significantly greater role. This may involve:

- Effective marketing of examples of sustainable development,
- Providing genuinely sustainable housing products to consumers, which provide a real option to the "business as usual" (and sometimes referred to as 'cookie cutter') housing options we are currently provided, and
- Reporting of successes and failures in sustainable development to achieve a general raising of the standard across the development industry.

Another key 'requirement' of the UDIA's proposed 'star system' is incentives from Government and assessment agencies, including fast tracking of development assessment processes, and reductions on infrastructure. In moving away from the 'business as usual' model for residential development it is acknowledged, that local authorities may also have to change their thinking in terms of how to assess alternative approaches.

For example, the use of water sensitive urban design is still not fully accepted by some local authorities due to perceptions of increased maintenance, and the long-term effectiveness (compared with easily maintainable hard engineering). In another example, it has taken some time for local authorities to re-recognise the benefits of domestic rainwater tanks, and to provide mechanisms which support their inclusion in residential development (including rebates and support through planning policies).

Developers receiving support from development assessment agencies is certainly necessary in facilitating the greater uptake of sustainability – but the expectation for reductions on infrastructure requirements really only holds sway where new development makes more efficient use of existing infrastructure, or where there will be no overall requirement for increased capacity (eg using the reuse of treated effluent or captured stormwater onsite, and minimising any increases in loading on existing systems wherever possible). In the case of development of outlying Greenfield sites, unless it can be demonstrated that the development can be completely self sufficient and sustainable, then Councils may still need to provide suitable infrastructure.

Similarly, as new development encroaches further and further into outlying areas (added on to each previous development), the requirement for infrastructure provision also increases – all symptomatic of urban sprawl. All this brings us back to the original issue of how to determine what is sustainable urban development and how do we measure it. In terms of sustainable development thus far, a new 'high water' mark has been set by a number of projects, particularly in the areas of water use efficiency and stormwater management, and energy inclusions in homes. However, it appears that the overall uptake of even basic sustainable development measures 'across the board' by the development industry is still some way off, due to the perceptions of increased cost and risk mentioned earlier. Without a move towards a minimum standard, it is difficult to predict where this new 'high water' mark for sustainable urban development will settle is to be seen, but it is considered unlikely that the uptake of sustainability will be either ground breaking or universal.

Rather than putting the onus back onto government and decision agencies to drive the necessary changes, the development industry and representatives need to set the bar at a height which will delineate the real 'champions' from the 'rest of the pack', and provide mechanisms from within the industry to encourage/coerce/force the greater uptake of sustainability, to provide reporting of shared learning, to provide valuable examples of successes and failures back to the industry, and to require the provision of a range of housing products which do more than perpetuate 'business as usual'.

Collectively, and with the support and encouragement of the UDIA, consumers, communities, and government agencies with an interest or involvement in land development activities must challenge the development industry as a whole to give real consideration to achieving more than the 'low hanging fruit'. The easy targets appear to be the standard set so far. The challenge to the development industry NOW should be to create and embrace as the market standard, housing and lifestyle options that will provide existing and future residents of Queensland with a much smarter and more sustainable future. It is obvious that we cannot continue with 'business as usual' if we are to live sustainably.