



O'Brien Sustainability & Environment



Sustainability & Masterplanned Community Development

A Discussion Paper

August 2005

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What is Sustainability?

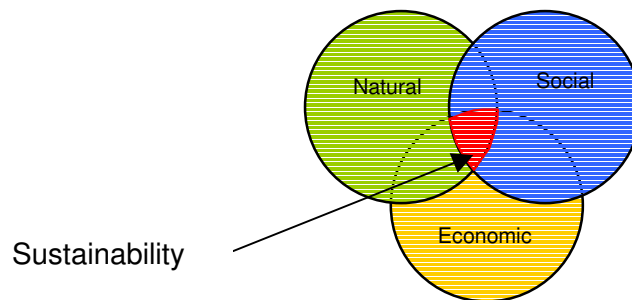
A well-recognised definition of Sustainability is,

"meeting the needs of current and future generations through integration of environmental protection, social advancement and economic prosperity".

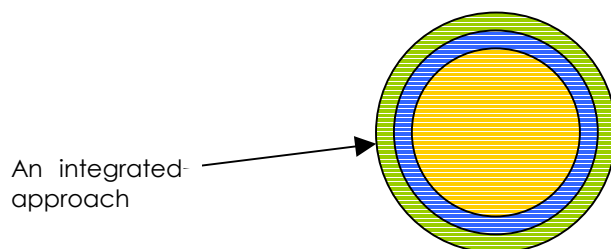
A more simple definition for sustainability applicable to the process of developing masterplanned communities might be,

"the creation of a community for current and future generations, that provides for Livability, Vitality and Equity based on the protection and maintenance of natural systems".

Conceptually, sustainability is often seen as achieving a balance between economic, social, and environmental constraints and opportunities:



However, when envisioning how sustainability forms the basis for developing future communities, sustainability is not just achieving a balance, but achieving the integration of these issues within the natural environment, to the long term benefit of all.



Everything we do occurs in and influences the natural environment.

Our social environment is dependant on how we live, work and play within our physical environments (natural and built).

These physical environments, and our social interaction within them influence our economic vitality.

Embedding sustainability into the future of masterplanned communities means a multi faceted approach. It means achieving:

- Environmental (and urban) stability which respects and protects natural values, while allowing the community to grow, evolve and develop in accordance with the needs of current and future generations;
- Social and cultural stability within the built environment, and promoting social interaction and engagement, cultural expression, and human experience; and
- Economic stability, and ensuring that heavy costs and penalties resulting from unsustainable development today are not imposed on future generations.

It also means having an understanding of 'the big picture' and embedding flexibility in the masterplan (process and implementation) which in turn allows development of communities to reflect improvements in technology, future opportunities, and changing benchmarks for global best practice in sustainable development.

Developing a 'Sustainable Community' Vision

The vision for a sustainable future in designing and creating a masterplanned community should be based on providing a long term framework for development which provides a mix of landuses, development types, services, and infrastructure, whilst ensuring economic vitality, social interaction and equity, and protection and maintenance of the natural resources, values, and amenity.

The approach taken to incorporating sustainability into the masterplanning process should be consistent with the broad principles of sustainability, such as those identified in, 'Leading by example: The Sustainability Code of Practice for Government Agencies and Resource Guide for Implementation, (2004), prepared and implemented by the West Australian Department of the Premier and Cabinet Government. These principles are as follows:

Foundation Principles

Long-term economic health

Sustainability recognises the needs of current and future generations for long-term economic health, innovation, diversity and productivity of the earth.

Equity and human rights

Sustainability recognises that an environment needs to be created where all people can express their full potential and lead productive lives and that significant gaps in sufficiency, safety and opportunity endanger the earth.

Biodiversity and ecological integrity

Sustainability recognises that all life has intrinsic value and is interconnected, and that biodiversity and ecological integrity are part of the irreplaceable life support systems upon which the earth depends.

Settlement efficiency and quality of life

Sustainability recognises that settlements need to reduce their ecological footprint (i.e. less material and energy demands and reduction in waste), while they simultaneously improve their quality of life (health, housing, employment, community...)

Community, regions, sense of place, and heritage

Sustainability recognises the significance and diversity of community and regions for the management of the earth, and the critical importance of sense of place and heritage (buildings, townscapes, landscapes and culture) in any plans for the future.

Net benefit from development

Sustainability means that all development, and particularly development involving extraction of non-renewable resources, should strive to provide net environmental, social and economic benefit for future generations.

Common good from planning

Sustainability recognises that planning for the common good requires equitable distribution of public resources (like air, water and open space) so that ecosystem functions are maintained and a shared resource is available to all.

Process Principles

Integration of the triple bottom line

Sustainability requires that economic, social and environmental factors be integrated by simultaneous application of these principles, seeking mutually supportive benefits with minimal trade-offs.

Accountability, transparency and engagement

Sustainability recognises that people should have access to information on sustainability issues, that institutions should have triple bottom line accountability, that regular sustainability audits of programs and policies should be conducted, and that public engagement lies at the heart of all sustainability principles.

Precautionary principle

Sustainability requires caution, avoiding poorly understood risks of serious or irreversible damage to environmental, economic or social capital, designing for surprise and managing for adaptation.

Hope, vision, symbolic and iterative change

Sustainability recognises that applying these principles as part of a broad strategic vision for the earth can generate hope in the future, and thus it will involve symbolic change that is part of many successive steps over generations.

Consideration of these principles and incorporating them into the approach to creating a sustainable community will ensure that the opportunities and constraints in all these areas are fully considered, addressed, and incorporated into the masterplan, and more importantly - the masterplanning process.

Creating a Sustainable Community

A significant body of work has already been completed in establishing a vision for sustainability for the future of development of masterplanned communities.

An essential step is development of a Community Plan that firmly establishes and supports the ideal of a sustainable future for the community. This Community Plan should identify the key outcomes for development, and suggests mechanisms for measuring the success in the vision for sustainability being achieved.

The preparation of the Community Plan should also include a 'Vision for a Sustainable Community' that will establish the broad objectives for design and development, and demonstrates how broad principles of sustainability are to be incorporated into the process of design and development.

The objective will be create a rich and festive community, which develops as a series of distinctive neighbourhoods and 'villages' within varied urban precincts, surrounded both close and afar by linkages to and views of iconic surrounding landscape features.

Vegetated hills, valleys, lakes, open space linkages and trails should be a constant reminder of the connection and relationship this community has with its natural surrounds. The community should celebrate the natural setting in every aspect of design, form and function.

Residents should have easy access and connections to employment opportunities both locally and within the district. The new community should operate as part of local and regional employment and economic growth, with residents benefiting from employment prospects in neighbouring areas. An integrated public transport system operating within the community and beyond will provide convenient travel alternatives.

A real 'sense of place' should be instilled, generating community pride in their active involvement in a safe, friendly and green living environment. The development of a Town Centre will provide stimulating experiences for residents and visitors, inspired by its urban amenity, and ease of access by the community it services. This environment should be equally complimented by a network of smaller neighbourhood mixed use villages offering meeting places, cultural experiences, shopping, recreation, and state of the art transport connections both near and afar.

The process of designing and developing the community should clearly embrace the principles of sustainability and is a model for others to follow - acknowledged both in Australia and overseas.

This vision process should quite clearly identify sustainability as a key driver for creating a new community, and reflects the consideration that is to be given to the three areas on which our understanding of sustainability is based - our natural environment, our social environment, and our economic environment.

Furthermore, this vision for sustainability should be underpinned by broad planning and development themes around which the community will grow and develop.

Each of these themes represent various aspects to be addressed in designing for a sustainable community. However, to design for and implement a sustainable community vision, it is also necessary to recognise that development themes and their associated issues cannot be treated in isolation.

Sustainable masterplanned communities will be achieved through recognising that development themes and the various elements within them are linked.

An economically vibrant community will be created where people can live, work, play, and interact, where housing, employment and services are located within the community, and are financially and physically accessible to all residents.

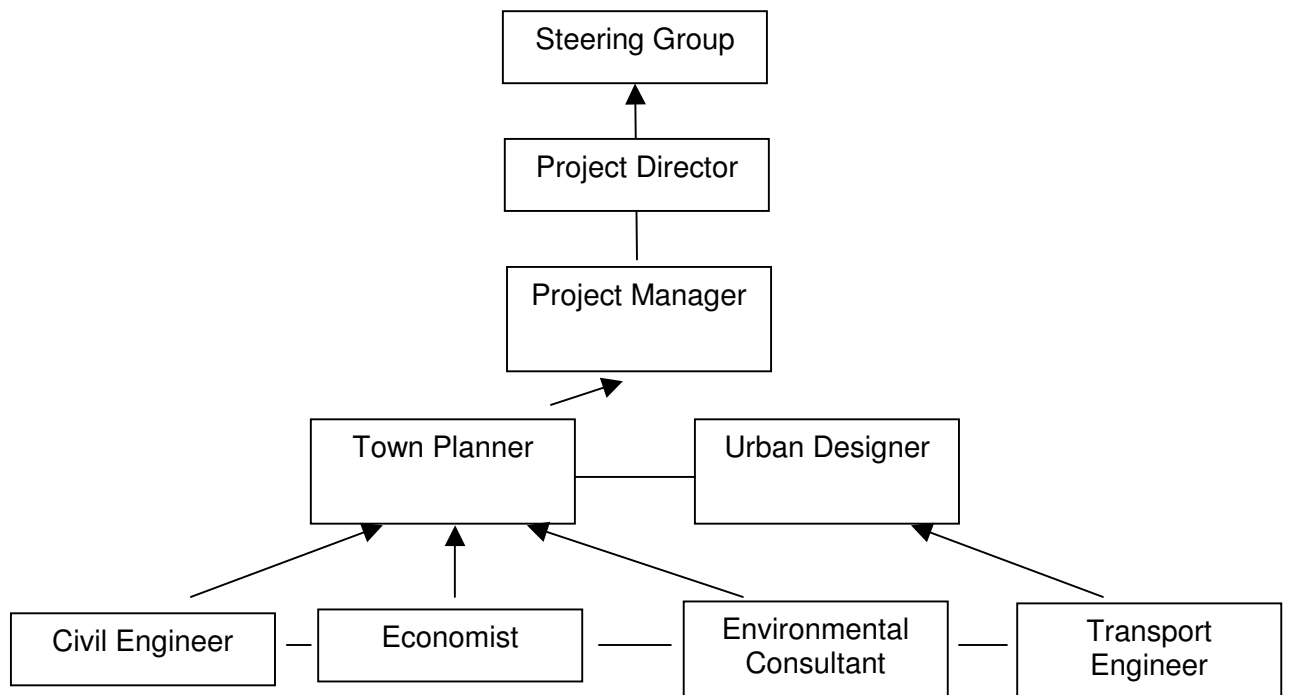
A socially vibrant community will be achieved where people feel safe, and 'at home', and where day-to-day interaction takes place in the street, public places, and open spaces, and where people have a sense of ownership and belonging, and value their environment.

An environmentally responsive community will be one where the natural amenity and systems are integrated into the design of places and spaces, and where natural environmental values are protected, valued, maintained, and above all, enjoyed by residents and visitors alike.

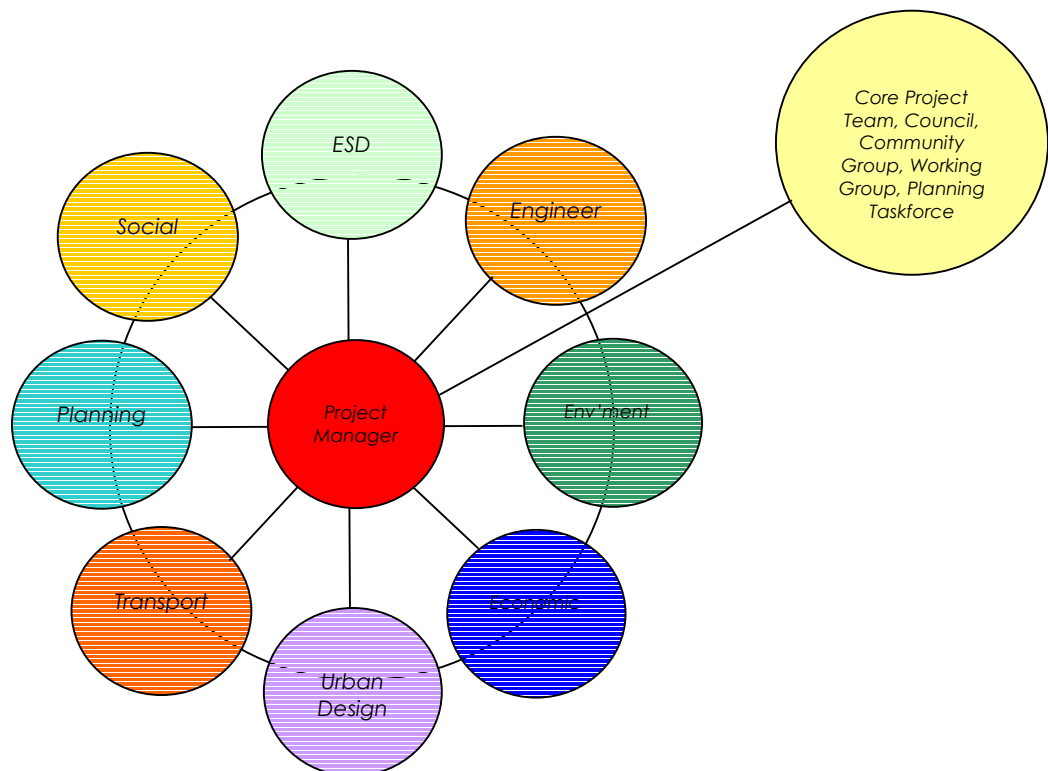
It should be recognised that it is the integration of all of these elements in the masterplan, and the recognition of the linkages between issues that will provide the framework for creating a masterplan for a sustainable community.

Creating a Sustainable Project Team Framework

The approach to project managing a masterplanning process for land development has traditionally been very hierarchical, with each member of the Project team reporting upwards to the Planning Consultant and or Urban Design Consultant, who in turn reports to the Project Manager, and ultimately reporting up to the Project Directors and Steering Group. Review of documents and reports is undertaken in a very linear manner, with each consultant providing comments as required, which are incorporated by the lead consultant, and passed upwards through the chain.



An alternative and more innovative approach might differ from this model in being more integrated and cyclical, encouraging more direct interaction and discussion between team members and consultants to ensure that issues are fully explored, addressed, and sustainable solutions to all the issues are incorporated into the masterplan process and implementation.



In addition to creating and fostering dialog and interaction within the project team to support sustainability, this approach helps to ensure that processes of community, government, and industry stakeholder engagement are established and implemented throughout the masterplanning process, and furthermore, throughout the growth and evolution of the community.

As identified earlier, a sustainable community is one where residents and stakeholders are engaged, and feel ownership and a sense of belonging. This cannot be achieved by excluding all stakeholders from participating in decision-making processes. An inclusive approach will be fully consistent with the sustainability **Process Principles** identified earlier. In addition to the significant body of existing information relating to the processes of planning and development, the process of identifying and implementing a sustainable future for the region will also involve the community, business, and government stakeholders who will be involved in making the vision for a sustainable community a reality.

This will be achieved through community engagement processes including:

- facilitating workshops to assist in formulating the masterplan, including enquiry by design, development and design workshops, and community information workshops, attended by stakeholders from community, government, business, and representatives of the urban development and design professions;
- identifying community understanding of sustainability and providing suitable information to bridge gaps; and
- inviting community stakeholders to participate in visioning, designing, and creating the community through the life of the masterplan.

Approach and Process

The achievement of sustainable urban forms, places and spaces requires a multifaceted approach to design, implementation, and development, over the long term. Adopting a sustainable approach to the future of masterplanned communities means having the mindset that residents and visitors will perceive the community as being 'where they want to be', long after the masterplanning process is finished.

It means handing down to successive generations a legacy of quality, inclusive, respectful planning and development that is designed for their future, rather than a legacy of exploitation of our natural environment, social, and economic resources for short term gain.

The approach of fully incorporating sustainability as a foundation principle into the masterplanning process for the future community begins with the team's understanding of the area and its constraints, and the opportunities that this project provides for creating a new community 'from scratch'. A multidisciplinary team will consider all of the issues associated with preparing the masterplan, including:

- natural environment - addressing issues such as environmental values, habitat and natural values, and topography);
- social and planning issues such as existing and proposed future land uses, transport corridors, proximity to services and infrastructure; and
- opportunities to reflect, complement and potentially influence the likely patterns of future growth in the surrounding area.

Sustainability is not an add-on. Sustainability needs to be recognised as the underlying principle for planning and development responses to the full range of masterplanning elements, including:

- land use, planning, and urban design,
- transport and movement systems,
- housing and accommodation,
- townscape/landscape appraisal,
- social planning and community development,
- cultural heritage,
- nature conservation and environmental management,
- community livability and human services,
- public utilities infrastructure, and
- economic and employment development.

The ideal approach is to embed sustainability into responding to these issues, and in developing the necessary documents, reports plans, and strategies that will make up the complete masterplan, including for example:

- Transport, Mobility and Access Plan;
- Integrated Water Cycle Management Plan;
- Other Physical Infrastructure Strategies;
- Urban Centres Strategy;
- Economic Development and Employment Strategies;
- Natural Environment, Greenspace and Recreation Plan;
- Community Facilities, Community Development and Human Services Strategy;
- Cultural Heritage Strategy;

- Housing Strategy;
- Visual Character Strategy;
- Centres Concept Plan and associated strategies; and
- Detailed Land Use Concept Master Plan.

Sustainability and Masterplan Elements

Land Use, Planning, and Urban Design

Effective use of land and resources, coupled with good urban planning and design will contribute significantly to urban sustainability by providing and improving social equity, economic vitality and responsible stewardship of natural resources and the environment.

Sustainable land use and planning should consider existing and future land uses, natural values and environmental constraints, provision of services and infrastructure, and access to employment nodes and major centres, both now and in the future.

Quality urban design must be built into the masterplan at the building, street, neighbourhood, district, and regional scale, supported by planning mechanisms and desired outcomes that clearly identify and support sustainable development.

Urban design and planning processes for the masterplan and subsequent development will support the delivery of social equity by:

- enabling co-location of land uses and activities to provide employment and services close to housing;
- providing a mix of housing densities, ownership patterns and tenures, prices and housing types suitable for all social-economic requirements;
- incorporating Transport Orientated Development and higher density development around transport nodes to encourage social interaction, walkability, and use of alternative transport;
- being responsive to stakeholder requirements and concerns;
- using and building on existing social and community infrastructure; and
- promoting a process of inclusiveness for all stakeholders in the urban design process.

Urban design processes for the masterplan will support the delivery of economic vitality by:

- creating mixed use urban centers and neighbourhoods which are interesting, active, and vibrant;

- providing a mix of development densities, including higher density where appropriate to make more effective use of limited land resources;
- providing for quality urban development which is of a high standard, and achieves high economic return on investment;
- encouraging greater use of public transport, linked to increased development densities and a mix of land uses;
- building on existing linkages, fostering the creation of partnerships and synergies, and achieving efficient sharing of resources between land uses, and stakeholders in the surrounding community and SEQ region; and
- promoting a process of inclusiveness for all stakeholders in the urban design process.

Urban design processes for the masterplan will support stewardship for the natural environment and efficient use of natural resources by:

- planning for a smaller urban footprint, and more efficient use of land and natural resources;
- designing to capitalise on existing infrastructure and services wherever possible (over creation of new);
- providing for development which reflects, respects, and adapts to natural environment constraints;
- designing houses, buildings, and neighbourhoods which are energy and water efficient, and respond better to local climatic conditions;
- designing neighbourhoods, places and spaces which encourage walkability, and use of public transport, resulting in reduced reliance on private transport, and
- encouraging residents and visitors to experience the natural environment through creating safe, comfortable, and special places, which will endure.

Transport And Movement Systems

Creating sustainable transport and movement systems for the community and surrounds is a key requirement in reducing our demand for fossil fuels, and for encouraging social interaction within the community.

Residents and visitors should have greater choice for transport methods, through the creation of a fine mesh of connectivity, supporting a network of regional transport corridors. Mixed density and transport orientated development will mean residents can live closer to employment and services, and have better access to transport infrastructure for travel to surrounding urban centres.

Creating safe pedestrian linkages will encourage residents will be more active in moving around their neighbourhood, helping to tackle the increased incidence of

obesity in our society. Parents will be able to walk children to school, or to local shops, with reduced risk from traffic, and a more pleasant environment to walk through.

Designing an urban form that provides greater access to public transport and options for alternative transport methods will have the effect of reducing reliance on private vehicles, reducing travel times and congestion, and having a positive effect on the natural environment through improved air quality and reduced reliance on non-renewable energy sources such as fossil fuels.

Housing And Accommodation

The provision of housing and accommodation options in the community should not discriminate. Housing options will be flexible, to cater for changing socio-economic considerations. Aged people, single people, households without children, single parent families, traditional families, and options for alternative living/share housing/mixed tenure will all be provided for.

Sustainable residential development will be based on the principles of 'Smart housing', and will reflect energy efficiency, water efficiency, and universal design. Builders and developers will be required to demonstrate compliance with minimum standards for sustainable housing, which will be built into planning and development mechanisms under the masterplan.

Homes will be cost efficient to build and live in, and will be resource efficient in material selection and construction methods. Homes will be built to meet the needs of people across a range of physical abilities and age ranges, and housing choice and construction will result in homes that are adaptable to the changing needs of the residents over time. Homes and neighbourhoods will be designed and constructed to be safe, consistent with Crime Prevention Through Environmental Design (CPTED) principles.

Similarly, the issue of housing affordability will be addressed through providing lower cost, high quality housing which will be integrated into community (rather than isolated in separate districts) to ensure inclusion and social interaction.

Townscape/Landscape Appraisal

The existing natural landscape is recognised for its special qualities - the surrounding hills, dynamic cliffs and rock escarpments, and the valley floor with rolling topography and waterways. The urban landscape should be a reflection of the dynamic ecological and social systems, which will ultimately mark the new community as a special place to live.

Comprehensive consideration of the natural and built landscape will result in a sustainable balance between urban development and the natural environment. Further assessment and mapping of the existing landscape will identify key features, viewsheds, and opportunities to enjoy the existing natural and future built amenity. Development under the proposed masterplan will take place so that these viewsheds are maintained, and planning controls and regulation will ensure

development reflects the human scale such that the built form is not overly dominant.

All elements of the landscape should be reconciled, and the provision of a quality landscape within the area will contribute to residents' experience, and visitors' memory. Success in providing a quality landscape will be measured by people's perceptions and enjoyment of where they live.

Social Planning And Community Development

The urban environment is about people - social interaction, equality, opportunity, expression, education and learning, experience, and creativity. Planning and designing for sustainability is as much about encouraging a vibrant and diverse social community through engagement, participation and interaction as it is about protecting the natural environment and achieving economic prosperity and return from investment.

While planning and design processes provide the determination of where best to locate built environment elements, schools, shops, places of employment and activity, it is the process of engaging the community and other stakeholders in the masterplanning process which will provide the opportunities for these stakeholders to establish ownership, and to guide the growth and development of the community over the life of the masterplan.

The masterplan approach should be to establish mechanisms and processes to engage and consult with the existing community, and with other stakeholder groups from community, industry, business and government in planning and decision-making. The methodology should include community engagement processes, gap analysis, education and information, and will involve regular feedback and discussion with the Core Project Team and community representatives throughout the process of developing the masterplan.

Cultural Heritage

As identified in the Foundation Principles for sustainable development developed by the WA Department of Premier and cabinet, it is essential that masterplanning processes recognise the significance and diversity of community and regions for the management of the earth, and the critical importance of sense of place and heritage (buildings, townscapes, landscapes and culture) in any plans for the future.

In particular, Australia's indigenous people have a strong affinity for the land as part of their culture, which needs to be respected and reflected through community engagement processes, consultation, and identification of issues. Accordingly, the masterplanning process should be respectful and inclusive of the existing cultural heritage (Indigenous and European)

Nature Conservation and Environmental Management

The conservation of nature and the protection and responsible stewardship of natural resources and systems are central to the achievement of sustainability, and are part of the core principles for development under the proposed masterplan.

The ideal approach seeks to provide for retention and protection of areas of environmental value. The enhancement and integration of the natural environment into the urban form will be significant in terms of natural values, social and community values, and ensuring economic return on development.

The existing natural values need to be identified during the initial opportunities and constraints analysis, and key environmental features such as habitat areas and linkages, significant areas of natural vegetation, waterways, wetlands and areas of high natural amenity will be mapped from a combination of aerial mapping and photography, interrogation of vegetation mapping and biodiversity database information, anecdotal information and local knowledge, and supported by ground truthing. This analysis will also be crucial in identifying opportunities to restore and/or augment existing habitat, and to engage the various stakeholders in the importance of the natural environment in the importance of reflecting the natural values of the area in the masterplan.

Planning mechanisms and impact assessment requirements will require that potential impacts on natural systems from development under the proposed masterplan will be carefully controlled. Developers will be required to demonstrate that environmental values have been considered and addressed, and that appropriate measures will be implemented through site planning and design, impact assessment, and environmental management during construction and operation of development to ensure the natural environment is not adversely affected as the township develops and grows.

The protection and responsible use of natural systems will also be a key requirement for any future development under the masterplan. The current water shortage across all of Australia's major cities has highlighted the need for us to use water more responsibly, efficiently, and to be aware of its limits as a resource. Integrated water management, stormwater management, detention, capture and reuse will all be key factors, both in providing water for community needs as well as protecting water quality in waterways, protecting natural systems, and maintaining environmental flows.

Water efficiency in homes and in the community will be a key requirement. Options and requirements will include domestic rainwater storage and use in homes, greywater reuse for garden irrigation, capture of stormwater, onsite treatment and recycling of industrial process water, and the use of more effective natural systems to treat sewage effluent to a level suitable for safe reuse in applications such as open space irrigation and agriculture, aquifer replenishment, and maintenance of natural flows.

Improvement of air quality will be achieved through reducing reliance on private vehicles, through establishing transport networks and service nodes which will encourage residents to source goods and produce from local providers. Industrial and commercial development will be required to reflect world's best practice, to encourage clean industry based on the principles of cleaner production to establish in commercial and industrial precincts in and around the new community, supported through appropriate planning mechanisms, incentives, and partnerships with relevant Government Agencies.

Waste management practices will be encouraged and adopted over time that will further reduce the amount of household and industrial waste sent to landfill. Waste management practices will be based on a waste management hierarchy to reflect a change to reduction, reuse and recycling over disposal.

Information provided to residents of new residential development will encourage them to take stewardship for the future of their community, to make more sustainable choices about purchasing, and give proper consideration to their impact on the natural environment from behaviors such as littering, dumping, and inappropriate waste management.

Community Livability and Human Services

Creating a livable community is about creating places where people want to live. It is about creating places where they feel a sense of belonging and a sense of ownership - the 'community' becomes something residents seek to protect and maintain, where opportunities to live, work, play and interact with friends, family and neighbours result in a sense of vibrancy.

Housing diversity that provides for different densities and styles, and addresses issues of housing choice and affordability, will be achieved through appropriate structure planning to reflect a mix of housing and the diverse needs of the community. The location of housing close to shops, services, and major transport nodes, and the creation of a 'fine mesh' of local transport networks will allow residents to travel easily through the community to access recreation, employment and services, while also reducing reliance on private vehicles.

Communities, neighbourhoods, places and spaces should be designed according to CPTED principles, and local streets and playspaces will be designed such that pedestrian movement is encouraged, with street designs that reduce dominance by cars and encourage social interaction by residents.

The masterplan should provide for a network of linked openspace and greenspace areas, which will provide passive and active recreational opportunities for the community, serviced by pedestrian pathways and cycleways, consistent with encouraging social interaction, physical activity and vitality.

As the new community grows and develops over time, the masterplan should support and encourage development of local commercial and activity centres, where professional services, medical services, commercial and shopping activities, recreational activities, education, childcare, etc will all be provided to service the needs of the growing community.

Public Utilities and Infrastructure

The growing community will require services and infrastructure. The masterplan will encourage the sustainable growth requiring that public utilities, essential services and infrastructure be provided to service growth and development, rather than as a reaction to it.

Integrated water management will help to reduce the demand on existing water storages and supplies, and will help to establish a near (if not fully) self-sufficient community in terms of water supply.

The masterplan should require the implementation of best practice energy efficiency in buildings and homes, which will have the net effect of reducing demand on existing energy infrastructure. Additionally, development requirements will encourage the use of onsite energy generation such as solar (photovoltaics), microturbine generators (in commercial and industrial developments, and cogeneration (waste to energy) to further reduce demand and to also supply surplus energy back into the grid.

Reliance on landfill disposal will be reduced over time and throughout the development lifecycle. Planning and development mechanisms will require greater consideration be given to the impact of increased waste as the community grows, and that alternatives to landfill be implemented for management and disposal of waste.

Waste management practices in residential communities will be encouraged and adopted over time that will support household recycling, and further reduce the amount of household waste sent to landfill. Waste management practices will be based on a waste management hierarchy to reflect a change to reduction, reuse and recycling over disposal.

Employment and Economic Development Opportunities

Local and nearby commercial and activity centres provide local employment opportunities for both service and professional sectors. The proximity major centres and industry nodes will provide additional opportunities for employment for future residents.

As the community develops and grows, the masterplan should support and encourage development of local commercial and activity centres, where professional services, medical services, commercial and shopping activities, recreational activities, education, childcare, etc will all be provided to service the needs of the growing community.

Measuring our success

The importance of recognising and incorporating the principles of sustainability into the growth has been fully recognised. Sustainability indicators have been implemented worldwide as part of making cities and regions more sustainable, and they will provide the means to gauge success in the creation and evolution of the community.

The characteristics that define a sustainable community have been well identified, and provide the indicators by which we can measure our success in achieving it. Similarly, a 'Sustainable Community Plan' should identify 'indicators of success' for measuring the progress of a 'sustainable community' as it develops, grows and evolves. Applying indicators provides the basis for measuring the successful growth of a sustainable community, and they form the basis for applying minimum

standards of compliance with planning mechanisms and requirements as they are developed.

Sustainability Indicators

Around the globe, there are numerous examples of where best practice has been implemented to create and measure the success of sustainable development, including energy efficiency, water efficiency, benchmarking and community engagement, and remodeling of the urban form to provide a more sustainable environment for all - examples include Beddington in the UK, Seattle and Portland in the United States, Curitiba in Brazil, and Goa in India.

Similarly, there are examples here in Australia where sustainability principles have been implemented into urban development as a response to our changing environment and resource constraints. In these instances, the use of sustainability indicators is demonstrating how successful we have (or have not been) in achieving a more sustainable way of life. Adelaide City Council has pioneered the incorporation of sustainability principles into community housing. The Western Australian Government has implemented a Sustainability Code of Practice and reporting requirements, and New South Wales, the ACT and Victoria have implemented mandatory requirements for energy efficiency and water efficiency, supported by reporting requirements for new residential development.

Existing indicators are all relevant. However, community engagement and stakeholder workshops help to identify the issues that the community sees as important in establishing a sustainable future for community.

Conclusions

The community, Council, State Government, and expert practitioners in sustainable development need to be engaged throughout the life of the masterplan to identify successes and challenges, and opportunities to change direction in terms of awareness and responses to sustainable development and growth.

Flexibility in the approach to developing the masterplan, and in the way community, industry, and Government agencies implement it will help to ensure that development and growth reflects best practice sustainable development from around the globe.

An inclusive and integrated approach to developing and supporting implementation of the masterplan, and the use of indicators which are relevant locally and in the larger regional and national scales, as well as reflecting world's best practice, will help to ensure that the development and growth of the community is consistent with the creation of an enduring urban community that is worthy of recognition worldwide as a special place to live.

References

Government of Western Australia 2004, *Leading by example: The Sustainability Code of Practice for Government Agencies and Resource Guide for Implementation*, Department of the Premier and Cabinet: Perth.