

**Focus on the Future**  
**Opportunities for Sustainability in Western Australia**  
A consultation paper for the State Sustainability Strategy for Western Australia

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**Hills Ecovillage Project Submission**



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# SUSTANABILITY IN THE PERTH HILLS AREA

*“ The challenge is to find new approaches to development that contribute to our environment and society now without degrading them over the longer term... and a healthy environment for the kind of inclusive communities we all wish to live in.”*

**Dr Geoff Gallop Premier of WA**

We believe our Hills Ecovillage proposal delivers a solution to this challenge. This is a community based not-for-profit initiative which aims to inspire and facilitate the development of ecologically sustainable communities. Our initial goal is to create an ecologically, socially and economically sustainable ecovillage in the Hills area of Perth, Western Australia, which will serve as a model for successful ecovillage development throughout Australia and the world.

What is an ecovillage?

The term “ecovillage” refers to urban or rural communities who strive to live a sustainable, satisfying lifestyle in harmony with each other and the Earth. An ecovillage has also been defined as,

“A human scale, full-featured settlement in which human activities are harmlessly integrated into the natural world in a way that is supportive of healthy human development and can be successfully continued into the indefinite future.”

## The Hills Ecovillage Project

Quite simply, the chief motivation was for us to create a space that would be ideal for ourselves and our children to live in. A place where everyone can attain a genuine interest and concern for each individual and the world around them. The landscape will have diversity, as will the people who have decided to become a part of it. All aspects of living within a community will have been considered to provide the best possible environment for the community to develop, grow and evolve.

Unlike most other Australian ecovillage developments this one commenced with market research, carried out two years ago, comprising of approximately 200 completed questionnaires. From these, 110 households showed levels of interest which may be broken down into the following categories:

- 35 “Committed” households (committed to living on an ecovillage)
- 35 “Conditional” households (seriously interested in living on an ecovillage depending on certain conditions such as location, price etc)
- 40 “Fringe Dwellers” (interested in the idea and considering it but only in an explorative phase)

The project has generated a good deal of excitement amongst the wider community. The responses given in the questionnaire indicate that we are not appealing to a narrow group of people. The spread of age, family situations and socioeconomic mix indicate a high level of community interest. This has revealed to us that the major concern for potential residents was the creation of a safe space to play and work, whilst considering the needs of the environment and the individual. Our market research to date has provided valuable information concerning the expectations, values and ideas of potential lot owners and confirms that there is a strong demand in the Perth area for a genuine, community based ecovillage.

There is evidence of a serious gap between this potential customer base and what is currently on offer in the way of commercial land sub-division. At this point in time genuine ecovillages fall far outside the typical scope of commercial property development. Given these circumstances, we believe there exists both an opportunity and a necessity to plan, develop and build a world-class ecovillage in the Perth region, to serve as a working example of sustainable development at the community level.

In this innovative approach to the creation of an ecovillage we have formed Ecocom Solutions, a non-profit incorporated association, to act as a vehicle for the community building aspect of the project. In this way the ecovillage community can begin to flourish well before the process of land development is actually complete. To date a strong community interest has been shown in Ecocom Solutions, of which some 20 families are now members. A number of community projects have been suggested by members, including an organic food cooperative, a sustainable building group, environmental education courses, conflict resolution training and a health and wellbeing centre.

Operating in parallel with Ecocom Solutions we have Green Edge Solutions Pty. Ltd. a non-profit company comprising of seven professionals. The ecovillage project is non-profit in nature and all members of the team are deeply committed to principles of ecological sustainability driving the development of the project. Nonetheless, the project itself is deliberately structured in order to generate a profit. This profit will then be used to develop additional infrastructure (i.e. an ecovillage education and training centre for the community and visitors) within the ecovillage in accordance with the non-profit provisions of the governing entities.

It is envisaged that the desire for a sustainable, community based lifestyle is likely to expand far into the future, creating an ongoing demand for people skilled in the creation of ecologically and socially sustainable settlements. The development and acquisition of these new skills is central to the process of designing and building an ecovillage. The Hills Ecovillage Project thus aims to produce not only a world class ecovillage, but also to create in the process a team of highly skilled and committed people who will continue to advise and assist in the design and implementation of other ecovillage projects in Australia and throughout the world, through the on site community education and training centre.

## The Hills Ecovillage Project Land

Exhaustive criteria for suitable land was laid down and an extensive search for land uncovered a property in Chidlow. The following points provide some preliminary information about the land and its intended use:

- § *The land is located in Chidlow 50 minutes from Perth, Western Australia.* Our market research clearly indicated that although 55% of residents planned to work from home or have a home based business, a large percentage required access to urban infrastructure and markets.
- § *The land is 0.75 km from the Chidlow Town Centre.* Easy access to wider local community infrastructure i.e. a community within a community.
- § *399 acres of land – made up of 7 titles (one owner) currently zoned General Rural. 1 title is zoned RRL.* We intend to create an Ecovillage based on the Strata Titles Act of W.A on a Rural Cluster concept. Our aim is to place between 65 and 80 lots in cluster arrangement (8 to 10 lots per cluster) on the property.
- § *The land has been used on and off over the years for sheep grazing and some grain crops.* This provides good potential for strategic revegetation.
- § *Approximately 70% natural vegetation, 30% cleared land.* Residential and community buildings will stand on cleared land. 80% of land will be communal. We envisage a village centre located where a disused Race Track is positioned. Lots will be located within 600 m of this village centre in a radial pattern. Lot sizes will vary – close to the village centre lots would be around 400 sqm then increasing as you radiate out from the centre to a maximum size of 1 acre. Average lot size would be approximately 0.5 acres. We will carry out an exclusion process based on Ian McHarg's Overlay Mapping Method. Lot placement would be strictly based on these outcomes. Some areas excluded will be good agricultural land, existing vegetation, water course and buffer zones around them and land without a northern aspect.
- § *An established Orchard.* As a consequence of the development the existing land use will be expanded and diversified with the development of permaculture areas, farming, preservation and regeneration of native flora.
- § *North facing gently sloping land.* Excellent potential for utilisation of photovoltaic generation of power with grid electricity available and the sale of surplus generated power back to the state grid. Net export of electricity is a very real possible outcome .
- § *Existing Cottage and other improvements.* Readymade community facilities.
- § *Winter Creek on Western End of property, artesian water and potential for water catchment.* Currently there is no intention to provide scheme water.
- § *State forest on the south boundary.* A building exclusion zone on the forest boundary will act as a buffer from potential urban impact.
- § *Located in the Mundaring Shire.* Local Council members have been briefed on the Hills Ecovillage Project and have in fact attended an Ecocom Solutions public meeting and expressed their support.
- § *Sewerage disposal will be based on composting toilets or alternative on site processing systems.* There are numerous approved alternative solid waste treatment systems, many of which have been designed and developed in Australia. In addition there is huge potential for grey water use, especially with an orchard already established on site.

# The Ecovillage Ethos

*“Development which meets the needs of the present without compromising the ability of future generations to meet their own needs.”*

**UN World Commission on Environment and Development**

*“Sustainability is the simultaneous achievement of environmental, economic and social goals”*

**Western Australian Government**

These definitions extracted from the Consultation Paper for the State Sustainability Strategy are espoused and elaborated in the following descriptions of an ecovillage. It becomes abundantly clear that the creation of ecovillages is a latent resource that must be investigated as a serious answer to many of our future land sub-division and development questions.

## **Environmental Sustainability**

Within an ecovillage people live in harmony with the ecological system of which they are a part. Natural systems and processes are respected and wildlife and its botanical habitat preserved. Human life-styles serve to regenerate, rather than diminish the integrity of the environment. Food is grown organically within the village or at the least sourced as much as possible within the community bio-region. Built structures are designed to blend with and complement the natural environment, using natural and ecologically sound materials and methods of construction. Consumption and the generation of waste is minimized. Human waste and grey water is used and/or disposed of to the benefit of the environment and community. A clean, renewable water supply is available and its source protected and conserved. Renewable, non-toxic energy sources are used to heat and power the community.

## **Social Sustainability**

An ecovillage is designed to recreate a stable yet dynamic community life, fostering a social environment in which people feel supported by and responsible to those around them. Physical structures in the village are designed in such a way as to maximize interaction between residents whilst preserving privacy for individual families. The experience of community is thus facilitated by conscious design but not imposed in any way. Personal growth, learning and creativity are valued and nurtured, with a variety of educational opportunities available to all age groups. Diversity in age, culture and spirituality is honored as a source of health, vitality and creativity in community relations, which are based upon mutual acceptance and inclusively. Community decision making processes are democratic and participatory and disputes, when they arise, are resolved by well defined conflict resolution processes.

## **Economic Sustainability**

Ecovillages foster economic self-reliance and typically result in the rejuvenation of local economies. Economic interdependence and self-reliance may be facilitated by a barter or a local energy trading scheme (LETS). Within the community the talents, skills and other resources of members are shared, and offered outside of the community, for the benefit of all. An ecovillage may foster a range of livelihoods such as organic agriculture, holistic health services, creative art and craft or environmental education. The rapid development of computer technology has now created new opportunities for village based businesses that still appeal to a global market.

# The State Sustainability Consultation Paper

Throughout the paper many principles are advocated and similarly many initiatives are promoted. It is not surprising that these are repeatedly satisfied within the “formula” for the ecovillage. Some of these are:

§ *Agenda 21.* The net cast by Agenda 21 very much captures the values of the ecovillage.

Chapter 4. Changing Consumption Patterns

Chapter 5. Demographic Dynamics And Sustainability

Chapter 7. Promoting Sustainable Human Settlement Development

Chapter 8. Integrating Environment and Development in Decision-Making

Chapter 10. Integrated Approach To The Planning And Management Of Land Resources

§ *Sustainability principles.*

§ *Conservation of biological diversity and ecological integrity (as the basis on which life depends).* Within an ecovillage people live in harmony with the ecological system of which they are a part. Natural systems and processes are respected and wildlife and its botanical habitat preserved.

§ *The precautionary principle (lack of scientific certainty should not delay measures to prevent environmental degradation and other damage).* Human life-styles serve to regenerate, rather than diminish the integrity of the environment.

§ *Inter and intra-generational equity (our decisions today should not compromise the choices of generations still to come and should provide for equity within generations).* An ecovillage is a full-featured settlement in which human activities are harmlessly integrated into the natural world in a way that is supportive of healthy human development and can be successfully continued into the indefinite future.

§ *Improved resource valuation, pricing and incentive mechanisms to protect and repair the environment.* Renewable, non-toxic energy sources are used to heat and power the community. Ecovillages foster economic self-reliance and typically result in the rejuvenation of local economies. Economic interdependence and self-reliance may be facilitated by a barter or a local energy trading scheme (LETS).

§ *We need to create new forms of economic and social development where pursuit of synergies between economic, social and environmental goals becomes the norm not the exception.* This in itself can be interpreted as a definition of an ecovillage.

§ *On average each Western Australian effectively uses between 17 and 31ha of land to maintain their standard of living... To be sustainable we should be aiming to reduce the total ecological footprint of our economy by at least half over the next 10-20 years.* Using conservative numbers, based on the Hills Ecovillage Project of approximately 160ha, and a population of 65 lots with an average of 3 people per lot we arrive at approximately 200 inhabitants. Being extremely liberal if we assume each inhabitant uses 10 times the size of the available land to maintain their standard of living (ludicrous!) we arrive at an average footprint of 8ha. This is less than half of the lower limit, a lot sooner than in 10-20 years!

- § *Any distinction between social and ecological health is artificial and prevents the discovery of solutions that address both sets of problems. Without the need for constant repetition please refer to the Environmental and Social Sustainability paragraphs above.*
- § *Australia has one of the highest long term unemployment rates in the OECD... The department of training outlines job opportunities in 6 areas that are all part of the sustainability agenda.*
- § *Earth repair (restoring land damaged by society).* The ecovillage ethos serves to regenerate the integrity of the environment through the use of permaculture farming techniques, energy efficiency, environmentally conscious construction and reduced consumption and waste thereby increasing sustainability and jobs.
  - § *Environmental survey (generating knowledge of the environment and its protection and management for example using satellite data).* The ecovillage is created by carrying out an environmental survey. The survey identifies the appropriate commerce that is compatible with the environment and creates revenue and employment for the residents and wider community.
  - § *Resource renewal (increasing eco-efficiency i.e. in the use of materials and water and recovering and preventing waste).* The ecovillage mandate is to use sustainable materials, renewable energy and onsite water cycle management, thereby stimulating demand and the need for skilled persons in these alternative and fledgling industries.
  - § *Sustainable energy (renewable energy and energy efficiency).* The intention of the ecovillage is to generate its own power through grid interactive photovoltaic generation. This creates demand for solar power systems which stimulates employment external to the ecovillage and internally for repairs and maintenance.
  - § *Sustainable communities and cities (transport infrastructure, planning, urban design and building design).* Body corporate owned land (in the village centre) will be the entrepreneurial part of the village. This is where shops, businesses etc will be built to provide goods, services and employment. In addition the community will foster a range of livelihoods such as organic agriculture, holistic health services, creative art and craft and environmental education.
  - § *'Clean and green food' and sustainable agriculture (organic farming, low input agriculture, agriculture based on ecological principles).* Permanent agriculture, organic growing and some traditional farming techniques will be the natural methods implemented to create sustainable healthy foods. In applying these techniques we will develop a resource for the community in produce and production methods. These skills can further be utilized in training workshops and as consultants for the wider community. The food products produced by the village will be certified organic, free of contaminants and sold to the wider community. Value adding to various produce will increase revenue and employment opportunities.
  - § *Changes in global technologies require us to adapt and innovate. Many of these opportunities are dominated by the services sector where knowledge-based skills and a high level of education are the most important factors.* Ecovillages represent a realistic and practical sustainable alternative to current rural and urban planning. As the demand for sustainable alternatives increases so does the demand for expertise in the development and construction of ecovillages. The project team can export their knowledge and skills, via the training centre, to the wider community .

## Answers to Key Questions

- § *Is sustainability a worthwhile pursuit?* This can be answered with a simple question. Are our children and future generations a worthwhile pursuit?
- § *What benefits could flow if sustainability was taken more seriously?* The benefits are numerous to name a few:
- § The establishment of ecovillages as a practical framework for sustainability
  - § Growth in small business developing alternatives to current products
  - § Reduction in our ecological foot print
  - § Consumption and waste reduction
  - § Life style changes that develop a culture of sustainability
  - § Responsible relationship between ourselves and our world
  - § Changes in society's environmental, social and economic values
  - § Formal education in sustainable practices within schools, tertiary institutes and communities.
  - § Increased environmentally friendly products and production methods
  - § A culture where the economic benefit is second to the environmental and social benefit
- § *In your experience what opportunities exist to pursue sustainability?* The urgent need for sustainability and a supportive social environment has resulted in a demand for alternative urban development. Ecovillages are an effective mechanism to demonstrate the value of sustainable living locally, nationally and internationally.
- § *What is the role of government, business and the community in facilitating change to be more sustainable?*
- § The first role is the introduction of legislation to assist proposed sustainable ventures in reaching fruition..
  - § Incentives for businesses for further research and development into sustainable methods of production and produce.
  - § Financial and skill support to businesses that opt for reduced emissions
  - § Ensuring existing and future urban and rural areas incorporate a sustainable transport infrastructure
  - § Formal and community education on sustainability
  - § Cooperation between private and public sectors
  - § Improved recycling and waste minimization
  - § Energy conservation and bias to renewable energy
- § *What best-practice examples exist, if any, to demonstrate how sustainability is being progressed?* Crystal Waters is the first village in the world to be consciously designed using the principles of Permaculture. It is a human-scale and environmentally responsible village, established only 12 years ago. It has received much acclaim - a United Nations World Habitat Award in 1995 for its "pioneering work in demonstrating new ways of low impact, sustainable living", and a listing on the UN Best Practices Database. Crystal Waters, home to 200 people is located 100 kms north of subtropical Brisbane, Australia. The Hills Ecovillage Project has based much of its planning on the Crystal Waters model. With hindsight we have the advantage of recognising the difficulties and mistakes experienced through the development of Crystal Waters.



- § *What research and development is needed to ensure sustainability outcomes can be achieved?.*
- § The development of expertise in environmental design and planning
  - § Sustainable building and construction methods both commercially and domestically
  - § Organic farming practices
  - § Effective education and training methods for sustainable practices
  - § Grey water treatment
  - § Waste recycling and minimisation
  - § Renewable energy sources
- § *In a more general sense, what else should Western Australia be doing to contribute nationally regionally and globally to progress sustainability?*
- § Implement reform within the WAPC to streamline ecovillage zoning and relieve the back log of planning approvals.
  - § Assist in the statutory processes of ecovillage proposals
  - § Provide financial assistance to feasible sustainability projects
  - § Assist individuals and organisations to locate information and skills required for projects, community development; and network development.
  - § Provide assistance for local experts to export their knowledge and skills globally
  - § Promote the propagation of ecovillages as a sustainable alternative
  - § Assist in the release and acquisition of suitable land for ecovillages
  - § Encourage public and bipartisan government participation at a grass roots level

## Summary

Our objective is to promote the ecovillage concept as a practical environmental and socially responsible alternative to land settlement and resource use. Alternative housing options (a sustainability strategy on its own) provide for better application of sustainable design principles together with clearer understanding of the relationship between humans and nature. The ecovillage also provides for the creation of sustainable communities through better social interaction and the enabling of employment opportunities.

Ecovillages are about tackling global problems at a community level. We believe there exists both an opportunity and a necessity to plan, develop and build a world-class ecovillage in the Perth region, to serve as a working example of a sustainable development. Once a successful ecovillage is established within the hills region less than 1 hour drive from the CBD. The floodgates will be opened to further ecovillage developments.

Government support is essential to the success of the Hills Ecovillage Project and other similar ventures. We submit our vision to the sustainability policy for consideration. Further detailed information can be submitted on request and we suggest you visit our website at [www.ecocom.org](http://www.ecocom.org)