

**Submission**

**Inquiry into Environmental Design and Public Health in Victoria**

To:  
The Secretary  
Environmental and Planning Committee  
Legislative Council  
Parliament House  
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Signed: 

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## Submission

# Inquiry into Environmental Design and Public Health in Victoria

A submission by the Kevin Heinze Centre.

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## Introduction

The Kevin Heinze Centre is a grass roots organization providing disability and aged care programs for those most in need. Our unique programs are primarily based around horticultural activities for children and adults including growing organic food, providing accredited training for young people with disabilities in horticulture, growing plants for re-vegetation projects and developing sustainable gardens in schools. The Centre provides educational, professional placements for students in health science.

For over 30 years we have provided our services without discrimination or prejudice, a high academic standard and a fundamental belief in equality. We present this submission as a small charity and Public Benevolent Institution with a clear interest in the betterment of our community through inclusive, responsible and sustainable practice. We believe that sustainability and the environment are far too important to be used for political purposes.

## Green environments and people

The environment in which we live, work and play is vitally important to the health of all people. Environments that provide opportunities for people to interact with nature, gardens or plants have proven beneficial health outcomes for humans. This is not a new phenomenon but has been known since ancient times. As cities grow and populations become more concentrated the need for "green" environments become more important. "Green" environments are not only essential for healthy living conditions but they also have a role to play in maintaining and improving the mental

health of adults and children. It is well documented that “green” environments also have the capacity to improve the productivity and efficiency of workers. In more recent times it has been noted that “green” environments also increase creativity and inventiveness of those working in such environs. Current research in the United States provides clear evidence that public safety improves and crime is reduced in areas of higher vegetation.

### Human connection and interaction with the natural world

Being connected to the natural world is increasingly seen as a way to assist the health and wellbeing of humans. Over many generations people have been constructing communities and personal habitats that have a diminishing connection to the living world. By doing so humans may have reduced the positive aspects of being in close contact with nature

One of the originators of this view, E. O. Wilson, suggests in his biophilia hypothesis that people living in an environment without a close connection to nature “*may have an outward appearance of having all they require to be happy but something vitally important would be missing*”.

Australian researcher David Aldous, an early proponent of the therapeutic value of “green space” outlined this in a paper for the Health Commission of Victoria in 1982. Aldous provided three implied explanations for the positive influence of plants on humans. The first describes plants as stimulus objects for which the human perceptual apparatus is specifically primed; the second is less specific, involving more aesthetically pleasing and perceptually stimulative aspects of the environment; the third aspect Aldous considered was the dependence of humans on nurturing with the emphasis on the responsibility for another living thing.

### The Evolution

Most human societies have evolved in communities closely connected to nature. This has been a necessity because humans have relied on nature for the basic elements of survival. In the absence of natural structures such as caves, humans built shelters of natural materials, structures of wood and rock, reed and

skin to protect them from the elements. Food was in the forests, rivers, lakes, the sea and on the plains; nature was integral to human lifestyle. Hunting and gathering, sowing, growing and harvesting; life was about a continuous interaction with the natural world. Even as humans re-organised their communities from hunter gathering to domesticating animals and growing crops, they still needed a close connection with the natural world to survive.

### Indigenous Culture – Our Culture

Indigenous culture and traditions do not follow materialistic values so common in modern society. It is common among the world's indigenous people to see matter as infused with spirit and neither the land nor its inhabitants can be slotted into a dichotomy between matter and spirit. Ronald Berndt described Aboriginal societies as sacred, where religion was all-pervasive and mytho-ritual expression was intimately associated with everyday social living, with relations between the sexes, with the natural environment and with food collecting and hunting.

It is not surprising that in Australia, Aboriginal people's loss of identity has contributed to the increased level of diagnosed mental health problems because indigenous people understand the need for an intimate and profound connection with the land and nature even if they reside in urban environments.

In most Western societies many generations have passed and many cultures mixed as communities developed and migrated but all humans have ancestral indigenous links. This may not be the intense connection felt by indigenous Australians now with the passage of time diminishing the consecutiveness leaving just a shadow from a past place, but a shadow is perhaps all it needs to be.

### The separation of humans from nature

The middle of the 19<sup>th</sup> century was a time of change for human habitation. Prior to this, with only 7% of the European population living in cities, most people lived a rural subsistence in small communities where contact with the natural world was constant. This changed when the Industrial Revolution introduced technology and machinery to agriculture, largely replacing the work of farm labourers.

In 1800 there were only 23 cities in Europe with a population over 100,000 citizens. By 1900 there were over 135 cities in Europe with over 100,000 citizens. People continued to develop communities distant from the natural world as they congregated in great numbers in these cities. The rapid development of the urban population, poor housing, and changes in manufacturing methods caused an increase in pollution, disease, crime and poverty. The increased density of urban populations had city planners seeking solutions to the problems associated with increasing urbanisation.

Ebenezer Howard's "Tomorrow: A Peaceful Path to Real Reform" (1898) is often described as 'the most famous town planning diagram' ever by proposing the development of what Howard termed "garden cities". Howard's (1898) proposal was to provide towns that addressed "*housing affordability, a sense of community, full employment, a high amenity living environment and access to nature not only with gardens public and private, but set in a garden, that is against a backdrop of green, productive agricultural land, natural features and low density rural institutions*".

Howard was responsible for the world's first mainstream planned suburban town, Leachworth in England, a model that is still widely used throughout the world.

In the United States urban planners such as Olmsted (1822-1903), the founder of American landscape architecture, was instrumental in setting up urban parks because he anticipated a new role for vegetation, to use its ability to relieve the stress of city life. Olmsted was influenced by a physician who had observed that "*the park has added years to the lives of many of the most valued citizens, and many have remarked that it has much increased their working capacity*". These early models and examples show that the development of urban living was quickly followed by a need for housing and community reform to reconnect to a more natural way of living away. This idea of "green space" was seen as a healthier way of living and it included having *access to gardens both private and public*.

### The Nature-Health Connection

The Australian Institute of Health and Welfare describe depressive disorders as the most disabling illnesses in Australia. In the 2004-2005 Australian Bureau of

Statistics National Health Survey nearly 1,052,600 Australians reported they had such a problem. It was reported in the Medical Journal of Australia that these disorders contribute to premature death by suicide, injury, cardiovascular disease and other health problems.

There is increasing evidence that “green space” in human living environments may offer some of the benefits provided by nature. Deakin University researcher, Associate Professor Mardie Townsend in *“Feel Blue? Touch Green? Participation in forest/woodland management as a treatment for depression”* refers to a number of ecopsychologists who assert that many psychological and physical afflictions are due to loss of contact with nature, and that exposure to nature can have positive benefits.

Researchers have also found that there were a number of benefits in introducing plants to the workplace. When all variables were taken into consideration the participants working in an environment that included plants were more productive, less stressed, had lower blood pressure and were more attentive.

Another group of researchers in the US found that contact with nature has an impact on alleviating or moderating the effects of Attention Deficit Disorder (ADD) in children. Their study provided evidence that attention deficit symptoms are more manageable after activities in green settings than after activities in other settings. And the greener a child’s everyday environment, the more manageable their deficit symptoms are in general.

An extensive study by the University of New South Wales found a strong link between regular gardening and the delay of the onset of dementia. In their longitudinal study of the elderly population of the City of Dubbo, New South Wales, *Lifestyle factors and risk of dementia: Dubbo Study of the elderly*. This study found that gardening had one of the most positive results for lowering the risk of the onset of dementia in that population. This longitudinal cohort study followed 2805 men and women aged 60 years or older living in the community and initially free of cognitive impairment for 16 years.

There is significant evidence that “green” environments have a role to play in preventative health. Green environments also have a regenerative affect on those who are recovering from illness. However the most significant reason to embrace the development of green environments is for the mental health benefits provided by such environments. The world evidence not only strongly supports the value of

“green” environments as a mental health intervention but also as a preventative measure. It is also noted that “green” environments significantly increase the mental agility of adults and children in most circumstances.

#### Current research in Victoria

The Executive Officer of the Kevin Heinze Centre is currently completing a PhD research project through Deakin University that supports the view that “green” environments assist the wellbeing of humans in many different situations. This study has involved key people with expertise who are part of “green” activities or in “green” environments including those working in hospitals, community organisations, schools, media and tertiary education. This study is largely about the therapeutic value of green environments and has been conducted in Victoria with a Victorian focus. The following dot points are based on comments by participants in the study as it stands to date. It will be completed in 2012.

Although it is not possible to put all of the findings of this study into this submission the following headings and dot points could be considered the views of the 38 experts and emerging practitioners who took part in this study.

#### *The benefits for children in school based and community environment and garden programs:*

- *Provides positive changes in student behaviour*
- *Children are generally more respectful, compliant, calm and focused*
- *Provides a sense of achievement, self worth and dignity*
- *Has enhanced the practical and social skills of marginalised children*
- *Minimised anti social behaviour*
- *Children can develop a positive relationship with the earth*
- *Children are better able to control their emotions*

#### *Human activities in the environments of parks provide the following benefits:*

- *Can reengage people back into nature*
- *Provides social engagement amongst communities*
- *Has an overall positive effect on the social cohesion*

- *Those in wilderness programs learn to greater control their lives and emotions and better manage their lives.*
- *Provides enhanced sense of calmness and happiness for most people*

*The role of the environment in health and rehabilitation including holistic treatment of chronic health conditions.*

- *healing, health or well being outcomes are more likely to occur in a natural environment.*
- *The environment is a conduit to psychological wellbeing*
- *This helps people emotionally cope and allows the person to focus on getting well*
- *makes people relaxed and comfortable and helps people get away from their day to day "busyness, worries and concerns"*
- *People are more confident with their particular health issue*
- *Gardens in healing environments provided normalisation for patients and participants and is a conduit to healing*
- *Patients willingly return for more treatment or therapy and are comfortable doing so because the environment is less threatening.*
- *Gardens provide a very positive feeling in what is often a stressful environment of hospital.*

*Social benefits provided by natural environments. This includes people with disabilities, older people, people with brain function disorders or mental illness:*

- *reduce the sense of isolation*
- *people in a calm and natural environment are kinder to each other communicate better and make friends more readily*
- *increases the health outcome*
- *draws people together and allows for natural interaction*
- *opportunity for shared experiences*
- *moderated the loss*
- *life affirming*
- *essential as a health intervention*
- *feeling good about oneself*



- *removes some cultural barriers as gardens are seen by practitioners as sharing spaces.*

The outcome of this is the need to be very aware of the community benefits of green space, parks, gardens and associated activities in human habitats. There is also an economic benefit when productivity increases are calculated and health outcomes improve. The worldwide evidence is that green is good. This is not a political agenda or a greenies point of view; it is backed up by international research over time across nations, nationalities and cultures. The use of green space for the benefit of humans is widespread in many countries; however the uptake in Australia is well behind others.

#### What is needed?

- A planned approach to greening all environments with those less green receiving priority.
- Encourage all schools to provide green areas. Maximise the green space in schools.
- Encourage business to green their environments. Both new and existing factory and industrial areas should make green space available.
- Parents should be encouraged to grow gardens with their children.
- Developers should provide green space in apartment developments.
- Offices should be encouraged to have plants both inside and where practical outside.
- Areas of the city that are not green should be developed with green space. This should include permanent "mini" parks and temporary greenspace on vacant land.
- Trees should be looked on as assets to streetscapes and should be introduced as widely as possible. Trees should be grown for their street suitability.
- Where possible roof gardens should be developed, not only for the moderation of the environment but for city workers to access. This should not be the highest priority; this is expensive and requires a specialist approach.

- Community park space people can not only use for recreation but also to do hands on activities.
- Community gardens should not only be in large allocated areas but small neighbourhood community gardens should be developed and encouraged.
- Have an opportunity for children to have their garden skills recognised in similar way to competitive sports.
- Public facilities such as hospitals, schools, government buildings etc, should be planned and built with green space. This green space should be open and available to the public.

This is an opportunity for Victoria to become the leader in environmental planning by applying current international knowledge to develop quality, sustainable and healthy futures for all adults and children.

## References

- Aldous D. 1998. *Horticulture Therapy in Australia- Moving Towards the New Millennium. Towards a New Millennium in People-Plant Relationships.* Eds Burchett M., Tarran J., & Wood R. International People-Plant Symposium, Sydney 19-22 July 1998.
- Australian Institute of Health and Welfare, 2007. *Incidence and prevalence of chronic diseases.* Retrieved 21 August 2009. Available: [http://www.aihw.gov.au/cdarf/data\\_pages/incidence\\_prevalence/#Depression](http://www.aihw.gov.au/cdarf/data_pages/incidence_prevalence/#Depression)
- Freestone, R. 2008. *From the industrial revolution to sustainability development: the enduring relevance of the peaceful path to real reform?* Retrieved: November 2007. Available: <http://web.mit.edu/dusp/chinaplanning/paper/Freestone%paper.pdf>
- Kellert, S. R., & Wilson, E. O., 1994. *The Biophilia Hypothesis.* Shearwater Books, Island Press, Washington D.C.
- Kellert, S. R., 1997. *Kinship to Mastery: Biophilia in Human Evolution and Development.* Island Press, Washington D.C.

Kuo F. E., and Sullivan W. C., 2001. *Environment and Crime in the Inner City. Does Vegetation Reduce Crime?* Environment and Behaviour, Vol. 33 No. 3, May 2001. (pp. 343-367.) Sage Publications.

Lewis C. A., 1996. *Green Nature Human Nature. The Meaning of Plants in Our Lives.* University of Illinois Press. Chicago.

Mackinnon A., Jorm A.F., & Hickie I. B. 2004, *Depression: Reducing the Burden, A National Depression Index for Australia.* Medical Journal of Australia, Supplement.. Medical Journal of Australia, p.181.

Simons, L. A., Simons, J., McCallum, J., & Friedlander, Y. 2006. *Lifestyle factors and risk of dementia: Dubbo Study of the elderly.* Medical Journal of Australia, Volume 184 Number 2, pp. 68-70.

Ranney V., 1990. *The Papers of Frederick Law Olmsted, vol.5: The California Frontier.* p.428. John Hopkins University Press. Baltimore.

Taylor A. F., Kuo F. E. and Sullivan W.C., 2001. *Coping with ADD. The Surprise Connection to Green Play Settings.* Environment and Behavior, Vol. 33 No. 1 January 2001(pp.54-77) Sage Publications.

Townsend, M. 2006. *Feel Blue? Touch Green? Participation in forest/woodland management as a treatment for depression.* Urban Forestry & Urban Greening 5 111-120

Wilson, E.O. 1984. *Biophilia.* Cambridge, Harvard University Press

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(This response uses data and information collected by the author as part of a Deakin University PhD study on therapeutic horticulture.)