

Executive Summary

The need to care for our environment and to create sustainable ways of living is now widely recognised. Environmental education is proposed, in national and international documents, as fundamental to raising peoples' awareness of the environment, and enabling them to take personal and collective action to care for and enhance it. The process of urban sustainability involves a large range of people and issues, and this strategy provides for a comprehensive and co-ordinated approach to environmental education in Hamilton City.

People from both community organisations and Council Units contributed to this strategy, which is in four main sections:

Our Planet, explains the broad concepts that underpin environmental education in Hamilton. Agenda 21⁽¹⁾ provides an overall approach to sustainability, which emphasises global sustainability as a process of enabling communities to participate in local environmental action. The Guiding Principles of Environmental education give a broad framework from which to plan and evaluate an environmental education programme.

Our City identifies the Council's environmental objectives and the main aims and actions of the strategy that will help Council achieve those objectives.

Our Roles proposes seven target groups:

1. Hamilton City Council
2. Formal Education Sector
3. Communities and Community organisations
4. Youth/Rangatahi
5. Maori
6. Business and Industry
7. Planners, Engineers, Designers and Developers.

Each group has a key role to play in environmental education for a sustainable Hamilton City. This section highlights those roles and identifies some of the issues associated with environmental education in each sector.

Our Future proposes actions that Council will take to enable each sector to be effective in environmental education. This includes:

- integrating environmental education between Council Units
- designing an environmental education programme incorporating each sector
- inviting partnerships with outside agencies for sharing resources and skills
- establishing mechanisms for promoting and sharing environmental education initiatives.

Monitoring of the overall progress of the Environmental Education Strategy will be carried out concurrently with Hamilton's Strategic Plan.

Foreword

Hamilton's Strategic Plan⁽²⁾, underpinned by the principles of Agenda 21 (Appendix 1), presents a blueprint for sustainable development in the city over the next 20 years. However, Hamilton City Council recognises that achieving real progress toward sustainable development is only possible if the values, attitudes and behaviours of the Hamilton people are consistent with this goal.

The Council therefore accepts that it has a major role to play in encouraging and empowering others in the community to have positive impacts on the environment. The primary vehicle for achieving this is environmental education.

Environmental education has been happening in the city, in various forms, for some time, through the dedication and perseverance of a number of individuals and collectives, in both the Council and the community. Until now, however, the activities have lacked a co-ordinated approach. This first Environmental Education Strategy ("Learning to Create a Sustainable City") aims to address this situation by establishing an ongoing process by which the Council can work with the community in an active partnership.

"Learning to Create a Sustainable City" supports and compliments the Environment Waikato (Regional Council) Environmental Education Strategy "Learning to Care for our Environment"⁽³⁾, in addressing specifically, the issues associated with urban living in Hamilton.

Hamilton City Council is the first city council in New Zealand to produce an Environmental Education Strategy. We hope that it will set the standard for others to follow.

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Introduction

Environmental education was formally recognised in 1972 in the United Nations Declaration on the Human Environment (UNDHE) which stated that:

“Education and training on environmental problems are vital to the long term success of environmental policies because they are the only means of mobilising an enlightened and responsible population, and of securing the manpower needed for practical action programmes”

Since then, a series of international conferences and reports (Appendix 1)⁽¹⁾ have further developed the concept, and the importance of environmental education in managing and protecting our environment is now widely recognised.

Compared to many other countries, New Zealand still seems a relatively clean and healthy place to live. However, the recent release of “The State of New Zealand’s Environment” report draws together scientific research to confirm that what we see happening on other parts of the planet is also happening here. The report states that in New Zealand:

- our problems of habitat decline and threatened species are “severe and widespread and appear to be getting worse”
- there is evidence in some cities of air quality “exceeding New Zealand guideline limits for protecting human health”
- there is “extensive heavy metal contamination of some harbours” due to transport.
- we contribute “an above average share to the world total of human induced carbon dioxide gas emissions”
- our waste is increasing and “our landfill practices are generally poor, as are our practices and attitudes towards managing hazardous waste”

The Environment 2010 Strategy⁽⁵⁾ seeks to address New Zealand’s increasing environmental concerns and the government has given a commitment to the promotion of environmental education throughout the community.

The government has recognised the need for a national framework to support and further environmental education and a national strategy for environmental education⁽⁶⁾ has recently been produced. Issues relating to environmental education in the formal education sector, as a policy instrument and in relation to Maori culture and values, are of particular interest in central government. A national strategy will give valuable guidance to local authorities in planning environmental education programmes and local environmental education programmes will provide essential information to the national level with regard to focusing national research and funding.

New Zealand has a role to play in the future sustainability of our whole planet, and made a commitment to that role in 1992 by signing Agenda 21. Hamilton City Council formally supported this position in 1993 by declaring Hamilton an Agenda 21 City.

What is Agenda 21?

Think globally act locally

In 1992, the United Nations Conference on Environment and Development was held in Rio de Janeiro and became known as the "Earth Summit". This was the first time that so many countries had come together to focus on the state of our unhealthy planet and attempt to address the development issues that have been so damaging. There was a common commitment by 179 countries to a global plan of action called Agenda 21(Appendix 2).

Two and a half years of negotiation lead to finalising the document at Rio. Agenda 21 is not enforceable by law; it relies on the **moral obligations of Governments and people.**

The focus of Agenda 21 is **sustainable development**. The Brundtland Report defines this as "meeting the needs of the present without compromising the ability of future generations to meet their own needs...." In other words, **not taking more from the planet than we give back.**

Taking into account the environmental, social and economic factors in decision making is crucial to sustainability. Agenda 21 places critical importance on the **value of our natural environment and social well-being**; sustainable development does not sacrifice them to economic development.

Agenda 21 emphasises the importance of involving citizens in the decisions surrounding the development of their environment and highlights specific groups that have important roles to play. Social groups such as **indigenous people, women and youth are recognised as having valuable knowledge and perspectives to contribute.**

Also highlighted is the **critical role that cities play**. Agenda 21 recognises the inequality between developing countries struggling to meet their basic needs through a lack of resources and industrialised countries where "...the consumption patterns of cities are severely stressing the global ecosystem...".

Education, public awareness and training are linked to virtually all areas of Agenda 21 and it is recognised that countries and regions will develop their own priorities according to their specific needs. Agenda 21 proposes national strategies and supporting policies and highlights the contribution that non-governmental organisations can make in designing programmes for environmental education.

Agenda 21 does not have all the answers and certain things were left out, such as the planned chapter on Multinationals and the subject of War and Militarism. However, **Agenda 21 is part of an ongoing process** and the greater the number of people that get involved in that process, the broader the debate can be.

Questioning and discussing the issues is an essential part of the sustainability process and fundamental to environmental education.

What is Environmental Education?

Environmental education

seeks to nurture a sense of concern and personal responsibility that leads to action. It is a process of recognising values, clarifying concepts and gaining skills to become equipped to participate in environmental issues. It is now well accepted that a three-fold approach is needed for effective environmental education; that is, education **about** the environment, **in** the environment and **for the environment**. (Tilbury, D.)⁽⁷⁾

Education *about* the environment is concerned with providing information on the workings of the environment - natural systems and the interactions between humans and the environment. This informative approach is concerned with developing awareness, knowledge and understanding of the environment.

Education *in* the environment is experiential; it is activity based outside the classroom setting and encourages growth through contact with the environment

Education *for* the environment has environmental improvement as a goal. It can develop a sense of responsibility and empower people to feel that they can make a difference by being actively involved.

This three-fold approach has been called education with the **head, hand and heart**. It is education through which people have the opportunity not only to gain a **theoretical understanding of the environment**, but also to **fall in love with nature** and to personally take action to **increase the quality of all life on earth**.

Guiding Principles of Environmental Education

The following educational principles deserve special attention when planning, implementing and evaluating an environmental education programme. Recognition of these principles will contribute to an holistic and effective environmental education process. These principles are based on Victoria Council's Environmental Education Strategy and have also been substantially used in the Environment Waikato environmental education strategy "Learning to Care for Our Environment".

Local and Relevant

Environmental education should be built around the environmental issues and problems that people have in their everyday lives. Each person's local environment is a particularly meaningful and motivating focus for environmental education. People are less likely to understand or become involved in issues that are remote from their own experiences. Education should make the connections between local action and achieving regional, national and global goals.

The Whole Environment

Environmental education should take an ecological approach, which considers issues in the context of the whole system and looks to the total system for solutions. Thus an educational programme of restoring vegetation would look at the impacts of that process on other parts of the environment and use an approach which minimises the use of water, energy, fertilisers, pesticides etc. Environmental education activities should not contribute to one problem while trying to resolve another.

Creative and Critical Thinking

Finding solutions to the complex issues surrounding urban sustainability requires some new ways of thinking. Environmental education should encourage people to constructively question the way things are done. Discussing new ideas and different ways of seeing things can raise a variety of possibilities for consideration.

Individual Contributions

Environmental education should help everyone involved to find the unique and specific contribution that they can make to the sustainability of Hamilton City. Individual lifestyles and behaviour combine to have significant impacts on the urban environment. Impacts can be positive or negative and emphasis should be placed on the realisation that individuals do make a difference especially when combined in collective action. Encouraging individuals to be involved in an issue in their own creative way empowers people to take responsibility and have an ongoing interest in their environment.

Ownership of Projects

Wherever possible, environmental education projects should be “owned” by the participants. This can be crucial to the educational success of the project. Ownership means that the project is largely conceived by the participants and is under their control. Involvement of “outside” specialists (including Hamilton City Council staff) can be beneficial but should occur in a way that does not take ownership away from the participants. Specialists or experts can also have a learning experience in these situations.

An Action Focus

An environmental education programme should include activities that are action based to encourage people to develop an understanding of their urban environment works. Investigating and theorising about how to care for our environment is less effective without trying to put it into practice. Working through the process is educational in itself and seeing the results of that process can be effective in developing environmental understanding, action skills and personal commitment.

A Variety of Approaches

A comprehensive environmental education programme should use a diverse range of educational approaches. People respond differently to different situations and have a variety of learning styles. A range of reinforcing experiences is needed; including action based projects, environmental information and media campaigns. Incorporating as wide a variety as possible ensures many people will be included in the environmental education process.

Consider all Viewpoints

The Hamilton City Council approach should be one of facilitating open-minded dialogue between the different parties involved in environmental issues. Everyone’s perception of their environment is valid and by recognising and respecting people’s differences, a cooperative way of working can be achieved. With a diversity of viewpoints people are more likely to reach innovative solutions for environmental issues and learn from each other.

Basic Understanding

Environmental education should help people to develop a basic understanding of key characteristics such as risk, uncertainty, scale, complexity, diversity and interdependence as they apply to urban sustainability. This provides an important foundation when forming opinions on environmental issues. For example, it helps people appreciate human limitations in regard to the ability to foresee, detect and counteract undesirable environmental change. This in turn helps people to understand why Hamilton City Council's policies may include precautionary approaches when dealing with risk or uncertainty.

Setting an Example

Environmental education should encourage as many people as possible to take action in a way that sets a positive example for others.

People are strongly influenced by what others are doing around them. Friends, acquaintances, organisations and fictional television characters all teach through the way they behave. One of the major focuses of this strategy is to encourage people and organisations (including the Hamilton City Council) to be role models for others to learn from.

Social Justice

Environmental education should operate in accordance with just social principles. Environmental education processes should be consistent with, and reinforce, community aspirations concerning equity within and across generations, and provide access for people of all gender, race, age and ability.

Working Together

Environmental education programmes need to draw together different people and organisations so that skills, knowledge and workload can be shared. Collaboration between different disciplines and sectors of society is necessary for addressing issues of sustainability, which integrate environmental issues with social and economic factors.

Experiencing Nature

Environmental education programmes should include activities that bring people into close contact with nature. In an urban environment it is easy for people to forget their connection with the natural world and to behave as if they are separate from it and dominant over it. Spending time in nature helps to foster in people, a deeper appreciation of their interconnection with the natural world, as well as an understanding of their ultimate dependence on it.

The Main Components of Environmental Education

An holistic approach to environmental education aims for positive changes in our physical environment. A threefold approach to education **in, for and about** the environment, guided by the preceding principles aims to help people acquire:

Knowledge – and basic understanding about the environment and human interaction with it.

Skills – to participate effectively in decision-making that affects the environment.

Awareness – and sensitivity to the whole environment.

Attitudes and values – of concern and motivation to care for the environment.

Participation – the means and confidence to be actively involved in resolving environmental issues

Hamilton City Council's Involvement in Environmental Education

Environmental Education for a Sustainable City

The mission statement of the Hamilton City Council is:

“To work in partnership with the people of Hamilton to meet the needs of the community, by providing quality services and sustainably managing the city's natural and physical environment according to the principles of Agenda 21”.

Environmental education is a fundamental part of the Hamilton City Council's work **to create a sustainable city**, for the well-being of all Hamilton citizens, now and in the future.

Council manages the city by integrating the social, economic and environmental needs of our community. Council recognises that a sustainable city is not a product or an end point but a creative process that involves all people. It is about the things that people do in every day life; it is a way of being.

Environmental education is essential in raising people's awareness to environmental issues and in enabling them to take action to create sustainable ways to live. A comprehensive environmental education programme offers opportunities not just for people to reduce their impact on the environment, but to be creatively involved in the development of their city.

Everyday in our city we consume air, water, power, food, materials that make roads, buildings, pipes, packaging, consumer goods and we produce back into the environment heat, sewage, organic and inorganic material, stormwater, carbon dioxide and other gases.

Although Hamilton has a geographic area of 9400 hectares it takes 42 times that amount of land to produce the resources that we use and assimilate the wastes that we produce.

(Based on the national average reported in the Issues paper, 'Management of the urban environment – an overview investigation' by the Office of the Parliamentary Commissioner for the Environment Feb 1998)⁽⁹⁾⁽¹⁰⁾

Advancing Council's Objectives

Council has a number of broad objectives that are part of the overall Council mission. The main aims and actions of the Environmental Education Strategy, identified in the next section, will significantly contribute to the achievement of the following Council objectives.

- **Commitment to the Principles of Agenda 21.** Environmental education seeks to involve citizens in the planning and decision making involved in the sustainable development of their environment.
- **Actioning Hamilton's Strategic Plan.** Hamilton people have identified 16 Visions for the health and well-being of their city. Environmental education enables people to make sustainable choices in the development of Hamilton.
- **Implementation of Council plans and policies.** Some plans (such as the Waste Management Plan, the Green Network Strategy and the Environmental Policy) explicitly identify environmental education as an important mechanism for achieving their objectives. Environmental education also enables people to be more aware of the environmental issues concerning Council's other plans and policies.
- **Fulfilling legislative requirements.** Environmental education can enable people to take personal responsibility for their own environment, which can significantly help Council to meet its Resource Management obligations.
- **Achievement of Quality goals.** Council is adopting a strong quality and customer focus. Council customers are people currently living in Hamilton, as well as future generations. Environmental education creates an awareness of the issues and the sustainable options available.

Main Aims and Actions of the Environmental Education Strategy

The purpose of this strategy is to increase the effectiveness of environmental education in the sustainable development of Hamilton, in a coordinated and cost-effective way. The Strategy provides a framework for building on existing successful initiatives, coordinating with other agencies, linking with complementary programmes, and creating new initiatives to fill existing gaps.

Aims

The following broad aims of the Environmental Education Strategy are fundamental to achieving Council's environmental objectives and to creating a sustainable Hamilton City.

1. **To increase the number and diversity of people and organisations involved in:**
 - environmental education initiatives
 - environmental improvement projects
 - the planning and decision-making process in Hamilton City.
2. **To facilitate the sharing of ideas and resources** and collaborate with other agencies for a more effective and cost-effective environmental education programme.
3. **To facilitate specific sectors of the Hamilton community** to play effective roles in environmental education.
4. **To recognise the Maori perspective on the environment** as playing a key role in environmental education, and to develop an environmental education programme that incorporates cultural and spiritual values that are meaningful for Maori.
5. **To support and encourage the integration of environmental education into the New Zealand Education Curriculum** and into the organisation and operation of schools.
6. **To increase the number and diversity of people skilled in environmental education**, and participating in environmental education in Hamilton City.
7. **To give rise to flexible environmental education process** that Hamilton people can contribute to and adapt over time.

Actions

1. **Establish an internal environmental education working group** that meets regularly and comprises representatives from appropriate Council units to:
 - ◆ review existing environmental education initiatives being delivered by Council
 - ◆ investigate opportunities for the integration of existing initiatives
 - ◆ make recommendations for inclusion in an Environmental Education Programme
 - ◆ investigate the role of each unit in the Environmental Education Programme
 - ◆ have an ongoing role in the Environmental Education Programme.

2. **Design and implement an Environmental Education Programme that includes:**
 - ◆ sections specific to internal and external target groups
 - ◆ a range of delivery mechanisms such as seminars, workshops, fact sheets, interdisciplinary projects
 - ◆ partnerships with other organisations which will deliver specific parts of the programme
 - ◆ identifying necessary resources
 - ◆ mechanisms to review the effectiveness of the programme
 - ◆ a timeframe prioritising the various parts of the programme.

3. **Design and implement a feedback and promotion process** that helps environmental education techniques become more effective and reach a wider audience through:
 - ◆ documentation of projects for information and display
 - ◆ an evaluation process to measure progress
 - ◆ effective use of in-house and external media opportunities
 - ◆ association with existing or new networks.

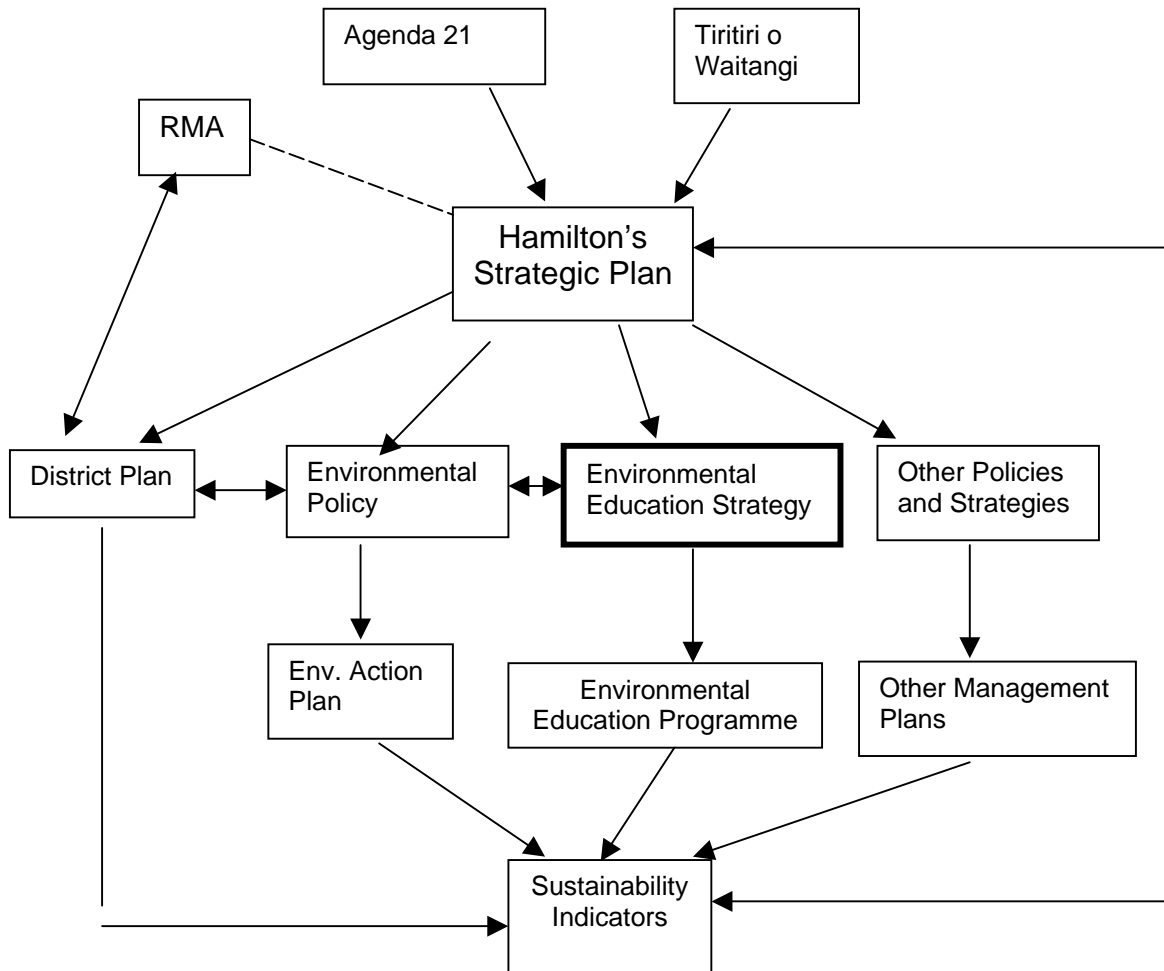
The Policy Context of Environmental Education

Environmental education in Hamilton City operates within a framework of internal and external Plans, Policies and Strategies, spanning the local to the international level. Complementing these other documents increases the effectiveness of environmental education locally. This framework also provides opportunities for Hamilton City Council to influence environmental education policy at a national level and to contribute to the environmental education network internationally.

The following documents influence the Hamilton City Council Environmental Education Strategy and Programme

- | | |
|---------------|---|
| International | <p>Agenda 21 - Chapter 36 makes the recommendation for Education, Training and Public Awareness.</p> <p>Tbilisi Declaration - fundamental principles of environmental education.</p> |
| National | <p>The Treaty of Waitangi - guides the partnership between Council and Maori.</p> <p>Resource Management Act - provides the legislative framework for sustainable resource management. Section 32 provides opportunities for Council to use education to achieve sustainable resource management goals.</p> <p>Environment 2010 Strategy - provides the government's vision, principles and goals for the environment and calls for environmental education to encourage individual responsibility.</p> <p>Learning to Care for our Environment - is a national strategy for environmental education.</p> |
| Regional | <p>Regional Policy Statement - identifies environmental education as being one of the five main ways of achieving the management of natural and physical resources in the region.</p> <p>Learning to Care for our Environment - Environment Waikato's Preliminary Implementation Strategy for Environmental Education.</p> |
| Local | <p>Hamilton's Strategic Plan - sets out the 16 Visions of a sustainable future for Hamilton City and identifies 26 Outcomes specifically related to environmental education. (Appendix 3)</p> <p>Hamilton City Council Environmental Policy - identifies seven key environmental areas to be addressed through education, consultation and the promotion of community participation in environmental decision making.</p> |

Links between the Environmental Education Strategy and other Council documents



Environmental Issues to Address

People from community groups and Council Units identified a number of environmental issues that they see as important in an environmental education programme, for the sustainability of Hamilton City.

Agenda 21 - what is it and what does it mean for us in Hamilton?

Water, land, air - how we use, affect and look after our natural resources. Sustainable development as it relates to rivers, streams, wetlands, gullies and conservation in the Hamilton City environment.

Housing - recognising links between housing and the environment, including planning, design, construction, use and disposal.

Energy - production and usage including household and transport. Sustainable alternatives.

Waste - how to reduce, reuse and recycle and what facilities are available.

Heritage - awareness and understanding of the value of Hamilton's heritage and the place of heritage in a sustainable environment.

Tangata Whenua perspective - of the environment and environmental issues.

Accounting - the inclusion of environmental costs and benefits in the economic equation.

Benefits - raising awareness that environmental education and working towards a sustainable environment brings benefits to health, safety, global warming, ozone, life-long learning and economics.

These issues are consistent with the categories stated in the Hamilton City Council Environmental Policy, which identifies seven main areas that Council needs to address.

Environmental Protection and Enhancement, Biodiversity, Wise use of energy, Sustainable Use of Natural Resources, Waste reduction, Environmental Management, Staff Training.

Target Groups and Sectors of Hamilton City

Hamilton City is made up of a diverse range of people and groups. In developing an Environmental Education Programme the aim would be to follow a process that includes everyone and this is a significant challenge. This section identifies groups in Hamilton that will be the main targets of the Council's Environmental Education Programme. These groups are identified as having particular roles to play in environmental education.

Environmental education is a dynamic dialogue between many different sectors and organisations all teaching and also learning from each other. The Hamilton City Council's Environmental Education Programme will focus on partnerships that enable and support specific sectors toward sustainable practices and help them to maximise their environmental education roles.

People may identify their roles with their jobs, but everyone is also a member of the Hamilton community and of a neighbourhood. Each person has a role to play in the life of the city and, therefore, everyone is a teacher by the very things that they do - by what they consume, their household practices, their support (or not) of organisations and their involvement in the city's development. Although this strategy identifies sectors and groups, changes come about through individuals' behaviour. Each of us can be a positive role model by considering the implications of our actions, the alternatives, and having an understanding of the values that underlie what we do.

Issues

- ◆ Environmental concerns are still seen as relatively minor by a large number of people.
- ◆ There is a lack of awareness of how people's own actions affect their local environment and the whole city.
- ◆ People want actions that fit into their day-to-day lives and become frustrated when 'being green' is too hard.
- ◆ Fashion, and media portrayal of the fashionable lifestyle, has a substantial influence on the practices and products that people use.

1. Hamilton City Council

Clarifying the role of Council is crucial to the success of an environmental education programme. The Environmental Education Strategy working groups have identified the following key elements in Council's role.

The Council's role in environmental education is to:

- **see the big picture** and how things interconnect. To know the causes and effects of certain activities and the possible alternatives.
- **lead by example** and educate by being a best practice model through organisation, operation and interaction with the community.
- **facilitate and co-ordinate** by strengthening the people network. Through regular interaction with existing and new partners, encourage the sharing of environmental education resources and ideas.
- **support and promote** environmental education through incentives, training and resources. Careful and co-ordinated design and production of Council documents and marketing material can promote Council's Agenda 21 and environmental philosophy in an effective and educational way.
- **provide facilities** that enable people to easily practice environmentally sound behaviour.

For the Council organisation to be working toward the common mission, staff and elected representatives should have knowledge and understanding of the Council's commitment to Agenda 21 and be able to see the relevance of it to their work. The customer focus that Council has adopted requires staff to present to their customers the issues and options available. Council Units have identified a number of environmental education initiatives that their Units need to be addressing (appendix 5). This places staff members in a teaching role, and therefore environmental education of staff is necessary.

Issues

- ◆ There is a lack of knowledge amongst staff about Council's commitment to Agenda 21 and sustainability.
- ◆ Environmental education being carried out by Council Units is ad hoc and does not reflect the overall concept of sustainability.

2. Formal Education Sector

This sector includes Teacher Training institutions, Tertiary, Secondary, Primary, Kohanga Reo and other formal teaching institutions. It is a large and diverse sector but there are opportunities within all areas to provide an holistic environmental learning experience for students. Raising awareness, gaining knowledge and having experience in environmental issues, can happen in the teaching process and be reinforced through environmentally responsible practices in the day-to-day workings of the organisation.

Learning institutions can:

- incorporate an environmental component into every subject to provide a variety of perspectives about the environment
- create programmes that integrate a range of disciplines to focus on an environmental issue
- raise students' awareness to opportunities for working in the environment.

The NZ curriculum framework provides environmental education opportunities in some subjects and a flexible framework to adapt to locally relevant programmes.

The Hamilton City Council EnviroSchools Programme, which was piloted in three schools in 1994, is now being established in other schools. EnviroSchools supports schools to infuse environmental education into the day-to-day teaching activities, operation and organisation of school life. Involvement of students, teachers, boards of Trustees and the wider school community is necessary for this to be effective and sustainable. Council support through resources, promotion and co-ordination is necessary.

Issues

- ◆ There are a lack of teachers trained in environmental education.
- ◆ Schools have different needs and different degrees of involvement in environmental education. This makes an overall programme difficult since each school has its own relevant starting point.
- ◆ Without integrated programmes environmental education is an extra time commitment for teachers and an extra subject to fit into an already crowded teaching curriculum.
- ◆ There is a lack of knowledge about how the aims of environmental education can be practically integrated across the curriculum.

3. Communities and Community Organisations

There is a range of different groups that people in a community identify with. This sector focuses on neighbourhoods and the groups that live there such as older people, families, youth, church, ethnic and other groups. Each group has a unique perspective on the environment and valuable experience to contribute to their neighbourhood. Community and neighbourhood groups can play an important role in environmental education by:

- drawing public attention to environmental concerns and facilitating local action
- creating community models that become ongoing educational mechanisms and increase the well-being of the community.
- keeping each other informed and involved in the sustainable development of their communities.

Issues

- ◆ There is still a lack of awareness about how people can participate in the decision making process and take action in their local communities.

4. Youth/Rangatahi

Youth/Rangatahi are a part of the community and neighbourhood sector, but they have also been highlighted as a specific group with key concerns in the areas of Education, Training and Employment, and the Environment (Youth Policy 1998). The Hamilton City Council Youth/Rangatahi policy defines youth as being all young people between the ages of 11 and 25 years. Youth/Rangatahi role models are an essential part of environmental education. Youth/Rangatahi who are actively involved in the decision-making and sustainable development of their city not only influence their peers, but encourage family members and the wider community to take responsibility for their environment.

Youthzone is a focus for youth resources and youth workers and a place where youth can go to meet and find support and information. This is an important point of contact for environmental education initiatives.

Issues

- ◆ Youth/Rangatahi are a diverse range of people with needs and interests that differ through the age groups and across cultural and ethnic groups; targeting environmental education to such a widespread group is a challenge.

5. Maori

The Hamilton City Council has established partnerships with Te Runanga O Kirikiriroa and Nga Mana Toopu, and works in close consultation with these groups. Council recognises that traditional Maori knowledge and perspectives on the environment are essential to an holistic environmental education programme.

Issues

- ◆ There is a lack of educational material incorporating Maori spiritual and cultural perspectives on the environment
- ◆ There is a lack of awareness about Treaty of Waitangi issues as they relate to the environment

6. Business and Industry

Industries and businesses can make a positive contribution to a dynamic and vibrant city; they also have wide ranging impacts on the environment. The Resource Management Act (1991), regulates the activities of resource users whose activities have a significant effect on the environment. Education can compliment legislation by encouraging resource users to achieve more than the “bottom line” and avoid the need for regulatory measures.

Industries and businesses that adopt environmentally responsible attitudes and practices make an important contribution to environmental education, setting a good example to employees, other companies and the public. Environmentally conscious companies look at the life cycle of their products and use materials and processes that minimise the use of resources and pollution.

The Waikato Environmental Business Network (WEBN) provides a forum for Waikato businesses to improve their environmental performance. WEBN provides educational seminars and programmes as well as a regular newsletter.

Issues

- ◆ There is still a lack of awareness amongst businesses about the benefits of Environmental Management Systems, cleaner productions, waste management and other environmentally sound practices.

7. City Planners, Engineers, Designers and Developers

“The primary purpose of the built environment is not to “shelter” us from a hostile and unfriendly natural world, but rather enabling us to relate more closely to a natural environment which wants to give us life”. (NZIA Environmental Policy)

The professions that shape our physical city have many opportunities to educate about the interactions between built and natural environments. Environmentally conscious design not only raises people's awareness of appropriate resource use and energy saving, but can bring urban people back into contact with nature. Experiencing a place where the built and the natural are working in harmony can increase our knowledge of, and respect for, the other forms of life that make up our environment.

In the built environment, reducing energy and water consumption, and minimising waste, is most efficiently done at the planning and design stage rather than trying to remedy once buildings are in place.

BRANZ (Building Research Association of New Zealand) has recently developed the Green Home Scheme which accredits designers to assess their designs and receive a certificate showing how environmentally friendly a new house design is. In partnership with Council this could provide a useful base to educate home builders, developers and designers.

Issues

- ◆ There is a lack of awareness about the importance of urban design in developing the city as a whole ecological system.
- ◆ There is a lack of awareness about the importance of the initial design phase that specifies the systems and materials that make up our buildings.
- ◆ It is difficult for homebuilders and designers to find concise information about alternative design solutions.

Co-ordination

The field of environmental education is evolving rapidly. A planned, co-ordinated approach is needed both within the Hamilton City Council and between existing agencies, to be cost effective and make the best use of resources.

A co-ordinated approach allows for the sharing of ideas and resources. People can see the large variety of environmental education programmes and projects happening with the potential of linking together where it is beneficial, and looking at what is working well with the view to advancing those processes. It can also assist in identifying gaps in current activities and setting priorities for further environmental initiatives.

These opportunities are relevant to the internal Units of the Council organisation and externally to the communities and organisations in Hamilton.

Internal co-ordination

Currently within the Council organisation, Units are involved in a range of environmental education initiatives in the form of written material, personal contact with the public and the facilitation of community involvement (appendix 4). At present this is ad hoc, lacking co-ordination, quality control and an overall consistency and focus. There would be benefits from Units working together, not only to co-ordinate material but also to find opportunities for integrating subject matter to educate in a more holistic way. An environmental education working group would do much to focus projects and resources where they can be most effective.

External Co-ordination

With such a large number of organisations and individuals playing a part in environmental education, it is a significant challenge to have a coordinated approach. By finding out who is doing what in Hamilton, and raising the profile of environmental education initiatives, more people can become involved in the planning of complimentary and self-sustaining programmes.

Hamilton City Council can form valuable partnerships with Government and non-governmental organisations involved in environmental and/or community education. This networking needs to happen at the national and local levels. Currently the Hamilton City Council works with Environment Waikato on a number of environmental education related projects. It is extremely beneficial for environmental education initiatives to consider the regional environmental issues that the urban environment is a part of, and to involve the expertise of the Regional Council in these areas. Co-ordination with other government agencies, environmental organisations and educational institutions is also seen as critical.

The National Strategy for Environmental Education has recently been prepared by the Ministry for the Environment. It will support local and regional environmental education strategies and provide a framework to guide the comprehensive long-term approach required nationally. Our local Environmental Education Programme will contribute to the National Strategy by gathering information on environmental projects and directing Government towards specific areas within environmental education that need research and support. The New Zealand Association for Environmental Education is a valuable network of environmental educators and the Waikato has recently established a regional branch. This will help Council identify other environmental educators and initiatives and be in contact with a large network of people and organisations involved in environmental education

Evaluation and Review

The effectiveness of the Environmental Education Strategy and Programme are dependent upon being able to identify and implement improvements to the Strategy. However, there are significant challenges in evaluating the success of environmental education.

An improvement in attitudes and behaviour is the main indication of successful environmental education. These changes may not become apparent straight away. Especially in environmental education of children, some aspects of learning may not be expressed until lifestyle choices are made as adults.

Environmental education is one of a range of mechanisms designed to achieve an environmental outcome, and as such, should be an integral part of the monitoring associated with Council's resource management policies and plans.

The Environmental Education Programme will be focused on the achievement of the 16 Visions identified in Hamilton's Strategic Plan. Currently, a range of sustainability indicators is being designed that will measure Hamilton's progress in relation to these Visions, giving the Environmental Education Programme some physical, social and economic indicators. This is in the long term.

Given that environmental outcomes are affected by a range of mechanisms, and may not be apparent over the short-term, the performance measures for the Environmental Education Programme will relate to the educational and other outcomes. Each environmental education project within the Programme will include statements about specific project outcomes that would indicate that the project had been successful. Some of these indicators might be:

- a given percentage of the target audience reached
- number of requests for further information
- number of people involved in projects (environmental and environmental education)
- amount and type of educational material produced
- attitudinal change as assessed by surveys, self reports, documented quotes from target group members
- evaluation of learning outcomes from workshops/seminars etc
- number and diversity of Hamilton organisations involved in environmental education activities e.g. the number of Enviroschools established
- feedback about Hamilton City Council's relationship with the various sectors and groups
- number of community groups and networks established
- feedback from this document, including numbers of people involved in the networking and communication opportunities, such as the Green Map, Green Who's Who Guide to Hamilton, Environmental Education Exhibition.

Timeframe

ACTION	WHO	WHEN
Establish an internal Environmental Education Working Group	Strategic, WDR, Community Assets, Building Control, Zoo, Environmental Health, Planning Guidance	1998
Design a 3 year Environmental Education Programme - in conjunction with Environmental Action Plan	Sustainable Environment Team (S.E.T.) with other Units and external organisations	Produce Plan November 1998
Implement Environmental Education Programme for each Sector:	S.E.T. in partnership with relevant Council Units and external organisations	
♦ 1. Council	S.E.T.	Begin 1999 - then ongoing through the induction process and on recommendation from Council EE Working Group.
♦ 2. Formal Education	S.E.T. - Teacher Fellow (1999), WDR, KHB, EW	Setting up EnviroSchools Programme 1998 - introduce into six schools in 1999 then expand programme in subsequent years.
♦ 3. Communities and Community Organisations	S.E.T., Community Groups and organisations	One initiative begun – continue and develop
♦ 4. Youth	S.E.T., Community Development Unit, Community Groups	Begin 1999
♦ 5. Maori	S.E.T., Te Runanga O Kirikiriroa, Nga Mana Toopu O Kirikiriroa	Begin 1999

Our Future

◆ 6. Business and Industry	Strategic, S.E.T., Environmental Health Unit, Environmental Business Network (EBN), Environment Waikato	Initiatives underway – continue and develop
◆ 7. City planners, Engineers Designers and Developers	S.E.T., Building Control Unit, Professional Institutes and organisations	Begin 1999
Evaluate Environmental Education Programme	S.E.T., Environmental Education Working Group	Annually
Review Environmental Education Strategy	Strategic, community groups, other council units	Every 3 years with the review of the Strategic Plan and Environmental Policy

Sharing Stories

For environmental education to develop and grow in Hamilton we need an ongoing dialogue. We need to share what's happening in environmental education, the successes and the obstacles. You can promote your environmental education initiatives and be part of the growing environmental education network.

What environmental education initiatives you are involved in? How effective they are and what sort of support and development do you think would enable them to become more effective?

Your stories will contribute in these ways:

Have your place on the Green Map – developed in New York the Green Map is now a worldwide network of Green Map cities, encouraging green tourism and promoting sustainable development. Hamilton can be part of that global network by producing a map that shows where all the environmental activities are happening. Things like, recycling initiatives, green buildings, environmental resource centers, enviroschools, wildlife habitats.....you can have your place on the map.

Show your projects to other educators - your initiative will be sent out to everyone in the environmental education network so that they can see what you are doing and make contact with you.

Be in the Green Who's Who Guide to Hamilton - your organisation will go into the next edition of the Green Who's Who Guide to Hamilton, raising public awareness of the growing number of environmental alternatives available. This publication will soon be available from the Hamilton City Council, Hamilton libraries and schools.

Be part of an Environmental Education Exhibition - in November the Festival of the Environment happens. This is a week of environmental activities and projects around the Waikato including an environmental education exhibition. You can open your school or business to the public so that they can experience your project or do a display for the enviro-ed gallery.

Promoting and developing Environmental Education

Name

Organisation

Name or topic of the environmental education project

Objectives of the project

What people/organisations are involved in the project?

What are the main stages of the project?

How will you know when you meet your objectives?

What photos, drawings, sculpture or other visual representations do you have of your project?

Would you like to be involved in the following activities?

Festival of the Environment _ ? Greenmap _ ? Green Whos Who Guide to Hamilton _ ?
Environmental Education exhibition _ ?

What other environmental education activities and networks do you know about (local, national or global) that others may be interested in?

Appendix 1

Key conferences and workshops relating to environmental education (Hooker, V.)

- 1970 International Union for the Conservation of Nature (IUCN) International Workshop on Environmental Education in Nevada – first definition of environmental education.
- 1972 Intergovernmental Conference on the Human Environment – Stockholm
- 1975 Workshop on Environmental Education – Belgrade – Belgrade Charter
- 1977 Intergovernmental Conference on Environmental Education at Tbilisi – Tbilisi Declaration provide the first principles for environmental education
- 1980 World Conservation Strategy (IUCN)
- 1987 World Commission on Environment and Development Report – Our Common Future (Brundtland Report)
- 1991 Caring for the Earth: A Strategy For Sustainable Living, IUCN
- 1992 United Nations Conference on Environment and Development (UNCED) Agenda 21 – Chapter 36 Promoting Education, Public Awareness and Training
- 1992 Conference on environmental education in the Commonwealth
- 1995 Intergovernmental Conference on Environmental Education, England – review of developments since the Belgrade Charter.

Appendix 2

The 27 Principles of Agenda 21

1. Human beings are at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature.
2. States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.
3. The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations.
4. In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it.
5. All States and all people shall co-operate in the essential task of eradicating poverty as an indispensable requirement for sustainable development, in order to decrease the disparities in standards of living and better meet the needs of the majority of the people of the world.
6. The special situation and needs of developing countries, particularly the least developed and those most environmentally vulnerable, shall be given special priority. International actions in the field of environment and development should also address the interests and needs of all countries.
7. States shall co-operate in a spirit of global partnership to conserve, protect and restore the health and integrity of the Earth's ecosystem. In view of the different contributions to global environmental degradation, States have common but differentiated responsibilities. The developed countries acknowledge the responsibility that they bear in the international pursuit of sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command.
8. To achieve sustainable development and a higher quality of life for all people, States should reduce and eliminate unsustainable patterns of production and consumption and promote appropriate demographic policies.
9. States should co-operate to strengthen endogenous capacity-building for sustainable development by improving scientific understanding through exchanges of scientific and technological knowledge, and by enhancing the development, adaptation, diffusion and transfer of technologies, including new and innovative technologies.
10. Environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have

appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.

11. States shall enact effective environmental legislation. Environmental standards, management objectives and priorities should reflect the environmental and developmental context to which they apply. Standards applied by some countries may be inappropriate and of unwarranted economic and social cost to other countries, in particular developing countries.
12. States should co-operate to promote a supportive and open international ecosystem that would lead to economic growth and sustainable development in all countries, to better address the problems of environmental degradation. Trade policy measures for environmental purposes should not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade. Unilateral actions to deal with environmental challenges outside the jurisdiction of the importing country should be avoided. Environmental measures addressing transboundary or global environmental problems should, as far as possible, be based on an international consensus.
13. States shall develop national law regarding liability and compensation for the victims of pollution and other environmental damage. States shall also co-operate in an expeditious and more determined manner to develop further international law regarding liability and compensation for adverse effects of environmental damage caused by activities within their jurisdiction or control to areas beyond their jurisdiction.
14. States should effectively co-operate to discourage or prevent the relocation and transfer to other States of any activities and substances that cause severe environmental degradation or are found to be harmful to human health.
15. In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.
16. National authorities should endeavour to promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution, with due regard to the public interest and without distorting international trade and investment.
17. Environmental impact assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority.
18. States shall immediately notify other States of any natural disasters or other emergencies that are likely to produce sudden harmful effects on the environment of those States. Every effort shall be made by the international community to help States so afflicted.

19. States shall provide prior and timely notification and relevant information to potentially affected States on activities that may have a significant adverse transboundary environmental effect and shall consult with those States at an early stage and in good faith.
20. Women have a vital role in environmental management and development. Their full participation is therefore essential to achieve sustainable development.
21. The creativity, ideals and courage of the youth of the world should be mobilized to forge a global partnership in order to achieve sustainable development and ensure a better future for all.
22. Indigenous people and their communities, and other local communities, have a vital role in environmental management and development because of their knowledge and traditional practices. States should recognise and duly support their identity, culture and interests and enable their effective participation in the achievement of sustainable development.
23. The environment and natural resources of people under oppression, domination and occupation shall be protected.
24. Warfare is inherently destructive of sustainable development. States shall therefore respect international law providing protection for the environment in times of armed conflict and co-operate in its further development, as necessary.
25. Peace, development and environmental protection are interdependent and invisible.
26. States shall resolve all their environmental disputes peacefully and by appropriate means in accordance with the Charter of the United Nations.
27. States and people shall co-operate in good faith and in a spirit of partnership in the fulfilment of the principles embodied in this Declaration and in the further development of international law in the field of sustainable development.

Appendix 3

Strategic Plan Outcomes for Hamilton that specifically relate to environmental education

4.0 Environment

4.1 Waikato River, streams, lakes and groundwater

1. The Waikato River and Hamilton's Streams, lakes and groundwater are recognised as living ecosystems and as having significant cultural value for Tangata Whenua
4. The community has pride in and appreciation of the Waikato River and Hamilton's Lakes

4.2 Heritage

4. Widespread public awareness and understanding of Hamilton's heritage and its importance to our everyday lives

4.3 Biodiversity

1. The community understands and appreciates the importance of biodiversity to Hamilton's natural environment

4.4 Public Open Space

5. The ecological value of open space areas is recognised and taken into account in reserves management

4.5 Soil

2. Widespread public awareness of the importance of soils in safeguarding the health and safety of both the environment and people

4.6 Air

4. Alternative sustainable modes to motor vehicles are promoted and supported

4.7 Energy

2. Use of renewable energy sources is promoted and maximised

4.8 Transport

2. Alternative, sustainable transportation modes are encouraged and supported

4.9 Noise

4. Public education on the effects of noise is promoted

4.10 Waste

6. Waste is recognised as a resource and is re-used wherever practicable

5.0 People and Well-being

5.2 Community Involvement in Decision making

1. The community has access to information, is aware of issues and can influence outcomes

5.3 Families, Whanau and Parenting

2. Child focused activities and facilities are promoted, co-ordinated and resourced

5.4 Youth/Rangatahi

2. Youth/Rangatahi are involved in the development, co-ordination and monitoring of programmes/activities, services and facilities to meet their needs
5. A positive learning environment is created for youth/rangatahi through strong partnerships with the education sector, parents, students and the wider community

5.5 Community Facilities, Services and Activities

1. Services and information relevant to the communities needs are provided in local neighbourhoods through co-ordination and participation of appropriate service organisations

5.6 Life-long Learning (Wananga)

1. Education facilities are established and programmes implemented that meet the communities diverse needs
2. Integrated planning and co-ordination exists between education providers and support services
3. Tino Rangatiratanga (education development and implementation by Maori for Maori) is achieved through a range of education opportunities
4. Non-traditional forms of education are recognised and supported
6. Life-long learning programmes are implemented, especially those that are neighbourhood/community initiated

5.7 Healthy and Safe Community

1. An holistic approach to community health and safety issues is adopted, with co-ordination and partnerships encouraged and enhanced

6.0 Leisure, Recreation, Arts, Culture and Sport

6.5 Leisure, Recreation and Sports Facilities

5. Key recreation settings, open space and facilities are developed to reflect the balance between active recreation, passive recreation and environmental goals

7.0 Economic Development

7.1 Economic Base and Information

5. Hamilton's business community accesses market opportunities for environmentally sustainable processes and products, particularly overseas

8.0 City Growth

8.3 Transportation

1. Public awareness and use of alternative transport modes is reducing the community's emphasis on the motor car

8.4 Distribution of Services and Employment

1. The Urban Village concept is encouraged

Appendix 4

Environmental Education Services from Council Units

Council Units have identified their specific customers and the issues, that they believe, the environmental education part of their service needs to address.

Customers within the Target Groups	Council Units	Environmental Education Service Issues to address	Possible Service Delivery Mechanisms
FORMAL EDUCATION - Schools	CAMBU ZOO SET	- awareness and care for the environment – long term	- enviroschools programme - education kit - student environmental newspaper column - citynews
COMMUNITY Residents	CAMBU WDR BC Env Health SET	- reduce, reuse, recycle - stormwater/sewer - protection of gullies - responsibility to city image - noise - fires -	Community newspapers face to face contact
Road Users	RTU	- Slow down in city - Other transport options	
Park users	CAMBU	- Litter, city pride, marketing the good stuff	Signage
YOUTH	Comm. Dev. SET	- Establish environmental youth forum - Facilitate environmental projects	
MAORI Iwi	Corporate	- Strengthen partnership, keep informed	
BUSINESS AND INDUSTRY Contractors	CAMBU WDR SET	- Best practices - Best products	- Enforce Green Purchasing Policy - Include an environmental section in Contract Admin. Course run by Design for engineers running contracts

Appendix

Industry/suppliers and users	PIG WDR SET Env Health	<ul style="list-style-type: none"> - discharges – sewer, noise, air, hazardous sub. - water and energy conservation - reduce, reuse, recycle - responsibility to city image, environmental conscience 	Cleaner production workshops Promote EBN
Registered Premises	Env Health	<ul style="list-style-type: none"> - Discharges -Noise, fires, air, haz subs, incinerators, water 	
Retailers	WDR	<ul style="list-style-type: none"> - Permeable surfaces – eco carparks - Less emphasis on street parking - Packaging/landfill - Street trees 	Promote EBN
Bldg Industry <ul style="list-style-type: none"> - designers - builders - consultants - developers - trades - home owner/builders 	BC SET	<ul style="list-style-type: none"> - Alternative solutions - Sustainable design/materials - Alternative costs - Sources of alternative design, materials, info. 	<ul style="list-style-type: none"> - Workshops - Existing trade and professional magazines - Handouts and brochures - Videos - Seminars new and through existing groups - Face to face
Institutions	Env Health	Incinerators	
CITY PLANNERS DESIGNERS & DEVELOPERS	CAMBU WDR PI.G Streets BC Env Health SET	<p>Sustainable holistic design</p> <ul style="list-style-type: none"> - sensitivity to natural landscape features on site - energy efficient design - building orientation - eating/lighting - building materials/products - natural stormwater systems - continuity of paths/cycleways - discharges 	<ul style="list-style-type: none"> - Reinforce and develop codes of practice - Own industry groups -Best practice seminars - Interdisciplinary workshops - More checks in permit system - Letterbox drop about trees
Other Local Authorities	Strategic	<ul style="list-style-type: none"> - Landfills/city streams and gullies - River/stormwater, protection by good practice - Agenda 21 	
Internal Staff	BC Strategic	<p>Alternative solutions</p> <p>Sustainable design and materials</p> <p>Cost alternatives</p>	

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