

Our Environment

Christchurch City Council's Environmental Newsletter

SEARCH FOR A NEW LANDFILL SITE

Canterbury's only major landfill, at Burwood, is set to close in 2002 when its current resource consents expire. Finding a new site for the 300,000 tonnes of commercial and domestic waste generated in the region has emerged as a major challenge for local authorities, including Christchurch City Council.

City efforts aimed at reducing the amount of waste needing to be landfilled have been very successful. In 1994 the amount of waste produced per person per year was 810 kilograms but the 1999 figure is expected to be 680 kilograms. Even so, Christchurch alone generates around 240,000 tonnes of industrial, commercial and domestic rubbish, which ends up in the landfill.

A decision on the preferred site is expected to be reached in October this year. The period of community consultation and detailed investigation may then take another 12 months before a final decision on whether to proceed with the site can be made,

and resource consents can be considered.

A joint venture company was formed to establish and operate a new regional landfill. Transwaste Canterbury comprises Canterbury Waste Services Ltd (Waste Management New Zealand and EnviroWaste Services Ltd) and the Canterbury Waste Sub-Committee, including landfill participants representing Christchurch, Waimakariri, Banks Peninsula, Hurunui, Selwyn and Ashburton Councils.

Canterbury councils will be able to close existing landfills in the region and replace them with one regional landfill. Thirty have already been closed. Considerable research and effort is going into the selection of the new landfill to ensure that it will be designed, built and operated in accordance with latest landfill technology and engineering practices.

to P2 



The existing Burwood Landfill

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Those involved in its design will also take into account current international standards and regulations.

The new Canterbury regional landfill must be:

- professionally and comprehensively designed, built and operated as a modern, environmentally-secure facility, ensuring minimisation of environmental risk and continuity of service;
- a good neighbour, avoiding future pollution problems;
- reliable under all kinds of conditions, including weather;
- economically viable (after allowing for waste minimisation efforts including recycling) while still providing high quality services and facilities;
- equally accessible and provide for equalised transport costs across Canterbury.

Modern landfills are lined to contain the waste and capped to manage rainwater infiltration and gas emissions. Extensive monitoring systems are put in place to ensure that the landfill operates as designed. Old style dumps or rubbish tips with associated vermin, mud, dust, smells and high contamination risks are no longer permitted.

Before deciding on the landfill option, the Canterbury Waste Joint Standing Committee also looked at incineration, bio-digestion, and neutralisation.

Incineration involves burning the waste. This method is used mostly in Europe and some parts of North America and Asia, where land for landfilling is scarce and costly. New air pollution standards make incineration plants expensive to build and operate. The cost for Canterbury of a suitable plant would be substantially higher. Incineration produces significant amounts of toxic ash and a landfill of even higher standard is still needed to dispose of this. Incineration also works against the success of waste reduction programmes, including recycling, because the plant needs high waste volumes to operate most effectively - the "need to feed the beast" syndrome.

Bio-digestion involves breaking down the organic waste without oxygen, but like composting it still leaves 40 per cent of the waste stream that is inorganic waste needing disposal.

The costs of building and running such a plant would be similar to that of incineration.

Neutralisation is a process which involves burning the waste with clay to produce a building material and generate electricity. It appears that initial trials have not been successful.

The Canterbury Waste Joint Standing Committee concluded that, for this region, controlled landfilling is by far the most cost-effective and environmentally responsible way of disposing of waste, especially as all other methods have leftovers which need a landfill anyway. An extensive public consultation exercise on waste disposal options for Canterbury in early 1997 also supported a controlled landfill.

Guiding principles were developed to help find the most suitable landfill site. These are based on criteria currently being used throughout New Zealand and adapted to Canterbury conditions. They concentrate on:

- effect on the neighbouring area;
- protection of groundwater and surface water quality, since aquifers and rivers are the main sources of water for drinking, irrigation and industry;
- the right type of geology to ensure site stability and to safeguard groundwater;
- identification of sites or areas that are important to Tangata Whenua, and also of areas of environmental, cultural or historical importance.

Other considerations include the vicinity of reserves and national parks, soil types and present land uses, planning zones including housing areas, land ownership and availability of sites. Attention must also be given to natural hazards or flood zones, which may threaten the integrity of the site, the local climate (which may impact on how the site is managed), transport distances, site accessibility and leachate collection and disposal.

A new regional landfill for Canterbury is required to deal with the region's solid waste. As the major contributor to this waste stream, Christchurch City Council is committed to a policy of zero waste to landfill by 2020.

Julie Eyles

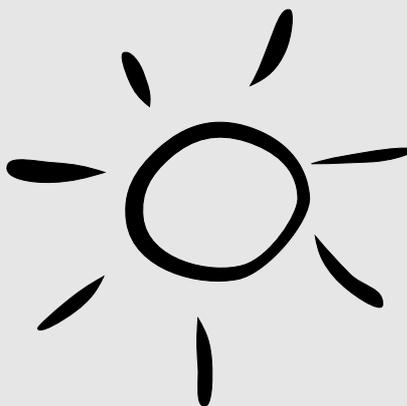
GOOD NEWS FOR OZONE LAYER

International Day for Preservation of the Ozone Layer is marked on 16 October. After repeated warnings about an expanding hole in the ozone layer, for once there is some good news to report.

Estimated global emissions of carbon dioxide that contribute to depletion of the ozone layer and global warming, fell in 1998, the first drop recorded while the world economy was growing.

Global emissions of carbon from the burning of coal, oil and natural gas fell last year by 0.5 per cent to 6,320 million tons, according to the Worldwatch Institute in Washington.

It also reported that the decline in emission occurred while the world economy expanded 2.5 per cent last year, contradicting arguments that any drive to reduce emissions will damage the economy.



The institute attributes the recent drop in emissions partly to improved energy efficiency and falling coal use, spurred by the removal of energy subsidies. Another reason is that much of the recent economic growth has been in information technologies and services, sectors which are not major energy users.

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GREEN FISH ON GRATES STILL A WINNER

The successful green fish on grates programme initiated in the early 1990s is not water under the bridge as far as the City Council is concerned. There still is a need to inform people of the purpose of stormwater grates in the gutters outside their homes and businesses, according to Trades Waste Officer Jim Instone.

Now that existing outlines of the fish are fading the Council is keen that school children revive the programme by painting their own green fish beside stormwater grates. For tips on stencils, paint and how to avoid polluting the drains, teachers or pupils can phone Jim Instone on 371 1369.

Many people think of the drain sump as part of the sewer. They do not realise that anything tipped down the grating actually ends up in their nearest river or stream, not the Bromley Treatment Plant.

A "Green Fish Team" was created about eight years ago, utilising the skills of Taskforce Green workers.

Armed with a metal fish template created by resourceful students

at the Christchurch Polytechnic, and sponsorship from Resene Paints, the team ensured that bright apple green fish appeared

on the sump of every street in Christchurch. The biggest challenge was to spray the template without getting any paint in the guttering.

Green Fish team members also visited schools in the area to inform them of the project, distribute class resources and to enlist their co-operation in caring for grates in their neighbourhoods.

The Council's Trades Waste Team emphasises that the philosophy still goes on. They regularly target "do-it-yourselfers", car washers, garden and roofing sprayers, and anyone else who might not realise that paint, chemicals and soapsuds have no place in our city stormwater system. According to Team Leader Norm Fitt people are getting the message, but it needs to be regularly reinforced through targeted education.

Julie Eyles



CLEANING UP CHRISTCHURCH – AND THE WORLD

Waves of volunteers are set to descend on the City's waterways, beaches, reserves and roads on September 17 and 18 to Clean Up the World – and Christchurch in particular.

Increasing numbers of bottles thrown into the inner city stretch of the Avon River are on the hit list. An area of Lyttelton Harbour is also targeted for a major blitz on litter.

Last year an army of 4,000 volunteers and 76 groups was involved locally in the annual clean up. Organisers from Keep Christchurch Beautiful and Marine Watch predict even more people may turn out this year.

Papanui Warehouse challenged other community organisations within its neighbourhood to come on board for this year's campaign. Jim's Mowing franchise offered to pick up the piles of rubbish collected during the clean up and the City Council's Waste Management Unit said it would also assist with rubbish disposal. The involvement of two major companies The Warehouse Group and Telecom has given the Clean Up the World Campaign a big boost nationally.

The huge voluntary local effort is part of a rapidly growing campaign, which involved an estimated 40 million people from more than 100 countries last year. Australian builder

and sailor Ian Kiernan was responsible for the first large scale Clean Up campaign in 1989, targeting Sydney Harbour. Clean Up Australia is now that country's largest community participation event.



People are constantly being asked to dig deep into their pockets to support worthy community campaigns and charities. Clean Up the World is different because it offers people the opportunity to give time rather than money. A couple of hours effort is all the campaign seeks.

How you can help

There are many ways you can help clean up the world:

- Organise a committee to co-ordinate a clean up in your local area;
- Help on the day by volunteering to participate in other clean up activities;
- Tell your friends, family and community from all over the globe about Clean Up the World;
- Help every day by caring for your local environment and setting an example to others in the community.

For more clean-up information, tap in to the Sydney web site www.cleanuptheworld.org

Kerry Everingham
Environmental Promotion Officer

SOWING SEEDS OF THE PAST

This year's clusters of white cabbage tree flowers looked particularly attractive to nurseryman Joe Cartman.

Charged with finding local, eco-sourced native seeds for Christchurch City Council parks, waterways and reserves, Joe had started to feel increasingly anxious. While scouring the Port Hills during the past three years he had found plenty of cabbage trees and even lots of flowers. No seeds, though, to fill annual orders for about 4000 cabbage trees.

"I think I visited every cabbage tree in the Port Hills," says Joe recalling his frustrating search and dwindling seed stocks. This year though it's business as usual for Joe who is supervisor at the Council's two nurseries at Smith Street and Gardiners Road. He gathered as many seeds as he could lay his hands on just in case there are a few more barren years ahead.

Obtaining the seeds poses its own challenges. Because native varieties planted by the City Council should be from local genetic material uncontaminated by imported strains, Joe gets his seed stock from cabbage trees growing naturally, well away from gardens. That often means scaling rocky outcrops high in the Port Hills, armed with four metre "nippers" to cut the seed-bearing flowers.

During seed quests between December and May, Joe can also be found searching Christchurch's wetlands, sand dunes, river banks and other pockets of native vegetation for seeds to fill orders placed by the City Council's Water Services, Parks and City Streets units. Over 400 native flowering plants

grow wild within Christchurch. Joe says a surprising number of remnants survive in the City but every time he does his rounds one or two more have disappeared.

Berries are "squished", separated in water, dried, then stored in the refrigerator. Raupo seeds are the only really difficult ones to

extract, says Joe. He sprays the fluffy flowers to kill off caterpillars then puts the heads in seed boxes, fluff and all.

Potting begins at the end of September and plants are sent out as soon as they reach the required size. Flax (*Phormium tenax*) is the most sought after species, with orders for up to 12,000 plants each year.

Although there is a general Council preference for native, locally-sourced plants, Joe also grows many North island natives, usually for their colour or other special characteristics. Most are grown in containers at the two and a half hectare Smith Street nursery. Small orders and most exotic plants are contracted out

because of space constraints. Larger species such as red oaks, ash, beech and liquidambas are grown in open ground at the Council's 11 ha Gardiners Road nursery.

Joe has noticed a radical change in planting philosophy during his 24 years working for the Council. Initially most plants grown were exotics. These days more than half are native, earmarked for ongoing planting programmes, particularly in Christchurch 650 parks and reserves and along the city's 400 km of waterways. Wairarapa, Nottingham and Avoca Valley streams and Sheldon Park are this season's major planting sites.

At the same time, extensive restoration planting is being carried out by the Department of Conservation, Turning Point 2000 and other project groups. The Council is also encouraging residents to incorporate native plants in landscaping plans. Useful advice includes a Streamside Planting Guide, explaining what to plant and how to maintain native plants along freshwater streams in Christchurch.



Joe Cartman among young cabbage trees grown from carefully collected seeds

It was developed as part of the Council-driven waterway enhancement programme which aims to:

- protect natural areas
- restore native habitat
- create green linkages
- restore waterways for people's enjoyment and sense of history
- enhance ecosystems for birds, fish, lizards and insects

The number of native birds on the Avon River has almost doubled since 1993, according to a survey by ornithologist Andrew Crossland. Restoration planting and better management of the City's waterways and wetlands has been credited for the increase. Ecology, landscape, culture, heritage, recreation and drainage are the six values which underpin the Council's management approach.

The Council has a mandate not only to protect threatened remnants of our biodiversity but to enhance, expand and restore them to mitigate past effects of serious losses, says botanist Dr Colin Meurk, who works for the City Council and Landcare Research. Wetland restoration and enhancement is a logical focus for Christchurch, mostly flat and, in pre-European times, covered with large areas of swamp.

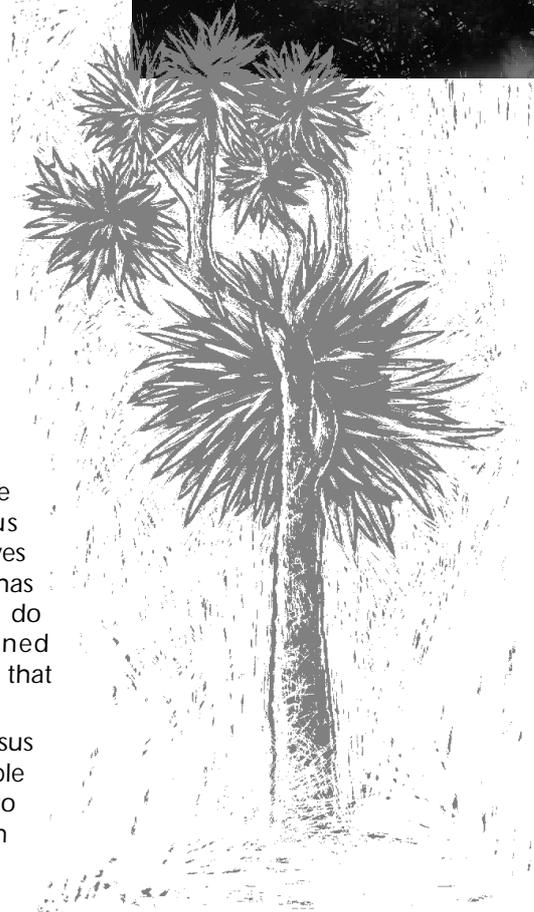
Many city streams and riverbanks have been transformed by attractive native planting, much more sustainable ecologically and economically than the boarded or concrete sides that used to flank many of them. Parks have also been primary targets for restoration planting. Selection of other sites is often fortuitous, depending on what land is available at the time, says Colin Meurk.

He is not deterred by sometimes vehement criticism that Christchurch is undermining its Garden city image. "The moment you're involved in changing the landscape in any way you get opposition."

While appreciating the English image, Colin Meurk says plants are much more appealing in their own natural environment than "our attempts to create a pale imitation of the real thing". Worse, exotics such as crack willow or yellow flag iris spread quickly, crowding out local species and upsetting the local ecological balance.

"If we want to do something unique we should be making our indigenous vegetation much more visible to ourselves and our visitors," he says. "Every place has an obligation to look after things that do not occur elsewhere. We've signed international conventions guaranteeing that we will do so."

Joe Cartman sidesteps the natives versus exotics debate, saying the two profitable nursery operations he supervises grow to order. However he believes there's room for both natives and exotics. "It's a



matter of what's appropriate for the site." Joe also supports the emphasis on locally-sourced native plants. After all they are proven survivors, able to cope with Christchurch's cold winters and dry summers.

He finds his job satisfying. "It's quite a dramatic thing putting 230,000 plants out there in the City every year. What I'm doing now is going to have a marked impact. It's going to be there long after I'm gone,"

Jennie Hamilton



MAKING THE MOST OF ENVIRONMENTAL PROJECTS

Local environment groups can now tap into hundreds of environmental projects, including four major Christchurch initiatives.

Three City Council projects: a community model for waterway restoration, investigation of lead contamination at gun clubs and wetlands, and glass waste management, are among those which have received assistance from the Ministry for the Environment's Sustainable Management Fund. So too has the Regional Council's cleaner production programme,

Anyone involved with sustainable management can get copies of reports, manuals, guidelines and training and decision-support programmes produced by SMF funded projects. Results of these projects are available on the Ministry for the Environment's internet site: www.mfe.govt.nz. Information may be copied, as long as it is not sold for profit.

The fund is designed to support practical initiatives which help achieve sustainable management of New Zealand's resources. During the three years it has been in place it has provided funding of more than \$20 million to 219 projects.

The fund gives preference to projects which are practical, have national benefit, involve consultation with stakeholders and meet widespread demand. Funding may be allocated for developing and applying methods, and for the transfer of knowledge and technologies from technical experts to the wider community.

Applications for funding are accepted in February and August each year. Funding is allocated through a competitive process. Successful projects may be allocated from \$20,000 to \$500,000 per year, and may be funded for up to three years. The fund will contribute 20-80 per cent of project costs.

Environmental Education Directory

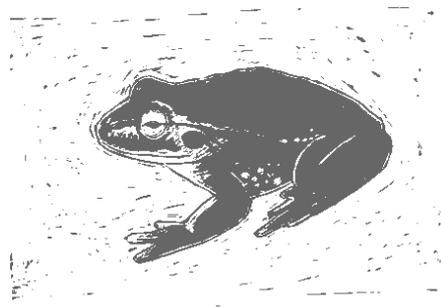
Environmental educators now have a directory of environmental education resources at their fingertips. Launched in June, the Environmental Education Directory of New Zealand aims to provide a comprehensive list of resources available throughout the country.

The directory includes 15 subject categories ranging from air and transport to hazardous substances. Other topics include energy, infrastructure, minerals, biodiversity, land, plant and animal pests, wastes, coast, heritage, Maori, natural hazards and water.

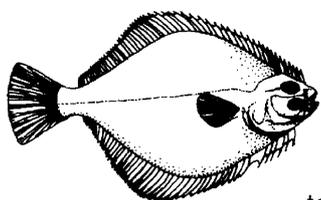
Under every subject heading are lists of activity packs, resource kits, magazines, video and audio tapes, contacts, places to visit and computer resources. Each entry contains a brief description of the resource, target audience, curriculum links, availability and price.

Development of the directory began in 1998 with funding from the Sustainable Management Fund administered by the Ministry for the Environment. Six monthly updates are planned to ensure it remains as comprehensive as possible.

The directory is available from the Ministry, PO Box 10-362, Wellington, or on line at www.eednz.org.nz



NEW GUIDELINES FOR ENVIRONMENTAL EDUCATION



New guidelines have been drawn up to provide practical advice for those delivering community and adult education.

They were developed by a team from Agriculture New Zealand and The Open Polytechnic of New Zealand, with input from environmental educators from throughout New Zealand and Ministry for the Environment staff.

The result is Environmental Education: A guide for Programme Providers – how to develop, implement and evaluate strategies and programmes. The guide is designed to support the Ministry's national strategy to develop the knowledge, awareness, attitudes, values and skills that will enable individuals and the community to contribute towards maintaining and improving the quality of the environment. The Ministry's strategy for

environmental education – Learning to Care for Our Environment - was released in 1998.

The guide, a Sustainable Management Fund project, is arranged in three main sections:

- Developing effective environmental education strategies
- Developing effective programmes and activities
- Evaluation of environmental education strategies, programmes and activities.

Each of the three sections can be used independently, depending on the stage of development. For each section there is an overview, a set of five principles and a set of checklists. At the end of the guidelines there is a toolbox with other helpful resources: a reference list, glossary, list of web sites and background on specific topics.

For more information tel: (04) 917 7414; email donna.gardener@mfe.govt.nz. Address: eednz.org.nz

EDMONDS TELEPHONE CABINET

For more than a decade the Edmonds Telephone Cabinet in Oxford Terrace stood in a sad state of neglect. The services it offered had long since been consigned to a past era. However, despite the apparent neglect, this solid little building erected in 1929 was physically in good shape. A little TLC - and money - was all that was needed to bring it back into service.

Towards the end of 1998 the Council sought Telecom's assistance to restore one of our smaller, but by no means lesser, heritage buildings as part of the redevelopment of the Oxford Terrace area. By early 1999 the project was well underway and in June the Edmonds Telephone Cabinet was reopened for service by Cr Anna Crighton, who unveiled a bronze plaque to commemorate the occasion.

Situated on the Banks of the Avon in Oxford Terrace, the telephone cabinet was part of a gift to the City by Thomas



Edmonds to celebrate the 50th year of his residence in Christchurch. The gift comprised a band rotunda, clock tower, balustraded walling, seating and lighting which were to be part of the Christchurch Beautifying Association's scheme for the inner city area of

the Avon known as Poplar Crescent. The name served a dual purpose; not only was it a reference to the trees which lined the banks, but it was the name of the suburb Poplar in London where Edmonds was born.

Today the name Edmonds is synonymous with baking products in New Zealand. In the fifty years from the initial founding of the business in 1879, Thomas and Jane Edmonds had seen their baking powder business produce 2.5 million tins and grow from back room origins in their Randolph Street grocery store to a modern three-storey purpose-built factory on Ferry Road. Designed by J S and M J Guthrie, this 1923 building, with its Sure to Rise symbol and signage on the principal façade, became a Christchurch landmark and New Zealand icon. Regrettably, and amid considerable controversy, the building was demolished in 1990. Happily other buildings associated with Thomas Edmonds remain as a significant part of our

city's built heritage: the Radiant Hall (now Repertory Theatre), the Theosophical Society building, the Band Rotunda, the clock tower and the telephone cabinet.

The Edmonds Telephone Cabinet along with the clock tower was for many years on an 'island' split by the roading configuration of Chester Street East and Oxford Terrace. After recent roading changes and landscaping the area became an attractive integrated part of this section of the Avon River bank.

Of classical stylistic conventions, the unusual telephone cabinet was designed in 1929 by Francis Wills, architect of a number of notable Christchurch buildings such as the Repertory Theatre in Kilmore Street, the Spanish Mission New Regent Street shops and the Edmonds Clock tower. Built in a circular plan of volcanic rock with Mount Somers limestone facings, the little building once provided a number of services. You could make a telephone call, post a letter and have a drink. The drinking fountain on the north façade, supported by a stylised acanthus leaf, no longer operates.



The classical motif continues around the parapet of the flat-roofed building in the form of projecting stylised acanthus leaves placed at regular intervals. Carved on the deep entablature are the words Christchurch the Garden City on the Avon that leave no question as to the intention both Thomas Edmonds and the Christchurch Beautifying Society had envisaged

with their efforts to landscape this area of the river.

Placing modern telephone equipment in the cabinet has been achieved with no loss of original fabric. A modern Telecom card phone was fitted onto the existing 1929 glazed tiles and the multi-paned fenestration has been restored and glazed.

Telecom said it was delighted to be involved in this restoration project of one of the more unusual payphones in the country and monitoring shows it is being well patronised. The reinstatement of the telephone proved its worth at the re-opening ceremony. A call was needed to locate Telecom staff from Auckland in Christchurch for the opening. With no cell phones on hand among Council staff, a Telecom pay-phone card was produced and the situation quickly rectified.

Jenny May

CHRISTCHURCH CELEBRATES ITS HERITAGE

Cultural Landscapes: Evolution of a River City is the theme of this year's Carter Group 1999 Heritage Week from 15 to 22 October.

Walks, lectures and a wide range of other events including a garden party and parades, will focus on the full range of heritage places in the cultural landscapes of Christchurch. These encompass the broad sweep of the City's historical development from pre-European times, emphasising the influence of the River Avon (Otakaro) on the evolution of the City. The river will be a unifying theme for



individual events based on heritage buildings, streetscapes, art works, parks and gardens, as well as developments in planning and urban design.

This year's official opening of Heritage Week, held in conjunction with the presentation of the Hagley/Ferrymead Awards, will take place in the recently refurbished Circle Lounge at the Theatre Royal on 15 October.

Various dimensions of Christchurch's cultural landscape will be explored during a one-day seminar on 16 October. For details phone (03) 355 7794 or (03) 371 1518.

HAGLEY/FERRYMEAD COMMUNITY BOARD 1999 HERITAGE AWARDS

The Hagley/Ferrymead Community Board is considering entries for its highly successful heritage awards scheme, now in its third year.

Initiator of the awards, Cr Anna Crighton, hopes to encourage greater interest and participation in the children's section of this year's awards. "Our children are the next generation of caretakers of our heritage," she says. "It is important that we encourage them from an early age to understand and appreciate the significance of the past for the future."

There are six entry categories in the awards:

- Retention
- Conservation and restoration

- Education and awareness
- Children
- Good Caretaker Award
- Christchurch Star Award

The Star award recognises efforts by businesses and retailers in the inner city to preserve or maintain a heritage building.

Award entries do not have to relate to buildings listed as heritage items in the City Plan or registered as Historic Places by the New Zealand Historic Places Trust.

Presentation of this year's awards will be held at the Theatre Royal on 15 October. For further information about the awards contact Cindy Breward at the Linwood Service Centre, tel: 372 2606, or Jenny May at the Civic Offices, tel: 371 1518.



Dorothy's Boutique Hotel was one of last years winners

A GREEN LIST

He Rongoa Maori/Maori medicine

... and the Earth burgeoned with trees and flowers, grass, flax and fruits and in the forest beasts, birds and insects found food and shelter. This is the realm of Tāne-mahuta, and in it men and women and children, whom Tāne caused to be, find solace and refreshment and great delight, for the realm of Tāne-mahuta is beautiful above all else.

The forest world of New Zealand: realm of Tāne-mahuta **by John Henry Johns. (577.3 JOH)**

Te rongoa Maori: Maori medicine by Pearce Melvin Williams. (581.634 WIL)

Maori healing and herbal: New Zealand ethnobotanical sourcebook by Murdoch Riley (581.634 RIL)

Maori medicine [video recording]: New Zealand Television Archive, [1993]. (581.634 MAO)

Life without arthritis: the Maori way: a remarkable discovery for arthritis and rheumatism sufferers by Jan De Vries. (616.72 DE)

Medicines of the Maori: from their trees, shrubs and other plants, together with foods from the same sources by Christina Macdonald. (581.634 MCD)

Nga taonga o te ngahere - Treasures of the forest by Tom Paul. (581.634 PAU)

Maori herbal remedies by Raymond Stark. (581.634 STA)



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