# Our Environment Newsletter

Christchurch City Council's Environmental Newsletter

# **GREEN EDGE FOR ESTUARY**

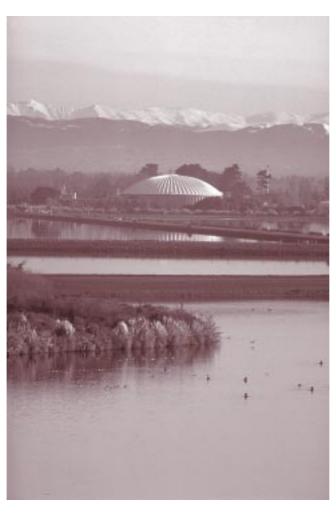
A green edge to be created around the western side of the Avon-Heathcote Estuary is designed to protect and enhance one of Christchurch's most important environmental assets.

The proposal, which includes Linwood Paddocks, Bexley Reserve and the oxidation ponds, is associated with the City Council's 15 wastewater year programme discharge a much higher quality of wastewater into the estuary.

The Green Edge has the potential not only protect and enhance existing habitats but to create new "natural" open space areas, says planner Adele Scoon. These will have wideranging benefits for the area's ecology,

recreation, heritage, education and landscape values.

Situated only a few kilometres from our city centre, the estuary is unparalleled among New Zealand estuaries in supporting such a large and varied wildlife population, according to a recent Council report. Despite its importance natural coastal marshlands, forests, dunelands and wetlands have been degraded by roads, housing and construction of the oxidation ponds. "Introduced trees, garden plants and exotic grasses have replaced native vegetation and the soft estuary shoreline has been replaced with hard edges and unnatural and often unsightly structures," the report says.



Development of experimental natural treatment of wastewater and stormwater in engineered wetlands is planned in part of Linwood Paddocks. Because of the relatively small area of land available the scheme will trial localised solutions to water treatment.

Re-establishment of saline and brackish ecosystems of saltmarsh and ribbonwood, establishment of coastal forest and enhancement of roosting and breeding sites is also planned in the paddocks.

Plans include reconfiguration and restoration of the oxidation ponds and surrounding area to a sand dune and wetland mosaic, and retention of islands as a vital breeding habitat.

**ISSUE 26** 

**AUTUMN** 

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For further information or submission of articles or illustrations please contact Kerry Everingham, Education Promotion Officer Ph: 371 1779 Fax: 371 1789.

to P2 🕼

Where possible, hardfill creating artificial hard edges along parts of the western shoreline will be replaced with more natural graded banks and saltmarsh species. Bexley Reserve, to be developed into an attractive recreation area, will be a buffer between the city's suburban edge and natural areas such as Te Huingi Manu Wildlife Reserve and the estuary.

Estimated to cost \$14 million, the plan will be implemented over the next 15 years with ongoing maintenance costs of about \$300,000 a year.

Jennie Hamilton



## **OUR ENVIRONMENT SURVEY RESULTS**

Thank you to those who responded to the survey included in issue 25 of *Our Environment*. Your views and suggestions were very helpful. Your bribe (a chocolate fish) should have been included along with this issue, that is, unless you forgot to note your details at the bottom of the page.

Huntsbury Residents and Ratepayers Association members were lucky winners of the morning tea draw and will soon sit down to their mouthwatering prize.

It was very satisfying to read that on the whole *Our Environment* is well received by a wide range of readers, from residents groups to schools to government organisations. The reasons given were also varied. Some liked it for reasons of personal interest, others wanted to keep in touch and said it assisted them in their job.

As a result of your suggestions page three is to become more school focused. In the past we have also neglected to target pre-schools, hence the green list's theme for this issue.

As for the overall appearance, we are updating the banner and have decided to run with two colours (as seen in this issue). Full colour was too expensive.

For those who prefer to receive *Our Environment* electronically, please send us your email address and details. In order to read the electronic version you will, however, have to have web access.

It was great to find out that a number of our readers are using *Our Environment* as a resource and for purely inspirational purposes.

We have listed below some of the ways this is done:

- Reference for excursions, resources etc,
- A resource for activities, discussion starters,
- Source material for teaching eg "global environmental issues",
- Rerun relevant articles in organisation's newsletter,
- Current information about Christchurch for science classes. Students love to hear about things happening in their city,
- Gives good ideas for student-operated environmental groups to work on.

The Calendar of Events suggestion was a good one and comes up time and time again. We have resisted this in the past because of the volume of requests we get for promotional advertorials and because *Our Environment* is only sent out quarterly. However, the Council produces the "Be There" events calendar and is happy to include environmental events such as Seaweek. For further information please contact Dawn Brown at 371 1916 or dawn.brown@ccc.govt.nz

We considered the suggestion that *Our Environment* and *City Scene* should be combined and concluded that the two newsletters had very different purposes and should continue to operate separately - but thanks for the thought.

A few of you indicated that you would like to contribute so we look forward to running with interesting stories from a range of sources in future issues. Drop me a line at kerry.everingham@ccc.govt.nz

**Kerry Everingham** 

# **OUR NATURAL ASSETS**

... a great opportunity for some Environmental Education

Christchurch's parks and reserves provide an exciting, accessible and relevant context for learning experiences outside the classroom. They offer the ideal opportunity for students to be involved with learning in their local environment while learning about their environment. Through issues-based programmes they will also have an opportunity to get involved in education for their local environment through positive actions taken on site during a park visit, back at school, in their community or around their own home. The following sites provide a great setting for students to develop their understanding of the key concepts of environmental education: Avon-Heathcote Estuary, Beach Parks (Spencer Park, South Brighton and Taylor's Mistake), Bottle Lake Forest Park, Christchurch Botanic Gardens, Halswell Quarry Park, Port Hills Reserves, Brooklands Lagoon, Styx Mill Conservation Reserve, The Groynes and Travis Wetland Heritage Park. Contact the Environmental Education Programme Co-ordinator, Janice for more details by janice.beaumont@ccc.govt.nz or fax (03) 371 1987, or contact the rangers at the parks.

#### Here's what one school in Christchurch is up to ...

Late last year students from St Peter's School in Beckenham took some positive action in their local environment by planting over 500 native trees in the Ernle Clark Reserve. The planting event was the culmination of their studies

about the protection and restoration of our native bush.

The reserve has held a special place in the school's heart for some time and last year's planting has created even greater attachment to the area. One class undertaking a fully integrated approach to studying the

environment. As part of their studies students will visit Ernle to sketch a landscape plan of a section of the trees planted and take base-line measurements of 20 trees to use for graphing activities back in the classroom. The data collected will form the basis of ongoing monitoring of the growth of the trees by students from the school in coming years. Students will also cover topics including the importance of our parks and reserves and the role of the park ranger, reducing our waste through composting (including a visit to the Garden City Compost facility), the value of trees to our city's air quality (with a visit to the Botanic Gardens – the 'lungs' of the City) and the sustainable use of trees (with a visit to Bottle Lake Forest - a working pine forest).

#### Look out for these features in future issues ...

- OUR WATER water conservation and caring for our waterways
- OUR HERITAGE preserving our built environment
- OUR WASTE reducing our impact on the local environment

#### In a nutshell ...

The Guidelines for Environmental Education were published for the Ministry of Education in 1999, providing guidance for teachers wishing to introduce a variety of environmental programmes to their teaching. There are three dimensions, in, about and for, which describe ways in which environmental education (EE) can help learners achieve the five aims of developing awareness and sensitivity, knowledge and understanding, concerned attitudes and values, skills, and a sense of responsibility. The key concepts in EE are interdependence, sustainability, biodiversity and personal and social responsibility for action.



#### Take some action!

If your school would like to take some positive action for the environment take advantage of this great offer...

Free trees for schools' Arbor Day programmes.

Register using the pack sent to all schools this month.

## **NEW LOOK FOR CITY STREETS**

A quiet revolution is occurring in our city streets. They are being redesigned as "Living Streets" with people and communities, not just cars, in mind.

The concept is based on the idea that residents, businesses, pedestrians, cyclists and other users should have, at the very least, equality with cars. Streets are being constructed for walking, jogging, watching, talking, scooting and many other past-times.

A new booklet produced by the City Council says that a Living Street encourages better driving behaviour and discourages heavy trucks and throughtraffic on most local roads. "Any street, apart from a motorway or expressway which has a pure transit function, can become a Living Street," it says.

The City Council's City Streets unit is proposing that the following roads be developed as Living Streets as part of the first phase of implementing this concept:

Papanui East Cluster, Harvey Terrace, Main Road (Redcliffs), a cluster of streets in Charleston, Mathers Road, Aynsley Terrace, Saltaire Street, Geraldine

Street, Creyke Road and Papanui Road.

These streets will be included in a showpiece portfolio that will show how the concept is applied to street renewal developments. Funding for all but two of the specified projects has been included in the 2001/2002 Annual Plan.

Living Streets have different forms:

#### **Community street**

This type of street is mainly residential, with traffic calming measures such as speed humps. It provides easy and safe access for all ages and abilities, interconnected walkways, convenient areas for cars and other vehicles, and places for recreation and other activities. (For example Bangor Street in the Avon Loop and Roundtree Street and Hanrahan Street in Upper Riccarton.)

#### Walkable street

This has mixed residential and commercial use eg shops, schools, dentists and doctors rooms, offices and cafes, among or alongside homes of various styles. A walkable street is often slightly wider than a community street but still offers places for leisure walking for all abilities and some recreation spaces. (For example Barnes Road in Redwood and Leslie Street in Upper Riccarton.)

#### **Small public areas**

These provide pleasant recreational space in mainly commercial areas. Often situated next to a busy street, the small urban

space helps merge the business environment with the community and sometimes hosts retail displays or small events eg corner of Victoria and Salisbury Streets. Comfortable seating, lighting and clear visibility are features of this style of Living Street.

#### Mixed use street or boulevard

This street is often predominantly commercial and incorporates more of a designed and constructed environment eg New

Regent Street, Cashel Mall and Worcester Boulevard.

#### **Quiet street**

This refers to mainly residential streets that have been "calmed" to allow both residents and cars equal use eg Ely Street in the inner city, and Lavandula and and Witbrock Crescents in Burnside. Restraints such speed humps, platforms, carriageway offsets. raised intersections, narrowed carriageways and kerb extensions help create a livable environment.

In addition the Living Street concept can be extended along street boundaries. Taking in footpaths, unfenced frontages, berms, kerbs and channels,

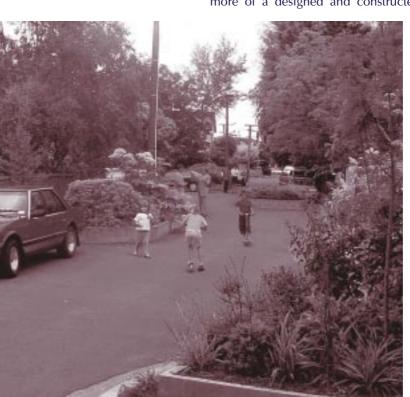
landscaping, street trees and lighting, these streets invite interaction with adjacent buildings, gardens and parks eg Washington Reserve, Catherine Street Woolston, and Fitzgerald Avenue Bridge area.

The Living Street strategy says the redesigned streets contribute to our quality of life through:

- Improved safety and security, economic viability, access to housing, community networks, creation of a liveable safe place and sense of community, and a sense of place and identity.
- Cultural activites that allow places to be celebrated and enjoyed.
- A sustainable environment with user friendly transport systems and a high quality of air, water cleanliness, waste disposal and noise reduction.
- Ease of access to health, education, shopping, sporting amenities and facilities and community organisations.

Lucas Sikiotis, Support Manager in City Streets, says the City Council is committed to creating more Living Streets throughout the city and intends to do so by phasing in a programme over five years. "By changing our traffic and transport priorities we can enjoy a better balance between pedestrians, cyclists, public transport, taxis, service vehicles and private cars."

#### **Jennie Hamilton**



#### **SEA LETTUCE IN THE ESTUARY**

The stench from rotting sea lettuce on the shores of the Avon-Heathcote Estuary got up the noses of many residents over the summer. The Council monitored the problem and removed the lettuce in parts of the estuary.

Sea lettuce is the bright green algae that grow around the world in sheltered rocky coasts and in estuaries. It grows particularly well in shallow estuaries where light can penetrate the clear water and water temperatures are

warmer. Nitrogen and phosphorus in coastal rivers or other discharges aid this growth. Weather patterns that influence the nutrient levels in the oceans also impact on the growth of sea lettuce in tidal waters.

The nuisance caused by the sea lettuce results from the large amounts of plant material that grows over some winter seasons. Given the right conditions it can multiply in the spring and summer period, breaking away and washing up on the shores and shallow areas of the estuary in smelly heaps.

The discharge of treated wastewater from the Christchurch Wastewater Treatment Plant is often said to be the cause of the sea lettuce. While the discharge will be one factor, it is not the major cause of excessive growth. As part of the investigations



into wastewater solutions the Council sought scientific advice from NIWA consultants. Their answers indicated that complete removal of the wastewater from the estuary would reduce sea lettuce by up to 50 per cent in some high-growth locations, but overall the reduction would be only about 20 per cent.

They also concluded that there would still be the potential for significant growth of sea lettuce with complete removal of the wastewater and large

reduction in nutrient loads from the two rivers. The reason for this is that growth is limited as much by the transparency of the water, and by the shearing effect of wind and tidal flows, as it is by the supply of nutrients.

The Christchurch City Council responds to the nuisance caused by sea lettuce by picking up large accumulations in certain areas of the estuary. These areas are restricted to the high tide areas on the eastern side of the estuary. However, when the entire intertidal area is covered in sea lettuce it is not possible to remove it all.

#### Mike Bourke

Operations and Maintenance Manager City Water and Waste

# **BID TO CONTROL RIVER WEEDS**

Latest efforts to eradicate weeds in the lower reaches of the Avon River have been partially successful.

Preliminary results showed that the herbicide diquat had controlled egeria and elodea but had a limited effect on native potamogetons.

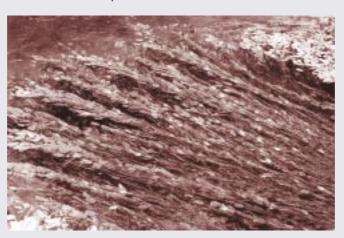
The Council is particularly keen to limit the spread of egeria which can crowd out other species and raise water levels because of the volume of plant material produced. Originally from South America, it looks quite similar to common oxygen weed but it is much larger.

Initial attempts to stamp it out in the Avon River included

suction dredging and the use of carpet to keep the weeds in the dark and thwart photosynthesis. When these methods failed the Council opted to try diquat.

Although the herbicide has controlled egeria, three different species of

potamogetons - red pondweed or manahi, curled pondweed and blunt pondweed - continue to thrive and cause problems for rowers. Their



impact has been particularly noticeable because the harvester has not been used during the herbicide trials.

Dense potamogetons growth also caused problems during the second trial on March 19. The boat used while applying the diquat had to be launched at high tide rather than the optimum low tide when there is smaller water volume.

Follow-up tests showed mixed results in the control of the target weeds. "Preliminary results from NIWA show that diquat has controlled egeria and elodea, but only had an effect on the potamogetons directly where the diquat was applied," said Council botanist Kate McCombs.

Water analysis indicated that the diquat dispersed quite quickly, although levels did increase again briefly on the incoming tide. Results from the monitoring of invertebrates

and eels have shown no adverse effects so far.

A full review of the trials will be discussed by interested groups in early May.



# TRUST KEEPS HERITAGE MESSAGE TO THE FORE

Spearheading the battle to save the former Sydenham Methodist Church is just part of a wide ranging brief for the New Zealand Historic Places Trust Pouhere Taonga. As this antry's leading authority for the

country's leading authority for the identification, care and protection of

New Zealand's cultural heritage its scope ranges from offering advice to home owners to campaigns to preserve landmark buildings.

The future of the Sydenham church now looks more secure as the Trust helps to set up a community trust which will administer the church once it is purchased using an interest-free loan from the City Council. The Trust will be represented on the new body.

The NZHPT has also been an effective advocate over the years for the retention of a string of local threatened buildings including the Lyttelton Times, Warners Hotel and former Government Buildings in Cathedral Square, the Music Centre of Christchurch in Barbadoes Street, as well as the Nurses' Memorial Chapel.

Those are the high profile cases. The Trust also carefully reviews notified and non notified applications to alter or demolish a building listed in the City Plan, and often prepares submissions for resource consent hearings.

Generally though, the Trust prefers to be involved at a much earlier stage. "It's much easier to come up with a win win situation for both the owner and us if we search for solutions early," says Paul Thompson, the Trust's regional manager based in Christchurch. This approach is in line with the Trust's objective "to achieve protection by agreement as a preferred process of cultural heritage management".

Since the Trust underwent restructuring two years ago, Paul Thompson has been responsible for overseeing the Trust's activities in the southern region which stretches from Kaikoura to Stewart Island.

The Trust's functions, set out in the Historic Places Act 1993 include:

- Registering historic buildings, structures, archaeological sites, wahi tapu and groups of historic places
- Advising owners on conserving and adapting their historic buildings
- Covenanting buildings and sites if owners want to voluntarily protect them
- Lobbying national and local government to provide financial incentives for protecting historic places
- Advocating for the protection of registered buildings and sites through the district plans of local councils.

Southern Trust staff, based mainly in the Christchurch and Dunedin offices, also work closely with branch committees of elected voluntary members. Canterbury alone has about 3000 Trust members.

The Trust owns and manages 13 heritage properties in the southern region. The most significant of these are the Timeball Station at Lyttelton, Fyffe House in Kaikoura and Totara Estate, south of Oamaru.

The Trust's advocacy role is becoming even more important. It means continually highlighting the message that our heritage buildings are important to communities and ways must be found to preserve them. This often involves finding new uses. When that happens, such as the development of a hotel and apartments in the former Government Buildings, the owners and the community are clear winners.

Jennie Hamilton

# IN THE FOOTSTEPS OF OUR EARLIEST SETTLERS

A pre-1850 inner city and coastal heritage trail traces the lives and achievements of Christchurch's first peoples who settled here long before the First Four Ships appeared on the horizon.

First Waitaha, then Ngati Mamoe, then Ngai Tahu made their home in a place called Otautahi after the Ngai Tahu rangatira Tautahi. They were followed in the early nineteenth century by European sealers, traders and independent settlers.

Interpretation panels along the two walks and other significant sites illustrate chapters of our history which have often been ignored. For example Otautahi/The Bricks at the corner of Oxford Terrace and Barbadoes Street is close to Tautahi's campsite and the landing place on the Avon River (Otakaro) used by the first European settlers.

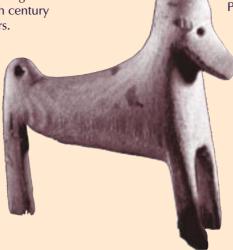
The coastal trail features three sites: Moncks Bay, Shag Rock and Clifton Bay. Human remains were found at Rae Kura (Redcliffs) where the Waitaha had a major settlement among the sandhills. Moa bones were discovered in and near the Moa-Bone Point Cave by sailors from the survey ship Archeron in 1872.

Interpretation panels also tell the story of other sites at Putaringamotu (Riccarton Bush); Linwood sand hills; Opawaho, the site of a Waitaha satellite settlement

near the river by Opawa Road; Cashmere Reserve and Mt Pleasant.

Launched last December, the Heritage Trail was a Turning Point 2000 project developed in association with Ngai Tahu and the City Council, and also supported by the Community Trust and New Zealand Lottery Grants Board.

Artefact from Moncks Cave



#### NO 16 IN OUR "STILL STANDING" HERITAGE BUILDING SERIES

# CHURCH'S LONG ASSOCIATION WITH SYDENHAM TO CONTINUE

The prominent stone church at the corner of Brougham and Colombo Streets was built as the Wesleyan Methodist Church for the Sydenham community in 1877-8.

It was designed by Crouch and Wilson, architects from Melbourne, who had earlier designed the Durham Street Methodist Church. Local architect TS Lambert was appointed the 'superintending architect' and due to funding problems was forced to change some of the original design. Two large vestries with organ chamber and spire above were left out of the building contract, which explains the unfinished plastered west wall with protruding keystones.

The plan follows the Methodist 'preaching hall' theme. Its façade with its simple, yet strong geometric forms and lancet windows is described as Early English Gothic.

Following construction of the building, the influence of the Methodist Church in the community grew. In the late 1880s Rev. L M Isitt attracted young people into church activities by establishing tennis and cricket clubs and building a gymnasium at the rear of the church. Through the minister and his church, Sydenham became one of the centres in the fight for prohibition. Other prominent figures associated with the building were lay preachers, Walter Bascand, a founder of an early prominent printing firm, and Rupert Pearce, manager of Aulsebrooks.

#### Landmark significance

The church has strong local landmark significance and relates to the development of early Sydenham, which was considered a 'model' borough in its founding days. It stands opposite the former Sydenham Post Office and together they form a visual gateway at the southern entrance of the commercial area of Sydenham. It is interesting that the Public Works Department opted to depart from the standard timber or brick suburban post office and faced the Sydenham building in stone to ensure it complemented the church opposite.

The church also relates to Sydenham

Park, formerly the

the King Edward drinking fountain on the park corner. This area was once the cultural and administrative heart of Sydenham. The former Sydenham Borough Council Buildings and Fire Station, both now demolished, were the last reminder of this group of buildings to the south of Brougham Street. Their demolition increases the importance of the church, which is listed in both the City Plan and Transitional District Scheme as a Group 2 protected building. It is registered by the New Zealand Historic Places Trust Pouhere Taonga, as a Category II Historic Place.

Agricultural and Pastoral Association's showgrounds, and

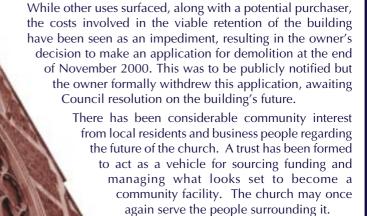
#### **Changing patterns**

Over time the size of the congregation dwindled, reflecting the changing residential patterns in Sydenham. The Methodist Church closed its doors in 1971 and the property was leased to the Seventh Day Adventist Church. Ownership of the church passed to the Samoan Congregational Church, which used the building until the mid-1990s. An application to demolish the church in November 1997 received 86 submissions in opposition, including one with a public petition of 712 signatures.

The present owner purchased the property in September 1999 and has made efforts to liaise with the City Council, NZHPT and local branch of the NZ Institute of Architects. Much of the discussion had been centred on the potential reuse of the building rather than the upkeep and conservation of the physical fabric of the building.

The Council funded a structural report for an apartment proposal developed by institute members. This involved inserting five apartments divided by structural shear walls and new floor diaphragms inside the church structure.

Later, the applicant received resource consent for the construction of four 'start-up' business/apartment buildings on the vacant land to the west of the church. These required consent partly because they were on the site of a protected building. Consent was granted but on the understanding that the church remained.



**William Fulton** 

## STORM CLEARUP CONTINUES

Contractors are still clearing trees destroyed by last October's devastating storm. .

Hardest hit were 15 hectares of pine plantations in the Bowenvale Valley and other parts of the Port Hills. However, the gale force winds also toppled scores of trees and tore down branches throughout the city, especially in the southern suburbs. "The closer you got to the hills the worse damage," the according to City Council arboriculturist Walter Fielding-Cotterell.



He estimates that the bill for the cleanup and replanting is likely to top \$1.3 million. Funding for the next financial year totals \$160,000.

Pine trees are still being removed from the hill plantations. It is also important to minimise the effects of felling operations on the hillside soils as they are very prone to erosion. As well as being a fire hazard, the trees are very

dangerous to extract. Once the plantation areas are cleared the area will be replanted native species. Although replanting necessary stabilise the soil, the Council is finding it difficult obtain sufficient locallysourced native trees.

Mr Fielding-Cotterell says an extensive programme to thin oaks in Hagley Park saved many of those trees. However several

notable trees in the Botanic Gardens, McMillan Avenue and at Fendalton Mall had fallen or had to be removed because of storm damage. All the wood from trees destroyed in the gale has either been sold for firewood or timber, or chipped for compost.

# **A GREEN LIST**

# Introducing pre-schoolers to the natural world.

It's a cliché to say that children are the hope of the future. In the case of environmental issues, however, it seems particularly apt. How can we introduce young children to thinking about the environment in a positive and thoughtful way? Perhaps the first step is to introduce them to the natural world using picture books. We have listed some picture books which inform and entertain.

**All kinds of animals** by Andrew Crowe (New Zealand)

**Amazon alphabet** by Martin Jordan **Commotion in the ocean** by Giles Andreae

**Booby hatch** by Betsy Lewin **Little bat** by Tania Cox

The night owls by Kevin Pattrick Rangi me te whenua: The sky and the

earth by Amanda Jackson
Whale song by Tony Johnston

What's for lunch by David Miller Who is the world for by Tom Pow

Picture books are located in book bins in the child or children's section of your local library.



# TREES FOR CHARLESTON RESIDENTS

The first 100 local people who attended a Charleston display highlighting local issues earlier this month each received a native tree.

Organised by the City Council, the display in Charleston Reserve on 12 May followed a special publication of *Our Environment* which outlined proposed developments in the area.

A follow-up public meeting was attended by about 50 local residents and other interested people who asked the Council to organise a display. This set out options for road patterns in the area and presented possible solutions to some other local problems, said urban design planner Josie Schröder.

Calls by residents for more trees to be planted in the area had prompted

the Council to supply 100 native trees at the display, as a start. These were donated by Trees for Canterbury.

Traffic issues, graffiti and the need for more places for children to play were among other issues raised by residents.

Josie Schröder said special issues of *Our Environment,* first for St Albans then for Charleston, had been well received by residents. "They really liked being kept informed and having the opportunity to be involved in what's happening in their own area."

The Council is planning other publications to inform residents what is happening in their neighbourhoods.

