

Greater Christchurch

Urban Development Strategy

So many options... which will you choose?



or



?



or



?



Options April 2005

Greater Christchurch - We're growing!

Every month 400 more people make Greater Christchurch their home. That's in addition to the 380,000 people who already live here. By 2021, 430,000 people will live here and around 500,000 could make the Greater Christchurch area their home by about 2041.

An extra 120,000 people could be living, working, studying, shopping, driving their cars and playing sport here by 2041.

- **Where will they live – in your backyard or somewhere else?**
- **If they all drive to work, will the traffic come to a standstill?**

To get the future we desire for our families and ourselves, we must manage the impact development has on our quality of life. Decisions made today will affect our lives, our children, grand children and all future generations. That's why the Greater Christchurch Urban Development Strategy process is underway.

Options Consultation – on right now!

This consultation booklet outlines four options for managing future growth. You're invited to have your say on the options being proposed to address growth issues.

The feedback form is on pages 19 and 20 at the back of this booklet. Everyone who completes the feedback form goes into a draw to win one of 20 free year-long subscriptions to The Press.

The Options Consultation closes on Friday 3 June 2005.

Did you know...

We're growing bigger each day: Over the past decade, the population in Greater Christchurch has grown by 1.2% per year. That's 13 more people making their home here each day. The populations of both Waimakariri and Selwyn districts are expected to grow by 40% in the next 20 years.

We're getting older each day: By 2021, 20% of us will be aged 65 and over (14% today) changing lifestyles, housing and facilities.

We're consuming lots of water: 1,780 litres per second of water are pumped from the Christchurch – West Melton aquifer for domestic water use. The greatest use of water is for activities such as watering gardens and washing cars.

We're driving our cars more: While the population is expected to grow by 14% by 2021, traffic growth will increase by 40-50% over the same period. Most of this additional traffic will be on arterial roads, adding to the 24km of road already congested. By 2021 over 78km of roads will be congested, unless we spend about \$1.5 billion on roading infrastructure.

Our infrastructure needs building and replacing: With population growth, infrastructure (water supply, wastewater and roading) will need to be built and upgraded at a cost of more than \$2 billion by 2041.

For more information about trends and issues turn to pages 5-7.



Introducing Greater Christchurch

Greater Christchurch is a collaborative initiative involving the Christchurch City Council, the District Councils of Banks Peninsula, Selwyn and Waimakariri, Environment Canterbury (the Regional Council) and Transit New Zealand. All these organisations have appointed representatives, who meet regularly along with a cross-section of local leaders drawn from community, business and government organisations.

This group is called the *Greater Christchurch Urban Development Strategy Forum*. Information about the *Forum* is on our website www.greaterchristchurch.org.nz. Bob Parker, Mayor of Banks Peninsula District, is Chairperson and Spokesperson for the *Forum*.

While the *Forum* is guiding the project, it's important that everyone participates in the *Greater Christchurch* community consultation to create the future they want for themselves and their families. *Greater Christchurch* affects everyone living in the area. That's why the organisations responsible for managing growth and providing services (local government, Transit New Zealand) need clear direction from the community on its preferred choices for the future.



What happens after this consultation closes?

Once your feedback to the proposed options has been analysed, a *Draft Urban Development Strategy* to manage growth will be released for public consultation later in 2005.

The participating councils will adopt a final *Greater Christchurch Urban Development Strategy* once feedback to the Draft Strategy is analysed and processed. This strategy will also be used as input to participating councils' Long-Term Council Community Plans (LTCCP), Community Outcomes and influence District and Regional Plans. Implementation is likely to begin by July 2006.



So many options... which will you choose?

Over the last year, options for managing future growth were developed. Public consultation begins with these alternative options. In this booklet you'll find:

- a brief summary of key issues affecting Greater Christchurch
- consequences if we decide to continue "Business as Usual"
- 3 alternative options for managing growth
- comparisons between the options and the key issues
- feedback form – tell us what you want for the future

The Issues: Turn to pages 5-7

The most significant issue facing Greater Christchurch is our population growth. With this growth comes increased traffic congestion and increased demand for services, such as water and community facilities. Pages 5-7 summarises these issues that were described in the Introduction to Issues, February 2005, booklet.

The Options: Turn to pages 8-15

Business as Usual Option: (pages 8-9)

This section starts with a description of what would happen if we continue the current trends without change. This is called the "Business as Usual" option.

Option A: (pages 10-11)

Concentrates development within Christchurch City and at larger towns in the surrounding districts.

Option B: (pages 12-13)

Balances future urban development between existing built areas with some expansion into adjacent areas.

Option C: (pages 14-15)

Disperses development out in the Greater Christchurch area away from established urban areas.

Compare Options: Turn to pages 16-18

This section summarises the key points of each option and compares their strengths and weaknesses.

Feedback Form: Turn to pages 19-20

It's time to decide our future. Tell us what you think by filling in the feedback form, and send it to Greater Christchurch (no stamp required) by **Friday 3 June 2005**.

When consultation on these options ends, the *Forum* will consider the feedback and draft an Urban Development Strategy for consultation. The draft Strategy could be any one of the options, or a combination of two or more options. That's why it's so important to consider these options and tell the *Forum* what you think by **Friday 3 June 2005**.

Want to be kept informed?

Everyone's invited to join our mailing / contact list to receive information about the project. Telephone, email or write to us with your contact details and we'll keep you informed, and send you material about the Greater Christchurch project.

- Phone: 0800 872 338 for assistance
- Write to: Greater Christchurch, 3rd Floor, PO Box 237, Christchurch
- Email: info@greaterchristchurch.org.nz

Feedback Form: Turn to pages 19-20

Compare Options: Turn to pages 16-18

The Options: Turn to pages 8-15

The Issues: Turn to pages 5-7

The place we call home...

The Greater Christchurch area has been changing fast over the last decade. So where are we living and how might that change in the next 20-40 years?

This is a snapshot of the districts within the Greater Christchurch area today and projections based upon current trends¹ – this is a “Business as Usual” spread of population growth. It could vary depending upon the option chosen.

Population Total for Greater Christchurch

How many?	2001	2021	2041	% change ²
Population	379,070	431,200	500,000	32%
Households	148,950	182,540	211,400	42%
New dwellings required		33,590	62,450	

Christchurch City

How many?	2001	2021	2041	% change
Population	327,200	358,800	398,510	22%
Households	129,700	153,100	170,293	31%
New dwellings required		23,400	40,593	

Banks Peninsula District³

How many?	2001	2021	2041	% change
Population	5,250	5,710	6,540	24%
Households	2,230	2,660	3,044	37%
New dwellings required		430	814	

Selwyn District³

How many?	2001	2021	2041	% change
Population	16,410	25,130	38,460	134%
Households	5,620	9,730	14,622	160%
New dwellings required		4,110	9,002	

Waimakariri District³

How many?	2001	2021	2041	% change
Population	30,215	41,090	56,490	87%
Households	11,400	17,050	23,441	105%
New dwellings required		5,650	12,041	

¹ The figures for 2021 vary from the official Statistics New Zealand projections.

² The % change compares the 2041 figure with the 2001 figure.

³ Figures are for Greater Christchurch area of districts only.



There's an issue or two you should know about

Land Use and Housing

Another 52,000 people are expected to live in the area over the next 20 to 40 years. By 2041 there could be 500,000 people living in Greater Christchurch – but where will they live?

To fit more people within Christchurch City's existing boundaries we may have to build upwards and reduce the size of our sections. Alternatively expansion into rural areas could occur. Will these new residents live in towns, such as Rangiora or Lincoln, or will more farmland be divided into lifestyle blocks?

Creating subdivisions incurs significant infrastructure costs such as water supply, stormwater, sewerage and roads. How do we ensure infrastructure is in the right place and at an affordable cost?

While the population is increasing, the average household size is decreasing, which means we require even more dwellings. Will changing lifestyles also change the type of houses we want to live in and our demand for shops, schools and recreational facilities?

Over time employment and shopping has dispersed. As employment changes, transport patterns change. Will we move closer to our places of work or spend more time and money to get to them?

Suburban malls expanded greatly in recent years so that Christchurch now has more shops per head of population than any other centre in New Zealand or Australia. How should we balance mall development, Central City and township growth?

Changes in our population and lifestyles will alter what we want to do for leisure and where we relax and play. If we build more townhouses with smaller gardens, will more people want access to community parks and gardens? Will these be local community parks within easy walking distance or out around the region as large regional parks designed for a variety of activities?



Transport

Traffic congestion continues to grow, threatening the environment, and using more resources at an increasing cost. The Greater Christchurch area has the highest car ownership in New Zealand.

As the population grows and more people live further away from their places of work, shops and schools, more time is being spent in cars driving. If traffic volumes reach the projected 40-50% increase by 2021 how will this impact on traffic congestion?

The cost of transport is rising for us as a community and as individual car owners. Are we prepared to pay more to keep cars on the road and to build and maintain the roads? The cost of crashes is also rising, contributing to the increasing cost of healthcare.

Transport poses real threats to our environment. Carbon dioxide emissions have risen by 43% in the last 10 years despite improvements in engine technology. Runoff from roads is still making its way into our streams, lakes and estuaries.

Key transport routes in and out of Christchurch are already congested. This causes delays and increases costs for businesses, such as farmers and manufacturers, trying to get goods to important destinations such as Christchurch International Airport and the Port of Lyttelton.

Alternatives to using vehicles have not fared well in recent years. The number of people cycling to work is unchanged, while the number of school and tertiary students cycling continues to decline. Public transport patronage has risen dramatically, but as a percentage of trips being made is unchanged, as more people make trips in cars.

Unless there is a dramatic shift from using vehicles to walking, cycling and using public transport, key transport routes will become even more congested.



Community Identity

Our city, towns and countryside are changing. In Christchurch, redevelopment is replacing older, single dwellings with townhouses and apartments. Towns, such as Rolleston and Rangiora, are expanding and farmland is being converted into lifestyle blocks. The coastlines and prominent open hills of Lyttelton Harbour are under pressure from development. The character of our communities is changing with this increased urbanisation.

Should we be concerned about old character homes being demolished to make way for blocks of two – three storey apartments? Does having a dairy, café or pub near your house make it more like the community you wish to live in? People moving to Waimakariri, Selwyn and Banks Peninsula districts can bring different values and urban expectations of amenities with them. Can this influx into the country of residents referred to as “townies” be managed without losing the character of our rural communities?

The Greater Christchurch population is getting older and living longer. Will older people still want to live in the suburbs, move to the inner city to be near services and facilities or retire to the country to be part of smaller communities?

Our communities are demanding more sophisticated community facilities, such as libraries and swimming pools, so what will happen to existing facilities and can we afford new ones?



Natural Environment

Some forms of development can impose irreversible damage on the natural environment. As development intensifies, open space and natural habitat is lost.

Many ecological sites in Greater Christchurch are small, fragmented and very vulnerable. The Estuary, Riccarton Bush, Travis Wetlands and areas around Banks Peninsula are home for many species that would otherwise migrate or become extinct.

Greater Christchurch enjoys one of the best supplies of high quality untreated drinking water in the world. That's because to the west and north of Christchurch City is a groundwater recharge area for the series of aquifers under Christchurch City – underground water fed from the Waimakariri River.

This water is clean and plentiful – so far. Demand for water for more intensive farming and growing numbers of households is threatening water quality and quantity. Do you think the water you drink is worth protecting?

The Greater Christchurch area is susceptible to natural hazards such as flooding, earthquake and tsunamis. Should we avoid developing at risk areas prone to liquefaction (the shaking of ground during an earthquake that can cause the ground to liquefy) when planning for future growth or rely on engineering solutions to these risks?

Flooding is a significant risk in Greater Christchurch. If the Waimakariri River breaks its banks, it would flow south through Christchurch and north through Kaiapoi. In low lying coastal areas there is the threat of coastal flooding and sea level rise, as a result of climate change. Should we plan development to minimise the impacts of flooding from rivers and the sea?

Key considerations for the options

These issues have been considered in the development of the options for managing future growth in Greater Christchurch. Some issues, however, are so important that they have been incorporated into all the options.



Our population growth is the key factor behind the need to plan for the future. The number of persons per household, used as the basis for projections, was provided by Statistics New Zealand in 2004 based upon the 2001 Census. The 2021 population figures are based upon medium population projections. The 500,000 projection could be reached around 2041 under a mix of medium and high projections.

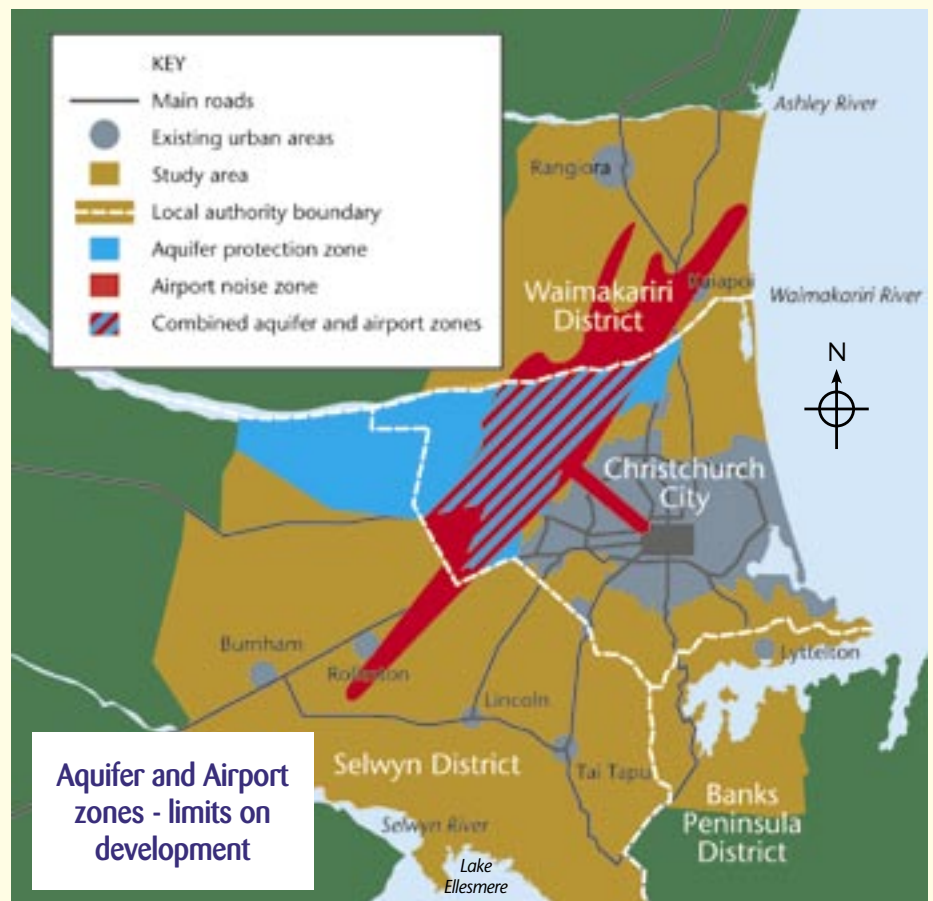
Our population is ageing: By 2021, 20% of residents in Greater Christchurch will be over 65 years of age (compared to 14% in 2001). These extra older citizens may require very different housing, in size and location, from their current homes.



Water: Most of our drinking water comes from a series of aquifers under Christchurch City. Protecting the quality of our drinking water is a top priority and limiting future development with an aquifer protection zone to the northwest, as proposed by Environment Canterbury, makes sense no matter which option is chosen.

Airport noise zone: The efficient transportation of goods and people through the Christchurch International Airport is vital to our local economy. It is important that the airport functions efficiently; accordingly, further residential development is restricted in the area known as the airport noise zone.

Three other issues were given consideration and factored into each of the three proposed options. The need to reduce the risk of flooding from the Waimakariri River; the importance of preserving the Port Hills and Lyttelton Harbour basin landscape; and the economic impact of the loss of productive farmland close to towns and the City. The aquifer protection zone, airport noise zone and Waimakariri flood plain all overlap in northwest Christchurch, so development of these areas is limited in all options.



Our options

In the next section the consequences of continuing with the Business as Usual Option or adopting an alternative option are outlined.

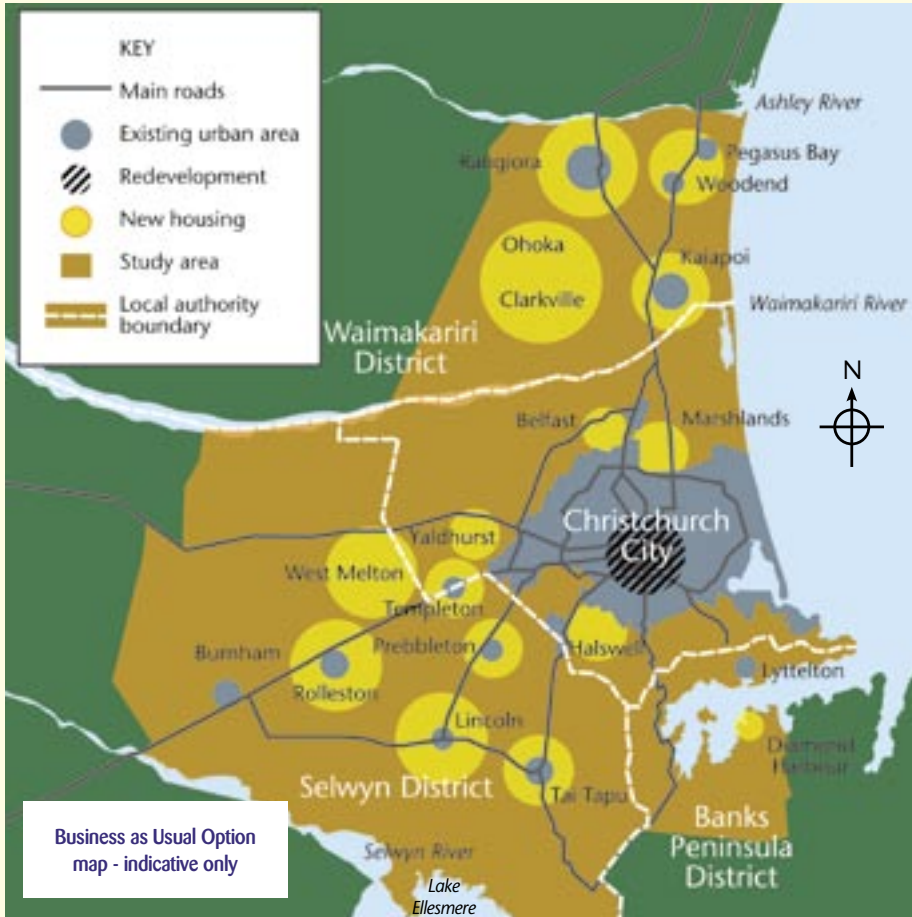
All figures are Net Present Value – that is, they are estimates of future costs in today's dollars.

The options use a number of terms:

- Urban renewal** redevelopment of existing housing, retail and commercial areas
- New subdivisions** includes lifestyle blocks, rural residential and suburban-sized sections
- Redevelopment** includes new housing developments in existing residential areas as well as retail, commercial and industrial renewal

Business as Usual Option

Business as Usual continues current trends of development spreading out around the Greater Christchurch area in new subdivisions, with some housing in urban renewal developments. Councils would continue to pursue independent growth strategies. The map indicates areas where development would generally occur.



Land Use and Housing

Business as Usual sees a continuation of the existing mix of redevelopment of established Christchurch inner suburbs, growth of larger towns and new rural residential developments.

About 21% of the population growth would be housed through urban renewal developments and the remaining 79% would live in new developments spread around the Greater Christchurch area. Employment and retail location would continue to disperse.

Christchurch and its inner suburbs already being redeveloped, such as St Albans, Richmond, Linwood and Addington would continue to be renewed. Housing choices here might include apartments and townhouses with two – three storey developments.

Christchurch's outer suburbs are unlikely to experience much change, however, there would be further expansion of Christchurch into rural areas.

Land outside Christchurch north of the Waimakariri River and southwest into Selwyn would continue to be developed for housing. The larger district towns, such as Rangiora and Rolleston would continue to grow.

New subdivisions would likely be a combination of traditional suburban subdivisions located around existing towns and new towns, such as Pegasus Bay, with smaller section sizes, and rural residential developments (lifestyle blocks) with large sections, blurring the distinction between town and country.

New subdivisions require water, sewerage, power and telephone services. Existing infrastructure in established suburbs and towns would require ongoing maintenance requiring \$360 million being spent on infrastructure by 2021 and \$560 million by 2041.

Redevelopment of existing suburbs, expansion of large towns and new development would provide good choices for house buyers, with a wide range of housing types and locations. The large areas of land zoned for development will keep land-cost lower and housing prices affordable and competitive compared to the other options.

Business as Usual Option at a glance

- Development continues between Christchurch and rural towns, and southwest to Rolleston and Lincoln, around Lyttelton Harbour and north of the Waimakariri River
- 21% of new housing is urban renewal (13,000 townhouses and apartments) and 79% in new subdivisions (49,000 new houses)
- Farmland/open space required for housing 120,000 additional people is 4,920 hectares equivalent to 26 Hagley Parks
- 320% increase in congestion by 2041/500,000 people, commute takes 55% longer (a 30-minute trip today would take 47 minutes in 2041)
- To avoid traffic congestion increases, new road construction, widening/maintenance costs \$2 billion by 2041 (\$206 per household annually)
- Walking, cycling and public transport are poor alternatives to driving
- Infrastructure for new subdivisions costs \$560 million by 2041
- Increased water demand
- Natural landscapes, such as the Port Hills, are threatened as development spreads

Transport

For people living in Christchurch's Central City and inner suburbs, walking and cycling may be practical alternatives to driving, and public transport services should be good to these areas and to the larger district towns, such as Rolleston and Rangiora. People living in new subdivisions in rural areas, further from where they work, study, socialise or relax are unlikely to have public transport available, and neither walking nor cycling will be viable choices.

With most development spread out around the area, people will spend more time travelling from their homes to work, school and shops. Arterial roads and city streets across the area will become more congested. With new developments spread right around the area it may not be feasible to extend Metro public transport services to some of these areas, giving residents limited choices.

By 2021 congestion would increase by 160% and commuting take 26% longer. By 2041 congestion would rise by 320% and commuting take 55% longer. For example, a 30-minute trip today would take 38 minutes by 2021 and 47 minutes by 2041. To prevent congestion reaching this level would require the building and widening of roads, and investing in public transport and cycling, at a cost of \$1.5 billion by 2021 and \$2 billion by 2041.

Congestion would increase motoring costs (vehicle fuel costs and the cost of crashes). By 2041 we would be spending over \$3.9 billion each year on motoring, in addition to the \$2 billion spent on roading.



Community Identity

New developments outside Christchurch and the larger towns will have little in the way of community facilities when first developed. This forces residents to travel further to existing facilities until amenities are developed, if they are developed. The lack of community facilities, such as schools, recreation centres and libraries, prevents new communities from developing an identity.

While well-planned redevelopment can breathe new life into neighbourhoods and attract new residents, much of the current redevelopment of existing suburbs is uncoordinated and random. This unplanned redevelopment of neighbourhoods changes the character of communities as villas and townhouses sit uncomfortably side-by-side. If this approach continues, the social make-up of these communities could change impacting upon community facilities. Libraries, clubs and even schools could face closure as redevelopment changes the community identity and the facilities required. The transition of population from old to new or redeveloping suburbs could also result in a loss of social cohesion.

Natural Environment

With growth spreading outward from Christchurch City around towns and into the countryside, there will be fewer opportunities to create large open spaces and regional parks. The open space between existing towns will increasingly fill up with housing developments. People will need to travel further to escape the built up areas and find open space for recreation and leisure.

With people living further away from their work, schools and shops, there'll be more vehicles on the road for longer periods. Vehicle emissions would increase 28% by 2021 and 64% by 2041 (carbon monoxide 160 tonnes/day in 2021 and 200 tonnes/day by 2041).

It is possible that air pollution could worsen, due to a lack of reinvestment in older housing areas and use of wood burning fires in outer areas.

As many new section sizes are large, and more lifestyle developments occur, the volume of water used to water gardens and lawns will rise rapidly. Overall water consumption would rise to 3,042 litres per second - a 45% increase from 2001.

Spreading development around the area may reduce the risk of damage from flooding, earthquakes and tsunami however, because of the spread of population at greater distances than at present emergency services would be stretched to respond to a natural disaster.

As development moves out into the countryside, productive lands currently used for market gardening and farming would be lost. Development could threaten the natural habitat and eco-systems essential for the survival of many native plants, birds and animals.



Option A

Option A concentrates development within Christchurch City and at larger towns in the surrounding districts. The map indicates areas where development would generally occur.



Land Use and Housing

Future housing and employment growth would be mostly contained within Christchurch (85% of population growth - 44,310 extra people by 2021) and the larger towns of Rangiora, Kaiapoi and Rolleston. Development would include both redevelopment of existing housing (for example, replacing homes on larger sections with townhouses and apartments) and developing new subdivisions generally adjacent to existing areas. This would require less land currently being used for farming to become residential.

Around 60% of new housing would be urban renewal, and only 40% would be in subdivisions, as further restrictions would be placed upon extensive development beyond the edge of Christchurch and towns. A green belt of open space would be established to prevent Christchurch, Rangiora, Kaiapoi and Rolleston spreading into farmland or each other.

Section sizes within the Central City and inner suburbs of Christchurch would be smaller as redevelopment increased. Mixed developments of commercial space on lower floors and residential on upper floors would occur. Redevelopment in suburbs such as Spreydon, Linwood, St Albans and Riccarton would increase as multi-storey townhouses, apartments and flats replace villas and bungalows. There would be more intensive development in some locations in the districts, such as Rangiora, Kaiapoi and Rolleston.

By redeveloping existing suburbs, it should be possible to reuse existing infrastructure, upgrading where necessary. This is considerably cheaper than the cost of developing infrastructure for new subdivisions. Infrastructure upgrades of water, sewerage and power would still be required and might cost the community as much as \$260 million by 2021 and \$430 million by 2041.

People not wanting to live in densely populated areas would still be able to live in homes in the outer suburbs, or in the surrounding towns. Though there would be choices of housing type as more redevelopment takes place, it might not be affordable for all income groups.

The cost of residential development will depend on locations and quality but land costs are likely to be higher per unit/lot under this option (because of less land being available). Affordable housing programmes may need to be developed to ensure all income groups have access to good quality housing.

Option A at a glance

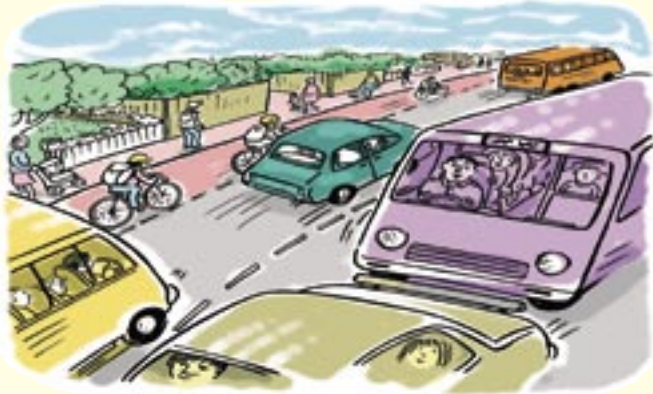
- Development focuses on central Christchurch and inner suburbs, also Rangiora, Kaiapoi and Rolleston
- 60% of new housing is urban renewal (37,470 townhouses and apartments in, for example, Spreydon, St Albans, Waltham, Linwood) - 40% in new subdivisions (24,980 houses on small sections)
- Farmland/open space required for housing 120,000 additional people is 2,110 hectares equivalent to 11 Hagley Parks
- Infrastructure for new subdivisions and urban renewal costs \$430 million by 2041
- 190% increase in congestion by 2041/500,000 people, commute takes 45% longer (a 30-minute trip today takes 44 minutes)
- To avoid congestion increasing, road widening/maintenance costs \$1.9 billion by 2041 (\$195 per household annually)
- Walking, cycling and public transport are significantly improved
- Opportunities to protect natural landscapes, and create open spaces around City and towns

Transport

Concentrating development within and around existing urban areas will make some roads more congested (50% increase in congestion by 2021, 190% by 2041) increasing travel times (commute takes 21% longer by 2021, 45% longer by 2041). For example, a trip that takes 30 minutes today would take 36 minutes in 2021 and 44 minutes in 2041.

Some road widening of key arterials may be inevitable and could be costly. With growth of towns such as Rolleston and Rangiora, the roads connecting these towns to Christchurch will also need upgrading to avoid the predicted growth in congestion (road infrastructure improvements and maintenance costs \$1.4 billion by 2021 and \$1.9 billion by 2041/500,000 population). By 2041 we would be spending over \$0.5 billion each year on motoring (fuel and the cost of crashes), in addition to the \$1.9 billion spent on roading.

Some people may end up living closer to their work places making walking, cycling and public transport practical alternatives to driving their cars. Greater investment in public transport would occur, making Metro services more attractive.



Community Identity

Redevelopment of existing urban areas will change the character of neighbourhoods. Planning and coordinating redevelopment will ensure that many of the existing community social structures and facilities are retained in the transition. Concentrating development within existing urban areas increases the potential for new residents to maintain and enhance community identity through joining existing social, cultural and sporting groups. This should ensure the survival of existing social networks as well as community amenities such as swimming pools, libraries and schools. Without additional residents local communities might not be able to retain these amenities. The increased number of families with school aged children moving into inner suburbs could balance the decline in overall numbers of school aged children, making the best use of existing facilities.

Existing shopping and retail centres are likely to expand and become more commercially viable, offering greater employment opportunities and a wider range of products and services to their local communities.

Large numbers of new residents moving into existing communities could also change the character of communities and the services required. For example, more quality public space would be required to meet the demand from people living in higher density developments with less private outdoor and recreational space. To ensure redevelopment enhances the character of existing communities, councils will need to set clear urban design guidelines and play a leading role, such as facilitating redevelopment where appropriate.

Natural Environment

By limiting growth to within and around the existing urban areas, it would be possible to create green zones or parks and open spaces around each urban area. Regional parks will provide habitats for native plants, birds, insects and animals, and provide for recreational activities from team sports to individual pursuits such as walking and hiking. Increasing the number of dwellings in urban areas would increase demand and use of existing local parks.

Focusing redevelopment on older established suburbs would result in older homes, built without insulation and heated with open fires, being renovated to become well-insulated homes heated with gas or electricity. As a result air quality should improve by reducing the overall level of wintertime pollution from home heating.

Vehicle emissions increase 15% by 2021 and 49% by 2041 (carbon monoxide produced will be 140 tonnes/day in 2021 and 180 tonnes/day by 2041). With more people living closer to established amenities such as schools and shops it would be easier and more attractive for people to walk, cycle or use public transport instead of driving their cars.

By reducing overall section sizes and the area of gardens and lawns requiring watering, the volume of water used by households would be reduced. Overall water consumption would reach 2,830 litres per second in 2041, a 35% increase from 2001 consumption.

Responding to natural hazards may improve by concentrating development closer to emergency services such as police, fire and ambulances. Concentrating development in Christchurch's Central City and inner suburbs, however, may present increased risks from some hazards. Central Christchurch is at risk of flooding from the Waimakariri River. The low-lying, soft sandy soils of Christchurch's eastern and inner suburbs are prone to liquefaction during earthquakes and coastal areas of Christchurch and surrounding communities are at risk from tsunamis.

By restricting development to within and around existing urban areas, farmland can continue to be used for primary production, and outstanding natural landscapes, such as the Port Hills can be preserved.



Option B

Option B balances future urban development between existing built areas with some expansion into adjacent areas. The map indicates where development would generally occur.



Land Use and Housing

Housing and employment development would be balanced between new subdivisions (62%) and urban centre development (38%) in and around existing towns and urban centres, increasing density in some areas of Christchurch.

Around 62% (32,320 people) would live in new subdivisions in and around existing towns and urban areas. There would be less productive farmland carved up into larger lifestyle blocks (2-5 hectares). Instead larger sections would satisfy people's desire for more land than a standard residential section.

Urban centres or community villages focus around shopping malls and community facilities, including health centres, libraries and cinemas where local residents get many of their day-to-day services, and serve as community meeting places.

Option B focuses development around these urban centres to provide people with easier access to facilities and activities. Potential urban centres that could be developed are indicated on the map.

Development of urban centres would include townhouses and apartments and mixed developments of offices, shops and apartments of three to four-storeys. Open space and parks would need to be developed to enable recreation opportunities for residents. Urban centre development would account for about 38% of development (housing around 19,809 new residents).

The development of new subdivisions would require integrated planning for new infrastructure (water, sewerage, power and telephone services) and may require significant upgrading of these services. The cost to the community for infrastructure could be \$300 million by 2021 and \$480 million by 2041.

The combination of redevelopment of urban centres and new development around towns and city boundaries would provide greater choice for housing location and type. Residents would be able to choose from apartments in the Central City, townhouses around urban centres, smaller sections in suburbs or larger sections in rural settings. The wide variety of choice would keep house prices affordable.

Option B at a glance

- Development at urban centres in Christchurch and districts
- 38% of new housing is urban renewal (23,731 townhouses and apartments in, for example, Rangiora, Lincoln, Christchurch) with 62% in new subdivisions (38,719 houses on medium sized sections)
- Farmland/open space required for housing 500,000 people is 3,900 hectares equivalent to 21 Hagley Parks
- Infrastructure for new developments/upgrades costs \$480 million by 2041
- 290% increase in congestion by 2041/500,000 people, commute takes 50% longer (a 30-minute trip today takes 45 minutes in 2041)
- To avoid congestion increasing, road widening/maintenance costs \$2 billion by 2041 (\$206 per household annually)
- Walking, cycling and public transport alternatives to driving – more bus services and cycle routes
- Opportunity to protect natural landscapes and develop open spaces around the City and towns and around urban centres

Transport

By developing self-sufficient urban centres or villages local residents could be within walking or cycling distance of their workplaces, schools, shops and other facilities. This could reduce many people's need for transport and the distances travelled. Transport connections between urban centres would need to be improved as would parking for vehicles and cycles. The majority of new development would occur outside the city and district town centres, so the volume of vehicles on the road would rise. By 2021 there would be a 140% increase in congestion and commuting would take 24% longer. By 2041 congestion would have increased by 290% and commuting would take 50% longer. For example, a trip that takes 30 minutes today would take 37 minutes by 2021 and 45 minutes in 2041.

To prevent congestion from reaching these levels, building and widening roads would cost \$1.5 billion by 2021, and \$2 billion by 2041. By 2041 we would be spending over \$3.9 billion each year on motoring (the cost of fuel and crashes), in addition to the \$2 billion spent on roading.

By increasing the population around urban centres and villages there could be sufficient demand for improved public transport including buses and even light rail. Public transport, cycling and walking could all become more attractive and economically viable.



Community Identity

A large proportion of our residential areas would remain unchanged. Locating development at existing urban centres should strengthen community identity, rather than change it. With the alternative of living in new subdivisions, people choosing to live in more intensive developments will be attracted by what they offer. Like-minded people will naturally move to the locations that offer them what they seek from housing and community identity.

Existing shopping at urban centres would expand, offering greater product ranges and services in response to their local communities' needs. Community facilities such as libraries, swimming pools, health and recreation centres are also likely to be developed. As more facilities relocate to urban centres they will attract more people to live within close proximity. This influx of residents will in turn stimulate more economic and social activity making urban centres self-sustaining communities.

Natural Environment

With growth restricted to areas around existing towns, and within the City boundaries, open spaces and regional parks could be developed as green zones between Christchurch and the neighbouring district towns. A network of regional parks might stretch from the Port Hills, through the Halswell and Heathcote Rivers/Wigram area, around the airport and aquifer protection zone to the Styx River/Brooklands lagoon area. As well as providing valuable space for group and individual recreation, these regional parks would enhance eco-systems and habitats for the many native species that live in the Greater Christchurch area. Regional parks would create visually attractive landscapes with trees, waterways and open grassland.

Development will result in older housing around urban centres being replaced or renovated with well-insulated housing with non-polluting heating. This should result in air quality being improved, particularly since many of the areas likely to be redeveloped have older housing, such as Spreydon, Linwood and Shirley.

With over 62% of the population growth being housed in outer suburbs and around district towns such as Woodend and Lincoln, vehicle emissions will increase 28% by 2021 and 64% by 2041 (carbon monoxide produced will be 160 tonnes/day in 2021 and 200 tonnes/day by 2041).

The reduction in section sizes around urban centres and villages will reduce demand for water from these residents, but development in outer suburbs will increase overall consumption to 2,924 litres per second by 2041, a 40% increase from 2001.

Focusing developments around urban centres improves the ability of emergency services to respond to a natural disaster. It is likely that some emergency services might relocate to these urban centres. Locating new developments to around existing district towns offers two benefits for the community: more of the population will live further from the highest at risk areas for flooding, earthquakes and tsunamis (Eastern and Inner Christchurch), and local fire and ambulance services will be within acceptable travelling times to respond to natural disasters.



Option C

Option C disperses development out around the Greater Christchurch area away from established urban areas. The map indicates areas where development would generally occur.



Land Use and Housing

Option C creates a greater degree of decentralisation of households and employment throughout the area. About 40% of the population growth is located in Christchurch City (20,852 people), 21% in towns (10,947 people) and 39% on rural and lifestyle blocks and larger residential lots of 2-5,000sqm (20,330 people). Lifestyle choice and a market driven rural-residential housing market are key factors encouraging decentralisation of both residential and commercial activity.

Residential development would occur in rural areas to the southwest of Christchurch City around Rolleston and Lincoln, north of the Waimakariri River, at Pegasus Bay and Rangiora, and around the Lyttelton Harbour Basin. About 90% of housing development would be in new subdivisions and rural residential developments and 10% would be urban renewal in areas of the City and towns. Christchurch and the major rural towns would largely retain their existing size.

These new subdivisions are likely to be a combination of traditional suburban subdivisions located near existing towns with smaller sections, and rural residential developments (lifestyle and residential blocks) with large sections.

The look and feel of existing neighbourhoods would experience little change, as redevelopment of existing areas would take second place to the development of new housing developments. Section sizes would remain similar sizes within existing urban areas, though the average size of a section in a new rural residential area would be much larger. Limited redevelopment in Christchurch's Central City would proceed.

New subdivisions require water, sewerage, power and telephone services. Existing infrastructure in established suburbs and towns would require ongoing maintenance costing about \$380 million for infrastructure by 2021 and \$580 million by 2041.

This new development would provide some choice for house buyers, with a wide range of locations although limited opportunity for apartment, townhouse and mixed use housing choices. The large areas of land zoned for development will keep land cost low and housing prices affordable and competitive.

Option C at a glance

- Development in areas outside Christchurch and rural towns, southwest to Halswell, Lincoln and Rolleston, around Lyttelton Harbour, between Rangiora and Kaiapoi and at Pegasus Bay
- 10% of new housing in urban renewal (6,245 townhouses and apartments) and 90% in new subdivisions (56,205 houses on medium to large sections)
- Farmland/open space required for housing 120,000 additional people is 6,850 hectares equivalent to 36 Hagley Parks
- New subdivisions require infrastructure at a high cost - \$580 million by 2041
- 630% increase in congestion by 2041/500,000 people, commute takes 65% longer (a 30-minute trip today would take 50 minutes in 2041)
- To avoid congestion increasing, new road construction, widening/maintenance costs \$2.1 billion by 2041 (\$217 per household annually)
- Walking, cycling and public transport are poor alternatives to driving
- Increased water demand
- Development threatens natural landscapes, such as the Port Hills

Transport

With development spread out around the Greater Christchurch area, people will spend more time travelling from their homes to work, school and shops. Arterial roads and city streets across the area will become more congested. By 2021 congestion would increase by 250% and commuting would take 31% longer. By 2041 congestion would rise by 630% and commuting would take 65% longer. For example, a 30-minute trip today would take 40 minutes by 2021 and 50 minutes by 2041.

Building and widening roads to avoid this predicted increase in congestion is likely to cost \$1.6 billion by 2021 and \$2.1 billion by 2041. By 2041 we would be spending over \$4.9 billion each year on private motoring costs (cost of fuel and crashes), in addition to the \$2 billion spent on roading.

With people living further from where they work, study, socialise or relax, walking, cycling and using public transport are unlikely to be attractive alternatives to driving. With more vehicles on the road, the costs of servicing and repairing the damage from crashes are likely to increase.



Community Identity

New developments would have little in the way of community facilities when first developed. This forces residents to travel to existing facilities until amenities are developed, if they are developed. The lack of community facilities, such as schools, recreation centres and libraries may prevent communities from developing an identity.

Existing facilities in established suburbs may struggle to survive without a steady inflow of new residents. Sports and cultural groups in older suburbs may struggle to survive. The transition of population from old to new suburbs could result in a loss of community groups and facilities and social cohesion.

Without pressure to redevelop existing suburbs and towns, older properties could become rundown and unattractive, further destroying community identity and pride as people who can afford to move away do so, leaving others in neighbourhoods in need of renewal.

Natural Environment

By encouraging growth to spread outward, the opportunity to create large open spaces and regional parks is reduced. While larger sections provide more private recreation space for individual homeowners, they reduce the space available for community recreation space.

It is possible that air pollution could worsen, due to a lack of reinvestment in older housing areas and use of wood burning fires in outer areas.

With more people living further away from their work, schools and shops, there'll be more vehicles on the road for longer periods. Vehicle emissions would increase 41% by 2021 and 103% by 2041 (carbon monoxide 170 tonnes/day in 2021 and 260 tonnes/day by 2041). With new developments spread right around the Greater Christchurch area, it would not be practical to extend Metro public transport services to some of these areas, giving residents no choice but to drive everywhere.

As section sizes are large, and more lifestyle developments occur, the volume of water used to water gardens and lawns will rise rapidly. Overall water consumption would increase to 3,240 litres per second by 2041, a 55% increase from 2001. Balancing residential demand for water with the water needs of farming and industry could lead to difficult choices over who gets priority for water and at what price.

Spreading development away from existing urban areas, the coastline and the Waimakariri River would reduce the risk of damage from flooding, earthquakes and tsunamis. Emergency services, however, would be stretched to respond to a natural disaster due to the spread of population at greater distances than at present.

As development moves out into the countryside, productive lands currently used for market gardening and farming would be lost. The current separation of town and country would be blurred as development spread in every direction. Development could also destroy the natural habitat and eco-systems essential for the survival of hundreds of native plants, birds and animals living in the Greater Christchurch area.

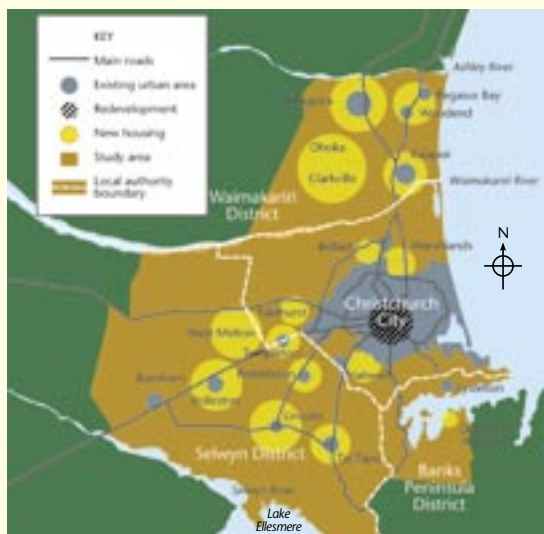


Comparing the Options for 2041

All costs are Net Present Value – that is they are estimates of future costs in today's dollars.

Land Use and Housing	Business as Usual Option (see pages 8-9)	Option A (see pages 10-11)	Option B (see pages 12-13)	Option C (see pages 14-15)
Locations for new housing	79% new subdivisions (Spread across districts in towns and rural subdivisions) 21% urban renewal (Christchurch inner suburbs)	40% new subdivisions (Around edge of towns and Christchurch) 60% urban renewal (Christchurch Central City and inner suburbs; Rangiora, Kaiapoi and Rolleston)	62% new subdivisions (Southwest of Christchurch to Selwyn, in Waimakariri around existing towns) 38% urban renewal (Urban centres in Christchurch and towns)	90% new subdivisions (Southwest from Halswell to Rolleston, North of Waimakariri River and Lyttelton harbour) 10% urban renewal (Christchurch City)
New housing • Type • Choice	<ul style="list-style-type: none"> • Mixture of housing types: 49,000 houses on medium to large sections 13,000 townhouses and apartments • Some choices in most locations 	<ul style="list-style-type: none"> • Mostly housing without gardens: 37,000 townhouses and apartments in urban renewal 25,000 houses on small to medium sections • Good choices in inner suburbs 	<ul style="list-style-type: none"> • Townhouses and apartments at urban centres with houses in new subdivisions: 38,000 houses on medium sized sections 24,000 townhouses and apartments • Good choices in most locations 	<ul style="list-style-type: none"> • Mostly houses, few townhouses and apartments: 56,000 houses on medium to large sections 6,000 townhouses and apartments • Good choices in new subdivisions
Land to house 120,000 more people	4,920 hectares - equivalent land area to 26 Hagley Parks	2,110 hectares - equivalent land area to 11 Hagley Parks (uses 43% less land than Business as Usual)	3,900 hectares - equivalent land area to 21 Hagley Parks (uses 20% less land than Business as Usual)	6,850 hectares - equivalent land area to 36 Hagley Parks (uses 40% more land than Business as Usual)
Public infrastructure cost for new housing	\$560 Million	\$430 Million (\$130 million less than Business as Usual)	\$480 Million (\$80 million less than Business as Usual)	\$580 Million (\$20 million more than Business as Usual)

Business as Usual Option Map - indicative only



Option A Map - indicative only

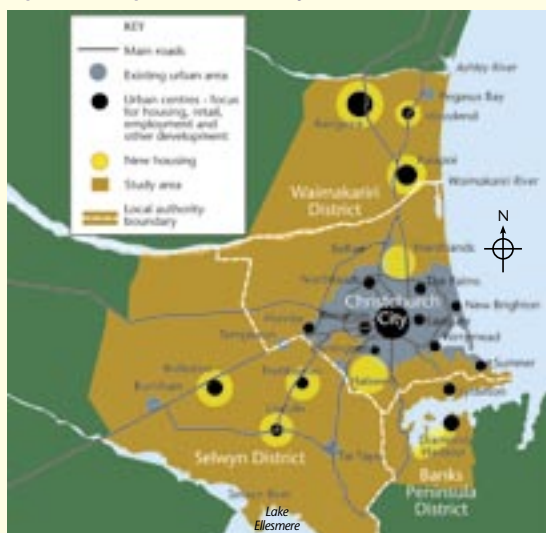


Community Identity	Business as Usual Option (see pages 8-9)	Option A (see pages 10-11)	Option B (see pages 12-13)	Option C (see pages 14-15)
Community Facilities	Few facilities for residents in new subdivisions – have to drive to existing facilities	Good range of facilities in easy access for residents of central and inner suburbs	Good range of facilities in easy access for residents at urban centres in Christchurch and towns	Few facilities for residents in new subdivisions – have to drive to existing facilities



Transport	Business as Usual Option (see pages 8-9)	Option A (see pages 10-11)	Option B (see pages 12-13)	Option C (see pages 14-15)
Congestion <ul style="list-style-type: none"> Increase Cost to avoid increase Impact on travelling times 	<ul style="list-style-type: none"> Congestion increases 320% \$2 billion to avoid increase Commute takes 55% longer – 30-minute trip takes 47 minutes 	<ul style="list-style-type: none"> Congestion increases 190% \$1.9 billion to avoid increase (\$100 million less than Business as Usual) Commute takes 45% longer – 30-minute trip takes 44 minutes 	<ul style="list-style-type: none"> Congestion increases 290% \$2 billion to avoid increase (same as Business as Usual) Commute takes 50% longer – 30-minute trip takes 45 minutes 	<ul style="list-style-type: none"> Congestion increases 630% \$2.1 billion to avoid increase (\$100 million more than Business as Usual) Commute takes 65% longer – 30-minute trip takes 50 minutes
Transport consequences <ul style="list-style-type: none"> Vehicle emissions Energy use Motoring costs (fuel and crashes) 	<ul style="list-style-type: none"> Vehicle emissions increase 64% 1.53 million litres per day (58% increase from 2001) Motoring costs \$3.9 billion per year (150% increase from 2001) 	<ul style="list-style-type: none"> Vehicle emissions increase 49% 1.39 million litres per day (45% increase from 2001) Motoring costs \$3.5 billion per year (135% increase from 2001) 	<ul style="list-style-type: none"> Vehicle emissions increase 64% 1.51 million litres per day (57% increase from 2001) Motoring costs \$3.9 billion per year (150% increase from 2001) 	<ul style="list-style-type: none"> Vehicle emissions increase 103% 1.87 million litres per day (95% increase from 2001) Motoring costs \$4.9 billion per day (188% increase from 2001)
Transport choices	Good in some built up areas for public transport, walking and cycling – poor for subdivisions in districts	Very good in city and inner suburbs for walking, cycling and public transport Limited elsewhere	Very good at urban centres for walking, cycling and public transport Public transport to new developments	Poor for people in new developments – limited public transport – walking and cycling not practical

Option B Map - indicative only



Option C Map - indicative only



Natural Environment	Business as Usual Option (see pages 8-9)	Option A (see pages 10-11)	Option B (see pages 12-13)	Option C (see pages 14-15)
Water use by 500,000 people	3,042 litres per second (45% increase from 2001)	2,830 litres per second (35% increase from 2001)	2,924 litres per second (40% increase from 2001)	3,240 litres per second (55% increase from 2001)
Natural Disasters <ul style="list-style-type: none"> Risk Response 	<ul style="list-style-type: none"> Mixture of increased risk in inner Christchurch and reduced risk in outer areas Good in built up areas and poor in outer areas 	<ul style="list-style-type: none"> Increased risk by concentrating people in areas most affected by earthquakes, flooding and tsunami Faster response times 	<ul style="list-style-type: none"> Increased risk around urban centres in eastern Christchurch - reduced risk for others e.g. Lincoln Good response times if emergency services based at urban centres 	<ul style="list-style-type: none"> Low risk with population in areas less affected e.g. Rolleston and Rangiora Difficult to respond with greater distances to travel on congested roads
Parks/open space	Good for neighbourhood parks in new developments	Good for regional parks outside urban areas	Good for network of regional parks in urban areas	Good for neighbourhood parks in new developments

Comparing Options by Strengths and Weaknesses

Land Use and Housing	Business as Usual Option	Option A	Option B	Option C
Strengths	<ul style="list-style-type: none"> • Good choice of housing location, type and section size 	<ul style="list-style-type: none"> • Uses least amount of land • Lowest infrastructure cost 	<ul style="list-style-type: none"> • Good choice of housing type, location and section size • Lower infrastructure cost 	<ul style="list-style-type: none"> • Some choice of housing location, type and section size
Weaknesses	<ul style="list-style-type: none"> • Development spreads • High infrastructure cost 	<ul style="list-style-type: none"> • Limited choice of housing location • Land cost likely to increase 	<ul style="list-style-type: none"> • Most development around busy urban centres 	<ul style="list-style-type: none"> • Uses most land • Highest infrastructure cost

Transport	Business as Usual Option	Option A	Option B	Option C
Strengths	<ul style="list-style-type: none"> • People able to drive to destinations 	<ul style="list-style-type: none"> • Smallest congestion increase • Smallest increase in travelling times • Walking, cycling and public transport practical alternatives to driving • Lowest infrastructure cost 	<ul style="list-style-type: none"> • Good for walking, cycling and public transport around urban centres • Public transport to district towns 	<ul style="list-style-type: none"> • People able to drive to destinations
Weaknesses	<ul style="list-style-type: none"> • Travelling times get longer with increased congestion • Higher cost of travel 	<ul style="list-style-type: none"> • Limited transport choices outside inner Christchurch 	<ul style="list-style-type: none"> • Travelling times get longer with increased congestion 	<ul style="list-style-type: none"> • Biggest increase in congestion • Longest travelling times • Poor choices for transport • Highest roading cost

Community Identity	Business as Usual Option	Option A	Option B	Option C
Strengths	<ul style="list-style-type: none"> • Established communities retain identity 	<ul style="list-style-type: none"> • Range and quality of facilities in inner city improves • Good access for local city residents 	<ul style="list-style-type: none"> • Range of facilities around urban centres • Good access for people living around urban centres • Communities retain identities 	<ul style="list-style-type: none"> • Established communities retain identity
Weaknesses	<ul style="list-style-type: none"> • Growth may be insufficient to retain facilities (e.g. schools) • New subdivisions may not have community facilities 	<ul style="list-style-type: none"> • Influx of new residents could change community identity 	<ul style="list-style-type: none"> • Some change in community character around urban centres 	<ul style="list-style-type: none"> • Spread of growth may result in loss of existing facilities • New subdivisions may not have community facilities


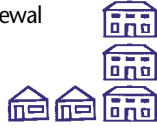











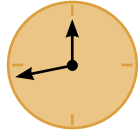
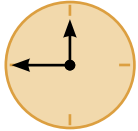





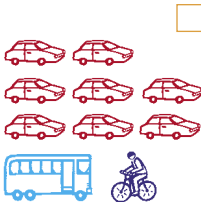
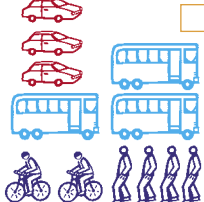
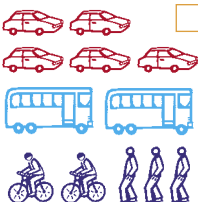
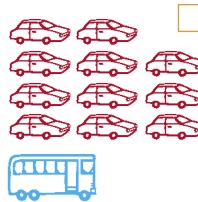
Natural Environment	Business as Usual Option	Option A	Option B	Option C
Strengths	<ul style="list-style-type: none"> • Opportunity to create parks in new developments 	<ul style="list-style-type: none"> • Least water consumed • Best air quality improvement • Best response to natural disasters • Increased opportunity for regional parks 	<ul style="list-style-type: none"> • Water use moderate • Air quality improves • Good response to natural disasters at urban centres • Increased opportunity for regional parks 	<ul style="list-style-type: none"> • Lower risk of damage from natural disaster
Weaknesses	<ul style="list-style-type: none"> • Higher water demand • Slower response to natural disasters in outer lying areas 	<ul style="list-style-type: none"> • Increased risk from natural disaster • Risk to streams and Estuary 	<ul style="list-style-type: none"> • Potential risk to streams and Estuary unless growth managed 	<ul style="list-style-type: none"> • Highest water demand • Vehicle emissions increase • Harder to respond to disasters • Greatest impact on landscape

Once you've read through the options please complete the feedback form (opposite) and send it in no later than **Friday 3 June 2005**.
So what are you waiting for? Let's decide our future together.

Greater Christchurch – Which Option do you prefer?

Now it's decision time. Please fill in and return this survey (you can complete it online at www.greaterchristchurch.org.nz) by **Friday 3 June 2005** and you'll go in to a prize draw for one of 20 free year-long subscriptions to The Press. To help you complete the feedback form, turn to pages 16, 17 and 18 for summaries, strengths and weaknesses of each option.

There are two parts to each question: Firstly, place a tick in the box of the Option you like best. Then rate each issue according to how important it is to you by ticking the box next to either High, Medium or Low. Please tick just one box to answer each question.

The Issues	Tick 1 box only for each question				Rating the Issues (Tick 1 box only)
	Business as Usual Option	Option A	Option B	Option C	
1. Which is the right mixture of new housing and locations?	79% new subdivisions <input type="checkbox"/> 21% urban renewal 	40% new subdivisions <input type="checkbox"/> 60% urban renewal 	62% new subdivisions <input type="checkbox"/> 38% urban renewal 	90% new subdivisions <input type="checkbox"/> 10% urban renewal 	Importance to you? High <input type="checkbox"/> Medium <input type="checkbox"/> Low <input type="checkbox"/>
2. How much farmland/open space should we use for new housing?	4,920 ha = 26 Hagley Parks <input type="checkbox"/> 	2,110 ha = 11 Hagley Parks <input type="checkbox"/> 	3,900 ha = 21 Hagley Parks <input type="checkbox"/> 	6,850 ha = 36 Hagley Parks <input type="checkbox"/> 	Importance to you? High <input type="checkbox"/> Medium <input type="checkbox"/> Low <input type="checkbox"/>
3. How much should we spend on new housing infrastructure? (costs for sewerage, water supply, etc)	\$560 million <input type="checkbox"/> 	\$430 million <input type="checkbox"/> 	\$480 million <input type="checkbox"/> 	\$580 million <input type="checkbox"/> 	Importance to you? High <input type="checkbox"/> Medium <input type="checkbox"/> Low <input type="checkbox"/>
4. How much traffic congestion is acceptable? (30-minute trip in 2004)	47-minute trip <input type="checkbox"/>  320% congestion increase	44-minute trip <input type="checkbox"/>  190% congestion increase	45-minute trip <input type="checkbox"/>  290% congestion increase	50-minute trip <input type="checkbox"/>  630% congestion increase	Importance to you? High <input type="checkbox"/> Medium <input type="checkbox"/> Low <input type="checkbox"/>
5. How much should we spend to prevent congestion increasing?	\$2 billion <input type="checkbox"/> 	\$1.9 billion <input type="checkbox"/> 	\$2 billion <input type="checkbox"/> 	\$2.1 billion <input type="checkbox"/> 	Importance to you? High <input type="checkbox"/> Medium <input type="checkbox"/> Low <input type="checkbox"/>
6. Which option gives you the best choice of transport?	<input type="checkbox"/> 	<input type="checkbox"/> 	<input type="checkbox"/> 	<input type="checkbox"/> 	Importance to you? High <input type="checkbox"/> Medium <input type="checkbox"/> Low <input type="checkbox"/>
7. Which option do you think is best overall?	BUSINESS AS USUAL OPTION <input type="checkbox"/>	OPTION A <input type="checkbox"/>	OPTION B <input type="checkbox"/>	OPTION C <input type="checkbox"/>	I do not like any of these Options <input type="checkbox"/>

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Feedback Form

