

Belfast Area Plan

Landscape Assessment



Prepared by
Christchurch City Council
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Contributors

Andrew Craig

Report Author

Consultant Landscape Architect, Peter Rough
Landscape Architects Ltd.

Hannah Lewthwaite

Landscape Architect, Christchurch City Council

Christine Heremaia

Landscape Architect, Christchurch City Council

Matt Bonis

Consultant Planner, Planit RW Batty & Associates
Ltd.

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1.0 Introduction and Executive Summary

1.1 The Purpose of the Study

This study has been undertaken as part of the Belfast Area Plan. The reason for developing the Area Plan is to manage change in and around Belfast. In recent years Belfast has experienced considerable urban growth in both the residential and business sectors. Further growth is anticipated along with the development of major infrastructure such as the proposed Northern Arterial.

1.2 Such development has the potential to significantly affect Belfast's landscape. Effects can be positive and negative, which is explained in more detail later. Nonetheless the aim is to avoid negative effects and along with other disciplines it is hoped that this report will assist in achieving this.

1.3 The landscape also presents opportunities and constraints which can be taken advantage of through development and protection processes. This can only occur though if people are aware of the existence of these attributes. It is one of the main aims of this report to do this.

1.4 Another purpose is to provide an overview of opportunities that might otherwise be overlooked when development takes place. In other words, a landscape assessment takes account of the wider picture. This means that development may capitalise on opportunities beyond its boundaries. The linking of public open space may be one such advantage. Another example would be branding for the whole of Belfast that may be reinforced through the thematic landscape treatment of developments.

1.5 A further purpose of undertaking a landscape study of the Belfast area is that it will alert other disciplines of the need to incorporate landscape opportunities into design arising from their field of expertise. This would especially apply to road designers, urban designers and parks and reserves planners. This approach would be reciprocal.

1.6 So as part of the Belfast Area Plan the overall purpose of this study is to provide guidance for the protection, maintenance and enhancement of Belfast's landscape while accommodating change.

1.7 Ultimately the findings will be incorporated into whatever means are available enabling, where appropriate, the protection, maintenance and enhancement of Belfast's landscape character and amenity. These will include statutory, council corporate, institutional and private mechanisms.

1.8 While this study will concentrate on the open space aspects of landscape there are other factors that will affect visual character and amenity such as the design and appearance of buildings.

1.9 This study is divided into various parts, but in general it sets out to essentially achieve the following:

- The identification and assessment of the existing landscape character and amenity of the Belfast area.
- Recommendations for the protection, maintenance, enhancement and creation of landscape features.

1.10 The overall aim or objective is to ensure that Belfast has a landscape character that is distinctive with high levels of amenity.

Distinctiveness is important for the following reasons:

- It gives residents a sense of belonging where the landscape engenders a sense of place.
- It gives Belfast a 'point of difference' that is able to be capitalised upon.
- Within the wider City context it gives Belfast a role as the major entry and exit point north.
- Allied to the above point, Belfast has a role to play in setting the tone or first impression of the City's identity as a 'Garden City' and as a sustainable City.

1.11 Amenity is important because it is what makes a place pleasant to be in (see also the definition of amenity in the Resource Management Act 1991).The provision of amenity is dependant on the following things:

- Aesthetic attributes where the environment appeals to all of the senses, especially the visual.
- Physiological comfort where adverse natural and physical conditions are minimised.
- Security from malign behaviour.
- Cultural attributes where certain meanings and activities are ascribed to the landscape.
- Recreational opportunities.

1.12 Summary of findings

Listed below is a summary of main points discussed in this study. They are divided into two categories; one is key observation and the other is recommended actions.

Observation

- Because Belfast is located on the main north road into and out of the City, it plays a key role in forming a good first and last impression of the City.

Action

- Enhance main north road through Belfast with further planting.
- Enhance gateway entry points – especially the Styx overbridge.

Observation

- A strong contrast exists between the urban and rural parts of Belfast.

Action

- Maintain contrast by ensuring rural open space is retained in accordance with the zone standard.

Observation

- In some areas high amenity boundaries between urban, rural, and reserves exist in the Belfast area.

Action

- Ensure that all such boundaries have high amenity, achieved through landscaping.
- Take advantage of natural boundaries such as waterways.
- Provide pedestrian and cycle routes along boundaries.

Observation

- Belfast's natural landscape features are predominantly waterways.

Action

- Enhance waterways with landscaping.
- Provide public access.
- Provide links between waterways.

- Provide ecological restoration.
- Use waterways as a basis for promoting (branding) Belfast.

Observation

- The combination of waterways, the railway and roads provide opportunities for the development of pedestrian and cycleway circuits and networks.

Action

- Develop walkways alongside rail and waterways.
- Promote the above.

Observation

- The newer residential subdivisions in Belfast (Northwood) are generally well integrated with natural features, principally waterways.

Action

- Encourage all future subdivision to integrate well with natural features.
- Where possible, enhance older residential areas to better integrate with natural features.
- Link natural features with others in the area.

Observation

- Some of the older industrial areas have poor amenity.

Action

- Enhance where possible, especially with street frontage landscaping.

Observation

- Some of the older residential streets have amenity that is low relative to newer residential areas.

Action

- Enhance with landscaping, and where possible include the undergrounding of services.

Observation

- There are existing and potentially strong natural and physical boundaries in the Belfast area.

Action

- Utilise these boundaries to define the extent of zones.
- Enhance boundaries to reinforce amenity.

Observation

- Belfast is a relatively self contained suburb within a clear boundary.

Action

- Reinforce Belfast's containment as a discrete suburb by constraining further outward growth, particularly to the east and west.

Observation

- Belfast has diverse living environments.

Action

- Encourage further diversity in terms of living density and juxtaposition with natural and physical features.

2.0 Historic Landscape

2.1 Natural history

Geology & Soils

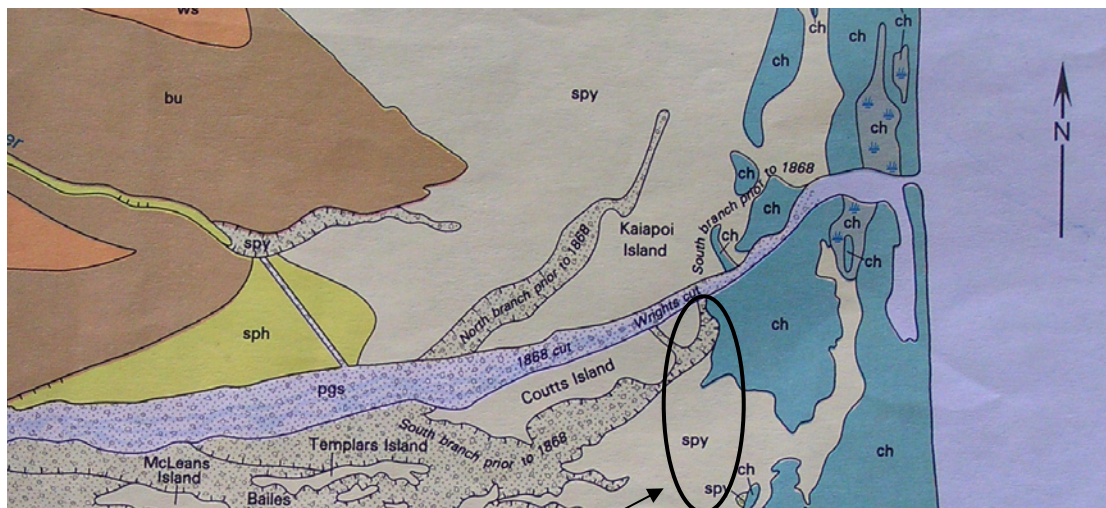
The geology and allied processes of any area has a significant influence on landscape character. Such processes have a direct bearing on landuse affecting the extent and nature of urbanisation and rural activity. Soils in combination with climate and hydrology influence vegetation, which in turn gives rise to particular landscape outcomes. Modification of naturally occurring characteristics can also impact on the landscape. In the Belfast area these modifiers take the form of stop banks, artificial drainage channels (see Figure 1 photograph) and the application of fertiliser.

- 2.2 Geologically the landscape is the product of alluvial processes. These mainly result from the presence of the Waimakariri River. The smaller streams (Waimakariri South Branch, Styx, Kaputone and Smack) are essentially part of the Waimakariri system. The Belfast area is located on the Waimakariri outwash plain. The presence of springs and the aforementioned smaller watercourses denote that the plain is still active. Artificial river control measures, such as stop banks attest to the ongoing presence of alluvial activity. Evidence, such as buried prehistoric vegetation, indicates past catastrophic flood events in the Belfast area. Belfast is still vulnerable to such events, although stop banks are designed to counter all but the most extreme of these.
- 2.3 The aforementioned water courses are still the predominant natural features in the Belfast area. They will be discussed in more detail later with regard to their existing and potential contribution to the landscape character and amenity of Belfast.
- 2.4 The soils are mainly silty loams resulting from flood deposition (see Figure 2 Soils Map). Old river channels are also evident in the soil structure where a mix of gravel and silt predominate. To the northeast the soils are more complex where they occur at the interface between marine, estuarine and river environments. Here the soils contain marine and alluvial detritus such as shell and wood.
- 2.5 The land form is essentially flat. There is very little evidence of past river terraces apart from those at the Styx. Here they are particularly pronounced in the vicinity of Main North Road where it crosses the Styx River, which is shown in the Figure 3 photograph. Undoubtedly river terraces would have been a feature of the landscape once. Being subtle landforms, it is likely that they have succumbed to urban and



Figure 1 Stopbanks such as this one modify the natural character of the landscape. They do however denote the landscape processes that prevail in the area – in this case the risk of flooding.

Figure 2 Soils Map



Approximate location of study area

(source: Brown & Weeber)

Key

spy.....Dominantly alluvial sand & silt over riverbank deposits.

NB: textured areas denote old river channels.

ch..... Mixed gravel, sand, shelly sand, silt, clay, peat & wood – marine, estuarine, swamp & dune.



Figure 3 Looking east from the Main North Road the terraces that contain the Styx River are highly apparent due to their relatively steep gradients.

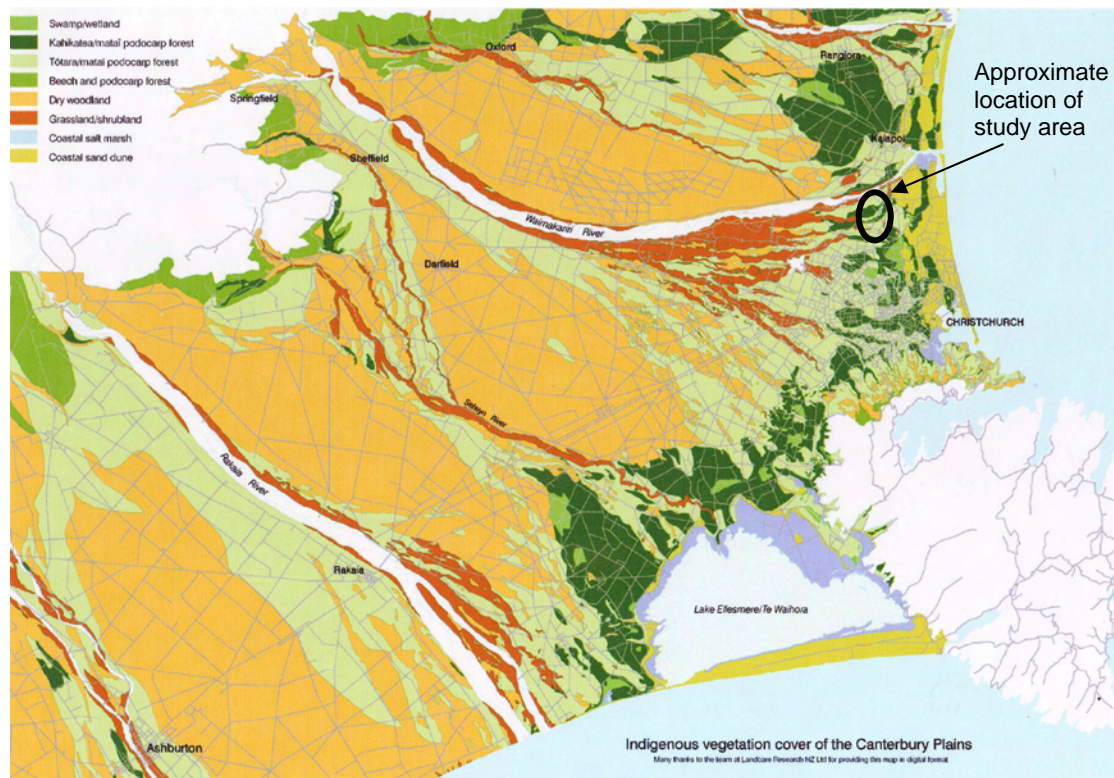


Figure 4 Map showing nature and extent of prehistoric vegetation.
Source: Landcare Research Ltd.

rural landuse regimes where building, cultivation, roading and drainage works over time has modified the terrain.

2.6 Vegetation

In prehistoric times it is evident that vegetation very much reflected the dynamic natural processes that prevailed in the area. These processes, as mentioned earlier, are chiefly due to the interaction between the Waimakariri River and the coast. Belfast more or less lies at the interface of these two naturally active areas which is reflected in local soils.

2.7 A map prepared by Landcare Research Ltd shows prehistoric vegetation patterns that closely reflect the soils map referred to earlier in this report. This map, shown as Figure 4, indicates that vegetation in Belfast would have been predominantly podocarp forest comprising Totara, Matai and Kahikatia. An illustration of what this may have looked like is shown in the Figure 5 photograph. A remnant of this forest type existed nearby at Papanui until it was milled during the time of early European settlement. The nearest equivalent today is at Riccarton Bush. Attesting to the presence of forest at Belfast are ancient logs which have been periodically unearthed during development in the region. Buried vegetation includes a prevalence of Totara logs, possibly due to their resistance to decay.

2.8 Prior to European settlement, but during Maori occupation, early maps indicate the presence of shrub, grass and wetlands. Species would have included kowhai, manuka, cabbage trees, flax, tussock, raupo and sedges (see old map – Figure 6,). By all accounts, flax or harakeke and raupo were particularly prevalent in the wetland areas. For Maori and European alike, flax had significant value as a raw material for a variety of uses. Raupo is also a plant commonly used by Maori. And so it is evident that indigenous vegetation was an important resource to early people in the area.

2.9 Since European settlement virtually all native vegetation has disappeared, although in recent times it has been extensively reintroduced through various conservation initiatives, such as the Styx Mill Conservation area. Nonetheless, post European settlement witnessed wholesale transformation of vegetation that supplanted all natives with exotic. Most of the exotic vegetation was selected for its economic value to Europeans. In the rural areas this includes pasture, forest plantations, orchards and market gardens. Shelterbelt planting is also a common feature of the rural environment, as is illustrated in the Figure 7 photograph. In urban areas amenity planting predominates, and this too is largely exotic, as is illustrated in the Figure 8 photograph.

2.10 A number of exotics are listed in the City Plan as notable trees. A list of these appears in Appendix 2. No native trees are listed as notable.



Figure 5 Prehistoric vegetation in the Belfast may have resembled that illustrated above. There is potential to recreate this scene in the Belfast area.

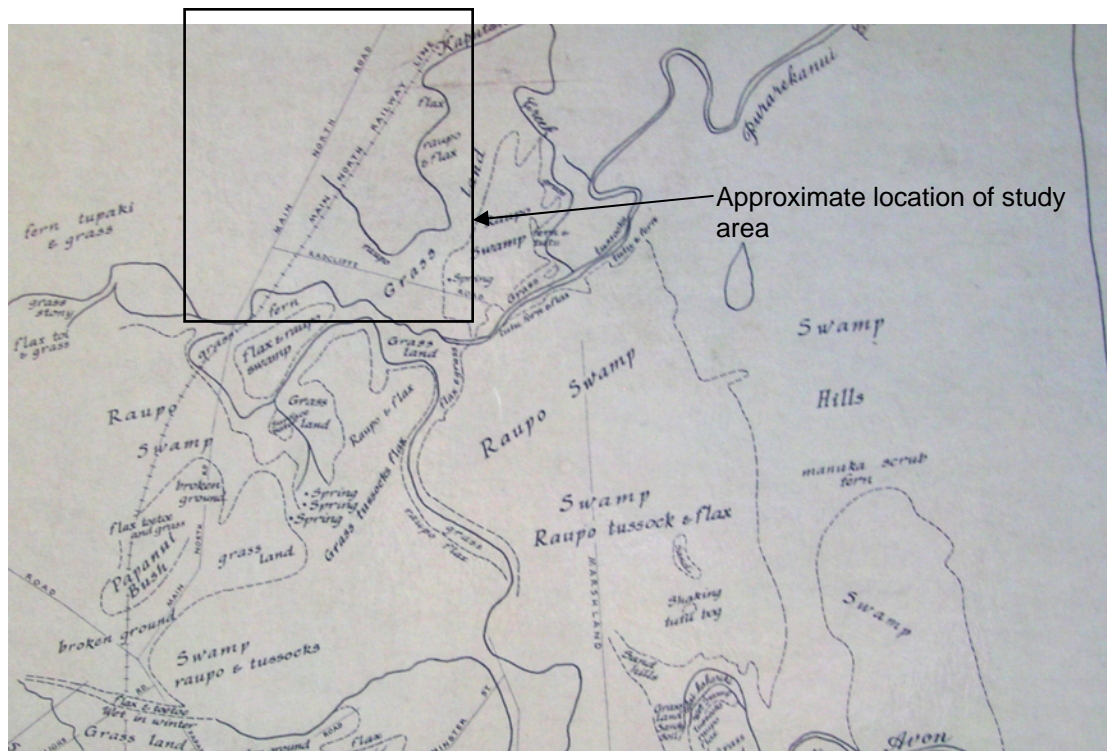


Figure 6 Early map of vegetation patterns at about the time of European settlement. Source: Christchurch City Public Library



Figures 7&8 Exotic plants dominate both the rural (above) and urban (below) vegetative landscape of the Belfast area.



Figures 9&10 Examples of riparian planting now occurring in the Belfast area.



Figure 9 Riparian planting at Sheldon Reserve



Figure 10 Riparian planting being undertaken at Langley Reserve, 2006

2.11 As alluded to above, recent wet land restoration has seen the considerable reintroduction of native plants in and around the natural environment of Belfast, which is illustrated in the Figure 9 and 10 photographs. They also appear in the highway median between Johns Road and the Styx railway overbridge, also shown in the Figure 11 photograph.

2.12 Cultural History

This will be discussed in the following chapter concerning existing landscape character and amenity. This is because the existing landscape is a product of historic land use. And much of what appears in Belfast today results from past activity.

2.13 Essentially generic land use has not changed all that much over the years. What does change is the scale of land use. Residential, industrial, commercial, recreational, transport and rural activity has always existed in the Belfast area since European occupation, and continues to this day. The townships function as a gateway into and out of the City has always manifested itself in the Belfast landscape.

2.14 Despite the fact that generic activities have remained more or less the same, some have occurred in recent times that are unique. These include the advent of major tourist and comprehensive residential complexes such as Clearwater. A further activity not witnessed until recently is the development of conservation areas, which includes ecological restoration in combination with recreational activity.

2.15 It is also evident from various texts that Belfast was a significant place for Maori. In recent decades this has found expression in the landscape, particularly in reserves and conservation areas.

2.16 Finally, there is a trend these days to actively enhance the character and amenity of the City and its constituent parts. This differs too from past practises, where the latter tended to be prosaic reflecting a pioneering mindset. It is this aspect that will be focussed on for the remainder of this report.

3.0 Existing Landscape Character and Amenity

3.1 Basic principles

The landscape character of any area is made up of a mix of generic natural and physical elements such as vegetation, landforms, water bodies, buildings, roads and so on. These characteristics are common to most landscapes or landscape types. For example, a very high proportion of open space to built form is generically characteristic of all rural landscapes irrespective of their location. What distinguishes one landscape from another is the way these generic elements are combined. Generally the more complex the combination the more distinct or unique the landscape character is. This distinctiveness is referred to as specific landscape character, since for obvious reasons it is specific to a particular area.

3.2 It is also worth noting that various landscape components are subject to a hierarchy or spectrum of scale. A rural or urban landscape is broad scale, whereas within each there is a spectrum of increasing detail at ever diminishing levels of scale. For example, a rural landscape can have within it various land uses that may include pastoral, horticultural and recreational activity. And under those headings further detail will be evident. For example, horticultural activity may include vineyards; orchards market gardens and so on. This spectrum of scale and land use activity is clearly evident at Belfast.

3.3 In this part of the study the aim is to identify the generic parts that make up Belfast's landscape character and then assess how these are combined in a way that makes Belfast unique. This combination of landscape features can be maintained and enhanced to reinforce Belfast's unique character. Ways of doing this will be discussed later.

3.4 The generic landscape character of the Belfast Area

At a macro level, the Belfast area consists of two main constituent parts made up of the rural and the urban environments. Currently within the study area the rural environment is roughly three times the size of the urban. Anticipated urban growth will alter this proportion as a consequence of rural land being diminished. Nonetheless, the public do not perceive study boundaries and so the reality for them is that Belfast will appear to be an urban peninsula jutting into its rural setting. Because of its peninsula like layout, Belfast has a particularly long urban / rural boundary in proportion to its urban area. Consequently Belfast still conveys the sense that it is a discrete suburb dominated by the rural environment that surrounds it (see Figure 12 Diagram). But this situation is now becoming less apparent as the City expands northward and Belfast grows south. The potential for eastward and southwest urban growth will diminish this effect also, should it be realised.

Figure 11 Native planting in the road median between Styx overbridge and Johns Road.

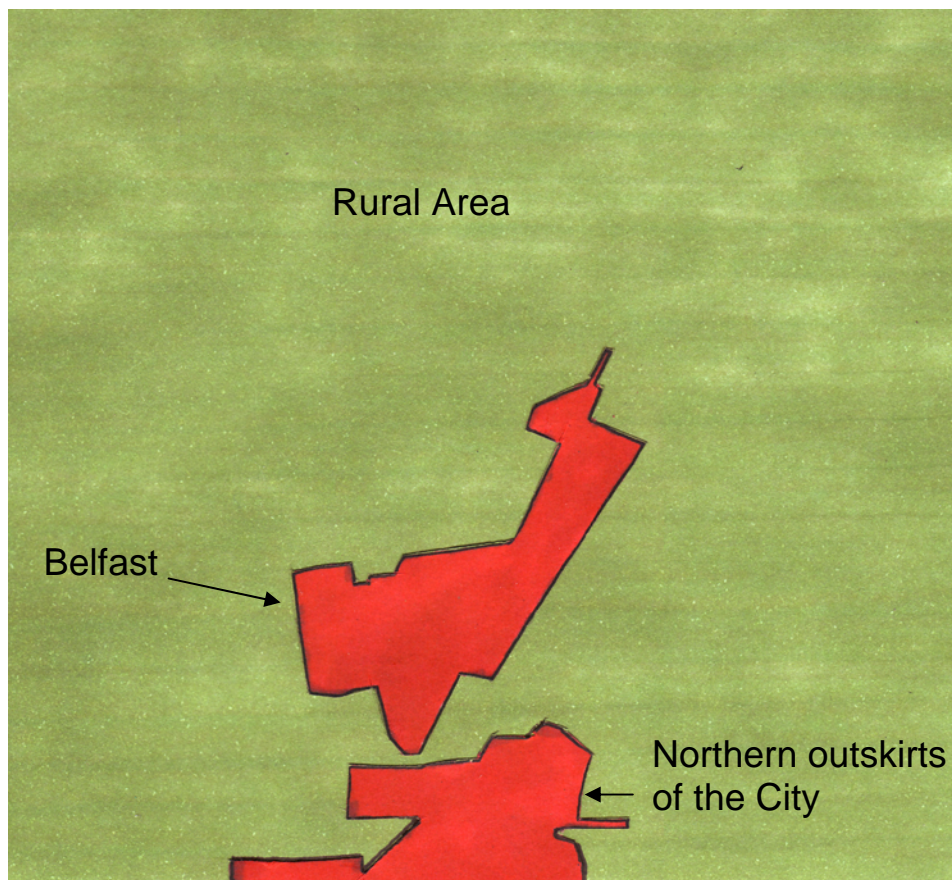


Figure 12 A schematic diagram where Belfast appears as an urban peninsula jutting out into the rural environment that surrounds it.



Figure 13 Older, small scale retail outlets in Northern Belfast.



Figure 14 Compared to the older retail outlets, recent development is of a much larger scale as shown here on the southern perimeter of Belfast.

- 3.5 Despite the potential extent of urban growth there will nonetheless always be a rural / urban boundary in the Belfast area. This will particularly be the case with regard to the land between the urban area and the Waimakariri River to the north. Consequently Belfast will substantially continue its function as a 'City edge', particularly to the northwest, with a reasonably high degree of certainty. Because of this, it will always have a strong association with the rural land it adjoins.
- 3.6 However, the relatively discrete rural settlement quality that Belfast once enjoyed will likely disappear as urban growth increases. This effect is perhaps best signalled by the recent development of large scale retail development in the BRP zone on the corner of Radcliffe and Main North Roads (see Figure 13 and 14 photographs).
- 3.7 A further effect in this regard will arise from whatever option is implemented from the Urban Development Strategy (UDS). This is discussed in more detail on page 31.
- 3.8 Up until the present day it is strongly evident that the landscape of the Belfast area is subject to continual change, and so it can never be regarded as a static entity. This process of change will continue and consequently the proportion between the major rural and urban components of the Belfast landscape will alter. So too will the specific character of these components which will be discussed in more detail later in this report.

3.9 The landscape character of existing rural land.

Currently the rural landscape in the Belfast area is extensive, and more or less completely surrounds the township. In terms of land use the Belfast rural landscape is varied. Land use includes virtually all forms of horticulture, conservation, recreation and pastoral farming. The latter use is by far the most dominant. There are also a number of industrial activities within the rural landscape that include quarry processing plants, sawmills and freezing works. Forest plantations at Chaney's are also present, but are outside of the study area. The Figure 15, 16, & 17 photographs illustrate the variety of rural activity in the area.

- 3.10 Stop banks are also a feature of the rural landscape, especially alongside the Waimakariri River as seen in the following photograph.
- 3.11 Most of the rural lots are divided into square and rectilinear units typically demarcated by fences and vegetative shelterbelts. Where horticultural activity occurs, the shelterbelts are more common than in the pastoral areas. In the horticultural areas this creates a greater sense of enclosure compared to the predominant openness that typifies pastoral units.

- 3.12 Horticultural activity is the most prevalent after pastoral farming. Considerable variation is evident where vegetable growing, berry fruit production, vineyards (St. Helena and Rosebank), and orchards are not uncommon in the area.
- 3.13 Overall the variety of rural land uses convey a sense of productive richness, albeit it on a relatively small scale. The proximity of ground water to land surface would also reinforce the appearance of verdancy.
- 3.14 Regarding the small scale appearance of rural enterprise in the area, it is not uncommon to find this in proximity to major metropolitan areas. The variability of land use also reflects the City's presence, where no doubt many own and operate lifestyle blocks. In this regard, the rural area around Belfast is not so different from most other flat land rural areas adjoining the City, although lifestyle blocks do not appear to be as prolific.
- 3.15 The characteristics described above are inevitably reflected in the appearance of the rural landscape. The smallness of lots is generally well defined by the formal geometric layout of fence lines and shelterbelts. The straight lines of these features reflect the flat topography of their setting. Consequently the area has the appearance of 'walls and floors', which gives the illusion of large outdoor rural rooms (see Figures 18 and 19 photographs). At various scales this effect is typical of most Canterbury rural landscapes.
- 3.16 Flowing through the rural area is a number of streams. Principle among them, apart from the Waimakariri, is the Styx, Otukaikino and Kaputone. Their informal meandering contrasts markedly with the formal grid like pattern of land subdivision within the rural area. The contrast between the informality of the streams and the formality of land subdivision is reinforced by the vegetation that accompanies these two patterns. The presence of mostly willows often signifies waterways, even if the water body itself cannot be seen which is shown in the Figure 20 photograph). Not surprisingly they are common along the banks of the Belfast streams, their informal habit often contrasting with that of mostly clipped and manicured shelterbelts.
- 3.17 Another feature of the rural landscape is the presence of a number of wetlands incorporating ponds or small lakes. These are located in the Styx Mill basin, Otukaikino Memorial Reserve, the Groynes, and just outside of the study area, Clearwater Resort. While not occupying a large proportion of the rural Belfast landscape, these wetlands and streams are nonetheless significant contributors to the character and amenity of the area. This is because they offer recreational, ecological and scenic opportunities within the Belfast area that are illustrated in the Figures 21 & 22 photographs). They also provide, like the proximity of the Waimakariri River, a basis for Belfast's identity, which will be discussed in more detail later.



Figures 15, 16, & 17 Illustrated above are examples of the various land uses that prevail in the rural area surrounding Belfast. From top down; viticulture, pastoral farming and conservation / recreation.



Figure 18 An oblique aerial photograph of the rural area surrounding Belfast reveals the “walls and floors” landscape that is typical of the area.



Figure 19 The ‘walls’ of shelter belts and ‘floor’ of pasture as seen from ground level. The proliferation of shelter belts in the Belfast area tends to preclude expansive views to features such as the Southern Alps and Port Hills. Note too the contrast here between the formality of the clipped hedge and the informality of the trees behind it, which is a common characteristic of the area. Such contrasts highlight the qualities of each feature.

- 3.18 A characteristic of these water features is that they occur in both the rural and urban areas of Belfast. Because of this they have the effect of bringing rural characteristics into the urban area. Essentially these rural characteristics are reflected in the dominance of openness and greenery over built form. As urban development expands, the role of these water bodies, and in particular the streams, as rural incursions will become increasingly important. In addition to providing for ecological, scenic, and storm water management corridors, they have the potential to function as pedestrian access ways between urban and the rural areas.
- 3.19 Further, there is evidence that these water features provide high quality urban / rural boundaries, an example of which is illustrated in the Figure 23 photograph. They therefore provide a model for how the urban / rural boundary may be treated throughout the Belfast area, which will be discussed in more detail later.
- 3.20 Industrial activities also feature in the rural landscape around Belfast. These include a clutch of industries in the B6 zone located between the Northern Motorway and the railway at the point where they meet the Waimakariri River (see aerial photographs). Prominent among these industries is a gravel processing plant adjoining the Waimakariri River.
- 3.21 A sawmill at Dickeys Road where it crosses the Otakaikino Stream is more or less located on the urban edge, but is within the Rural Zone. West of the sawmill is the Belfast sewage treatment ponds (see aerial photographs).
- 3.22 Located on the urban / rural interface are the two abattoirs east of Belfast Township (see photographs). This is perhaps the largest industrial complex in the Belfast area.
- 3.23 Outside of the Belfast study area are other industries, such as the gravel processing plant on Dickeys Road.
- 3.24 A characteristic of most of these industries is that they have a direct relationship with the land resource in which they are located. This is particularly the case for the gravel processing plants where their very presence tells, in part at least, the story of their setting. To some extent it is the same too for the abattoirs.
- 3.25 Despite the direct relationship these industries have with their setting, they do not have a particularly high amenity (see Figure 24 photograph). This is largely due to history where their establishment preceded the amenity requirements of the current City Plan. Consequently they adversely affect rural and urban / rural interface amenity. How this might be remedied is discussed in more detail later.
- 3.26 Generally though, the rural area around Belfast displays a high level of amenity. This is due to the abundance of open space and greenery.



Figure 20 The presence of water loving willows often signals the existence of waterways that otherwise cannot be directly seen.

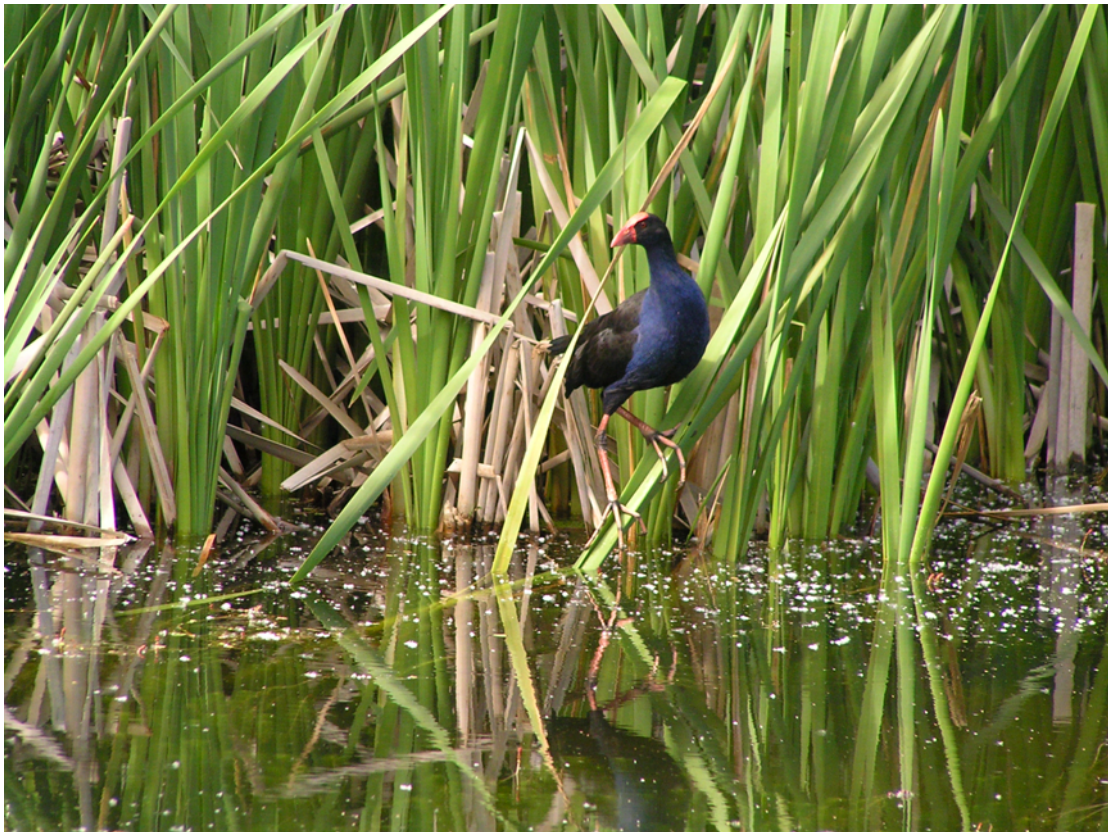


Figure 21 The presence of wetlands provide a wide range of opportunities, including as shown above, the provision of habitat for native birdlife.



Figure 22 Wetlands in the Belfast area also provide recreational opportunities such as this walkway at Otukaikino Reserve.



Figure 23 An example of very good boundary treatment incorporating riparian planting at Sheldon Park. Such treatment can apply equally well on the urban / rural boundary.



Figure 24 Poor industrial amenity is common in Belfast for many of the older industries.



Figure 25

The contrast between rural and urban environments is evident in these two photographs taken at ground level and from the air. The quality of each environment is highlighted by the contrast between them.

Additionally, apart from the aforementioned industries, it is devoid of activity that would otherwise detract from rural amenity.

- 3.27 Further, the area is generally devoid of the rural residential lifestyle lots that are more common in other areas on the periphery of the City. These lifestyle lots can have the effect of diluting the contrast between urban and rural environments. In the Belfast area the contrast between rural and urban is relatively acute and apparent (see photographs and aerial).
- 3.28 One thing that distinguishes the rural from the urban is that the former is much more vulnerable to change than the latter. This is because the rural environment can alter significantly with regard to land use, which in turn is usually driven by economics. Land uses can change in two fundamental ways.
- 3.29 The first involves land use changes that alter the specific, but not generic character of the rural environment. This means that even if the land surrounding Belfast were to remain rural, there is no guarantee that existing land use regimes will continue. Pastoral land may be converted to forestry, horticultural, conservation (for example, Styx Mill Basin) or recreational use (for example, Clearwater Resort). Or the reverse may happen. Irrespective of these changes, the generic character will always be one of abundant open space and greenery in proportion to built form.
- 3.30 The second form of change is both generic and specific. This occurs where rural land is rezoned for urban purposes. Unlike rural land use, urban land use is generally irrevocable. Consequently the change is permanent. It is important to appreciate the principle that where such change occurs that it does not necessarily follow that amenity will be lost. While the source of rural amenity will be lost, that is open space and greenery; it can be replaced with equally high urban amenity.
- 3.31 What is lost though is rural character, where this is replaced with urban development. This has occurred to a considerable extent in recent times in the Belfast area. The potential for further conversion of rural land for urban purposes is considerable also. In the Belfast area there is no real constraint to further urban rezoning of rural land apart from the flood hazard posed by the Waimakariri River, conservation areas (reserves) the Lower Styx Ponding area and possibly the aircraft noise contours (see Figure 26 map).
- 3.32 Because of these features there will always be a rural / urban interface in the Belfast area. This interface or boundary will be one of the crucial meeting points of these two land uses that merit a high degree of landscape management. Why it is important is that where contrasting landscapes meet the differences between them are highlighted. As a result the qualities of each environment is made apparent (see Figure 25 photograph).

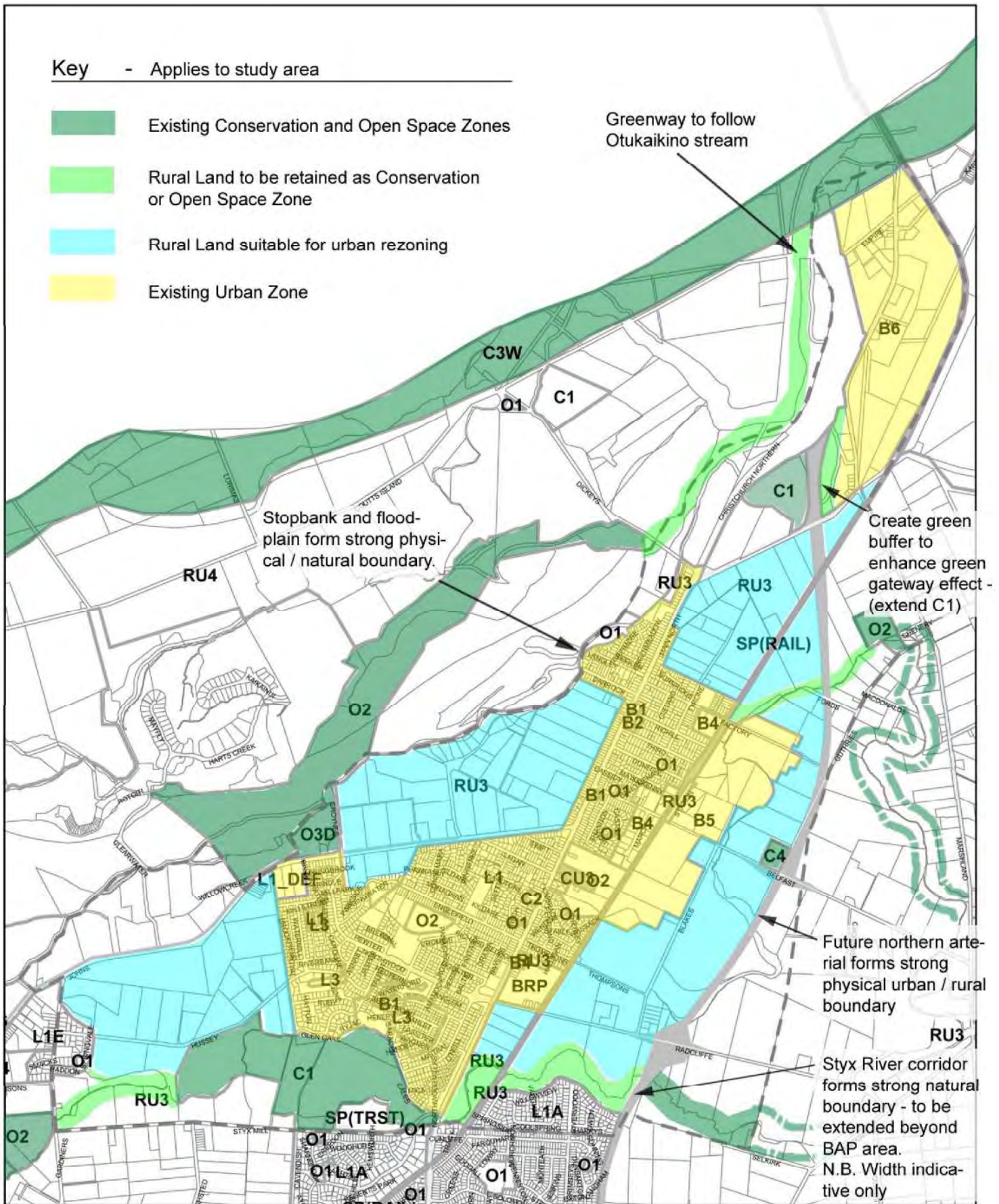


Figure 26

Map showing the extent of land suitable for urban zoning based on landscape considerations.

0 200 400 600 800 1000 m

Scale 1:30,000 at A4

**Belfast Area Plan - Potential Zoning
within BAP Study Area Only**



Figure 27 The two freezing works (arrowed) at Belfast form some of the largest urban structures in the area.



Figure 28 Enclaves of high density housing (L3) is a feature of Northwood subdivision which adds to living zone diversity in the Belfast area.



Figure 29 New housing at Northwood where Living 3 housing (arrowed) embedded within a predominantly low density Living 1 environment.

3.33 The Landscape Character of Urban Belfast

Not unlike the rural environment, the urban landscape character of Belfast is variable where it contains a wide range of activities. By virtue of its extent the most dominant of these activities is residential. But there are other significant activities as well such as the two abattoirs and the recently constructed retail centre.

- 3.34 The former are by far the largest urban structures in Belfast (see Figure 27 aerial photograph). While these cover a larger land area, they are not tall buildings. There are no especially tall buildings in the Belfast area, where most are two storeys or less. Consequently the urban area displays smallness of scale, which is more or less consistent with the outer suburban areas of Christchurch. Nonetheless there are signs that this smallness or perhaps more accurately the consistency of scale is changing.
- 3.35 As mentioned, most of the built form is residential in character. These are fairly typical of most Christchurch residential neighbourhoods in that the houses are modestly scaled, detached and variable in design and appearance. Associated landscaping is also typically varied in both maturity and species.
- 3.36 With the recent advent of the Northwood residential subdivision the density, style and size of such development in the Belfast area is becoming increasingly diverse compared to its historical residential character (see Figure 28 and 29 photographs).
- 3.37 High density housing is emerging alongside the low density normally associated with the outer suburbs. We can assume from this that the demography of the area is correspondingly becoming increasingly diverse, as is the case for the City as a whole. Demographic changes may express themselves in terms of ethnicity, age and culture which we are now beginning to see manifest in the landscape. For example, smaller lot sizes reflect a shift where residents are less reliant on back yard gardens to provide for recreation, fruit and vegetable growing. Larger sections in the older areas of Belfast would also reflect the need to dispose of sewerage via septic tanks.
- 3.38 As a result modern lots that are emerging in the area are smaller which means that housing will be denser compared to older areas of Belfast. It also means that the extent and size of landscaping will be at a smaller scale. People will no longer grow potentially large trees out of fear that they will become nuisances due to size. Consequently small scale planting will occur within the private realm.
- 3.39 For the urban landscape to accommodate larger trees, public land becomes the only viable venue. Such land will include road corridors, parks, reserves, and schools. Major retail and industrial areas may

The proposed northern arterial route

The Main North Road

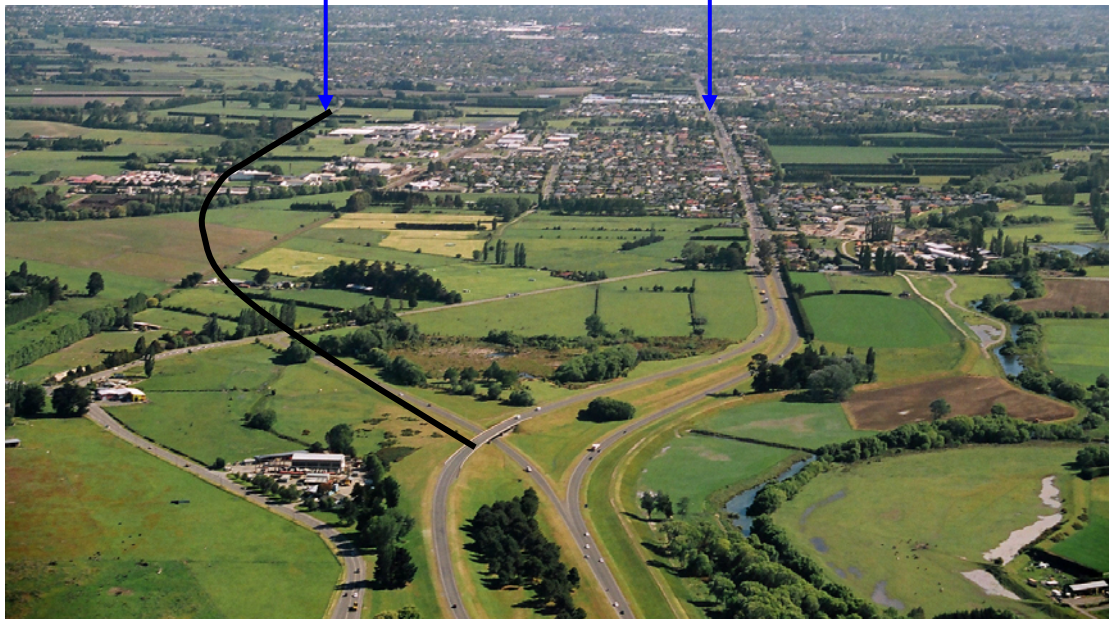


Figure 31 The Main North Road, here looking southward, is one of the most dominant landscape features in the Belfast area. The proposed Northern Arterial would add to the dominance of roads and reinforce Belfast's role as a major entry and exit point for the City.



Figures 32 & 33 Bridges mark the entry / exit points for Belfast and the City. Both the Waimakariri Bridge (above) and the Styx overbridge (below) are very prosaic in their design.

also provide opportunities for the planting of large trees, especially since the City Plan requires them to do so in the event of development.

- 3.40 So overall the consistency of scale with respect to everything is lessening, where we are now witnessing greater diversity. In this regard, in combination with an increase in residential area, the urban character of Belfast is changing quite considerably, particularly in the new greenfield subdivisions. Infill housing and redevelopment of older areas will also result in change in both scale and appearance. This will certainly be the case for the specific character of Belfast; although it is very unlikely the generic character will change at all. That is to say that the unique combination of urban elements that currently make up Belfast will alter in such a way that a new combination will emerge. On the other hand the generic contributing elements such as houses, roads and business activity will remain the same, and in this sense will be indistinguishable from any other similarly configured urban area.
- 3.41 There are two small, older retail centres located on the Main North Road that are not particularly prominent as part of the urban landscape. Schools, churches and parks are also features of the Belfast urban landscape, and nor are these dominant in the area.
- 3.42 Apart from buildings, the other major feature of the Belfast area is the roads. In particular Main North and Johns roads are dominant in terms of size and traffic flow. In addition to Marshland Road nearby, they are the only City routes to and from the north. Because of this, for those who do not live in Belfast these provide the only encounter that most people will have with the township and its surrounds. It is likely that for non-Belfast residents these major roads would be the one landscape feature that most would associate with Belfast. Apart from the Waimakariri River there are no other major landmarks or landscapes that would challenge the dominance of these roads (see Figure 31 aerial photograph). By default these roads contribute significantly to the identity of Belfast as the northern entry and exit suburb of Christchurch.
- 3.43 It could be argued that Kaiapoi Township north of the Waimakariri River has a similar function, and to some extent it has. But because the motorway does not pass through the town centre of Kaiapoi, its role as the City's entry / exit point is much diminished. Further the point at which traffic slows occurs at Belfast rather than at Kaiapoi. And finally Belfast has two very strong gateway points.
- 3.44 To the south the Styx overbridge forms one gateway (see Figures 32 and 33 photographs). Regarding its function as a gateway, an article in the Christchurch 'Press'¹ made the following observation.

'Where ancient walled cities had their gates, Christchurch had its Styx railway overbridge.'

¹ Mike Crean, Christchurch Press 10/2/03



Figure 34 A large gum tree and others form a naturally strong entry and exit to and from Belfast and the City.



Figure 35 An example of poor urban / rural boundary treatment. The opaque paling fence serves no purpose since privacy and security are insignificant issues where urban areas adjoin rural.

For half a century, the overbridge was a sign for travellers from the north that they had arrived in the city. The drive through pleasant farmland changed suddenly as they crested the overbridge and saw before them the streets, houses, and shops of the built up suburbia.'

Note that the article cited above uses the past tense, the reason for which soon becomes apparent where the author goes on to say;

'Urban growth in Belfast has pushed housing and retailing developments south, nearly all the way to the Styx. If this detracts from the sense of the overbridge as a city gateway, what effect would the proposal for a twin overbridge have?'

- 3.45 Since this was written the twin overbridge has been implemented. Implicit in the article is that for the gateway to function effectively it needs to occupy the interface where '*...pleasant farmland...*' and '*...streets, houses and shops...*' meet. Further urbanisation of Belfast means that the overbridge is in danger of being overwhelmed by suburbia. Consequently its threshold location between the rural and urban is lost.
- 3.46 To some extent this is true – the extent of rural land leading up to the bridge has been significantly diminished along with a corresponding decrease in the contrast between the rural and urban. Nonetheless, there is an unmistakable strip of rural land on the north side of the bridge, particularly east of Main North Road. This rural area contains the Styx River, and given its importance as a gateway, not to mention conservation function, it is highly desirable to retain this landscape as such. This will be discussed in more detail later.
- 3.47 Northward a group of eucalypt and other large trees form a more natural gateway at the point where the motorway begins (see Figure 34 photograph). Unlike the overbridge, the gateway function of the northern gateway has little chance of being usurped by urbanisation. This is because urban growth is unlikely to advance toward the Waimakariri River and alongside the motorway. As a result the land either side of the northern entrance will remain rural. The proximity of Wilson's Swamp to this entry point will also ensure that the status quo will be maintained.
- 3.48 Reinforcing the gateway function at the northern entry point are the bridges that cross the Waimakariri River. Typologically bridges have a strong association with entry / exit points to cities or distinct precincts within. Indeed the word 'rival' is derivative of the Latin word '*rivalis*' denoting the division of cultural and political opposites by a stream or river. In this case the landscape feature of the river and its bridges signals the transition from rural to urban and politically from the provincial to the metropolitan and vice versa. Of all the entry / exit

points into and from Christchurch, the Waimakariri Bridge is the strongest and therefore the most effective.

- 3.49 The current gateway function of Belfast will diminish however if the proposed northern arterial and western bypass routes are implemented. In this event there will likely be less association of the township as an entry exit point to the City. Further, the speed limits on these proposed roads will be higher than that for the urban environment of Belfast. Consequently travellers will not be so aware that they are entering the City until they are physically slowed at the point where the arterial roads merge with the urban environment.
- 3.50 The upside of the road diversions is that the township will experience a significant improvement in amenity due to less traffic. Currently the very high volume of traffic detracts considerably from Belfast's amenity. Frequent heavy trucks compound the problem. The heavy traffic flow also curtails amenity improvement along the road corridor, especially where it runs from John's Road to the Motorway. This is despite the fact that trees have been recently planted in the median. Potentially there are further opportunities for improvement and this is discussed in more detail later.
- 3.51 Elsewhere the town boundary is defined and aligned by roads which are also straight. The transition along this edge between the urban and rural is very abrupt and rectilinear in character. There is no transition in terms of a gradual lessening of housing density as one moves away from the urban part of Belfast. Consequently there is considerable contrast between the urban and rural areas of Belfast, where on one side of the fence or road it is entirely rural and on the other it is entirely urban.
- 3.52 Like the rural environment the urban area is mostly characterised by the grid layout of streets. This is especially the case for the older residential parts of Belfast. In the newer residential areas (since circa 1970) the street layout is generally more informal and serpentine in character. The latter generally have comparably higher levels of amenity compared to their older counterparts. This is because the newer streets have all of their services under-grounded. All of the older streets still have above ground services such as power and 'telco' lines and these significantly detract from amenity.
- 3.53 The newer streets also have greater levels of street planting. In some instances this is combined with storm water swales and so the street assumes multiple functions.

4.0 Landscape issues for Belfast

- 4.1 As is historically evident, and like most areas in the City, the Belfast area has undergone considerable change. This means that its appearance is constantly being altered. In recent times the area appears to be entering a period of accelerated change. Large residential subdivisions such as Northwood and the nearby Clearwater attest to this process. By Belfast standards, relatively large scale business development has also occurred. Such change has a dramatic effect on the landscape. Rural land is converted to urban, and in Belfast the extent of this has been considerable. Future development is imminent that includes further business and residential activity. Additionally the proposed northern arterial will also have a profound effect on the landscape of Belfast.
- 4.2 Not all change is as dramatic as the conversion of rural land to urban use. Established urban areas, both residential and business tend to be relatively static. Change in these areas is generally incremental and small in scale. It usually takes the form of property upgrades, occasional new building or alteration, and Council initiated street enhancement. An example of the latter is the planting of trees in the Main North road median.
- 4.3 As alluded to, the greatest and most dramatic, and therefore noticeable, change results from the urbanisation of rural land. Needless to say, such change is driven by urban growth.
- 4.4 All recent and future development adds to Belfast's increasing diversity. The overall effect is that Belfast will no longer retain its character as a more or less homogenous semi-rural settlement on the City's outskirts.
- 4.5 With such change the effects on landscape character and amenity can be both negative and positive, and are summarised as follows:

Positive

- Development can lead to the creation of new public open space.
- The public may get access to natural features and recreational opportunities that would otherwise be unavailable.
- Opportunities for vehicle and pedestrian circulation are increased.
- Natural features affected by development are likely to be enhanced.
- Compared to older areas, modern development is likely to achieve higher levels of amenity – for example all services are underground.
- Through the subdivision process trees may be protected.
- The adverse effects of any development are required to be avoided, remedied or mitigated.

Negative

- The character of one landscape (usually rural) and the amenity it provides is irrevocably lost.
- The sense of a relatively small scale community and how it is outwardly expressed in the landscape is diminished.
- The demand for open space is increased along with competition for its use.
- Local identity based on landscape character is lost – in Belfast its ambience as a rural settlement is diminishing.
- The sense of separateness that was prevalent in Belfast is diminished as the City grows outwards.
- A sense of uncertainty arises, particularly with rapid large scale change.
- That the community as outwardly expressed in the landscape is usurped by the introduction of new communities that might be perceived as not sharing the same values by established local people.

4.6 How such change is perceived will depend on each individual. In principle it appears that most people do not respond well to large scale and rapid change to the landscape. People fear the negative consequences of change listed above, and this is compounded when change is large scale and rapid. Consequently incremental change at a modest scale is more easily accepted. For changes to the landscape this may mean encouraging the gradual staging of development if it is practical to do so.

4.7 Education via public consultation can also be effective in countering the negative aspects of change. This gives people the opportunity to have a say in landscape outcomes. It also provides an opportunity for the agents of change to promote the positive effects of development, also listed above.

4.8 A further point regarding perception of the landscape relates to people's influence on it. In general people have most control on the landscape of their property. Beyond this the sphere of influence diminishes rapidly. Nonetheless the political process via Council agencies (Community Boards etc) enables individuals and groups to have some effect on landscape outcomes. The City Plan also reflects this process, as does the statutory input it allows for citizens. As a result implementation of the City Plan will ultimately be expressed in the landscape and in doing so reflects community values.

4.9 Finally with regard to landscape perception, another method can include direct research, but this method is generally expensive. Consequently it is better suited to very specific landscape projects. A good example of this for the Belfast area is a perceptions study carried out for the Styx River system, entitled "*Community Perceptions of the Styx River & its*

Environ."² The methods used in this study involved workshops, focus groups, and consultation with stakeholders.

² McMath, Marivee 2000/03

5.0 Areas suitable for landscape protection, maintenance and enhancement.

- 5.1 Opportunities and constraints inform the protection, maintenance and enhancement of the landscape. Under this heading the landscape of Belfast will be examined in accordance with its principle component parts, namely the rural and urban. This is not to say that these environments should be seen as discrete, since the inaction between them is critical to realising good design results.
- 5.2 There are areas throughout the Belfast area that merit protection, maintenance and enhancement. There are also areas outside of the study area that are inextricably linked to those within. For example all of the waterways flow through and beyond the study area. It is likewise for potential and existing pedestrian linkages, and similarly for roadways. Because of this reference will be made to these outside areas where they are important to the study area.
- 5.3 The assessment of areas for protection, maintenance and enhancement has been divided more or less in accordance with zones. These include the following
- Living zones
 - Business zones
 - Roads (special purpose zones)
 - Conservation zones
 - Open Space zones
 - Rural zones
- 5.4 The reason for focussing on zones is that the City Plan is the chief mechanism for implementing protection, maintenance and enhancement. The zones also generally reflect land ownership and jurisdiction. For example most, but not all open space and special purpose road zones are publicly owned. The same is the case for conservation zones. This means that the maintenance and enhancement of these areas can be funded publicly and therefore independently of the City Plan.
- 5.5 Most of the other zones lie within the private realm. Most of these are within the business, living and rural zones. There are also some properties that are privately owned, but provide limited public access such as golf courses (Clearwater and Everglades) and retail developments.
- 5.6 The City Plan has prescriptive controls for the provision of landscape amenity in the business zones. For example the plan prescribes the number of trees required, their spacing, protection and ultimate height.

- 5.7 In comparison the character and amenity controls for the living and rural zones are much less prescriptive. Landscape outcomes in these zones are enabled rather than required, where provision is largely a matter of faith. For these zones character and amenity is mostly guaranteed through controls on the proportion of open space to built form. These take the form of site coverage, setback, height, recession plane, and minimum lot size controls. The only exceptions for these zones are Special Amenity Areas (SAs) and high density housing from Living 3 upward.
- 5.8 All of the aforementioned controls apply Citywide, although in some areas controls are specific to a certain area. The aforementioned SAs for example, and in the Belfast area, Clearwater Resort has its own set of rules and an outline development plan. There are no SAs in the Belfast study area.
- 5.9 Within any of these zones there is no need to add rules requiring further maintenance and enhancement of character and amenity in specific response to the Belfast setting. The only exception concerns how the urban interface with rural, open space and conservation zones is treated.

5.10 The urban / rural / open space and conservation interface

On site assessment showed that within Belfast there are some very good treatments on the urban / rural / open space and conservation interface (see again Figure 25 photograph). There is some poor boundary treatment as well as shown in the Figure 35 photograph).

- 5.11 Good boundary treatment is important for the following reasons.
- For urban growth scenarios it achieves policies 6.3.10 and 6.3.12 concerning the character and amenity of the urban / rural zone boundary. This will be discussed in more detail later.
- It can provide for a range of parallel functions such as pedestrian / cycle links, storm water swales, and wildlife corridors (see Figure 36 diagram).
 - It provides for views from properties.
 - It allows de facto surveillance to take place, thereby enhancing community security.
 - It enables property owners to 'borrow' neighbouring space, which is particularly important for high density housing where private outdoor space is very limited.
 - It allows for a soft transition from the urban to the rural / conservation / open space area.
- 5.12 Implementation of the above could be achieved via a combination of rules and conditions attached to subdivisions.

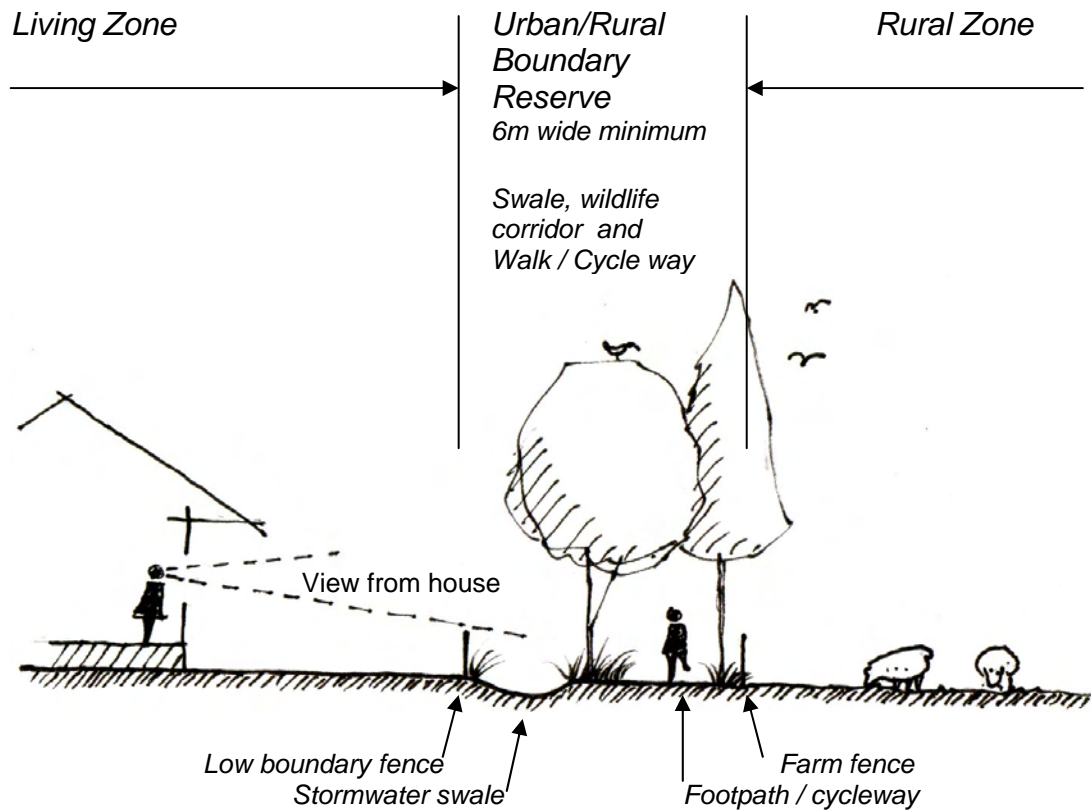


Figure 36 A schematic cross section diagram showing how a boundary between the urban and rural zones could be treated.



Figure 37 A good example at Northwood of integrated stormwater management, pedestrian footpaths and roadway with a mix of exotic and native planting.

- 5.13 Suggested rules may require that the opaque part of a fence is not to exceed 1.2 metres high. Above that a fence could still be erected provided it is transparent. Transparency would have to be defined so as to ensure that visibility is maintained across the boundary. Such a definition might include for example, the provision of gaps no less than 100 x 100mm² and spaced at not more than 30mm.
- 5.14 As conditions attached to subdivisions it may be feasible to ensure that an easement exists along the zone boundary of no less than 6 metres. This should be sufficient enough to contain some planting, a swale and a pathway.

5.15 Urban environments

All of the new business and living environments in the Belfast area have a high level of amenity. On the one hand this is due to requirements of the City Plan. On the other it came about because the latest developments were comprehensive which involved considerable input from the Council. In this regard the relationship between the Council and developer could be regarded as a partnership. As a result public and private interests are catered for in a balanced way, which gives good environmental outcomes. Consequently a salient characteristic of this approach is the integration of various land uses that historically were kept apart.

- 5.16 Examples of these outcomes include integrated pedestrian circulation, storm water management and roadways (see Figure 37 photograph). The juxtaposing of conservation environments with the urban is also apparent where an example is shown in the Figure 38 photograph).
- 5.17 These characteristics are not so evident in some of the earlier developments – circa 1970s to early 1990s. It appears that this may have resulted from their generally small size and a way of thinking that precluded integrated land management. Consequently some opportunities were missed.

5.18 Road and street enhancement

For the older residential and industrial parts of Belfast therefore, opportunities exist for further enhancement of their environment. The following photographs illustrate these areas currently. Generally improvements, most of which are required in some of the older street environments, can take the form of;

- Street tree planting
- The under-grounding of services
- Kerb and channel upgrading.
- Differentiated pavements – of road, cycleway and footpath surfaces reflecting different functions.
- Street art.
- Upgraded lighting, including up lighting of significant street trees.
- Carriageway narrowing.



Figure 38 A predator proof fence at Northwood is a good example where urban development happily coexists with the realisation of conservation objectives.



Figure 39

The rail corridor at Belfast (photo left) has the potential to accommodate a pedestrian / cycle way similar to that shown in the photograph below.



5.19 Enhancement of roads can also achieve the following results;

- As key 'first & last impression' entry / exit point to and from the City and as gateways, especially for the Main North Road.
- As high amenity 'park ways' where abundant greenery is a dominant feature of the road corridor.
- As swale corridors in combination with road ways (again see Figure 37 photograph).
- As zone boundaries between urban / rural, industrial / living / open space and conservation.
- As view corridors
- In quieter streets recreational opportunities.

5.20 Rail road

As the railway passes through Belfast it, like the Main North Road forms an important entry point into the City. It therefore has a role to play in creating good first and last impressions of the City. Most of the railway runs more or less along zone boundaries, which include the rural, business (industrial) and living. The rural and living generally have high amenity, although some of the business activities are less appealing.

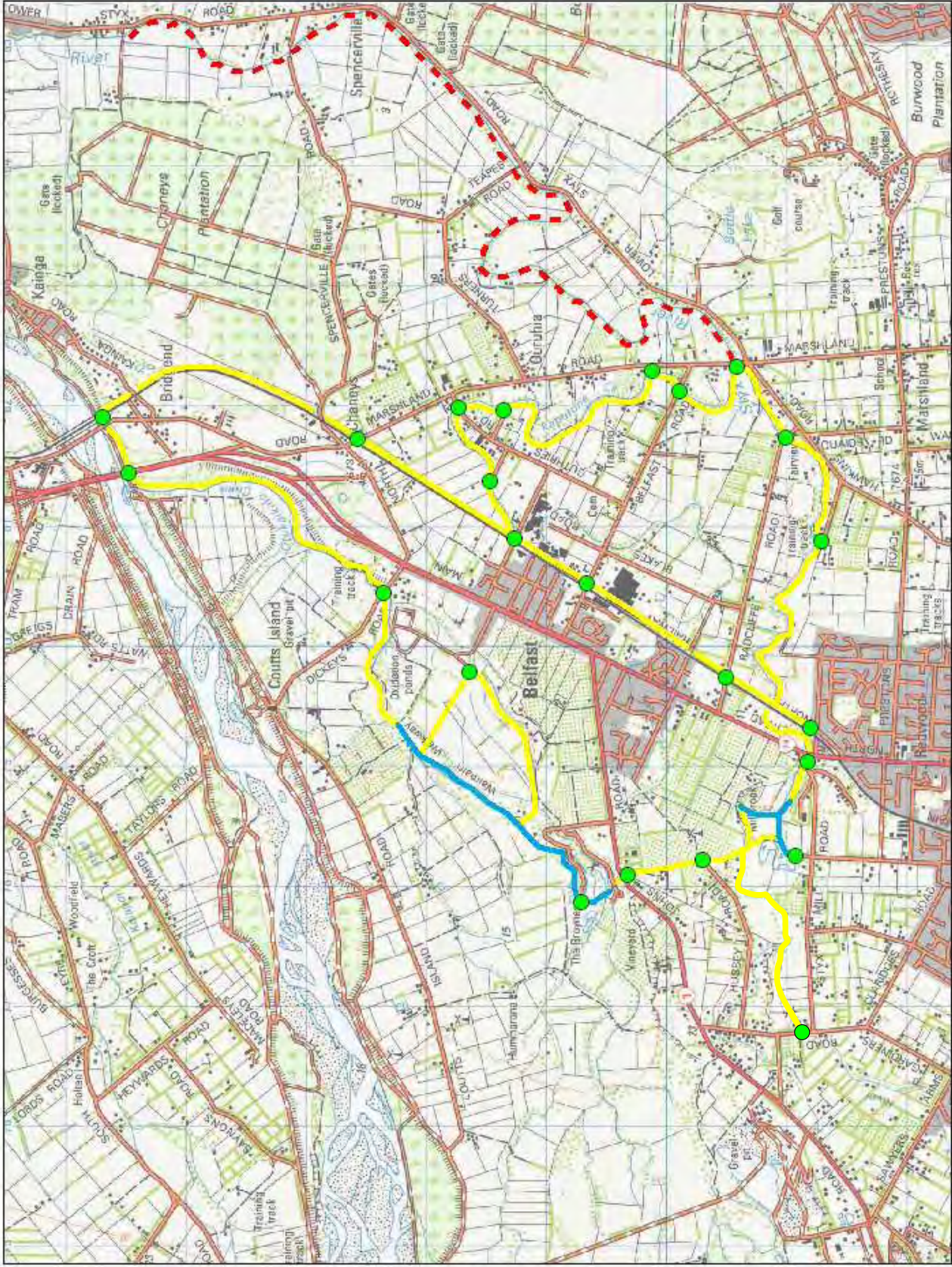
5.21 Opportunities to improve amenity along the line are constrained. This is because space is limited and it is necessary to access the track for maintenance. Secondly the rail authorities prefer not to have tall vegetation near the track because of the risk of branches and debris fall onto the lines.

5.22 Nonetheless, the rail way does present an opportunity to enhance pedestrian and cycle access around Belfast. The combination of rail with pedestrian and cycle access has been successfully implemented elsewhere in Christchurch (see Figure 39 Photographs).

5.23 A significant advantage of creating such a link in Belfast is that it will enable the completion of a pedestrian / cycleway circuit. This circuit will incorporate the waterways in addition to existing streets. This is shown on the Figure 40 pedestrian and cycleway circulation map as are all the potential entry and exit points.

5.24 Parks and Reserves

Parks and reserves appear to be well developed and maintained. Further enhancement could be undertaken which may include more public art and the up lighting of significant landmark trees. Some of the buildings located in parks could be improved such as the Ouruhia Memorial Hall. Further, all of the parks and reserves either adjoin or have waterways or wet lands running through them. This combination



Legend

- Existing Circulation
- Potential Circulation (note: existing roads would also serve this function)
- Entry and Exit Points
- Connection to Brooklands Lagoon



BELFAST AREA PLAN

**Figure 40
POTENTIAL AND EXISTING PEDESTRIAN AND CYCLEWAY CIRCULATION**

is administered entirely by the City Council and it is evident that enhancement and maintenance is of generally high standard.

- 5.25 There are opportunities to create further parks and reserves, and these more or less correspond with the potential conservation and open space zones shown on the Figure 26 map.
- 5.26 One area in particular would lend itself to considerable enhancement. This is alongside the banks of the Waimakariri River, especially in the vicinity of the Otukaikino outlet (see Figure 41 aerial photograph). This area is very large and would offer a broad range of recreational and conservation opportunities. With appropriate development of the lower reaches of the Otukaikino as a walk and cycleway, a good connection could be made with urban Belfast. This is also shown on the Figure 26 and 40 maps.
- 5.27 Other potential parks may occur in the vicinity of the existing industrial areas. High quality open spaces are seldom available to workers in these areas, and opportunities exist to redress this. Furthermore, it may be possible to incorporate and reuse old industrial buildings for community activities, while taking into account any heritage values that may be associated with them (see Figure 42 photograph).

5.28 All river, pond and stream environments.

Rivers, ponds and streams along with wetlands are the prominent natural features of Belfast. Their presence as natural features is not only a product of frequency, but also of dominance of rural land in proportion to the relatively small extent of urban Belfast. Thus the water features have not been overwhelmed by urban development as has been the case in much of Christchurch.

- 5.29 In this regard the waterways of Belfast can be considered a microcosm of Christchurch in its early days. An opportunity therefore exists to create a new urban model where waterways are considered assets rather than liabilities (see Figure 43 and 44 photographs of boxed and naturalised drains). This approach is already emerging in new comprehensive developments, such as Northwood, where waterways are integrated into the urban environment.
- 5.30 Not only does this express the ethos of sustainability, it is also an opportunity to endow Belfast with a positive identity. Enhancement of the Styx has already adopted branding with its Kotuku emblem. This emblem denotes the departure of spirits as was originally associated with Belfast by Maori. The original intention could also be extended to Belfast with regard to its location beneath the flight path to and from the City (see Figure 45 picture of emblem and photograph of plane). Additionally the Kotuku has strong ecological connotations.
- 5.31 Compared to Christchurch City, the size and range of waterways in Belfast is considerably greater, largely due to the nearby presence of

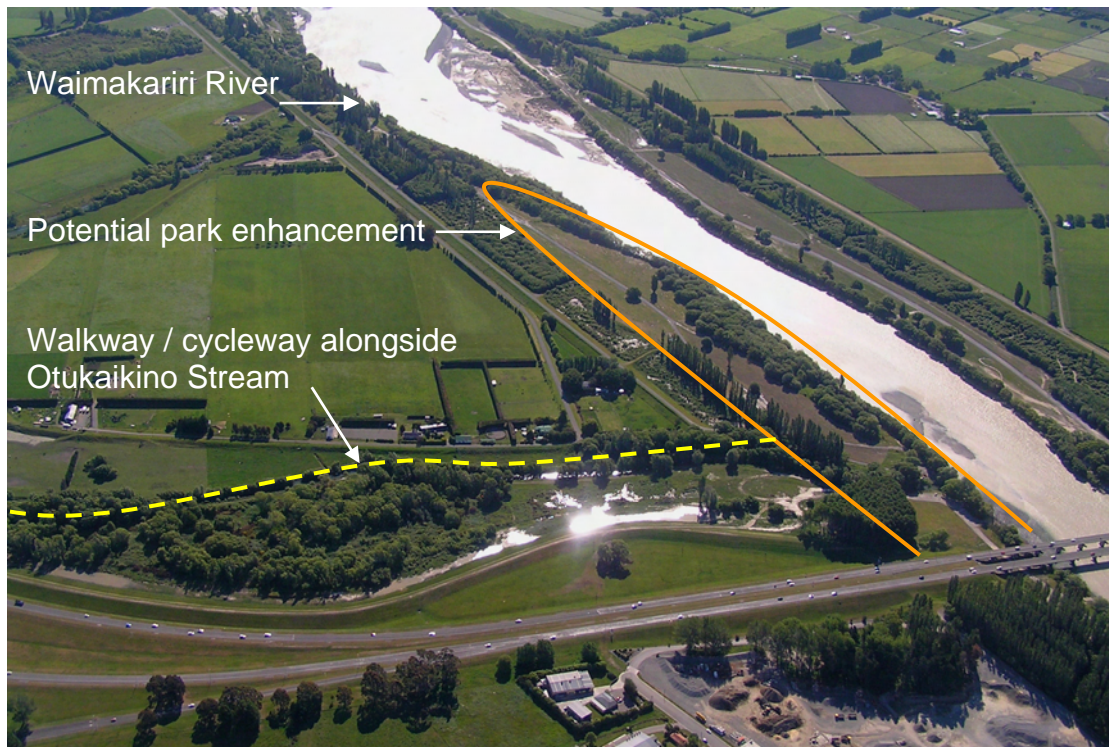


Figure 41 Showing the extent, more or less, of conservation 3 land that has considerable potential for enhancement which would include picnic, recreation and ecological restoration activity.



Figure 42 These old buildings on Belfast Road may have potential for reuse as community facilities such as an arts cooperative or for indoor sports. The surrounding land could be used for a park in the vicinity of freezing works.



Figures 43 & 44 Boxed drains are still relatively common in the Belfast area. If sufficient space is available there is potential to naturalise them so as to create a more ecologically friendly environment such as that shown below.



the Waimakariri River. The Otukaikino and Styx are significantly smaller, but nonetheless maintain a commanding presence. This is in part due not only to the actual water body itself, but also to the wider riparian zone of influence (see Figure 46 diagram).

5.32 Compounding this is the location of these rivers within and close to Belfast Township. Of the Waimakariri, Otukaikino and Styx Rivers the latter has the highest degree of visibility from the point of view of local residents. The Waimakariri on the other hand, has greater visual prominence for travellers (both road and air) to and from the north. But it does not have a strong visual connection to the township in the same way the Styx does.

5.33 Waterway and wetlands opportunities

Parts of these, such as the Styx Basin, Wilson's Swamp and Ouruhia Domain have been extensively enhanced in recent times. Essentially the enhancement has taken the form of naturalisation with an emphasis on the reintroduction of indigenous vegetation. A consequence of this is the establishment of wildlife, both native and exotic. The areas that have been enhanced are in public ownership. Most, if not all of the remaining waterways and wetlands lie within privately owned land (see photographs – of farmland at Styx).

5.34 Generally, waterways and wetlands can be enhanced in the following ways;

- As ecological settings
- As recreation settings
- As scenic settings
- As urban / rural boundaries
- As pedestrian and cycle routes
- As storm water management systems

5.35 The waterways and wetlands are for all intents and purposes the most salient natural feature of Belfast. As mentioned, they are not unique in that much of Christchurch is built on a network of waterways and wetlands. In recent times their value as a natural asset with a strong identifying association with the City has been realised.

5.36 What is unique to Belfast is the proximity of the township to the Waimakariri River, and what are essentially its tributaries. The connection between the larger river and Belfast is not strong. And so an opportunity exists to strengthen this. The figure 26 and figure 40 maps indicates how this and other opportunities associated with waterways and wetlands can be connected with each other and Belfast Township.

5.37 All of these watercourses currently and potentially provide valuable opportunities for those aspects listed above. These waterways have



Figure 45 The water bird emblem used to symbolise the Styx River not only has spiritual and ecological significance, but could also signify Belfast's gateway status which includes its position below the flight path from the City's airport. This emblem could be adopted as part of Belfast's branding.

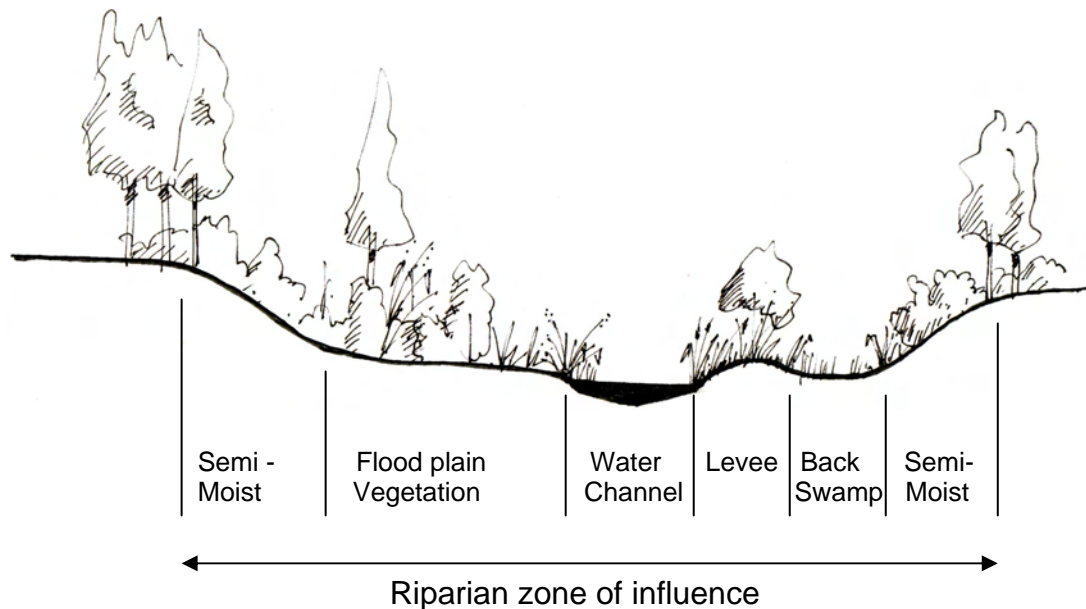


Figure 46 Diagram schematically showing the riparian zone of influence and how it can extend, although this can vary, well beyond the parent water channel.

Diagram based on: Dr Colin Muerk The Styx – Purakaunui Vegetation and Landscape Potential 2004

historic significance to both Maori and Pakeha as well, which is now finding expression in recently enhanced areas.

5.38 As mentioned they could also provide the foundation for Belfast's identity. Apart from giving Belfast a 'brand', the waterway identity can be used to promote Belfast as a suburb that is distinct from all others in Christchurch (see Figure 45 graphic). The contrast between the natural character of the watercourses and the formal character of the urban environment also helps reinforce the qualities of each and their appreciation. Thus enhancement would focus on the reinforcement of 'points of difference.' In the case of the waterways this would mean making them more naturalistic and using vegetation and structure combinations that would be unique to the area. This approach is strongly supported by City Plan objectives and policies, which will be discussed next.

5.39 Enhancement of the waterways can be achieved in the following ways:

- By protection of the waterway and the waterway corridor. This will involve statutory methods such as through esplanade reserves and strips, and the acquisition of land for public ownership. Zoning could also be utilised (Conservation and Open Space zones).
- Landscape enhancement involving the removal of undesirable vegetation and structures and replacing them with that, which is more appropriate (see again Figure 43 & 44 photographs).
- The creation of public access ways and recreational nodes such as picnic areas (see Figure 47 & 48 photographs).
- The creation of ponding areas.
- Riparian and storm water drainage management (see Figure 49 photograph).
- Predator control (see again Figure 38).
- Interpretation and promotion (see Figure 50 photographs).

5.40 For a more detailed description of waterway enhancement refer to the City Council's '*Vision 2000 – 2040 The Styx*' document produced in 2000. The enhancement principles outlined in this document can be equally applied to other waterways in the Belfast area.

5.41 Branding or creating an identity for Belfast

There has already been some discussion on how Belfast might create a strong identity for itself, and there will be further consideration when the City Plan objectives and policies are discussed, particularly under the City Identity heading. The advantages of branding or giving the area an identity are that;

- The community develops a strong sense of place and therefore belonging.
- Positive attributes can be utilised in the marketing of Belfast for commercial purposes.



Figures 47 & 48 Belfast's waterways provide diverse opportunities for recreation such as walkways (above) and landings for boating (below).

- A positive image can attract people to live, work and visit Belfast.
- People feel motivated to invest in the maintenance and enhancement of the environment in which they live.
- That Belfast contributes to the identity of the City as a whole.

5.42 Belfast has landscape characteristics that in combination help make it unique. These include the waterways and wetlands, the main north road and railway. Its 'peninsula' like shape jutting out into a rural setting gives the township a distinctly rural flavour.

5.43 As mentioned one potential contribution to the image of Belfast is that it is the only point where the urban part of the city comes close to the Waimakariri River. At a macro scale therefore, the relationship of Belfast to the river will be one of the foundations for establishing the township's future identity.

5.44 So too will the Styx, Otukaikino and Kaputone water ways, which will be discussed in more detail shortly with regard to the objectives and policies. Also discussed will be the gateway to Christchurch function of Belfast.

5.45 In summary the branding opportunities may include the following where Belfast becomes identified as;

- A City gateway where the "Garden City" image is especially promoted.
- An "Eco-burb" where urban development is very well integrated with the natural environment, especially the waterways and wetlands.
- A recreation hub that specially caters for waterway based activity.

5.46 Summary of landscape opportunities

These are summarised in chapter 7.0 and Figure 26, 40 and 62 maps. See also the executive summary at the beginning of this report.



Figure 49 Stormwater management is combined with wetland ecology at Northwood.

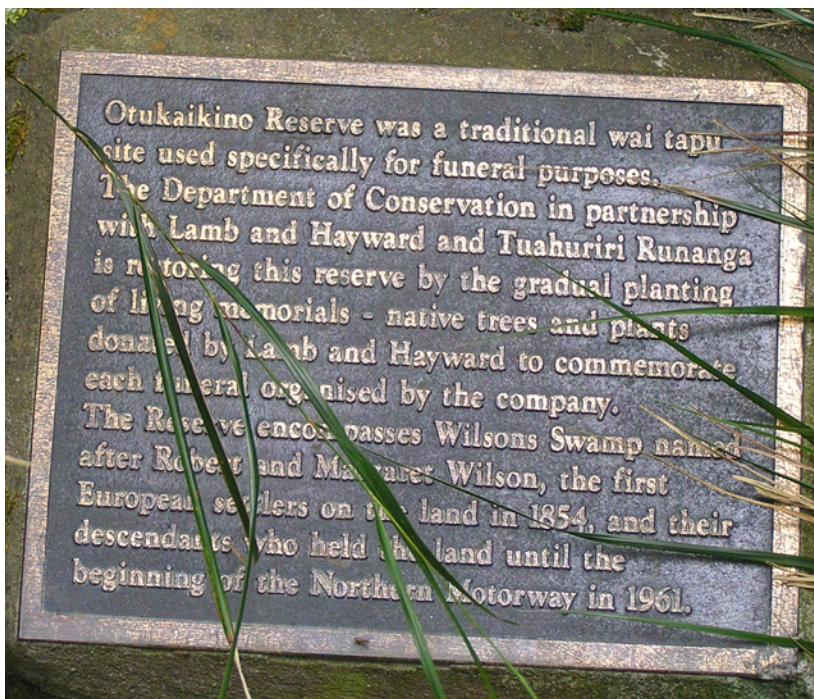


Figure 50 Two diverse examples of interpretation at the same site – Otukaikino Reserve (Wilson’s Swamp).

6.0 Statutory analysis

6.1 Introduction

The most relevant statutory document is the City Plan. Other documents include the Regional Policy Statement (RPS) and the Proposed Canterbury Natural Resources Regional Plan (NRRP). All are borne of the Resource Management Act (RMA). In this analysis all of the focus will be on the City Plan - for two reasons. One is that the City Plan is operative as is the RPS but not the NRRP. The second is that the City Plan is specific in its objectives and policies whereas the ECAN plans are generic. For the most part then, implementation of the Regional Plans follows from implementation of the City Plan.

6.2 The City Plan has many objectives and policies that are relevant to landscape matters in Belfast. These can be found under the following sections of the City Plan.

- 2.0 Natural Environment
- 4.0 City Identity
- 6.0 Urban Growth
- 10.0 Subdivision and Development
- 14.0 Recreation and Open Space

6.3 The sections on Living, Business and Rural are not referred to because they concern activity within zones. For these character and amenity are delivered by the zone rules, and in doing so the relevant objectives and policies are achieved. Essentially these seek to maintain and enhance character and amenity in accordance with the predominant activity for each zone. They also seek to reinforce the “Garden City” image that Christchurch is associated with. And finally the policies aim to ensure that cross boundary effects are contained, especially where business zones adjoin living zones.

6.4 The chief means of achieving the maintenance and enhancement of character and amenity for all zones is through control of the proportion and location of buildings. Controls on proportion generally seek to maintain a certain amount of open space commensurate with the prevailing zone standard. This is in addition to ensuring consistent building bulk throughout the zone for the purpose of maintaining character and amenity.

6.5 Landscaping is nonetheless required for business zones and some living zones (L3), but is not universally required. This is because the business zones especially, can generate adverse effects on character and amenity.

6.6 So the focus here is primarily on the effects of urban growth. This is because it has the greatest potential to significantly change the character and amenity of Belfast. It is also one area where the objectives and policies enable landscape opportunities to be realised in response to urban growth. These, for example, would include the integration of natural features with urban development. Once an area is zoned for urban purposes it is very difficult to take retrospective advantage of lost opportunities.

6.7 The Greater Christchurch Urban Development Strategy (UDS)

The purpose of Urban Development strategy is to explore options for the management of urban growth in and around Christchurch, and in so doing achieve the purpose of the RMA. The UDS to date has developed four options, including a 'business as usual' option. Essentially the options consider where growth concentration is to occur, and the effects that arise from this. Generally these range from growth containment within the central city and inner suburbs to dispersed growth in the city and satellite townships.

6.8 Common to all options is anticipated population growth, which is thought to be in the order of 500,000 by 2041, up 120,000 from the current population. To accommodate this growth it is expected that greenfield development will range from over 2000 hectares to nearly 7000 hectares, depending on which option is implemented.

6.9 This will clearly have implications for Belfast where potentially the extent of rural open space faces significant reduction. The UDS also identifies that for some options natural landscapes and the opportunity to create open spaces on the City's perimeter are also threatened.

6.10 Some options (A & B) are favourable to the protection of natural landscapes and the provision of peri-urban open space. Since the landscape in and around Belfast presents significant potential in this regard, these options would be the preferred ones.

6.11 The UDS also identifies restraints to growth within the greater Christchurch area, of which the area north of Belfast is endowed with a number. These include the Waimakariri flood hazard zone, its allied aquifer recharge zone, and the airport noise zone. Despite this, the UDS map indicates that there is no real growth constraint to the west and east of Belfast.

6.12 The Long Term Council Community Plan (LTCCP)

The Long Term Council Community Plan (LTCCP) is also to be considered. Essentially it reiterates many of the objectives and policies in the City Plan. For example, under the 'Strategic Directions' heading it includes the goal; 'Strengthen the Garden City Image' which is also sought in the City Plan. Because of this duplication the LTCCP will not

be discussed in any detail in this report. Where it is useful in the context of landscape is that it flags the Council's corporate intention to protect, maintain and enhance the City's landscape. This intent is apparent in the LTCCP's 'Strategic Directions.' Under the 'Council's Activities and Services' heading most action is determined to continue for the duration of the LTCCP. Furthermore, such actions are generic in that they will apply Citywide and as such will include Belfast, but not specifically target it. The latter role is left to the Council's Annual Plan, implemented in deference to the more general direction provided by the LTCCP.

6.13 The Resource Management Act

Sections 6 (a) and 7 (c) and (f) are the most relevant to landscape matters in the RMA.

6.14 Section 6 (a) seeks '*The preservation of the natural character of the coastal environment (including the coastal marine area) wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development.*'

6.15 Wetlands, lakes, rivers and their margins are common features in the Belfast area. The City Plan recognises the importance of these areas where they are either reserves or have esplanade designations.

6.16 There are no Section 6(b) outstanding landscapes in the Belfast area and so this part of the RMA does not apply.

6.17 Section 7 (c) requires us to have regard for '*The maintenance and enhancement of amenity values.*'

6.18 Amenity is defined in the RMA as '*..those natural or physical qualities and characteristics of an area that contribute to people's appreciation of its pleasantness, aesthetic coherence, and cultural and recreational attributes.*'

6.19 Where S6 is solely concerned with natural landscapes, S7 applies to all environments, be they rural or urban, industrial or residential. This does not necessarily mean that S6 landscapes and the urban environment are mutually exclusive. Natural S6 landscapes can and are found in urban settings, with the Avon and Heathcote River corridors being examples of this. The same would apply to the water ways in Belfast.

6.20 Section 7 (f) requires us to have regard to the '*Maintenance and enhancement of the quality of the environment.*'

6.21 Of importance to landscape outcomes are the nouns 'preservation, maintenance and enhancement'. These terms give us direction as to

how the landscape is to be treated. They are generally reflected in City Plan objectives and policies.

- 6.22 A note on 'enhancement' though – this not only means to improve a landscape, but can also include the creation of a landscape that does not yet exist. There are opportunities in the Belfast area where this can occur.
- 6.23 Another important consideration concerns the word 'maintenance.' This generally means to keep things as they are. In the City Plan context this means that the landscape or environmental outcomes anticipated for the various zones are to be generically maintained, while allowing specific changes to occur. Consequently the urban and rural environments in Belfast can experience significant changes in specific character while retaining the basic elements that identify them.

6.24 City Plan

As alluded to above, the City Plan reflects the requirements of the RMA. In its implementation the entire City Plan will find expression in the landscape in one form or another. Nonetheless, some objectives and their supporting policies seek specific landscape outcomes and it is those that I will concentrate on here.

- 6.25 Essentially the City Plan seeks to ensure that the character and amenity of all zones are maintained and enhanced. Also of relevance to Belfast because they are dominant features in the area, waterways are to be preserved subject to section (6a).
- 6.26 The Plan also addresses environmental change. Principally this takes the form of urbanisation. In the Belfast area urbanisation of rural land has been extensive over recent years. Northwood subdivision alone has close to doubled the urban area of Belfast. Further urban growth has the potential to significantly increase the urban extent and dramatically change the landscape character of Belfast. Because of the significant changes to landscape character that result from urbanisation, the focus here will be on those parts of the City Plan that control this. The City Plan has a number of objectives and policies that seek to control the adverse effects of growth and to ensure positive environmental outcomes.

6.27 Urban Growth Policies³

The urban growth objectives become relevant if rezoning from rural to living is being contemplated anywhere in the City. Rural Objective

³ CP Vol. 2 Section 6

13.1(a) opens the door for such rezoning to occur in current rural zones. The relevant part of the Objective⁴ states;

'That the rural and soil resource be managed to: [among other things] provide scope for the appropriate establishment or extension of urban activities;....

- 6.28 The Urban Growth objectives and policies give guidance as to how this may occur. So too do others, notably City Identity, Subdivision, Natural Environment and Recreation and Open Space.
- 6.29 The main issues concerning urban growth as it affects the landscape is the extent of rezoning, and the location and nature of the proposed urban / rural boundary. There are a number of urban growth policies that give direction with regard to those issues. These are now addressed in numerical order as they appear in the Plan.
- 6.30 Policy 6.3.1 concerns the urban / rural boundary and intends *'To ensure peripheral urban growth does not occur in a form detached from current urban boundaries, or which promotes a dispersed and unco-ordinated pattern of development.'*
- 6.31 Essentially it means that urban growth needs to be contiguous with existing urban areas. For Belfast this policy precludes the establishment of isolated pockets or urbanisation within the rural landscape that surrounds it. This does have implications for developments like 'Clearwater', which straddles the boundary between urban and rural character. Within the study area boundary there is very little scope for development of this kind, although it cannot be ruled out on nearby sites, particularly toward the coast and westwards on the City side of John's Road.
- 6.32 For Belfast it would certainly be desirable to ensure that urban growth is not detached from the existing urban area. As mentioned one of the prevailing characteristics of Belfast is that it is more or less entirely surrounded by rural land on account of its peninsula like shape. Consequently the rural environment has a commanding presence that in all likelihood is appreciated by local residents. The relationship that urban Belfast currently has with its rural setting will certainly be degraded should isolated pockets of development occur. Further, the identity of the town as a well defined urban entity would diminish because its extent would become ambiguous in the event of unco-ordinated development.
- 6.33 Policy 6.3.5 seeks *'To avoid urbanisation of land which is of outstanding landscape quality, is ecologically significant, or which detracts from the margins of waterways or the coastline.'*

⁴ City Plan Vol.2 Part 13

As mentioned there are waterways in the Belfast area, which are regarded as having a natural character worth preserving (see in particular policies 2.2.5, 2.2.8, 2.2.10 and 4.1.7), and so this policy would therefore apply. Essentially the waterways are protected by way of esplanade reserves or strips, which are identified in the City Plan planning maps. All of the reserves in the study area also have watercourses running through or alongside them, and as a result they are given protection.

- 6.34 There are also a many allied policies to the ones above that seek preservation and or enhancement of the City's waterways. The most relevant include policies 2.4.3, 2.4.4, 2.4.5, 4.1.7, 10.21, 14.1.10, 14.1.11, and 14.1.12.
- 6.35 There is scope to extend the protection of water ways in the study area, and these are identified on the Figure 26 map. In extending preserved areas it is important to appreciate that in landscape terms a waterway is defined by the extent of its influence, particularly in how it has shaped the land. Thus the water body itself will form part of the waterway landscape and its banks and terraces the other (see Figure 46 diagram). What this means is that riparian reserves may not necessarily parallel the water body.
- 6.36 While the most common mechanism for preserving waterways is to impose esplanade reserves and strips, other means are available too. The City Plan also protects waterways with controls on building setbacks and excavation and fill⁵.
- 6.37 Environmental compensation or tradable development rights (see policy 2.4.5 Extended Protection) is another means of preserving riparian land. So too is land purchase by the Council. Covenants protecting particular areas may also be applied. Preservation of waterways may involve packages of two or more of the mechanisms cited above.
- 6.38 Following on from this are Policies 6.3.10 and 6.3.12 that seek to address the nature of the urban / rural boundary.
- 6.39 It is necessary to discuss Policy 6.3.12 ahead of Policy 6.3.10 because in implementing the former the latter may also be achieved. Policy 6.3.12 relates to the rural / urban interface. It is the one policy that seeks explicit landscape outcomes on the rural / urban interface. To this end it aims...

'To reinforce the consolidation of the urban area by:

- (a) improving the landscape quality of the rural- urban interface;*

⁵ City Plan Vol.3 Part 9.5 General City Rules

(b) establishing a transition of low density housing, open space or esplanade reserves, adjacent to the urban boundary, particularly where no clear physical boundary to urban growth exists; and

(c) encouraging the planting of suitably located trees on the urban-rural interface, to create a high standard of amenity, and to better define and improve the quality of the urban edge of the City.

- 6.40 Regarding implementation of Policy 6.3.12 it will be necessary to ensure that the rural urban interface has high landscape amenity which clause (a) seeks to achieve. This part of the policy can only be achieved by providing sufficient open space for landscaping and then ensuring that the latter is implemented. Clause (b) establishes the open space by requiring a transition of low density housing or open space adjacent to the urban boundary.
- 6.41 In the Belfast area there is a number of existing boundary treatments that result in high amenity outcomes. How this is achieved has been discussed in some detail earlier. Out of the earlier discussion two basic conclusions emerged with regard to maintaining high amenity on the boundary.
- 6.42 One is the avoidance of high opaque fences or walls along the urban / rural boundary (see Figure 35 photograph).
- 6.43 Where practical the other is to run swales and or amenity planting along the boundary. The latter could also be combined with walk and cycle ways. To implement this option it would probably be necessary to provide an easement or reserve.
- 6.44 A third option would be to take advantage of existing water ways and enhance these as edges. Because there are a relatively high number of waterways within the study area they therefore provide a good opportunity for providing high amenity urban / rural boundaries.
- 6.45 With regard to clause (c), the planting of suitably located trees on the urban / rural interface is required and overlaps with clause (a) and (b). In fact, (b) can be seen as the means of achieving tree planting along the boundary where building density and setbacks enable this to occur. It should be noted though, that such planting is not required for Living zones.
- 6.46 Policy 6.3.10 concerns the boundaries of urban extensions, and wants *'To prefer peripheral development which is contained, at least in part, by a well defined barrier to further outward extension for urban development.'*
- 6.47 One of the issues this policy raises relates to the question of where the 'natural' or logical boundary occurs. Such boundaries would occur where there is a marked change in topography such as a water body,

or significant change in slope gradient. The former would apply in the Belfast area.

- 6.48 This approach is encouraged where in the explanation and reasons for this policy, it states that *‘Aligning the boundary of areas for peripheral growth with a defined natural or physical feature seeks to avoid pressure for continued outward extension of these areas into the rural area. In addition, support is given to a compact urban form and such features can improve the quality of the rural- urban interface.’* With regard to improving the quality of the rural / urban interface, this policy clearly reinforces policy 6.3.12, and vice versa.
- 6.49 For the study area the presence of significant watercourses provides strong natural boundaries to urban growth. This is particularly so for the land north of urban Belfast where the Waimakariri and the Otukaikino rivers form a very assertive urban boundary. The Styx and Kaputone are less effective in this regard since urbanisation has the potential to ‘leap frog’ each of these. In terms of implementing this policy however, and given that there are no other strong boundaries to the east, the Styx and Kaputone therefore provide the strongest urban boundary.
- 6.50 The proposed northern arterial route also has the potential to provide a strong physical urban / rural boundary. The intended route of this delineates the study area to the east. Such a boundary could be reinforced with extensive bulk landscaping. This would not only enhance amenity, but would also visually signal the presence of the boundary. In effect, tall planting would create a ‘wall’ that may assist in visually containing the township.
- 6.51 Should Policy 6.3.10 be fully implemented within the Study area, the result will be a township that is distinctly contained by a strong natural boundary. This can be further reinforced by an urban layout that mirrors watercourse routes (see Figure 26 map). Not only will such a boundary contain Belfast, it will also reinforce its identity as a discrete urban enclave with an unique character.
- 6.52 The final policy that is relevant to the study area under the Urban Growth heading introduces the concept of environmental compensation. Policy 6.3.14 enables tradable development rights that allow,

In limited circumstances, to apply the concept of “environmental compensation” where:

(a) land of high landscape or natural value is protected or made available for public use and / or:

(b) significant public benefit will be gained from hazard mitigation measures which would substantially enhance amenity values.

- 6.53 This policy may allow land to be rezoned or developed in return for land that has significant natural values being made available for public ownership or protection. Even though environmental compensation may result in other policies not being achieved in the best way, it cannot negate the overall purpose of the Act.
- 6.54 The key issue arising from environmental compensation is whether or not there is a significant benefit to be had from publicly acquiring the land or protecting it by covenant. And that this compensates for the degree to which it fails to meet other objectives and policies of the Plan.
- 6.55 The benefits of environmental compensation include the following:
- Improved recreational access.
 - Enhancement such as native plant revegetation, ecological restoration, recreational facilities.
 - The assured protection and maintenance of natural features such as water ways and native vegetation.
 - Erosion control.
 - Weed and pest control.
 - Permanent fixing of the urban / rural boundary.
 - The provision of recreational linkages (between open space reserves).
 - Improved water quality.
- 6.56 The disadvantages include:
- The cost of enhancement and recreational development.
 - Operational costs, which may include weed and pest control, along with erosion mitigation and hazard control.
 - Issues of precedence and the integrity of the City Plan dependant on whether or not the rezoning is contrary to the relevant objectives and policies.
- 6.57 Because of the high natural values associated with Belfast's waterways, there is a strong incentive to apply environmental compensation as a means of securing or enhancing their protection with the above listed outcomes in mind. Since environmental compensation essentially involves tradable rights, higher density

development may occur in return for the provision of increased and enhanced riparian reserves beyond what esplanade designations provide for.

6.58 Subdivision Objective and Policies⁶

Closely related to urban growth are the subdivision objectives and policies in the City Plan. To some extent these determine the extent of subdivision via, for example, Objective 10.1 concerning natural hazards. In the Belfast area the flood hazard posed by the Waimakariri would be a constraint in this regard. But the focus is really on character and amenity. In essence the subdivision provisions seek to integrate development with existing environmental assets, including infrastructure. This is generally summarised in the overall objective for subdivision⁷.

- 6.59 A key point is the emphasis on integrated development, and there are good opportunities in Belfast to undertake this. This has already been undertaken with a fair degree of success in the Northwood subdivision where the natural and physical environments are generally well integrated. This approach is perhaps best summed up in an excerpt from the reason to this objective, which states;

'The subdivision and development processes should be undertaken in a manner that is environmentally sensitive, recognising the values of water (both surface and underground), the coastal environment, natural habitats and ecosystems, and take into account any adverse effects on natural and physical resources.'

- 6.60 More specifically, but reinforcing this Objective 10.2 which seeks the '*Protection of natural features and archaeological sites*'. Again the emphasis is on the integration of natural features with the physical, while minimising adverse effects on the former. This is described in the reasons where it states that;

'The pattern of subdivision can have an impact on the likely management of parcels of land which have significant natural values, or which include archaeological sites, particularly subdivisions adjacent to rivers and streams, or on the Port Hills. It is desirable that the pattern of land subdivision recognise the natural boundaries of features on the ground, and provide the opportunity for these to be set aside and protected. Similarly, opportunity may also be provided through land use development not involving subdivision.'

⁶ City Plan Vol. 2 Part 10

⁷ 'Subdivision and development objective'

That the values and functioning of natural and physical resources are maintained when the process of land subdivision and/or development takes place, recognising anticipated land use activities.

6.61 A number of policies under the subdivision objectives reinforce the outcomes described above. These policies include 10.2.1 concerning the protection of natural features, ecosystems and archaeological sites; 10.2.2 concerning waterway margin access; and 10.2.3 concerning the effects of subdivision works on the environment.

6.62 In the reasons to Policy 10.2.1 a reference is made to the boundaries of subdivisions in relation to natural features, which were discussed earlier with regard to the urban rural boundary. The treatment of edges, particularly between the natural and physical is critical in achieving good landscape outcomes. The reasons state;

'The process of land subdivision involves creating boundaries which may not align with irregular boundaries of natural features on the ground. Fencing and planting of these boundaries may result in adverse effects on visual amenity values, where the boundaries are poorly located in relation to the boundaries of the natural features on the ground.'

6.63 From a landscape point of view it would be very desirable to achieve the outcome described above, particularly in an area where waterways are prominent. To this end the reasons go on to state;

'It is important to ensure where possible, that the subdivision pattern does not artificially divide and create difficult management circumstances for areas of land containing important natural features, habitats or river and stream environments which often have a natural and irregular pattern.'

6.64 It is important therefore that the boundaries of subdivision are not divorced from natural features in those instances where the two meet. Not only does sensitive boundary treatment provide for amenity, it also promotes identity. Furthermore, it demonstrates the sustainable integration of human activity with the natural environment, both of which are not necessarily mutually exclusive. This outcome is reflected in one of the environmental results anticipated where; *'Protection of the integrity of significant natural features, ecosystems and archaeological sites through the pattern, design and process of land subdivision'* is sought. In this regard the purpose of the Act is being well served.

6.65 Policy 10.2.2 seeks to provide waterway margin access for recreational, riparian maintenance, ecological and access purposes. These are mostly implemented through esplanade strips and reserves. Other mechanisms as discussed earlier such as environmental compensation, covenants and purchase may also be used to secure waterway margins, particularly where it may be desirable to extend the esplanade strip or reserve.

6.66 Because Belfast, both within and outside the study area, is well endowed with waterways, there is considerable potential to create a

network of pedestrian linkages. So not only do the waterways provide opportunities for high amenity urban boundaries, they also enable pedestrian circulation throughout the area, while preserving conservation values.

- 6.67 Reinforcing the policy direction discussed above is policy 10.3.2, which encourages ‘... *innovative subdivision design consistent with the maintenance of amenity values.*’ This policy introduces Council involvement in subdivision design, particularly where it is comprehensive. The aim is to ensure that subdivision design takes into account local context within and beyond the bounds of proposed development. This ensures that development is integrated with the surrounding environment. In the Belfast area the Northwood development is a successful demonstration of this approach.
- 6.68 A key design principle behind this policy is, as alluded to, consideration of context. This as opposed to a more formulaic or standard means of subdivision design leads to a high level of distinctiveness and amenity. In effect subdivision not only capitalises on local conditions, it also ‘borrows’ from adjoining environmental assets. These may include open space, natural features, linkages, view protection and nearby community facilities.
- 6.69 A further policy relating to landscape matters concerns the protection of significant trees. Policy 10.3.3 seeks the identification and encourages the retention of unlisted trees on proposed subdivision sites. In the Belfast there does not appear to be many trees that would merit further protection. This is because the greenfield sites tend to be former orchards, market gardens or pastoral land. Consequently most trees are utilitarian in nature, comprising mostly shelterbelts and such like. Nonetheless there may be trees worth retaining, including shelterbelts or remnants thereof. Or as the case may be, emergent naturally regenerating native vegetation such as that found in nearby ecological heritage sites may also be retained.
- 6.70 This concludes the discussion on subdivision. Being inextricably linked to urban growth, subdivision has the potential to affect the greatest changes to landscape character of the study area and its immediate surrounds. While the change in character may be dramatic, this does not mean that the outcome is adverse. Clearly the objectives and policies discussed above seek to ensure that urban growth and the ensuing subdivision acknowledges contextual conditions and provides a high level of amenity. This is especially important for the integration of new development with regard to not only the surrounding natural environment, but also to the existing physical one as well.
- 6.71 Natural Environment

As mentioned, the significant natural environment features in and around the Study area are the waterbodies. Objective 2.4 seeks to protect and enhance such natural features. Surface waters are

specifically identified in the reasons for the objective as being subject to this objective's purpose. A number of policies set out to achieve the objective, which has some relevance to Belfast.

- 6.72 Policy 2.4.1 concerns ecological heritage sites, of which there are two within the study area⁸, these being Styx Basin and the Groynes. Just outside of the study area is an ecological heritage site⁹ at Coutts Island on Dickeys Road. Essentially the policy requires these areas to be protected and restored.
- 6.73 It is possible that through enhancement of natural features that the extent of ecological heritage sites can be increased. (Wilson's Swamp is a good example of this where restoration work has been extensive). Most of the esplanades have the same potential when they come into being.
- 6.74 Of particular relevance is the recognition that ecological heritage areas play a key role in contributing to identity of the City. Of this the explanation and reasons state:

'Many of these remnants are unique to Christchurch and Canterbury. In some cases they are among the best remaining examples of their type on the Canterbury plains. The value of these natural remnants is not only scientific, educational and cultural but is also a guideline or measure of ecological sustainability within the City.'

In addition, maintenance of the City's distinctive natural heritage is part of the character of Christchurch as a uniquely New Zealand city, different from other New Zealand cities and of special interest for the visitor.'

- 6.75 The same could be applied to Belfast where its unique waterways can contribute to the area's identity. That is, they could not only help to enhance the City's identity, but also distinguish Belfast from the rest of the City. This could be easily achieved in Belfast because most of the waterways still run through rural land. And so the opportunity exists to enhance or create fully riparian ecosystems that are not just confined to the waterbody itself.
- 6.76 The explanation and reasons also point out the importance of linking the ecological heritage areas, if for no other reason than to ensure their survival. Currently the sites in Belfast are isolated from each other. There are opportunities nonetheless to enhance linkages. This can be achieved at the very least by utilizing esplanade strips and reserves. The only problem with this is that their implementation is reliant on subdivision, which may not occur for a long time. Other mechanisms may have to be explored to expedite desirable outcomes such as land

⁸ Ecological heritage sites 8.1 and 3.13

⁹ Ecological heritage site 3.07

purchase. This will have other advantages too, such as implementation of linkages.

- 6.77 Policy 2.4.2 seeking to ensure that activities are compatible with natural environment values is of particular relevance to Belfast because of the area's urban growth potential. Further the policy alerts us to rural activities that can have potential adverse effects on the natural environment, such as drainage and forestry.
- 6.78 In Belfast there are currently some activities that are incompatible with the environment in which they are located. Notable among them is the sawmill at the junction of Dickey's Road and the Otukaikino River (see Figure 51 and 52 photographs). The river has very high natural value, and the presence of the sawmill detracts from this visually. It is also possible that the river suffers contamination from chemicals since freshly treated timber is stored on the river banks (see photograph). In instances like this it would be desirable to relocate the business to a more suitable site.
- 6.79 Most incompatible activities, like the sawmill example are products of history, no doubt antecedent to any kind of planning regime. Implementation of this policy should ensure that such incompatible activities are avoided in the future. Nonetheless, we should also avoid being over zealous in its application. This is because it is possible to get some very interesting design results from combining certain activities in a way that might not be otherwise envisioned. Residential and retail activity can be successfully combined with natural environments for example, whereas convention might dictate otherwise (see Figure 53 photograph). And because there exists considerable potential for development in the Belfast area, opportunities to adopt this approach are considerable.
- 6.80 Reflecting Section 7 matters is policy 2.4.3, which seeks to enhance the City's natural environment. Of relevance to Belfast's waterways, this policy makes direct reference to these natural features. A great deal of waterway enhancement has been undertaken in the Belfast area to date, but there is a lot more that can be done.
- 6.81 There exist some of the old box drains in Belfast and there are opportunities therefore to naturalise these. Most are located in rural areas (see again Figure 43 and 44 photographs), and so should subdivision occur there is plenty of scope to enhance these drains.
- 6.82 The smaller rivers and streams offer potential for further enhancement also, as does the Waimakariri. The Styx, Otukaikino and Kaputone streams are essentially products of the Waimakariri, and so it would be desirable that this relationship is recognised through enhancement. As a result the public will come to appreciate that the waterways in the area are inextricably linked as part of a larger system, and that the very existence of Belfast is a product of that.



Figure 51 Stacked timber, possibly treated, next to the Otukaikino Stream detracts from potential high natural amenity, and may affect water quality.

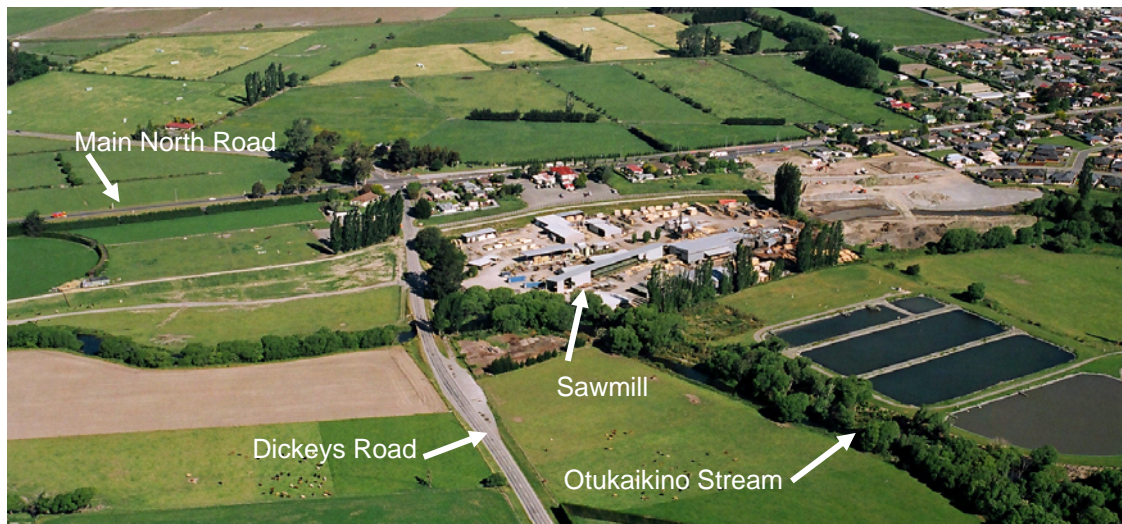


Figure 52 An aerial photograph shows the sawmill in relation to Otukaikino Stream and its wider setting.

- 6.83 Objective 2.9 concerning environmental awareness aims to reinforce greater appreciation of the natural environment, and enhancement is one way of achieving this. To this end the objective states:

'Public understanding and awareness of important habitats within the City can be enhanced through a number of mechanisms. These include education, increased opportunities for recreation and enjoyment of these areas, and publicity.'

'This policy will not be achieved directly through any regulatory options, but through advocacy and Council's own development of its conservation estate.'

- 6.84 It is not entirely true that this objective will be entirely achieved via Council advocacy and conservation estate development. Implementation of most other policies described so far will also enhance public appreciation of the natural environment.

- 6.85 Closely allied to the above policies is policy 2.4.4 which seeks to maintain and enhance the City's ecosystems and habitats. Some emphasis is put on waterbodies as the explanation and reasons begin by stating that;

'There are a number of important fresh and saltwater wetland areas remaining within the City, although the great majority of the City's original wetlands have been drained. For this reason, those areas which do remain are of even more importance, and have significance under Sections 6 and 7 of the Act.'

- 6.86 Again this policy reflects the intent of most others regarding the natural environment where activities are controlled to ensure its protection. The avoidance of activity, which has the potential to adversely affect the natural environment, is emphasised. Methods of achieving this are flagged, which include setback, excavation and filling controls, along with the avoidance of incompatible activities in general.

- 6.87 Another method of achieving this is through policy 2.4.5, which aims to extend the protection of natural ecosystems and habitats. The explanation and reasons outline the purpose, which states;

'The fragility of some existing habitats within the City is exacerbated by a lack of adequate buffer protection and a number of sites are isolated. Their protection would be enhanced by the provision of open space linkages and extension of "green" areas where this is practicable.'

'In addition, the opportunity for extension of public ownership, particularly on the Port Hills and along waterways, is an alternative to regulation, and voluntary mechanisms such as covenants will be actively pursued by the Council.'

- 6.88 As mentioned, ecological heritage sites are especially isolated from each other. But since most are either on or near waterways, there is a good opportunity to enhance linkages as envisioned by the policy. The explanation and reasons go on to describe mechanisms to achieve this including environmental compensation, land purchase and other unspecified incentives.
- 6.89 In summary the natural environment objectives and policies seek to first and foremost maintain and enhance natural features, which in Belfast are the waterbodies. Protection primarily relies on controlling the relationship of activities in proximity to waterbodies. To this end controls focus on the compatibility of activity where it encounters valuable natural environments.
- 6.90 A very important principle therefore, is that the natural environment objectives and policies do not rule out the compatible integration of natural and physical environments. Or to put it another way, the two environments are not necessarily mutually exclusive. From a design point of view, combinations of contrasting environments can produce highly satisfactory results without compromising character and amenity. And if such integration of the physical with the natural should take place, then the priority is to ensure that natural character and amenity prevail.
- 6.91 For Belfast this means that its waterbodies will be salient features of the landscape, and not subsumed by urban and rural activity as they once might have been in earlier times. It will also mean that the natural features of Belfast will be an integral part of the urban landscape. In this regard the natural features will be multi-purpose incorporating ecological, recreational, storm water management and circulation functions.
- 6.92 Belfast's natural waterbodies also have the potential to become inextricably linked with the area's identity. This is especially so given the general lack of other major identifying features in the area. Not only do the area's natural features contribute to Belfast's identity, they also introduce that of the City as a whole, especially with regard to its image of sustainability. This leads on to the next set of objectives and policies – City Identity.
- 6.93 City Identity

The overall objective seeks to maintain and enhance features of the City that make it distinctive and unique, the key ingredients of which are form, amenity and heritage. Of particular relevance to Belfast in the reasons for the objective, some emphasis is placed on the relationship between the physical and natural. Here it states; *'However, its [the City's] identity is created from the special relationship of the natural and physical features which set this City apart from other*

cities.' As discussed above, this would be the best approach with regard to establishing a strong identity for Belfast through the integration of physical features with the natural.

- 6.94 The reasons for Objective 4.1 elaborate on the relationship between the physical and natural. It states, *'The relationship between the natural and physical features creates the form of the City.'* The same applies to Belfast, which in turn contributes to the overall form of the City. Implementation of this is linked to the urban growth policies, particularly those relating to the extent and boundaries as discussed earlier.
- 6.95 The reasons also suggest that the City's form not only results from the relationship of natural and physical features, but that this relationship is in contrast. Enhancement therefore means increasing this contrast. Natural features are made to appear more natural, and the physical more physical. For Belfast this means that its waterbodies will need to become more natural in appearance where unnecessary physical features are removed or ameliorated in some way. These features might include box drains, buildings, power poles, fences and so on.
- 6.96 One strongly contrasting characteristic in the Belfast area occurs between the organic and informal alignment of watercourses and the geometric and formal alignment of roads and boundaries (see Figure 54 Photograph). This pattern can still be maintained, particularly in subdivision layout as indicated on the Figure 55 diagram.
- 6.97 Finally the reasons for this objective mention the role of diversity arising from contrasting areas and features. All suburban areas in Christchurch have distinctive combinations of features that help make them unique – some more so than others. The position of Belfast in relation to the Waimakariri River gives it considerable distinctiveness. No other suburb in Christchurch has that relationship. Reinforcing this are the other waterbodies in the area. The main highway north contributes to this identity also.
- 6.98 Currently the connection between the Waimakariri and Belfast's urban area is weak. This can be overcome with stronger pedestrian linkages to the river, particularly along the Otukaikino River corridor. Mass planting using a common theme between the river and the township could also enhance the relationship between the two.
- 6.99 So far the discussion has largely focussed on the natural features of the Belfast region. The City Identity policies also recognise the importance of the City's physical environment in making the City distinct. Policies 4.1.3 and 4.1.4 concern suburban areas and centres. The distinctiveness of these areas relates to building density where the outer suburbs are low scale characterised by abundant open space. One important identifying feature to arise from this is the City's garden city image.



***Figure 53** A good example of integrated stormwater drainage and ecological restoration with large scale commercial development – in this case at Northlands Mall.*



***Figure 54** The informality of the Otukaikino Stream contrasts with the formality of horticultural and pastoral land use, and the township. This principle can be applied to future urban development where street layout can reflect rural boundaries.*

Straight streets act as view shafts to significant natural and physical features

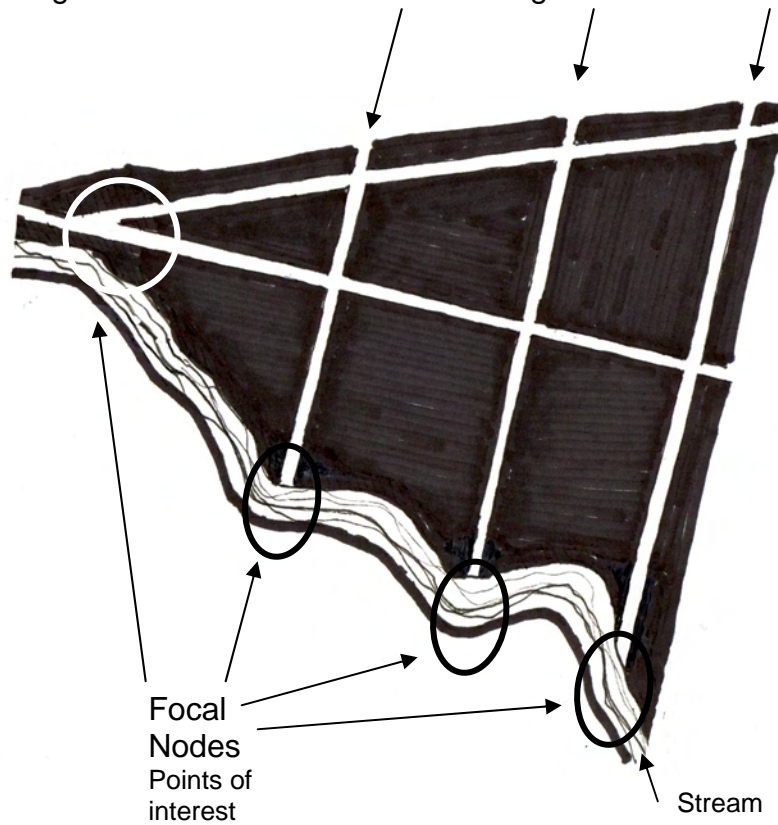


Figure 55 Schematic diagram showing how a street layout reflects topography and existing land use patterns. Such a layout has the advantage of creating points of interest while providing for access to significant natural and physical features.

6.100 While the policies encourage higher density developments toward suburban retail and community centres, they do acknowledge exceptions. In the explanation and reasons it states;

'... within larger areas of peripheral growth, there is the opportunity to enable concentrations of medium density housing as physical focuses, and around expansive publicly owned spaces. Such development does not affect any "existing character" and provides greater variety and housing choice in establishing the identity of new suburban areas.'

6.101 There are good examples of this in the recently developed Northwood subdivision at Belfast and at Clearwater nearby. There is no reason why such mixed density developments cannot recur in the Belfast area. While the policies state a preference for high density development around retail and community centres, there may be opportunities elsewhere. These may even include high density housing in proximity to natural features, where clustering can favour the preservation of conservation land. This is otherwise known as 'conservation clustering' where higher densities are traded for the protection or provision of open space, generally for conservation purposes (see Figure 56 diagram). Further, high density development can also enable the creation of natural open space where none existed, as is the case at Northwood and Clearwater (see Figure 57 and 58 photographs).

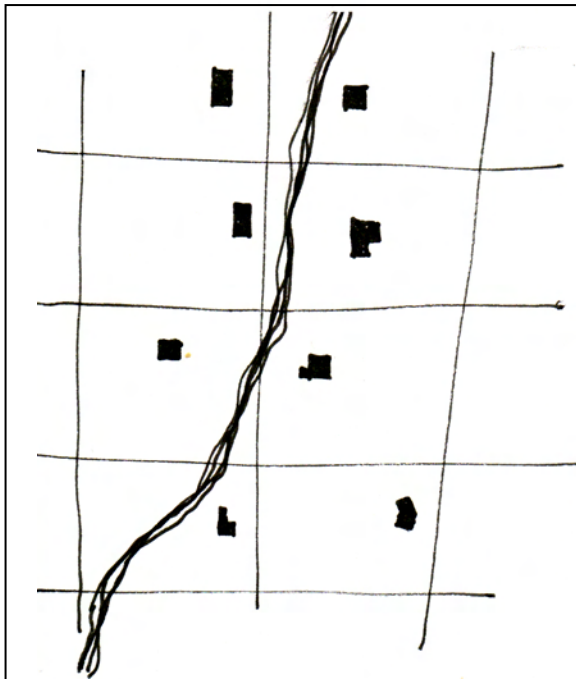
6.102 What results is not only a high level of amenity, but also distinctiveness where Belfast can trade on a potential reputation for having well integrated physical activity within its natural environment.

6.103 Policy 4.1.6 relates to the plains and in particular their rural component. A large part of the Belfast Study area and beyond is rural plains. A specific reference is made in the explanation and reasons to the effect where Belfast is acknowledged as an '*... enclave of urban development...*' This supports the earlier observation where it was noted that the Belfast urban area is more or less entirely enveloped by its rural setting.

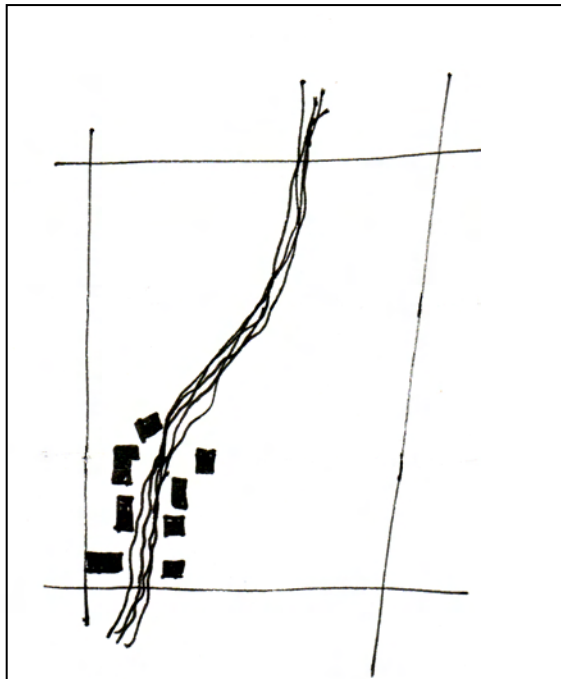
6.104 Essentially this policy seeks to maintain and enhance the open space rural character of the plains. To this end it anticipates the predominance of open space over built form. The boundary between the urban and rural is also addressed where the explanation and reasons state;

'The edge between the urban and rural areas varies, with a hard edge defined by parks, forests, shelter belts, natural habitats, or a transitional area where "lifestyle" development has established.'

6.105 All of the above features are present at Belfast, although lifestyle blocks are not as common as they are elsewhere around Christchurch. With regard to the edge, the explanation and reasons go on to state;



The above diagram shows buildings spread through a rural area in accordance with the City Plan's minimum density rules.



This diagram shows how the same number of buildings can be clustered so as to maintain rural character and protect natural features in rural setting

Figure 56 Illustrates the effect of 'conservation clustering' in order to preserve either rural character of natural features.

Figure 57 and 58 photographs below show the same effect illustrated above in practise. Left hand photograph is at nearby Clearwater and right is at Northwood. The high density housing frees up open space that otherwise may be used by lower density housing. Both examples result in good quality natural open space.



'Protection of features for amenity, and natural values also serve to define and create an identifiable edge to the rural environment...' and of relevance to Belfast includes *'...the Waimakariri River to the north....'* 'The Otukaikino River can be added to the mix, as can the Styx.

- 6.106 Overall this policy aims to maintain the contrast between the rural and urban environments. Fundamentally this comes down to ensuring the provision of open space at much higher levels than what could be anticipated in the urban environment. With the presence of watercourses it may also be possible to admit fingers of rural land into the urban setting. Apart from providing amenity, this will enable visual and pedestrian access to rural areas. Again the greater the contrast between these two environments the better able they are appreciated.
- 6.107 Also under the City Identity heading is Policy 4.1.7 concerning Estuaries, waterways and wetlands. This policy therefore has particular relevance to Belfast. The policy seeks to recognise and promote waterways and wetlands *'...as significant habitats and natural features, and enhance their cultural significance.'* Like many of the policies discussed so far, this one places particular emphasis on the maintenance and enhancement of waterways and wetlands, particularly to their natural state. To achieve this, the explanation and reasons suggest that the *'...sphere of influence [of waterways and wetlands] does not have a hard edge, recognition has been given to the need for buffer areas from adverse environmental effects of both land and water based activities.'* The implication for Belfast is that future development will need to be cognisant of this *'...sphere of influence...'* when considering effects on waterways and wetlands. As alluded to previously the extent of a waterway's influence can go well beyond the waterbody itself.
- 6.108 One of the major issues for any part of the City concerns amenity, which is addressed by objective 4.2. What makes the City pleasant is a key component of its identity. Character arises from a particular combination of natural and physical features in the landscape, and amenity is what makes the resultant environment pleasant in both the physiological and aesthetic sense.
- 6.109 To achieve this there are a number of specific policies. Those that are already discussed also contribute to amenity in their implementation. The amenity policies aim to encourage those elements, which make the City pleasant.
- 6.110 The first is policy 4.2.1, which seeks the provision of tree cover. This is provided in both the private and public realms. Trees are required by the City Plan in business zones, but not in the Living zones. The latter are enabled by the provision of open space. Public open spaces such as roads and parks accommodate trees as well.

- 6.111 In the new retail areas of Belfast trees have been included as required by the City Plan. In the older retail area this is not the case, and so an opportunity exists to remedy the situation if it is at all practicable. I note that some of the established industrial areas have undertaken tree and shrub planting in recent times (see Figure 59 photograph). It would be desirable to encourage further such planting, bearing in mind that there is no mandatory requirement to do so.
- 6.112 In the public realm the presence of trees is quite extensive. They are particularly prevalent as street trees in the newer subdivisions, but the older ones have them in most areas. Some streets are still void of trees (see photographs), and opportunities therefore exist for further planting.
- 6.113 Allied to the tree cover policy is policy 4.2.2, which aims to recognise and promote the 'Garden City' image of Christchurch. All of the trees planting venues just described significantly contribute to the garden city image. Shrub planting and lawns also contribute, as do garden based amenities.
- 6.114 An important aspect to achieving this policy is the avoidance of high opaque fences along road frontages. Low fences are preferable as they allow views into front yard gardens, and in so doing enhance the garden City image.
- 6.115 Belfast plays a very important role in the promotion of the City as a garden City. This is because it forms the only entry and exit point to and from the City. It therefore plays a critical role in creating a positive first and last impression of the City. Garden City character and amenity is therefore vitally important alongside the Main North Road and railway. Recent tree and shrub planting has enhanced the Main North Road, although gaps are still apparent (see Figure 60 photograph).
- 6.116 Should the proposed Northern Arterial be implemented, and then it is important that the Garden City image is strongly conveyed alongside that too. This would involve extensive tree and shrub planting. The width of this is in part determined by Transit New Zealand's guidelines that require non-frangible trees to be planted at least 12 metres from the road¹⁰ edge. It would be desirable to have large trees in the road corridor, so that would necessitate a landscape berm of over 12 metres width. 15 metres width would therefore be the minimum to accommodate large trees, although 20 metres would be ideal. Shrub planting can be a lot closer to the road.
- 6.117 Turning to the physical environment, policy 4.2.3 aims to promote the '*...harmony and compatibility of buildings.*' There are few rules controlling the design of buildings, and so this policy can only seek to encourage good design. It does however highlight some important design principles which to some extent have already discussed. Chief

¹⁰ For roads with a speed limit of 100km/h



Figure 59 Recent amenity planting in Belfast industrial area on Belfast Road



Figure 60 Despite recent street tree planting there is still scope to plant trees along Main North Road, both in the median and berms.

among them is the need to ensure that context is taken account of in the design of buildings. This means that the character and amenity of the surrounding environment should be considered and reflected in building design.

- 6.118 As discussed earlier, this might mean that larger or high density buildings may need correspondingly larger areas of adjoining open space in order to counteract their dominant effects. Or near conservation areas buildings may need to be more subdued so as to not overwhelm the natural character of the adjoining environment, while still maintaining a contrast between the urban and rural areas. This would be achieved through the differential of open space provision between the two areas. In other instances it may be desirable to create landmarks. In Belfast this might occur, for example on the major intersection of Johns and Main North Roads.
- 6.119 At the other end of the spectrum are open space and the role it plays in contributing to the identity of Belfast. Policy 4.2.4 seeks '*To ensure the development and protection of the quality of public open spaces*'. All of the open space referred to in this policy is publicly owned. It not only includes parks and reserves, but also streets.
- 6.120 This policy is closely allied to the Open Space set of objectives and policies in Part 14 of the City Plan. Some of these will be discussed in more detail shortly where they have particular relevance to the landscape of Belfast. Most policies in Part 14 aim to ensure that open spaces are provided and are evenly distributed throughout the City. Further policies encourage diversity of open space. Urban Belfast is relatively well endowed with parks and reserves, which are relatively well spread. It also enjoys diversity where the function of parks and reserves include conservation and recreation in all its forms. The Belfast Cemetery adds to this diversity also. The parks and reserves also serve local and citywide communities, an example of the latter being the Groyne and banks of the Waimakariri.
- 6.121 The only weak point is that many of these spaces are not well connected. Policy 14.1.10 aims to remedy that where it sets out to reinforce the linkages between open spaces. As mentioned the watercourses at Belfast provide an opportunity to make linkages between parks and reserves. Certain roads and the railway line can also function as linkages.
- 6.122 The City's identity is linked to the image that it has an abundance of public open space, from which it derives much of its character and amenity. Like many of the policies already referred to, the quality of open space is to a large degree dependent on context. Function also influences the appearance of space. Some parks are devoted to sports, such as Sheldon Park, while others are more conservation based, such as Styx Basin reserve. The explanation and reasons encourage appropriateness of design while maintaining a high level of amenity.

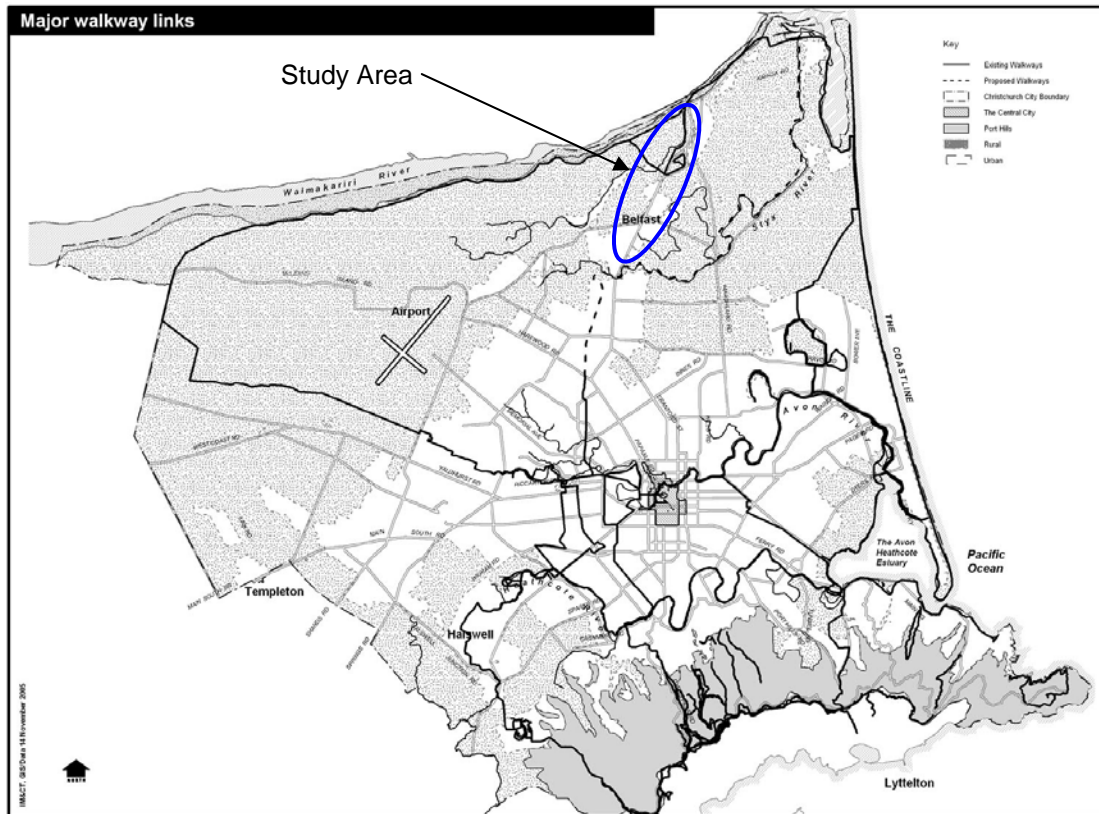


Figure 61 From the City Plan a map indicates existing and future walkways, some of which link to the Belfast area.

- 6.123 Mention is also made of streetscape and the adverse effects on amenity that results from overhead services. In some older parts of Belfast overhead services are still apparent, as they are alongside the Main North Road on its northeastern side. It would certainly be desirable to underground services where they currently exist above ground. This is especially important for the remaining overhead services alongside Main North Road given its role of creating a good first and last impression of the City and Belfast.
- 6.124 Policy 4.2.6 sets out to enhance the landscape quality of the City. It is promotes what has been discussed before – the integration of development with landscape. It further aims to achieve the Garden City image referred to earlier. In effect, this policy is reinforcing those that come before it. Its implementation is reliant on the landscaping required by the City Plan for mainly Business Zones. Further implementation comes from the Council’s own maintenance and enhancement of public open space. As mentioned above, the more recently developed parts of Belfast generally have a high level of landscape amenity. In some areas of the older parts of Belfast further landscape enhancement is desirable, particularly within streets and in association with some existing industries.
- 6.125 Closely related to the Identity policies are those concerning open space, some of which have already been referred to. Of particular relevance to Belfast are those that refer to waterways and wetlands.
- 6.126 Like many of the policies so far discussed, Policies 14.1.11 and 14.1.12 both seek the enhancement of the City’s water resources for conservation and compatible recreation purposes. In these policies a great deal of emphasis is given to the primary conservation function of waterways and wetlands. Essentially all activity is subservient to this outcome, where this is summarised in the explanation and reasons, which state;
- ‘Along rivers, wetlands and coastal/estuary margins, the Plan’s provisions are aimed at emphasising the dominance of natural values over intensive use (in terms of building activity, development or in some areas, public use).’*
- 6.127 Policy 14.1.13 sets out to enhance the role of rural areas as important recreational venues and specifically identifies ‘...*rural waterways in the north of the City...*’ as being a targeted area. Another function referred to in the explanation and reasons is the creation of a green belt of open space in key areas around the City. Because Belfast is more or less located on the banks of the Waimakariri River, it is readily placed for providing a green belt linkage. The Styx also offers similar opportunities (see Figure 61 City Plan map).

6.128 The final open space policy of some relevance to Belfast concerns the redevelopment of sites. Policy 14.1.14 encourages the open space development of sites that may include for example old quarries and suchlike. Some of the old industrial buildings and sites, of which there are number in the Belfast area may also lend themselves to suitable development for recreation and open space purposes.

6.129 Summary of City Plan objectives and policies

It is evident from an analysis of objectives and policies relevant to landscape matters that certain key themes emerge. Clearly considerable priority is given to the protection, maintenance and enhancement of the natural environment, which in the Belfast area solely comprises waterways and wetlands. These are seen as having a key role in the delivery of sustainable ecosystems, recreation, access, identity and general amenity.

6.130 The physical environment is also well provided for, particularly with regard to the maintenance and enhancement of character and amenity. An important component in providing this is context and compatibility. This principle not only applies to local settings, but also to wider environments they may be affected by development in both a positive and adverse way.

6.131 Application of this principle also encourages integration between new development and the existing urban and rural environment. Belfast is well placed to apply all of these approaches, if for no other reason than it is still a relatively small discreet entity.

7.0 Implementation and Landscape management

- 7.1 There are a number of methods available for the implementation of landscape enhancement and ongoing management. Most commonly maintenance and enhancement involves more than one of the methods described below, and may include all.
- 7.2 The demarcation between who delivers is also becoming increasingly blurred, where multiple agencies may be involved. These agencies will include Christchurch City Council, the Regional Council (ECAN), the Department of Conservation and Transit New Zealand. Private parties and individuals (developers, landowners and corporations) will also be involved, and quasi private interests such as clubs and community organisations may also take part.
- 7.3 Allied, and necessary to delivery is funding, and this too can have multiple sources as described above. Funding will principally include direct capital from landowners, developers, the councils and central government agencies such as Transit NZ and the Department of Conservation. Other sources will include sponsorship and donations.
- 7.4 It is not uncommon for partnerships to form, such as between the City Council and developers / landowners. This is understandable since both usually have a mutual interest in land development. For the Council's part, this will include a vested interest in roads, open space, and infrastructure. So the amenity of these provides for the public's enjoyment of the environment in which they live. And the effects of development and the provision of amenity will inevitably extend beyond its boundaries. Roads, waterbodies, and open space will all transcend boundaries. Consequently an important role for public agencies is to cater for these cross boundary effects in terms of providing for continuity of landscape character and amenity.
- 7.5 The main point to take from the above discussion is that the implementation of landscape maintenance and enhancement nearly always involves multiple agencies. Observation shows that partnerships produce very good results, many examples of which have been illustrated in this report.
- 7.6 We can also include in the mix the role of public consultation, which can exert a considerable influence on landscape outcomes. Methods range from broad scale, such as the statutory process concerning the City Plan and Regional Policy Statement. The implementation of these will ultimately find expression in the landscape in one form or another. Allied to these is the City's annual and Long Term Council Community Plans, both democratic documents that in their implementation will affect the landscape. And the final method of consultation involves discrete, council initiated, maintenance and enhancement projects.

- 7.7 Overall, the public have a considerable say in how their environment will be maintained and enhanced. Not only will they influence the nature of this, but also its funding. The public will have less influence on the private realm, where a certain degree of individual expression is expected. This will take the form of how people landscape their gardens and design their houses. But even at this level some form of public control is evident. The City Plan for example, determines the extent of open space that is available for landscaping and as a means of controlling building dominance. More control on amenity outcomes is exerted for business activity, since this has greater potential to adversely affect public amenity. For business zones therefore, the landscaping rules are more prescriptive than those for the all other zones. The City Plan is thus one of the strongest tools for generically influencing landscape character and amenity in both the public and private realm.
- 7.8 The various methods of implementing and maintaining landscapes are summarised as follows. Such methods apply City wide, for which Belfast is no exception.
- 7.9 Statutory – City Plan and Ecan plans.

For these the method of implementation is via implementation of objectives and policies through zoning and rules.

Advantages

- Generally assured landscape character and amenity outcomes.
- Has democratic input via City Plan process, enabling public input into landscape outcomes.
- Anticipates that landscape outcomes will be achieved in the short and long term, and that benefits will accrue over time.
- Strategically driven rather than localised, where the City wide context is taken into account.
- The statutory Plans can be reviewed and changed and therefore improved.
- Sets a minimum standard (permitted baseline) for the achievement of character and amenity that is mandatory.

Disadvantages

- Effective monitoring of desired landscape outcomes is not guaranteed
- Democratic input can lead to compromises and therefore mediocre design results.
- The achievement of anticipated environmental results will take a long time to fully implement due to incremental implementation of development subject to the rules.

7.10 Voluntary

7.11 These methods are achieved by two principle means – one being the product of private property owners, and the other corporate. The latter will be discussed separately. Voluntary methods of landscape implementation in the private sector are mostly confined to private property, but philanthropic input can also find expression in the public realm, such as public art or contributions to public open space development. Institutions such as schools also contribute to the landscape amenity of Belfast, since a large proportion of their estate is in the form of open space. The advantages and disadvantages are listed as follows.

Advantages

- Individual expression leads to diversity and therefore an increase in visual interest.
- Generally private interests are well motivated to maintain landscapes to a high level, especially in living zones.
- No cost to the public.
- Private realm landscaping, in combination with building design, outwardly expresses common values that in turn reflect a sense of community.
- The level of maintenance in a residential and business community can be a useful indicator of confidence in its wellbeing.

Disadvantages

- The quality of landscaping and building design can be inconsistent.
- The implementation of high amenity cannot be guaranteed.
- Maintenance cannot be guaranteed.
- Community wide landscape outcomes can appear to be piecemeal.
- Private sector landscaping can harbour undesirable plants that have the potential to invade sensitive landscapes such as nearby conservation areas.

7.12 Corporate

These include large private enterprises such as developers and major landowners such as Ngai Tahu. The corporate face of public organisations are also included, principally the Christchurch City Council, Transit NZ, Ecan, and DoC.

Advantages

- Generally well funded and therefore can contribute significant amounts to the maintenance and enhancement of the landscape.
- Corporates have the resources to design and implement high quality landscapes.

- Landscapes tend to be thematically consistent, and therefore create a strong sense of environmental coherence.
- Boundaries can be transcended enabling the wider landscape context to be taken account of.

Disadvantages

- Change of ownership or jurisdiction can affect further capital and operational expenditure devoted to the maintenance and enhancement of the landscape.
- Consistency of maintenance and enhancement may fluctuate over time due to changes in corporate structures.
- Managers with responsibility over landscape outcomes may not be sufficiently educated in what the long term vision is and how landscapes are appropriately maintained.

7.13 Summary of implementation and landscape management

The implementation of landscape and its management in the Belfast area is largely based on universal principles, rather than site specific means. It is evident that implementation and management will result from a combination of methods, all of which have been described above. Further, all of the above methods will in their implementation be apparent to the public, even for those areas entirely confined to the private realm.

- 7.14 What is also clear is that partnerships between all interests are necessary to implement and maintain landscape outcomes. And because of this everyone has a vested interest to ensure this happens.



Legend

Old Industrial Areas

- Landscaping road frontages

Old Streets

- Widen berms
- Landscaping
- Kerb + Channel upgrade
- Underground overhead services

Main North Road (berms)

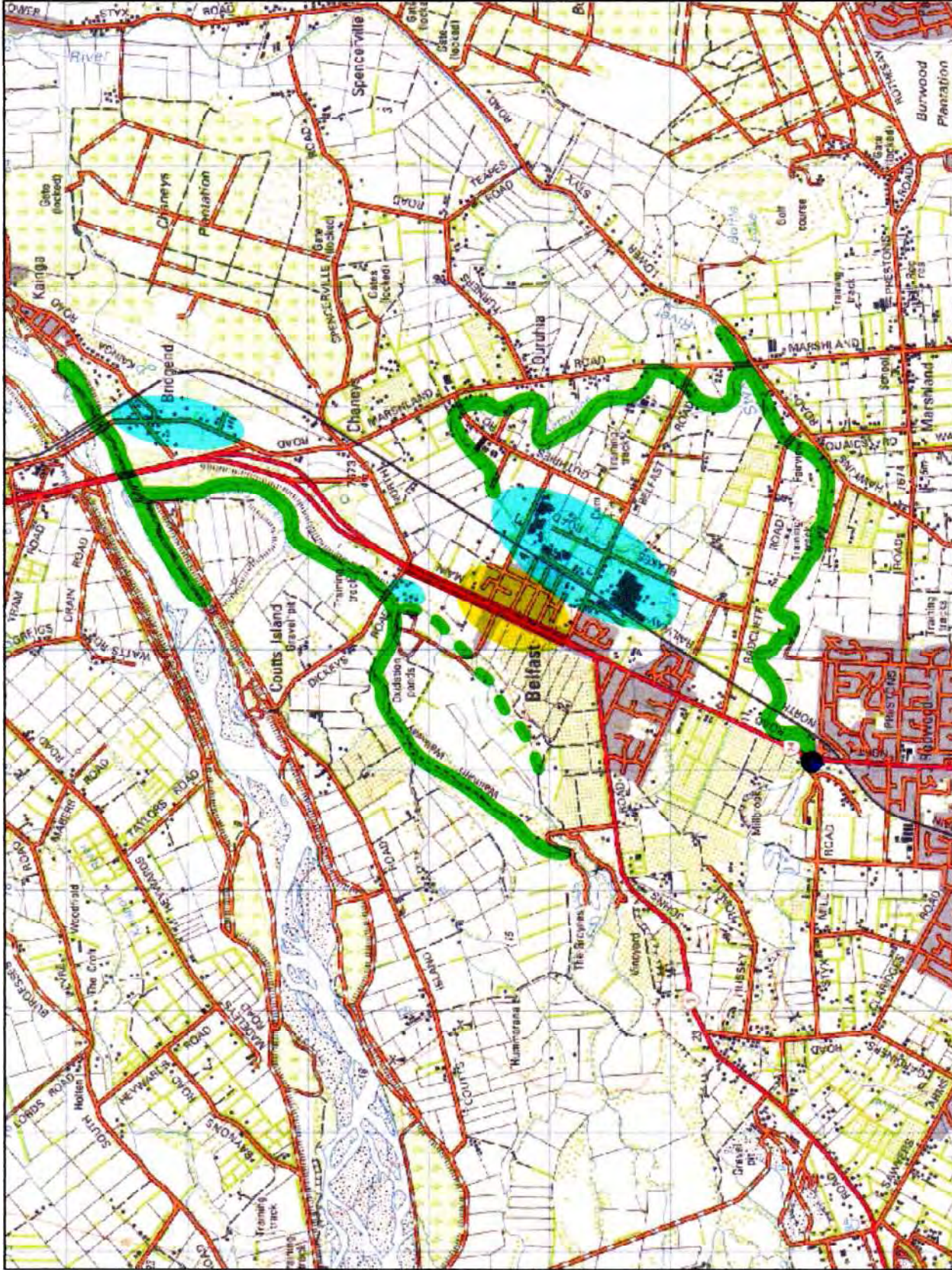
- Street tree planting on berms
- North East underground of overhead services
- Public art

Watercourses

- Landscaping
- Establish walkways & cycleways
- Weed control
- Seats & landings
- Public art

Styx Overbridge

- Planting alongside bridge
- Public art on bridge



BELFAST AREA PLAN

**Figure 62
POTENTIAL ENHANCEMENT - MAJOR AREAS**

8.0 Anticipated landscape outcomes

- 8.1 In taking into account the means of maintaining and enhancing the landscape of Belfast by the aforementioned methods, certain environment outcomes should emerge. Not all are guaranteed, although recent developments such as Northwood indicate that we can have confidence that good results are attainable. This is particularly so where there is a sound partnership between the Council, developers, local residents and other parties such as Transit New Zealand and local Iwi.
- 8.2 In summary the anticipated landscape outcomes, which are identified on the Figures 26, 40 and 62 maps, would include:
- High quality rural / urban boundaries characterised by 'soft' verdant edges.
 - High amenity gateway and roadway treatment, which are distinctive.
 - Maintenance and enhancement of rural and urban character and amenity, including the sub areas within each of those categories.
 - An integrated network of pedestrian, cycleway and ecological linkages.
 - The maintenance and enhancement of natural features for the purposes of conservation, recreation, open space amenity, scenery, identity, cultural and storm water management.
 - A strong identity or branding for the Belfast area based on its natural features and City gateway function.
 - Clearly distinctive containment and form of the Belfast area that reinforces its identity as a discrete suburb of Christchurch.
 - Industrial activities that have a reasonably high level of street scene and zone boundary amenity.
 - A wide range of living and recreational opportunities based on the landscape.

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Appendix 1

Literature Review

Most of the literature referred to is listed in the bibliography included in this report. Photographs and maps are not listed, but where useful they have either been referred to or reproduced in the body of this report.

There appears to be no landscape related literature covering the entire Belfast Area. There is landscape literature however that focuses on parts of Belfast area – namely water bodies such as the Styx River and Kapotone Stream. Most other literature refers to activities in the Belfast area, such as farming and urbanisation that have in turn influenced the landscape.

Maps have also been particularly helpful in this respect, as they often present a good historic record of Belfast's evolving landscape. Some of these are reproduced in this report.

Historic photographs have also been useful, and like the maps they too record the changing landscape. Both the maps and photographs demonstrate that the Belfast landscape is dynamic over time, and is constantly changing as a result.

The Styx has come under particular attention where clearly it has been the subject of intense scrutiny particularly from an ecological, cultural, recreational and conservation perspective. This alone sends a strong message that the Styx River is considered one of the most important natural landscape features associated with Belfast.

The other major natural feature of the area, the Waimakariri River receives scant attention, even though it is by far the larger of the two rivers. Despite being outside of the study area, the Waimakariri is largely responsible for the geomorphology of the Belfast Area, and has an undeniable presence in the local landscape.

Listed, and briefly discussed below are references to various literature where landscape features.

Ecology

Some studies, particularly Keller¹¹ do look into the wider Belfast area in considerable detail at recreational opportunities and ecological considerations. In her assessment there is some very useful guidance for landscape development and management, particularly where it favours desirable ecological outcomes.

¹¹ Keller, J Recreation & Open Space (2004) & Belfast Ecological Report (2005)

Urban Design

In her report, Janet Reeves identifies 'natural boundaries' that contain Belfast and lists these as the Styx and Waimakariri Rivers along with less natural features such as the proposed Northern Arterial.

Landscape

As mentioned, little is written on Belfast as a whole, but the Styx River system has received considerable attention. Among the literature relevant to landscape is a report prepared by landscape consultants, Boffa Miskell. The subject of their 1990 report was the Styx. Essentially this report recommended that a management plan be prepared for the Styx River system. They also included recommendations for landscape management, such as the removal of willows and the provision of pedestrian access.

Botanist Dr. Colin Muerk has also produced a report (2004) concerning vegetation and landscape potential of the Styx river system. Among other things, his report identifies various restoration projects along the Styx River. The recommendations for revegetation are particularly useful for riparian restoration, which could be applied to most, if not all of Belfast's waterways.

Appendix 2

Protected Trees

Listed below are the trees in the Belfast area that are protected in the Christchurch City Plan.¹² Also see Planning Maps 10B & 18B.

| <u>Street address</u> | <u>Species (Common Name)</u> |
|--------------------------------|--|
| 663 Main North Road | Willow, Poplar, & English Elm |
| Main North Road / Motorway | Monterey Cypress, Blue Gum, Manna Gum & Wellingtonia |
| 8 Blakes Road (Kaputone Creek) | Horse Chestnut, Blue Gum, Tulip Tree, Southern Magnolia, Mayten, Chusan Palm, Camperdown Elm, Weeping Elm, |

¹² Volume 3 Section 10 Appendix 4