

6.3 Evaluation of Options

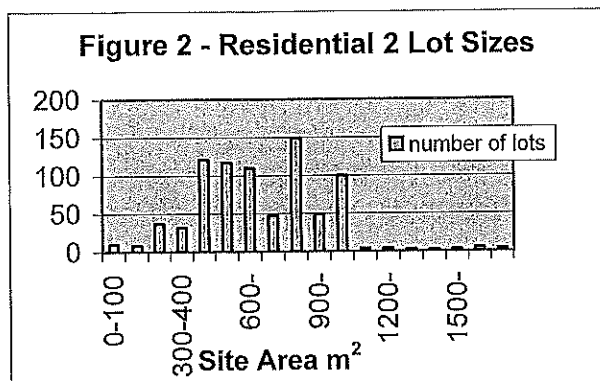
When analysing the alternatives it becomes clear that the do nothing option (**Alternative 6**) is an inefficient method that can be excluded from further examination. Although effective in addressing the issue it has significant environmental costs and no identified environmental benefits. **Alternative 4** (a low density residential alternative -Residential 6) can also be excluded from further consideration, as it is relatively ineffective in addressing the issue. It is also inefficient as the environmental benefits are uncertain and unlikely to outweigh the environmental costs.

Table 1 indicates that the option of the status quo (**Alternative 1**) has a number of environmental benefits including the protection of the high class soil resource and maintenance of rural amenity values but few social and economic benefits. It is also noted that this approach may indirectly promote redevelopment of the existing physical housing resource and encourage residential development in other parts of the city with spare capacity. While it aligns favourably with a number of Proposed District Plan objectives and policies it is ineffective in addressing the issue of residential housing demand in Mosgiel. It is also considered that a constraint on the availability of residential land in Mosgiel and elsewhere in Dunedin is likely to have high social and economic costs. It will be likely to result in ongoing conflicts between the Council, residential developers, commercial interests, interest groups and the Dunedin community. It may also eventually result in cumulative impacts on rural productivity and rural amenity values through incremental and uncoordinated development by way of resource consents. As a result this approach is not considered to be the most appropriate method.

Alternative 5 provides for similar environmental benefits to Alternative 1 but it offers some scope for further development of higher density housing within Mosgiel to meet demand. Analysis of lot sizes within the existing Mosgiel Residential 2 Zone and aerial photography of the area indicates that there has been some subdivision and redevelopment of sites within the zone enabled by the Residential 2 zone performance standards (These provide for a minimum lot size of 300m²). However, there are still a significant number of sites that can be subdivided and redeveloped. In general lots sites of over 600m² are capable of subdivision and development. Figure 2 shows the range in lot sizes in the zone. The reasons for the relatively low level of redevelopment are considered to include the generally good condition of the existing housing stock and the location of existing houses. Where a house is located in the centre of large site it reduces options for including the existing house in the redevelopment proposal. Demolition of existing houses for redevelopment purposes only appears to be an economic option if the house is in poor condition. It is noted that the economics of redevelopment of existing properties in the Mosgiel Residential 2 zone may improve if the cost of residential housing in the area continues to increase. The existing Residential 2 zone surrounds the commercial centre and contains a large proportion of the older housing resource in Mosgiel which is more suitable for redevelopment. As a result, there does not appear to be a great benefit in increasing the size of the Residential 2 Zone as it is unlikely to offer significant redevelopment potential to satisfy residential demand in the area.

Increasing the density of the low density Residential 6 Zones by rezoning offers more scope for residential infill development than expansion of Residential 2 zone. However, there are issues with the various Residential 6 Zones that may impact of the effectiveness of the rezoning or restrict the level of intensification. Stability issues exist with the Braeside Residential 6 zone that are likely to restrict intensification and this area beyond the current density levels. Along Gladstone Road North there are also areas of instability that may restrict more intensive development to parts of the zone. The Residential 6 Zone Description for the Gladstone Road South and Gladstone Road North zones identifies the high amenity values present in both of

these zones and notes stability concerns. The zone description notes that further intensive subdivision of these zones is not encouraged. The current lifestyle use of the Residential 6 Zones means that intensification of these zones is likely to create conflicts with existing landowners. Again this approach is considered to be relatively ineffective in addressing the issue.



The analysis highlights Alternative 2 and Alternative 3 as presenting the best prospects for addressing the demand issue.

Alternative 2 has similar benefits to the status quo (Alternative 1) for rural land surrounding Mosgiel but is likely to be more effective than the status quo in addressing the issue as it provides for residential land or higher density development in other parts of the city to meet demand. As the options for expansion of residential zones around Mosgiel may impact on the high class soil resource then this option also has the benefit of protecting this resource on rural land surrounding Mosgiel. It may also protect the high class soil resource generally if expansion of residential zones occurs on rural land that does not contain high class soils.

In terms of addressing the issue of demand for residential land in Mosgiel it is an indirect approach involving a constraint on expansion of residential zones in Mosgiel while providing for higher density development and/or the expansion of residential zones in other areas to address demand. While this approach has the potential to be effective in meeting the objectives and policies of the Proposed District Plan this option is not considered to be as effective as Alternative 3 in addressing the issue as it does not directly address demand for residential land in Mosgiel. This is important and is discussed in more detail below.

A simple analysis of available residential land and sites in residential zones (without examining the quality of the available land) in other parts of the city suggests that there is already residentially zoned land available in other areas but due to consumer preference this land is not being taken up for development to the same extent as available residential land in Mosgiel. Table 3 shows vacant residential sites in a sample of valuation roll blocks from different areas of the city. It shows that there is potential in a number of areas for further development of residentially zoned land. However, while this potential is being taken up in areas of demand the demand for residential land does not always extend to other or all areas of the city where supply is available. This view would support feedback received from the Real Estate Institute in recent discussions with the Council's Economic Development Unit which indicates that demand for residential land for residential housing is focused in particular areas and markets. As a result if the approach identified in Alternative 2 were to be successful demand for the Mosgiel area would need to be actively diverted elsewhere.

Table 3: Vacant Residential Use in a Sample of Valuation Roll Blocks

Valuation Roll	Valuation Name	Residential Use Properties	Vacant Residential Use in Residential Zones	% Vacant
26620	Waikouaiti	760	116	15.3%
26710	Ravensbourne	601	72	12.0%
26640	Port Chalmers	657	68	10.4%
28010	SW Mosgiel	1595	55	3.4%
26970	Roslyn	962	21	2.2%
28020	East Mosgiel	1081	21	1.9%
27470	South Dunedin	917	9	1.0%
28000	North Mosgiel	1555	15	1.0%

Success in diverting or altering consumer demand is uncertain. This is because the factors supporting residential demand in Mosgiel are not necessarily present to the same extent in other areas. As a result, this approach is also likely to result in high social and economic costs identified for Alternative 1 in Table 1. Even when Alternative 2 is combined with Alternative 5 and a range of non-regulatory approaches are employed to promote areas other than Mosgiel it is still likely that strong demand for residential land in Mosgiel will remain and that there will be pressure to approve resource consent applications for housing developments on an increasing basis as available land is extinguished.

Constraints on residential choice in Mosgiel will result in high social and economic costs. In relative terms the net social and economic costs are considered to outweigh the net environmental benefits which are uncertain as they are dependent on the scale and location of expansion and the ability to control the cumulative effects of incremental development.

Alternative 3 provides for a direct means of addressing the issue of demand for residential land in Mosgiel and it is considered to be an effective method for this purpose. Providing land zoned residential for growth of the housing resource provides for controlled expansion of the town. It will secure an appropriate level of infrastructure and a suitable standard of residential amenity in the new residential zones provided. However, it will also result in the loss of some rural land for productive purposes and while rural land is not a scarce resource in the District it may also impact on amenity values and the high class soil resource surrounding Mosgiel. The high class soil resource is identified in the Regional Policy Statement and in the Rural Section objectives and policies of the Proposed District Plan as requiring protection. In weighing environmental benefits and costs in relative terms the environmental benefits of Alternative 3 are considered to be more certain while the environmental costs need to be considered in terms of the overall effect on land productivity including factors such as high class soils land use and degree of fragmentation. The effects on rural productivity and high class soil resource and effects on rural amenity, character, and outlook will vary depending on the location and area. The environmental benefits of Alternative 3 are considered to outweigh the environmental costs identified.

Having regard to social and economic benefits and costs, the benefits clearly outweigh the costs and Alternative 3 is therefore regarded as an efficient option for addressing the issue.

6.4 Conclusion: The Most Appropriate Method

From consultation it is evident that the Mosgiel community generally supports growth including the expansion of residential zones to enable the Mosgiel community to grow and

thrive. Concerns have also been raised by individuals and interest groups on a range of matters including urban sprawl, effects on rural amenity and the effects on the high class soil resource.

Despite the potential environmental costs of providing for expansion of residential zones to meet demand for land for residential housing, environmental benefits outweigh the environmental costs and the social and economic benefits strongly support the provision of further land to meet demand.

The high social and economic costs associated with other alternatives to expansion of residential zones in Mosgiel means that on balance Alternative 3 is considered to be the preferred option as it enables the community to provide for its social and economic well being. Whether this approach sustains the potential of natural and physical resources, safeguards the life supporting capacity of the soil, and avoids remedies of mitigates adverse effects will depend on the scale and location of the proposed expansion of Mosgiel residential zones. This will be examined in more detail in the following sections of the report.

7 CONSIDERATION OF ALTERNATIVES FOR EXPANDING RESIDENTIAL ZONES

The broad analysis of the options in Section 6 of the Report supports the expansion of the Mosgiel residential zones to address the demand for residential land in the Mosgiel area. In order to ensure the purpose of the Act is achieved by expansion of residential zones it is important to consider the merits of the various alternative locations for growth of Mosgiel having regard to the objectives of the Proposed District Plan and Section 32 of the Act. This will ensure that the most appropriate location for growth of the housing resource is selected. Growth rates also need to be considered to ensure that the size of the land bank is sufficient.

7.1 Area of land to be rezoned

Feedback from the community during consultation indicated a desire to have certainty regarding the future development of Mosgiel. This led to some requests for any potential rezoning to be sufficient for over 20 years potential residential development. However, providing certainty to the community must be balanced against the reasonably foreseeable needs of the community and potential restrictions changes to the zoning of the land may have on the ability of land to be used productively in the period before development occurs.

While the provision of residential land beyond what may be anticipated for the next 10 years may create certainty for the community, attempts to predict growth pressures and residential development may be less certain when extended over a longer period. Changing the zoning from Rural to Residential would also restrict the ability of owners of undeveloped rural land to change rural activities undertaken on their land. Thus, while farming is a permitted activity in the Rural zone, farming activities would require a resource consent in Residential zoned land. This may prove overly restrictive on land not anticipated as being required for residential activity for over 10 years. The plan review process is required to be undertaken every 10 years which enables a reassessment of the adequacy of the existing residential land bank at that time.

If the Mosgiel residential housing resource continues to grow at a similar rate to the growth that has occurred in the last decade (62 dwellings a year) then it is estimated that approximately 65 new building sites will be required every year. In 2002 sixty-five (65) building consents for new residential units were approved in the Mosgiel area and to end of June 2003 thirty-five (35) building consents for new residential units were approved. As a result, over a 10-year planning period it is likely that 650 new building sites will be required to meet demand. If the development density is established on a Residential 1 basis the approximate size of the land

bank necessary to accommodate demand can be estimated. The Council's Water and Waste Department use a figure of 730m² per site for un-subdivided vacant Residential 1 land to take into account the requirements for roads and reserves. Using this figure and the typical rate of new residential unit development for the Mosgiel area of 65 dwellings a year indicates that an area of land in the order of 45-50 hectares is required as a land bank to meet demand over a 10 year period. It is noted that there is still potential for further subdivision of Residential 2 zone, although it is not anticipated that this contribution will be significant. Also residential land from former school sites may also be available for residential development within the 10 year planning period. These sources of development sites may provide a useful buffer if growth rates exceed estimated levels.

As the areas considered for rezoning are located on the outskirts of Mosgiel they will have an outer residential character. Residential 1 zoning is therefore considered to be the appropriate zone for this purpose. Multi-unit developments to provide for those people seeking smaller homes and sections that exceed the density requirements of the Residential 1 zone will require resource consent to establish. This is also considered appropriate to ensure this type of development is successfully integrated into a Residential 1 environment.

7.2 Possible Areas for Residential Expansion

As discussed in Section 6.1 of the report the options for expansion of Mosgiel were refined during the consultation process. The areas for expansion initially identified and discussed during the consultation process are shown below in Figure 3 and are labelled as East A, East B, West A and West B. Figure 3 also identifies two additional areas that were suggested as alternatives during the consultation process. These are identified as East C and West C.

The areas identified in Figure 3 will be referred to in the following discussion on the merits of various options for the expansion of residential zones in Mosgiel.

Expansion to the north of Mosgiel was not generally supported during consultation on the variation and there are good reasons for excluding expansion of residential zones to the north from more detailed consideration. The Silverstream has provided an obvious and relatively effective constraint on residential development to this point and it is considered to be a valuable boundary to control fragmentation and uncoordinated expansion of Mosgiel. The presence of industrial zoned land to the north of Mosgiel and the development of industry in this area indicates that there is also potential for increased conflict between residential and industrial uses if residential zones expand to the north.

Similarly there are good reasons for generally excluding the elevated terrain to the south of Mosgiel from more detailed consideration. These reasons include stability, which is a particular concern in some southern areas, the presence of landscape management areas and in general terms the greater difficulty in supplying infrastructure in these areas.

As a result, the further analysis of alternative sites is restricted to consideration of the six sites shown in Figure 3.

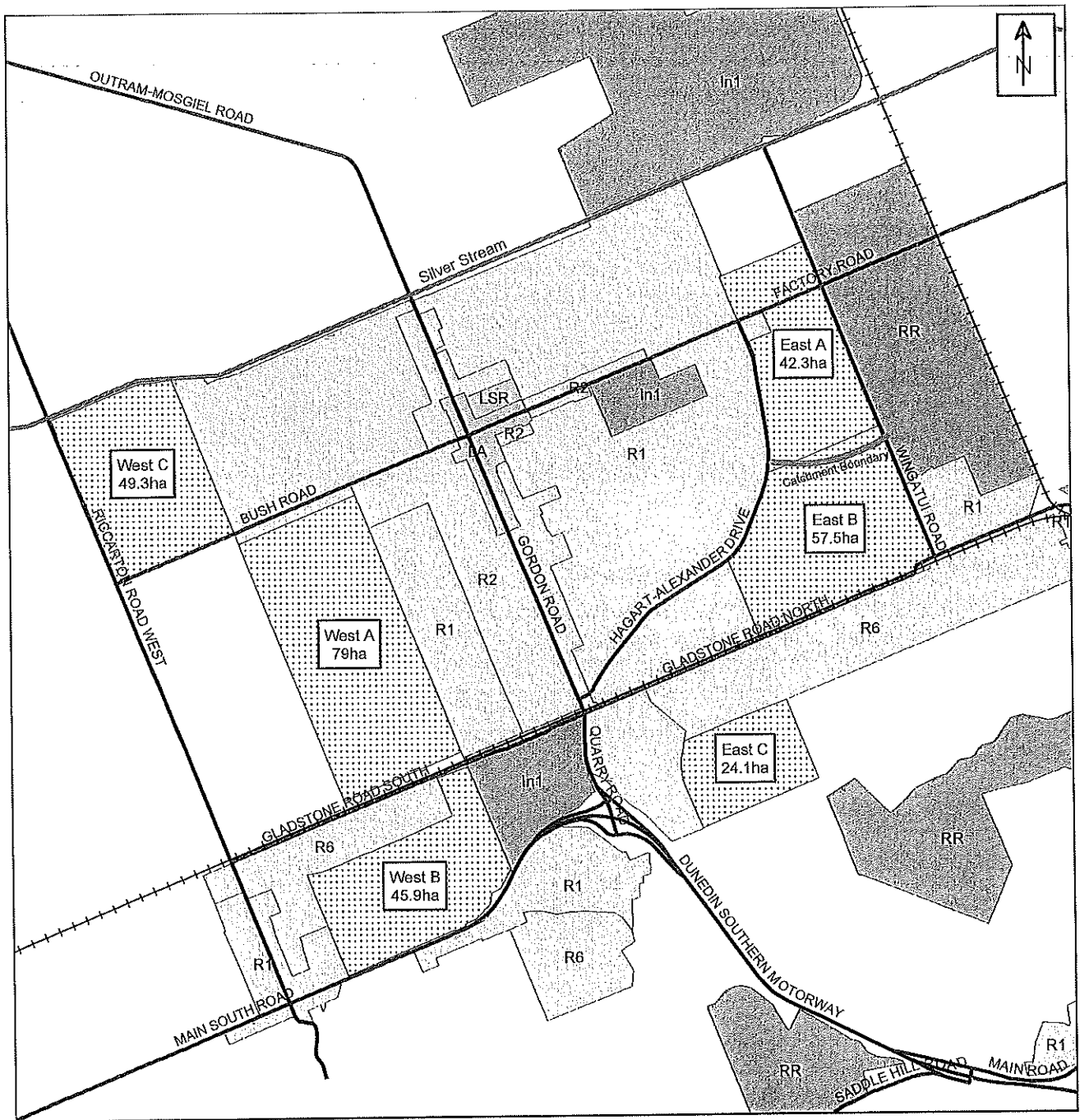


Figure 3: Variation 15: Mosgiel. Possible locations for expansion of residential zones in Mosgiel

8 POTENTIAL DEVELOPMENT CONSTRAINTS

8.1 Transport Infrastructure

Traffic within Mosgiel

The development of roading around Mosgiel is facilitated by the relatively level terrain and lack of obstacles. In general the existing roading network provides good internal access for pedestrians and vehicles from the east and west. In particular both East A and West A have good direct access to this network and internal access has few complications.

The development of internal roading in East B would be more complicated due to the presence of the Owhiro Stream. Access from East B and West A to Gladstone Road is also limited due to the presence of the railway. The development of roading in West B is similarly complicated by the Transit New Zealand designation for the East Taieri bypass.

Traffic leaving Mosgiel

For traffic heading out of Mosgiel, access onto Hagart Alexander Drive is considered to facilitate ease of access to the State Highway and into Dunedin, although it is noted that there is pressure at the southern entry and exist from Mosgiel. The major intersection at this point involves Gordon Road, Gladstone Road and Hagart Alexander Drive and it is also complicated by a rail crossing. Advice from the Council's Transportation Planning Department is that improvements to this intersection can be made to enhance its performance and these will be considered if pressure increases.

Mosgiel Bypass

The growth in residential and industrial traffic on the Taieri has raised issues regarding the capacity and desirability of Gordon Road handling the resulting volumes of traffic. Gordon Road in Mosgiel is designated State Highway 87 and is a key route for heavy and light traffic heading towards Dunedin. The Council has initiated a working party to investigate possible bypass options to reduce the traffic using Gordon Road.

As Mosgiel is the destination for a proportion of heavy vehicles and they provide a relatively low proportion of the total number of vehicles using this route, it was considered appropriate that any bypass should address both heavy and light vehicular traffic.

Bypass options at the east and west of Mosgiel have been investigated. At present a considerable proportion of traffic approaching Mosgiel from the north-west uses Riccarton Road to gain access to State Highway 1 at East Taieri. Traffic from the North Taieri industrial area travels to Dunedin via Three Mile Hill or through Gordon Road to the Motorway. Current use of Hagart Alexander Drive as a bypass for traffic from North Taieri is limited by the lack of direct access to Hagart Alexander Drive across the Silverstream. However, Hagart Alexander Drive could be extended to provide direct access and it remains an option for a traffic bypass.

No decision on the appropriate route for the Mosgiel bypass has yet been made. Whichever bypass route is chosen the proportion of heavy vehicles using it is likely to remain comparatively low. The majority of traffic will continue to be local and commuter vehicles. Apart from Gordon Road itself, the present roading network within Mosgiel operates well within its capacity to provide a good level of service. Additional residential development will have good access to roads able to comfortably accommodate the additional traffic.

Advice from the Council's Transportation Planning Department is that options for the bypass route will not have any significant implications for the further residential development. Once selected, the Mosgiel bypass will include appropriate mitigation measures to minimise the impact upon adjoining land uses especially current and future residential activity.

East Taieri Bypass

The area identified as West B is bisected by a Transit New Zealand (Transit) designation (D462 SH1 East Taieri Bypass "Proposed Limited Access Road"). This designation parallels the existing state highway and is intended to create a limited access road enabling traffic on the state highway network to bypass the community of East Taieri. This bypass has been identified as having a number of possible benefits including increased average traffic speed through East Taieri and potential reduction in likelihood of accidents. The designation provides for survey and investigation but not road construction. A new notice of requirement will be required before construction is undertaken.

Residential activity established in the West B area would be potentially affected by the construction of the bypass and by subsequent traffic activity on the realigned state highway. In particular traffic noise may be an issue. The bypass would also reduce the overall area potentially available for residential development and limit pedestrian and vehicle access between the north and south sections of the West B area.

Conversely, the further development of residential activity in this area may affect and complicate the mitigation of effects, particularly noise and visual effects, on residential dwellings resulting from the construction and operation of the bypass. As a result further development of this area for residential activities may be opposed by Transit New Zealand.

State Highway 87 - future route

Transit New Zealand has recently commenced investigation of the preferred route for State Highway 87 from Outram to its connection with State Highway 1 as it saw a benefit in this information being available when the Council decides on the Mosgiel By-pass route. Transit currently considers that in the long term the local traffic volume and the low average speed will make Gordon Road unsuitable for designation as SH 87. Any route to the east of Mosgiel is also not likely to be attractive to SH 87 traffic so the options being considered by Transit are the Outram-Allanton Road, Gladfield Road and Riccarton Road. The connection onto SH 1 will be an important factor in selecting the preferred option. It is expected the outcome of the investigation will be made public in the final quarter of 2003. This decision may impact on the West C alternative that adjoins Riccarton Road.

8.2 Local Waterways

Mosgiel is located within the boundary of catchments draining into two separate stream systems on the Taieri Plain. The Silverstream and the Owhiro Stream systems currently receive some stormwater discharge from existing urban areas in Mosgiel, with the bulk of stormwater currently being discharged into the Silverstream. The Silverstream has a substantially larger catchment than the Owhiro and flows in a roughly east-west direction, forming the northern boundary of the Mosgiel urban area. The Owhiro Stream parallels the Chain Hills and lies to the south of most of the Mosgiel urban area. The Owhiro passes under Gordon Road through a culvert near the intersection with Hagart Alexander Drive and runs beside or near the Main Trunk Railway line from Mosgiel to East Taieri some distance beyond.

Silverstream

The flow and capacity of the Silverstream has been modelled to provide greater certainty in planning infrastructure and addressing potential flooding hazards in the North Taieri. Due to the considerable size of the Silverstream catchment the potential effects of additional stormwater discharge to the Silverstream resulting from residential expansion of Mosgiel are considered by the Otago Regional Council to be insignificant. Flood banks along the Silverstream necessitate the pumping of stormwater.

Owhiro

The Otago Regional Council has indicated concern about the potential for increased discharges into the Owhiro catchment. The quality of the Owhiro Stream has been adversely affected by existing discharges from rural and urban activities. There have also been issues with flooding of the Owhiro catchment in times of high rainfall. This flooding affects land in areas to the west of East Taieri where the flow of the Owhiro causes ponding. Flooding is also considered to be a risk where the Owhiro passes through Mosgiel due to constrictions such as culverts and potentially between Mosgiel and East Taieri where the channel is below the 100year flood design standard.

Rising water levels in the Owhiro can create additional flooding problems around Quarry Creek. High levels in the Owhiro can cut off the entrance of Quarry Creek and this can result in flooding around the East Taieri cemetery and school. Additional water flows in either the Owhiro or Quarry Creek at peak times may exacerbate this situation.

Recent advice from the Otago Regional Council on residential development between Mosgiel and East Taieri has recommended minimum floor levels above the level of the main trunk railway line. While this approach may be effective for low density housing in the Rural and Residential 6 Zones it is less appropriate for more intensive residential development.

Consultation with the Otago Regional Council has indicated that additional stormwater discharge to this catchment may contribute to downstream effects. Mitigation of potential adverse effects from development in this area may consequently require the piping of stormwater to alternative areas for discharge, such as the Silverstream or Blackies Ditch. Alternatively, adopting alternative stormwater design systems that delay the release of additional stormwater flow past peak events may be effective. Such design approaches may include options such as retention ponds, wetlands or holding tanks.

The Owhiro catchment has not been modelled to the same detail as the Silverstream. Consequently, information on water flows in this area is limited and development in these areas is subject to a greater degree of uncertainty.

During consultation Kai Tahu identified discharges to and pollution of the Owhiro catchment as an issue of potential concern. Specific concerns relate to the effects of further discharges of sewage and stormwater on the health of streams. Changes in the volume of flow and discharges of sewage and stormwater may adversely affect ecological and habitat values and mahinga kai resources. Due to the small size of the Owhiro stream and catchment these discharges are likely to have a greater effect than on a larger system which is more easily able to absorb these effects such as the Silverstream.

Blackies Ditch

Blackies Ditch is an open stormwater drain to the west of Mosgiel (located in the area identified as West A). Blackies Ditch was identified as a scheduled drain on Otago Catchment Board maps (identified as M2) of the North Taieri and is now administered by the Otago Regional Council. M2 runs roughly parallel to but south of the Silverstream and joins with the Mill Creek drainage system approximately 5 km to the west of Mosgiel.

The Otago Regional Council has indicated that the area identified as West A has a catchment boundary within it resulting in part of this area draining into Blackies Ditch and the Mill Creek system and part draining into the Owhiro Catchment. The Otago Regional Council indicated that stormwater could be discharged into the Blackies Ditch/Mill Creek system in this area.

8.3 Land Productivity

High Class Soils

An area of approximately 14,000 hectares of high class soils has been mapped within the boundaries of Dunedin City. Of this 14,000 hectares around 5,000 hectares of high class soils are located on the Taieri Plain.

A number of the areas considered as possible areas for the expansion of Mosgiel have been identified as containing high class soils. Community consultation raised questions regarding the relative weighting given to current productive use of high class soils against retention for future productive use. Community views diverged between those questioning the value of preserving high class soils because of the low level of intensive productive use of high class soils surrounding Mosgiel to those seeking the preservation of the high class soils resource for future productive use.

Any assessment of the effects of residential expansion on the environment should be informed by relevant policies and objectives of the Proposed Plan. Policy 6.3.10 of the Rural Section of the Proposed Plan specifically addresses high class soils. This policy is discussed in Section 5.3 of this Report.

The explanation to Policy 6.3.10 clarifies the intent that it should be read in the context of the entire soil resource. This is where Policy 4.3.4 is relevant, as the significance of the resource must be assessed at local, regional and national levels. The policy framework enables the balancing of the conservation of soils against other uses that promote the sustainable management of natural and physical resources.

Objectives and policies in the Rural Section of the Proposed District Plan seek to avoid sporadic developments in the rural area that may adversely affect the long term use of the high class soil resource. In particular, low density residential and rural residential scale activity can be a threat to the high class soils resource. Low density residential development can occupy a relatively large area of high class soils but do little to accommodate demand for residential land. While small scale rural activities can be established on rural residential lots partially protecting the land resource there is an increased likelihood that these sites will be removed from productive use. It is also noted that increasing the density of residential activity in rural areas can contribute to a greater prevalence of reverse sensitivity issues occurring in these areas due to differing expectations of rural amenity. Increased conflict can constrain productive use of land.

This variation does not seek to provide low density residential or rural residential scale development and it has been excluded from consideration because it is not effective in

addressing residential demand. If it is considered appropriate for Mosgiel to expand into areas of high class soil then this expansion should be at a density that more efficiently addresses demand for residential housing in Mosgiel. The Council has recently provided for a Rural Residential zone in an area to the east of Mosgiel near Wingatui. This area was established as there was significant existing fragmentation in the area and it will only provide for limited increase in Rural Residential activity (This zoning is subject to submissions). This area would also serve as a peri-urban buffer should residential zones be expanded to the east. Such a buffer would assist in limiting potential for incremental residential expansion beyond boundaries.

Of the six areas identified in Section 7 of the report five contain high class soils, although the proportion of high class soils in the West B area is low and it is not considered to be a significant factor in assessing the suitability of this area for expansion of residential zones. East C does not contain high class soils. Of the four remaining areas East B contains the lowest proportion of high class soils. East A, West A and West C all contain significant proportions of high class soils.

In terms of the proportion of the total high class soil resource Table 4 below shows the amount of high class soils in each area and expresses them as a percentage of the total high class soil resource and the high class soils on the Taieri Plain (Note that the figures are taken from broad scale mapping and the may not reflect local variations of soil type).

Table 4: High Class Soils

Soil Type	(ha)	HCS %
HCS in District (ha)	13772	100%
HCS on Taieri (ha)	5250	38%
East A	40	<1%
East B	20	<1%
West A	51	1%
West C	37	<1%

Information available on the current use of high class soils is also worth considering in determining the relative weighting of these soils to meet future needs. Agriquality land use data indicates that land use activities on high class soils at present are predominately dairying and grazing stock. This data indicates that only a small percentage (<5%) of the high class soil resource is currently used for more intensive agricultural activities

It is noted that this data may not be completely comprehensive but it is still clear that at this time only a small percentage of the high class soil resource on the Taieri Plain is used for intensive agriculture and the overwhelming majority of the land is used for grazing stock and dairying activity. There remains potential for a substantial increase in the use of the high class soil resource for intensive agriculture within the district and on the Taieri Plain should circumstances make this a more attractive economic option for landowners.

Cumulative effects on the high class soil resource are difficult to assess overall but even with the recent potential loss of rural land containing high class soils for industrial activities (Variation 9B) and possible use of rural land containing high class soils for residential activities resulting from this proposed variation these effects are considered to be minor. Further a zoning approach has benefits in addressing cumulative effects. Directing demand for

residential development to specific areas avoids future fragmentation from ad hoc development and enable more effective management of the resource in accordance with the purpose of the Act.

While it is acknowledged that it is important to protect the high class resource to meet the reasonably foreseeable needs of future generations the potential loss of high class soils needs to be viewed in the wider context discussed above.

Fragmentation

The Environment court has described fragmentation as “*the fraying of the rural land at its interface with the urban land*”. Fragmentation of rural land in proximity to a township or urban area generally indicates that there is a decreased likelihood that the land will continue to be used for productive purposes. In that regard it would be useful to examine the existing degree of fragmentation that is evident around the edges of Mosgiel and to consider this as a factor in determining the potential effect on rural productivity of residential expansion in the various areas.

An examination of lots sizes, land ownership and the number of houses in each area identified in Figure 3 as possible areas for expansion of Mosgiel indicates that there is low existing fragmentation in East C, West A and West B, moderate levels in East A and East B and the highest level of existing fragmentation evident in West C.

In considering the wider area it appears that the area to the east of Mosgiel is more fragmented than the area to the west although some fragmentation is also evident to the west. Recognition of the existing fragmentation to the east of Mosgiel and lifestyle use has resulted in the Council rezoning an area to the north of the Wingatui Residential 1 zone Rural Residential as part of the Rural Variation. This land, which is identified in Figure 3, comprises 87.6 hectares and is bounded by Wingatui Road to the West and the railway line to the East. This rezoning is subject to submissions.

8.4 Infrastructure

Water

Potable water for the Mosgiel community is provided primarily from an aquifer system. The exception is the water supply for the Wingatui residential area which is served by water from the Mt Grand treatment plant. The microbiological quality of the Mosgiel bore water supply is high and as a result it does not require any further treatment. The Council’s Water and Waste Department indicates that there is capacity within the existing water supply systems to provide water to any of the identified options through connection or upgrades to the existing infrastructure. Resource consents for abstraction have recently been renewed for 35 years. These consents which have made allowance for the expansion of Mosgiel in terms of the total allowable water take. However it is noted that there are water restriction conditions that will apply when monitoring bores fall below a certain level.

The costs of securing a suitable water supply to new residential zones will depend on the extent of upgrading required. Those areas with direct access to an existing supply with sufficient capacity will only face internal reticulation costs (West A and West B). Some areas will require system upgrades. Higher costs are associated with the West C area and the highest cost is associated with East C as it requires upgrading of the water main from Wingatui Road.

Stormwater

Stormwater infrastructure is considered to be an important constraint in determining the most suitable alternative for expansion of residential zones. Stormwater issues and the impacts on

local waterways are discussed in more detail in Section 8.2. It is evident that there is less certainty surrounding stormwater provision for some alternatives that is the case with other infrastructural considerations. In particular alternatives that utilise the Owhiro Stream or creeks and drains that feed the Owhiro Stream for stormwater discharge may generate short term capacity and downstream flooding issues that may require stormwater mitigation to be provided. As a result, the Otago Regional Council suggests that should expansion of residential zones in Mosgiel be appropriate they would prefer that options other than the Owhiro be pursued. This approach is also more likely to address potential Manawhenua issues as impacts on the Owhiro were also raised as an issue in consultation with Kai Tahu.

East B, East C, West B and part of the West A area utilise the Owhiro stream for stormwater discharge either directly or indirectly. Expansion of residential zones into these areas is not precluded and mitigation measures may address capacity issues and effects on the health of the Owhiro Stream. The costs of mitigation have been factored into the cost estimates for some of the alternatives. However, further research and modelling of the impacts on the stream would be beneficial to ensure that stormwater issues do not arise.

Wastewater

Information supplied by the Council's Water and Waste Department indicates that there is potential to address the wastewater needs for all the identified options shown in Figure 3 through various extensions, upgrades and connections to the existing wastewater systems serving Mosgiel. The estimated costs of securing the infrastructure for wastewater disposal to the identified options vary between \$150,000 and \$450,000. Lower costs are associated with East C and West B options and higher costs are associated with East A and East B options.

8.5 Amenity

Amenity constraints affecting the expansion of residential zones would typically include major transport routes and transportation hubs such as the main trunk rail line, state highways, airports and ports. The presence of industrial areas may also impact on the amenity of a residential area. In Mosgiel the existing state highway, the proposed highway bypass at East Taieri, the Taieri Aerodrome, industrial zones, and the main trunk railway line are likely to be the major adverse influences on the amenity values that will be experienced in residential zones.

One of the reasons for excluding expansion to the north of Mosgiel from more detailed consideration was the presence of industrial zones and industrial activities in this area as this may affect amenity values in the new residential zones and create reverse sensitivity effects on industrial activities.

In terms of amenity constraints the East Taieri Highway Bypass which bisects the West B area is the most significant amenity constraint identified. Although it is uncertain when this bypass may be developed it imposes a significant constraint on the development of this area for residential activity. The amenity constraints on the East A area have been reduced by avoiding the Aerodrome and industrial activities to the north and with the exception of East B and West A which adjoin the railway line along Gladstone Road the remaining areas have low amenity constraints.

8.6 Natural Hazards

The two principal natural hazards that may constrain the expansion of residential zones are flooding and land instability. The area to the south of Mosgiel was excluded from general consideration for expansion of residential zones for reasons including instability. The East C alternative is in a southerly direction and part of the area is identified on the hazard register as being included in stability studies. Advice from the Council's engineering advisors indicate

that while it is appropriate to consider this area as an option for residential expansion further investigations would be necessary to confirm the extent of suitable land within the block.

Flooding is the other obvious natural hazard that needs to be considered. Areas with a known flooding hazard include part of East A (Hagart Alexander Drive) and parts of West B (Cemetery Road). These areas have been identified as being subject to periodic flooding. The Council has set aside funding for addressing the flooding issues on Hagart Alexander Drive and the Council's Water and Waste Department is currently progressing the design of flood mitigation proposals for this area. Capacity issues with the Owhiro indicate that more rapid stormwater flow resulting from residential development may cause downstream flooding in the West B without including stormwater mitigation measures into the design.

The areas with the lowest risk from flooding appear to be West A, West C and the elevated East C area although with stormwater mitigation works on Hagart Alexander Drive completed the flooding risk to the East A area will also be relatively low.

8.7 Proximity to Community Services

In determining the most appropriate option the proximity of a residential area to community services is a factor worth examining. In section 2.3 the recent education review is outlined and it is noted that there is not a significant difference between the identified options in Figure 3 in proximity to school facilities. While in terms of distance to community services, access through local traffic links and the location of school facilities East A and East B appear to be the best options there is little between the various options. This factor is therefore not considered to be a significant determining factor in identifying the most appropriate location for residential expansion.

8.8 Rural Amenity and Outlook

Expansion of residential zones will directly impact on the amenity of rural land to be rezoned with a loss of openness and a change in character from rural to residential. As well as the obvious change within the rezoned area, this will also potentially impact on the outlook from the area surrounding the new zone. The degree of existing fragmentation both in the area to be rezoned and in the wider area, the nature of the roading network and the existing land uses will all contribute to the degree of this effect.

In terms of rural outlook this will also be influenced by the elevation of the land to be rezoned. Elevated sites will be more visible from the existing urban area in Mosgiel and consequently will have a greater impact on rural outlook. The sites identified as options for expansion are located on relatively flat areas with the exception of East C. However, in the case of East C, this area is below the Landscape management Area and is adjacent to an existing residential area. As a result the impacts on rural outlook are relatively low.

In terms of rural amenity most options will generate only local impact and there is a degree of fragmentation in the wider area that will reduce the adverse effect. This is particularly the case for East A and East B. The presence of Hagart Alexander Drive along the current residential boundary, the Residential 1 Zone at Wingatui and the extent of rural-residential scale development have altered the environment over time so that its rural character is already compromised. This is also the case for West B. West C has a higher degree of existing fragmentation than most options but existing fragmentation in the wider area is not as evident as with options East A and B. The least compromised areas from a rural amenity perspective are considered to be East C and West A.

8.9 Reverse Sensitivity

Reverse sensitivity effects may occur where residential activities are brought into contact with rural activities that generate effects such as odour, over-spray and noise in the course of their operations, leading to potential conflict. Similarly, expanding residential activities close to areas where industrial activities are established can result in reverse sensitivity impacts on the existing activities. Controlled expansion of residential zones has significant benefits over ad hoc development in this regard, as the certainty for rural and industrial activities is increased if the area where future residential expansion is to occur is known and the potential for reverse sensitivity effects is considered. Fragmentation of rural land and rural-residential development in rural areas where the new residents encounter rural effects that they did not anticipate is the classic example of reverse sensitivity in the rural environment and has led to conflict in many communities.

As described in Section 7.2 the potential for conflict between residential and industrial activities was one reason for not considering further expansion of residential zones to the North of Mosgiel.

Examining the existing land use in and around the areas identified as options for expansion of residential zones provides an indication as to likely reverse sensitivity effects. Most options appear to either have residential or low intensity agricultural land use surrounding them with the exception of West A and West B, where existing horticultural operations increase the potential for reverse sensitivity effects. Also there is an existing wastewater treatment plant to the northeast of West C and a wood processing operation to the west of this area established by resource consent where reverse sensitivity effects could occur. While there is an industrial zone and an existing aerodrome to the north of East A which could result in reverse sensitivity effects the potential for conflict is reduced by a generous buffer to the north of the East A option.

The East A option has potential for fewer effects than the majority of other options because of existing rural residential development along Wingatui Road. This will operate as a peri-urban buffer between residential and rural activity and it is part of the recently notified Wingatui Rural Residential zone. However, it is also noted that this zone is the subject of submissions on Variation 9A: Rural Variation.

8.10 Manawhenua Values

Section 2.3 outlines the history of the Mosgiel area and while it is noted that there is a long history of activity in the area there are no significant settlement sites recorded. Consultation with Kai Tahu indicates that there may be issues with the potential impacts on the Owhiro Stream and these are outlined in Section 8.2 on waterways.

Landuse issues for Kai Tahu typically relate to historic settlement sites and the potential impacts of developments on traditional resources, waterways, the coasts and the environment as a whole. In general terms consultation suggests the likelihood of issues arising from the expansion of residential zones are low but options which discharge to the Owhiro Stream offer the most potential to generate concerns. The Owhiro is a small stream in poor health and apart from capacity issues, discharges have the potential to further degrade stream quality.

8.11 Existing Buildings

In addition to natural hazards and topography the existing buildings and structures on an area of land to be developed for residential use can influence its physical suitability. Buildings and structures can act as a constraint by increasing the cost of developing the land, reducing the

land available and by restricting development options. In general terms the options identified in Figure 3 contain a relatively low level of existing structures and they offer few constraints to development for a residential use. West C contains the highest number of existing building but most of these are located in relatively close proximity to existing roads and this constraint is not considered to a significant determining factor in identifying the most appropriate area for expansion of residential zones.

9 CONSIDERATION OF ALTERNATIVE SITES

The constraints to developing a particular area and the likely effects resulting from the expansion of residential zones need to be considered in determining the most appropriate site for the expansion of residential zones in Mosgiel. Table 5 and Table 6 below provide a summary of the consideration of the various sites in order to identify the most suitable area for expansion. Table 5 identifies the constraints on the suitability of the alternatives for residential development and Table 6 considers the effects that residential use of each area is likely to generate. The suitability of a particular site can be assessed in relative terms by considering the various factors identified in the tables.

Section 32 – Efficiency, Effectiveness, Costs and Benefits

Section 32 of the Act requires the Council in considering alternatives to determine the most appropriate way to achieve the purpose of the Act to examine their effectiveness and efficiency taking into account the benefits and costs.

Tables 1 and 2 were used to examine and identify the most appropriate method for addressing the demand for residentially zoned land in Mosgiel. This analysis identified that expanding residential zones in Mosgiel (Alternative 3) is the most appropriate method.

In considering the various alternative areas identified in Figure 3 for implementing the expansion of residential zones it is also necessary to examine their effectiveness and efficiency taking into account benefits and costs. This examination draws from the issue based analysis undertaken in Tables 5 and 6 and the previous evaluation in Tables 1 and 2 for the expansion of residential zones in Mosgiel (Alternative 3). In undertaking this examination it is also noted that the evaluation in Tables 1 and 2 for Alternative 3 generally apply to all the alternatives with some variation resulting from specific area differences.

Effectiveness of the various alternatives in providing for residential expansion in Mosgiel and in meeting Proposed District Plan Objectives and Policies is identified Table 7 and the costs and benefits of the most effective options are discussed in Section ??? below. The Efficiency of an option is determined by the ratio of benefits to cost and examining the efficiency of various alternatives will lead the identification of the most appropriate way to achieve proposed District Plan objectives and policies and the purpose of the Act.

Risk of Not acting or Acting

Section 32(4)(b) requires the risk of acting, in this case by the expansion of residential zones, to be considered when there is insufficient or uncertain information. The discussion in Section 8 and information contained in Tables 5 & 6 indicate that insufficient information and uncertainty is associated with some of the identified options. Stability, flooding, and stormwater discharges are noted as being uncertain in some of the areas considered for expansion. Stability issues are associated with the East C option although the risk is relatively low and issues appear to be confined to parts of the site. Uncertainty is associated with stormwater discharges to the Owhiro Stream. There is a risk of acting in respect of those options which are located in the Owhiro catchment namely East B, East C, West B and the

southern part of West A if stormwater from these area discharges directly to the Owhiro Stream. The risk of acting is a consideration for the East B, East C and West B options and to a lesser extent the West A options. Further modelling of the Owhiro is noted as important in Section 8.2 on local waterways before these alternatives are considered for development.

It is also noted that there is uncertainty associated with amenity effects from transportation routes which may occur as the result of expanding residential zones. The Mosgiel bypass route and the future route of State Highway 87 discussed in Section 8.1 have yet to be finalised and they may have an impact on residential amenity. However, as discussed in Section 8.1 the amenity effects are not expected to be significant and the risk of acting in respect of undetermined transportation routes is considered to be low.

9.1 Effectiveness

In general terms all options identified in Figure 3 are potentially suitable for future residential development and over a 50 year period residential use of some or all the identified areas for residential development may be necessary to provide for the growth of Mosgiel. The effectiveness of the various options in providing for residential development is examined in Table 7. As identified in Section 7.1 it is anticipated that over a 10 year period that 45 –50 hectares of land will be required and that a 10 year period is considered to be an appropriate planning time frame.

During a 10 year period it is anticipated that some infill redevelopment will occur in the Mosgiel Residential 2 Zone and other residential zones and that surplus school land may also become available for residential redevelopment. This will reduce the amount of land required over this period. Conversely it is noted that larger sized sites well above the 500m² minimum, which are a feature of some recent residential subdivisions in Mosgiel, may reduce the number of sites that will result. In terms of the analysis in Table 7 options exceeding 40 hectares that have few physical restrictions to development for a residential use are considered to be effective in providing for development over the identified planning period.

Table 7 identifies that East C is the least effective option due to its size. Further, while the majority of the area can be utilised there are parts of the area that may be affected by stability constraints. Increasing the size of this area does not appear practical and introduces other issues. Landscape Management Areas are located to the south and stability issues exist to the west of the East C area, while existing residential zones are located to the west and north of the East C area.

Table 7 also highlights that existing designations and activities reduce the available area for development of West B potentially impacting on its effectiveness. These are likely to reduce the available area to below 40 hectares. However while it is not included in the analysis intensifying the recently rezoned Residential 6 Zone to the west could potentially increase the size of this area.

East A, East B, West A and West C are all considered to be effective options in providing for residential development over a 10 year planning time frame. It is noted that with the West C option there is a higher proportion of existing buildings that may potentially impact on development but this is not expected to be a significant constraint to residential development in the area. East A at 42.3 hectares with few physical restrictions to residential development is considered to be an effective option over a ten year period. It is noted that a generous buffer is provided to the Industrial 1 Zone and existing aerodrome activity to the north of East A which does not exist with the existing residential land to the west. While it is prudent to avoid reverse

sensitivity effects there is potentially scope to increase the size of the East A option to the north if more land is considered necessary to provide for a 10 year planning period.

The effectiveness of the identified options in meeting Proposed District Plan objectives and policies is also examined in Table 7. It is noted that with most of the options the assessment carried out in Table 1 is valid in most cases although there are a few important differences which are identified below.

9.2 Evaluating Effectiveness

In identifying the most appropriate area initial screening to exclude ineffective areas is a useful approach. **East C** can be excluded from consideration as it provides only a limited land bank of around 25 hectares. Based on estimated growth rates this would necessitate establishment of additional residential zones after about 5 years. Stability issues, described in Section 8.6 may also impact on the area available for residential development.

Capacity issues with the Owhiro Stream impact on the effectiveness of this option in meeting the Proposed District Plan objectives and policies for securing sustainable expansion of stormwater infrastructure. These issues are discussed in Section 8.2 where it is noted that options which discharge stormwater to the Silverstream are more certain and less likely to create adverse effects. Discharging stormwater to the Owhiro Stream is also identified as a risk to acting above.

Table 6 identifies that the East C area does not contain high class soils and it may provide a useful supplementary area for future development if the certainty surrounding the mitigation of effects of discharging stormwater to the Owhiro Stream can be provided. Although it is excluded from consideration for this variation it may be worth investigating in the future should further expansion be required to address growth. More detailed modelling of the Owhiro catchment characteristic should be completed before any such investigation was commenced.

The **West B** option can also be excluded on the basis of its effectiveness. In Table 5 it is noted that this area has a low proportion of high class soils and infrastructural costs of establishing the area are low if stormwater issues can be simply resolved. However, the presence of the State Highway 1 Bypass Designation (D462), which bisects this area, is a significant constraint to development. While the future development date of this bypass route is uncertain and it is not likely to proceed in the near future the potential effects on the residential amenity of the area are considered to be significant. If established the bypass will also potentially impact on local transportation links by dividing the residential area.

There are also other factors that weigh against selection of this area. There is a risk of acting in respect of periodic flooding in the vicinity of Cemetery Road and as identified in Table 7 the area available for redevelopment is reduced by the presence of the East Taieri Church, the Cemetery and the bypass designation. Removing these areas from consideration reduces West B to below 40 hectares reducing its effectiveness.

Capacity issues with Quarry Creek and the Owhiro Stream identified in Table 5 impact on its effectiveness in meeting Proposed District Plan objectives and policies by securing sustainable expansion of stormwater infrastructure.

Due to the presence of amenity constraints associated with the State highway Bypass Designation noted in Table 5 it is also the least effective option for meeting Proposed District Plan residential amenity objective and policies for establishing and maintaining a pleasant residential environment.

In the case of **East B** sufficient land area is available although the Owhiro Stream reduces the available land for development and affects the establishment of local transportation links. The

railway line to the north of Gladstone Road North will also impact on local transportation links. However, as is the case with West B it is excluded because capacity issues with the Owhiro Stream identified in Table 5 and discussed in Section 8.2 impact on its effectiveness in meeting Proposed District Plan objectives and policies for securing sustainable expansion of stormwater infrastructure. As previously discussed discharging stormwater to the Owhiro Stream is also identified as a risk to acting. Stormwater discharge is the primary factor in the exclusion of this option from further consideration. If greater certainty can be established through further modelling and investigations into the use for the Owhiro Stream then this area may well be suitable for residential expansion in the future should growth of Mosgiel continue at a similar or greater rate.

The three most effective options for expansion are considered to be the **West A**, **West C** and **East A** options. All of these options are located on high class soils and it is noted in Table 7 that the proportion of high class soils in these areas reduce the effectiveness of these options relative to other options not located on high class soils. However, as discussed in Section 8.3 the impacts on rural productivity including the high class soil resource must be assessed in a wider context and other factors must be weighed against the loss of high class soils. On balance, when considering the extent of the loss of high class soils, the immediate and future impacts on rural productivity are relatively low.

East B, East C and West B are excluded on the basis of effectiveness. The Costs and Benefits of East A, West A and West C options are examined below.

9.3 Benefits and Costs

Environmental Benefits

Table 2 identifies the environmental benefits of expanding residential zones in Mosgiel (Alternative 3). The three most effective areas for expansion identified above will include these benefits, except protection of the high class soil resource, as they will avoid conflict resulting from ad hoc development and provide for coordinated and sustainable expansion of residential housing. Also the zoning approach used for residential expansion will ensure appropriate amenity levels through subdivision and land use performance standards. However, there are differences between the options. West C and East A are entirely located in the more certain Silverstream catchment and West A is partly located in the Silverstream catchment and partly in the Owhiro catchment area. As there are capacity issues and a risk of acting previously identified with discharging to the Owhiro Stream the environmental benefits of securing sustainable infrastructure are not as certain for West A. However, as this area comprises almost 80 hectares it could easily be reduced to remove the uncertainty surrounding the Owhiro Stream and still provide over 40 hectares land for residential development. In terms of benefits from securing appropriate residential amenity levels all options have relatively low constraints identified in Table 5 although West A is likely to be the best option purely from an amenity perspective.

Environmental Costs

Table 2 identifies that the environmental costs associated with expansion of residential zones are effects on rural amenity and character; rural outlook; and rural productivity. These environmental costs are identified and examined in Table 6. Of the three options all are considered to result in only a localised impact on rural outlook. In terms of rural amenity West A is identified as being subject to a greater costs as it has a low level of fragmentation while the other two options have higher levels of fragmentation.

Greater costs in respect of rural productivity are also associated with West A. While all three options have a high proportion of high class soils West A has a low level of fragmentation and parts of the area appear to be more intensively used. A part of West C has been recently planted in nut trees.

Table 6 examines effects on watercourses and this issue is also discussed in Section 8.2 and is closely linked with Manawhenua values. In the case of East A and West C and low environmental costs are associated with the stormwater discharges to the Silverstream. Potentially higher costs are associated with West A.

Social and Economic Benefits

Table 2 identifies that the social and economic benefits for expansion of residential zones in Mosgiel includes economic efficiency in the provision of infrastructure, lower establishment costs for residential developments and increased certainty for developers in respect of assessment matters for housing developments. Also identified as benefits are increased support for social and economic activity in Mosgiel and the provision of choice for people who wish live in Mosgiel. It is also likely that conflict compliance monitoring costs will be lower than with ad hoc developments as residential activity is anticipated and confined to a specific area.

These benefits apply equally to the three areas and variation in local benefits such as good access to community services which is discussed in Section 8.7 are also not considered to be significantly different between these areas.

Social and Economic Costs

The principal social and economic costs identified with expansion of residential zones are those associated with infrastructure and these are examined in Table 5. Other economic costs would include zone implementation costs and development costs associated with avoiding or removing existing buildings and structures. Social costs to consider would be the displacement of existing rural or rural residential residents and conflict as the result of reverse sensitivity effects.

Infrastructure costs are identified in Table 5 and also discussed in Section 8.4. While there is not a significant difference between the three options the lowest cost option based on estimates from the Councils Water and Waste Department is West A and the highest costs are associated with West C although these are not significantly different to the East A option. In terms of possible social costs associated with displacing existing rural residential residents the West C area appears to have the greatest potential for higher costs due to the fragmentation and existing rural residential housing on this area although the costs are not considered to be significant.

Constraints to the establishment of local and wider transportation links are identified in Table 5. The costs of establishing local roads are not expected to vary between the most effective options. As discussed in Section 8.1 it is noted that increasing traffic pressure at the southern entry and exit point for Mosgiel may necessitate intersection improvements. Development of East A for residential use will add to the pressure bringing forward the timetable for this work. However, it is likely that this upgrading will be required in the future to address traffic flows in any event.

Reverse Sensitivity is identified as an effect to be considered in Table 6 and it is discussed in Section 8.9. East A is considered to have the lowest costs associated with reverse sensitivity. In addition to low intensity rural land use in the area there is rural residential development along the length of Wingatui Road to the east that will act as a peri-urban buffer to rural activities.

The Otago Lumber operation immediately to the west of West C creates noise and dust emissions to which residential activities are sensitive and the sewage treatment plant to the northeast also has the potential to impact on future residential use of this area. In relative terms the highest social and economic costs are associated with the West C option.

9.4 The Most Appropriate Area

After considering the effectiveness of the various options and then examining the costs and benefits of the most effective options, East A is considered to be the most efficient options for the expansion of residential zones in Mosgiel to provide for further development of housing over a 10 year planning period. West A has higher environmental costs and it is considered to have more opportunities for productive purposes. This analysis is supported by lower existing fragmentation and the current use of the area. West C has higher social and economic costs as the result of infrastructure costs and potential reverse sensitivity effects. On balance the East A option is considered to be the most efficient option and the most appropriate for expansion of Mosgiel's residential zones in order to address demand for housing in the area over a 10 year planning. As discussed in Section 8.9 the existing fragmentation and rural residential development along Wingatui Road acts a useful peri urban buffer to rural zones further east and it limits the productive potential of the East A area. It is unlikely that the East A area will have a long term future for intensive agriculture given its location and the surrounding development in the area. There are no significant constraints to development of this area for residential use to address the demand for residential housing in Mosgiel.

10 CONCLUSION

Of the options examined to address identified demand for residential land in Mosgiel, the expansion of Mosgiel residential zones was considered to be a more effective method than diverting demand to other areas. The expansion of residential zones is considered to be the most appropriate method for discharging the Council's duties under the Resource Management Act.

Six possible areas were identified for the expansion of residential zones in Mosgiel and these are shown in Figure 3 of the report. The effectiveness of these areas in providing for residential development over a 10 year planning period indicates that the three most effective options for expansion are West A, West C and East A. These three options are all located on high class soils and are located either completely or in part located in the Silverstream catchment.

Consideration of the costs and benefits of these options to determine efficiency and identify the most appropriate option indicates that while all of these options are suitable for residential expansion, East A is more efficient than West A and West C. While the benefits of these alternatives are very similar West A has higher environmental costs and West C has higher social and economic costs.

On balance East A, an area of 42.3 hectares to the east of Mosgiel between Hagart Alexander Drive and Wingatui Road, is the preferred option for the expansion of Mosgiel residential zones. There are no significant constraints to residential development in this area and the effects of establishing residential activity are not significant. This is reflected in the cost benefit analysis where East A is identified as the most efficient option.

The future of the East A area for intensive agriculture is significantly constrained by land fragmentation and existing rural-residential development in the surrounding area. The rural residential development along Wingatui Road will provide a peri-urban buffer to rural zones and reduce the potential for reverse sensitivity effects. East A lies in the Silverstream catchment and there are no significant constraints associated with provision of infrastructure for the expansion.

11 INFORMATION SOURCES

Kati Tahu ki Otago Natural Resource Management Plan 1995

Dunedin City Council, Monitoring Population, August 2002

Dunedin City Council, Monitoring Housing, December 2002

Decision No C 117 /2009

IN THE MATTER

of the Resource Management Act 1991

AND

IN THE MATTER

of an appeal under Clause 14 of the First
Schedule to the Act

BETWEEN

NEW ZEALAND TRANSPORT AGENCY
(formerly Transit New Zealand)

ENV-2006-AKL-000243

Appellant

AND

DUNEDIN CITY COUNCIL

Respondent

BEFORE THE ENVIRONMENT COURT

Environment Judge L J Newhook
Environment Commissioner D H Menzies
Environment Commissioner S J Watson

(On the papers)

FINAL DETERMINATION (BY CONSENT AFTER INTERIM DECISION)

Introduction

[1] The Court issued an Interim Decision¹ a significant time ago, rezoning various pieces of land on the fringes of Mosgiel. The piece the subject of the present



Decision No C 140/2006

determination was at that time labelled “West B”, and has since become known as “East Taieri”.

[2] The parties were set the task by the Court of preparing a structure plan. Much of the content of that was going to depend on resolving the issue of whether a Transit (now NZTA) designation for a motorway was to remain. The issue having been resolved after quite some time, by the removal of the designation, work on the structure plan has proceeded. Finally, a memorandum was lodged signed by most of the parties dated 31 August 2009, describing an agreed structure plan.

[3] The following parties to the appeal under s274, signed the memorandum:

KL Chapman Trust; Limesprings Trust; Otago Regional Council; and Gary Pearson.

[4] B & R Miller and P Scott had participated in the appeal under section 274, but at this juncture were not prepared to sign the memorandum. Upon enquiry from the Court they have however advised that they do not wish to make submissions and prepare sworn evidence in relation to their position.

[5] The Court understands for present purposes that all parties are satisfied that all matters proposed for the Court’s endorsement fall within the Court’s jurisdiction, and conform to relevant requirements and objectives of the Resource Management Act, including in particular Part 2.

Order

[6] The Court now determines (ultimately by consent after its earlier interim decision), that:

Variation 15 (Mosgiel Residential Variation) to the Proposed Dunedin City District Plan is amended as set out in Annexure 1 and 2 attached to this order.

[7] The appeal is otherwise dismissed.



DATED at Auckland this *21st* day of *November* 2009.

For the Court :



I. J. Newhook. Environment Judge



Appendix 8.4

East Taieri Structure Plan and Design Assessment Criteria

Site Description

The East Taieri Structure Plan Area lies to the south-west of Mosgiel in East Taieri. The area is 45.9 ha and the topography is irregular and gently sloping from the base of Saddle Hill on the southern edge northward.

East Taieri Structure Plan Area is boarded on the southern side by the Main South Road and Cemetery Road traverses the eastern end of the area, providing the main existing access to the area.

Activities within East Taieri Structure Plan Area are education, cemetery, community facilities (dog exercise area), residential properties, and rural activities.

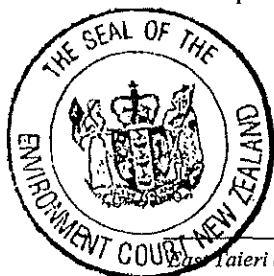
Purpose

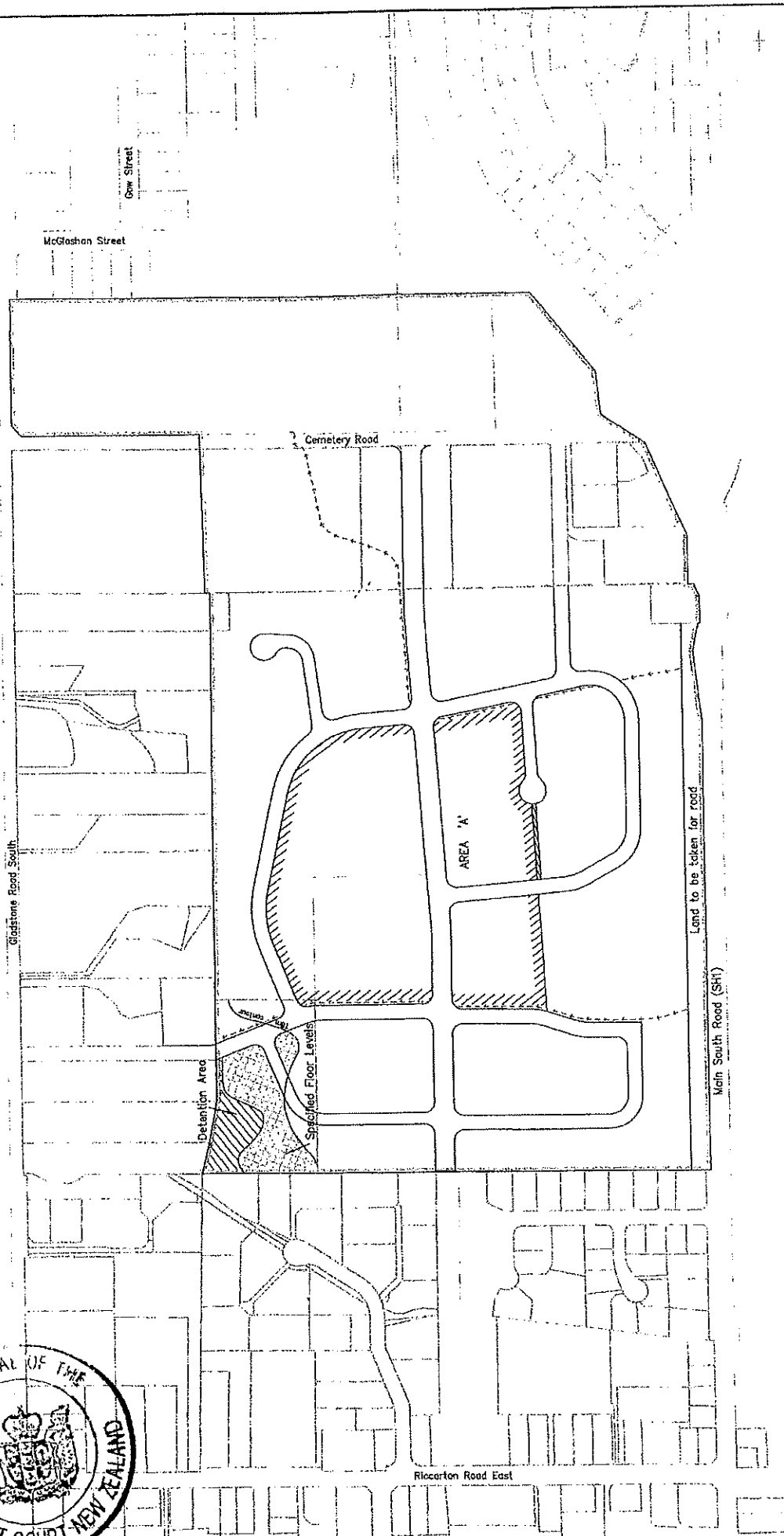
The Structure Plan shows an outline of the key features of future developments in the East Taieri Structure Plan Area. Major roads, the general location of a reserve, and areas potentially required for stormwater detention are all indicated on the Structure Plan, and are required to be incorporated into subdivision and/or development design. In assessing any resource consent application the Council will have regard to the Structure Plan and Design Assessment Criteria, in addition to the assessment matters in Section 18.6.

The Design Assessment Criteria sets out the following 'Design Elements':

1. General Subdivision and Development Design
2. Design of Roads and Access Paths
3. Design of Reserves
4. Design and Management of Stormwater
5. Management of Water and Waste Water
6. Landscaping of Public Areas

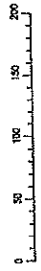
The Design Elements have been split into two categories. Those that are 'required' to be included within a resource consent application and those that are 'recommended' to be included. The 'recommended' design elements allow for some flexibility in design, while ensuring that subdivision contributes to the efficient development and amenity of the structure plan area. The Design Elements are intended to guide development rather than prescribe exact design and layout.





Legend

Structure Plan Boundary	-----	Pedestrian Access	-----
Title Boundaries	-----	Detention Area	▨
Road Boundaries	-----	Specified Floor Level	▤
Main Watercourses	-----	Area A	▧



Plan Change No 15 East Taieri Structure Plan – Residential 6

Amended 30 July 2009
 Issued 16 September 2008

PPP Ref 30-718 WEI
 Sheet 1 of 1
 Scale 1:4000 @ A3

Design Element 1: General Subdivision and Development Design

Design Element I relates to the general layout of the network of roads, reserves and other access linkages that make up the public space of the subdivision.

Design Requirements

1.1 Subdivision and development design shall achieve an integrated roading, open space and recreation network.

1.2 Subdivision and development is to provide a highly inter-connected roading system so as to reduce trip distances and improve local accessibility. Pedestrian and cycle routes should be generally integrated within the road design, or provided in the form of 'accessways'.

Explanation

Roads, reserves and other access linkages should be considered in an integrated manner together with the neighbourhoods they create. The proposed road network should seek to create an inter-connected network of roads (within and outside of the development) that provide good accessibility to local activities. Roads are one of the important public spaces within residential areas, and can, if appropriately designed and located, add considerable amenity value to the subdivision. Reserves and open space can maintain and enhance intrinsic values and habitats, and amenity values, as well as providing recreational opportunities for the community. The general location considered to be appropriate for a reserve is indicated on the structure plan.

Subdivision design should achieve connectivity within and between neighbourhoods, adjacent areas and to local services such as schools, shops, and recreation areas. Connectivity created through multiple linkages between points should be one of the key aims of any subdivision as it promotes convenience, energy efficiency, safety and social interaction. Roads should be through routes where ever possible. Accessways will provide pedestrian/cycle linkages to external roads and public areas.



Design Element 2: Design of Roads and Access Paths

Design Element 2 outlines the general design of roads and the interface with external areas, and highlights aspects that need to be considered to ensure connectivity and access within, and beyond, the East Taieri Structure Plan Area.

Design Requirements

2.1 The following road connections are appropriate:

- **Access onto Cemetery Road (limited)**
- **Access link to Gladstone Road**
- **Access link to Riccarton Road**

Explanation

The access links identified are essential for full development of the largest collective block of land to be developed within East Taieri Structure Plan Area, as they provide key access points required from the East Taieri Structure Plan Area to the greater road network, and meet public transport requirements. Without these access points to the greater road network, excessive pressure would be put on Cemetery Road if maximum development of the largest collective block of land is to occur. The trigger for these access links will be identified through traffic impact assessments undertaken at the time resource consent applications are lodged.

Cemetery Road is a local road and as such has a limited vehicle carrying capacity. Most of the current use of the road is associated with vehicles accessing the school, cemetery, church, or Hub-Youth Centre. The existing limited carrying capacity of this road places a constraint on the number of lots that can be developed within East Taieri Structure Plan Area that will access onto Cemetery Rd.

It is important to protect the amenity of Cemetery Road and provide a safe environment, as this is a primary pedestrian route for school children. Road improvements (including road widening, the construction of a footpath, kerb and channel, speed platforms and a pedestrian crossing at Gladstone Road) are required to address issues created by increased traffic flows resulting from development of the East Taieri Structure Plan Area.

2.2 Collector roads are to be a minimum of 20m wide road reserve, including footpaths 2m wide, and cycle lanes 1.5 m wide, within the 20m road reserve.

This is the Council's standard requirement for collector roads. Wider roads may be permitted where desired to allow additional widths for street tree or amenity planting or to allow for stormwater management areas.



Design Requirements

2.3 New local roads within East Taieri Structure Plan Area are to be a minimum of 16m wide road reserve, including footpaths of a minimum 1.5m wide and 8m carriageway.

2.4 Road layout should be designed to maximise safety of all road users, including pedestrians.

2.5 Provision of shared use pedestrian/cycle paths to enhance connectivity is encouraged, provided they meet Council requirements.

2.6 Subdivision applications must include:

- (a) **A traffic impact assessment.**

Explanation

Road design should be appropriate to the function of the road and provide practical widths for vehicular access. Local roads are not required to provide cycle lanes, however this may be desirable.

Safety of all road users is a key consideration in the design of the road network. Design and layout can be used to influence driver behaviour to control speed, reducing the likelihood of vehicles speeding within the subdivision. Many traffic calming methods are available and should be incorporated where appropriate. Traffic calming measures and improvements for pedestrians and cyclists are required for Cemetery Road to address safety concerns in regards to increased traffic from East Taieri Structure Plan Area using this road.

Pedestrian and cycle paths should generally be integrated with road design. Paths that are separate from vehicle routes enhance connectivity. These should be designed to allow for multiple use (pedestrian and cycle) and ensure personal security for users. Lighting may be appropriate if the cycle/pedestrian path is long, likely to be well used, or will be located away from main street lighting.

The design should adhere to "Crime Prevention Through Environmental Design (CPTED)" principles.

A traffic assessment is required to provide information about the carrying capacity of the surrounding roading network and the impact the subdivision will have on this and the surrounding environment.

The assessment will also be used to determine when capacity of the roading network is to be exceeded and therefore trigger the need for upgrades or access links to be developed.



Design Element 3: Design of Reserves

Design Element 3 outlines matters for consideration for locating, and designing recreation reserves within the East Taieri Structure Plan Area.

Design Requirements

3.1 A 4000m² recreation reserve shall be provided within the region marked "Area A" on the structure Plan. The detailed location of this reserve shall be shown in the Resource Consent application for subdivision of land in the area and vested in Council accordingly.

3.2 The reserve transferred to Council during subdivision of East Taieri Structure Plan Area should have a consistent boundary treatment where it will adjoin residential properties eg. low fencing. This work should be undertaken by the developer to give a consistent design, standard, and height of fence (or other boundary definition) on all proposed residential properties adjoining the reserve, and to promote safety of reserve users.

3.3 Personal security and multi-use are a priority in reserve design. Clear sight lines into all areas of reserves should be available from public roads, nearby dwellings, and along cycle/pedestrian paths, etc. Reserves should contain entry points with road frontage of at least

Explanation

The spatial requirements for reserve provision are guided by the LTCCP, with consideration of the proximity to existing reserves. The reserve needs to be located and designed to be accessible for new residents within the East Taieri Structure Plan Area. Timeliness in regards to the vesting of the reserve is also important to ensure the reserve is available and accessible to new residents without significant delay.

A larger reserve is preferred (rather than multiple small areas), and the general location for one is proposed within the region marked 'Area A' on the structure plan. Larger reserves allow more recreational opportunity and varying uses, and better provision of play equipment where this is to be provided.

It is appropriate for developers to clearly define the boundaries between residential properties and reserves. This ensures a consistent style of fencing or boundary treatment surrounding the reserve, giving a unified look and defining the public/private property interface. Visual clutter and inconsistencies in boundary treatment around reserves is an aspect that communities often comment on after new subdivisions have been developed where a mixture of boundary treatments or fences have been installed. Completion of boundary treatment prior to issue of individual titles also ensures that boundaries are clearly defined. The design should adhere to 'Crime Prevention Through Environmental Design (CPTED)' principles and be discussed with, and agreed to, by Council prior to construction.

Reserves with wide street frontages have a reasonable level of security, because of surveillance from the road and from the houses nearby. Therefore, crime is likely to be discouraged and the reserves are likely to attract the maximum number of users and be more valued by the community.



Design Element 4: Design and Management of Storm water

Design Element 4 addresses the requirements for stormwater management within East Taieri Structure Plan Area.

Design Requirements

4.1 Local stormwater reticulation systems shall be designed for a 1 in 10 average recurrence interval event.

4.2 The rate of stormwater discharge from the East Taieri Structure Plan Area shall remain equal to or less than that of pre-development up to the 1 in 100 average recurrence interval event.

4.3 On-site stormwater management systems (retention/detention and secondary flowpaths etc.) shall be designed for a 1 in 100 average recurrence interval event. Stormwater retention/detention measures shall be provided on-site as part of the overall development.

4.4 Stormwater management systems shall not be designed to discharge stormwater to land as a means of disposal.

4.5 The discharge of stormwater shall not degrade the quality of the receiving environment.

Explanation

This is Council's standard requirement for stormwater reticulation systems.

This is in order to ensure that flood risk is not exacerbated.

The development of East Taieri Structure Plan Area will increase stormwater runoff. To avoid increasing the frequency and severity of flooding from the Owhiro Stream, developments at East Taieri Structure Plan Area must retain stormwater on-site for later discharge when the Owhiro Stream's capacity permits.

It is considered that the discharge of stormwater to land is not a practicable option for the East Taieri Structure Plan Area.

Stormwater will receive contaminants from a variety of sources. This requirement promotes a reduction in the adverse effects of contaminant discharges into Otago's water bodies by adopting the existing water quality as a minimum acceptable standard. Stormwater is required to meet the "Regional Plan: Water" for Otago, permitted activity discharge requirements.



4.6 Subdivision and land use applications should include information outlining:

- (a) the techniques to be used to manage stormwater and the extent to which these techniques are accommodated on site; and
- (b) how the integrity of the stormwater mitigation and management measures will not be compromised during and after subdivision; and
- (c) actions to be taken to ensure the on-going management and maintenance of on-site mitigation measures and the responsibilities for this; and
- (d) design details highlighting the adequacy of the proposed measures and identifying areas of greatest risk.

4.7 Subdivision and development within the 'Specified Floor Level' Area shown on the structure plan is to be designed to adequately address potential flooding issues.

Design Recommendations

4.8 Stormwater management may be achieved by a combination of publicly or privately owned on-site measures. Where the stormwater devices are proposed by applicants to serve more than one property, these may be vested in Council, if Council's requirements are met.

Subdivision and development should be designed to effectively mitigate and manage stormwater generated. For this reason, the developer is required at subdivision stage, to demonstrate that appropriate stormwater mitigation and management will be undertaken and that adequate provision has been made for their continued operation and maintenance of design capacity.

This area has been identified as being lower lying than the surrounding area and is therefore susceptible to flooding during periods of high rain. Residential dwellings in this area are to have finished floor levels for dwellings above the 1:50 year flood level in accordance with the New Zealand Building Code, in order to reduce the potential for flooding of the dwellings. Periods of high rain are likely to result in flooding or ponding of water within these properties.

Explanation

Stormwater management could include the use of techniques such as swales, rain gardens, permeable paving, and retention/detention areas.



Design Element 5: Management of Water and Waste Water

Design Element 5 outlines the provision and management of waste water and water to East Taieri Structure Plan Area.

Design Requirements

5.1 Water reticulation pipelines and waste water pipelines should principally be located within road reserves.

5.2 Water should be sourced from Mt Grand.

Explanation

Service pipelines for water and waste water should generally be located within the road reserve to enable easy access for maintenance. It is less desirable to locate pipes through private properties or reserves. In some cases wastewater pipelines servicing a number of properties may be placed over private land. Waste water from the East Taieri Structure Plan Area should be reticulated to the Burns St pumping station.

The Mosgiel Taieri bores are currently at maximum capacity for servicing properties in Mosgiel. Large subdivisions in the area, such as the East Taieri Structure Plan Area, will be serviced from the Mt Grand treatment plant.



Design Element 6: Landscaping of Public Areas

Design Element 6 suggests aspects of landscape design that need to be considered when planning any works to be undertaken within East Taieri Structure Plan Area.

Design Recommendations

6.1 Tree planting along internal roads is encouraged where it enhances the amenity value of the area and complies with Council requirements for species type, standards and conditions.

6.2 Any land to be vested in Council as reserve shall be grassed to a standard that can be cut with a ride on mower, and free of buildings, tree stumps or other obstacles. Any landscaping may only be undertaken with approval of Council.

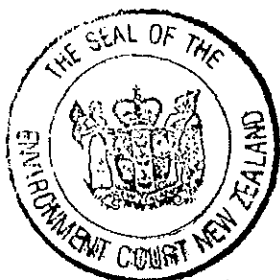
Explanation

Appropriate tree planting can enhance the amenity value of public areas and enhance the area for the community.

Consideration will need to be given to the location of trees in regards to services ('pipelines) along the roadway to allow access for maintenance.

Land to vest in Council should be vested land in a tidy state, but will generally not be landscaped. Council will design and landscaping the site to achieve the desired purpose and needs of the community. Where a developer wishes to undertake landscaping or provide specific facilities, this can only be undertaken with the approval of the Community and Recreation Services Department.

The reserve proposed within the East Taieri Structure Plan Area has a prime purpose of recreation. The size of the reserve proposed allows for multiple use and a variety of activities such as space for children's free or structured play, picnicking, exercising etc.



Dunedin City District Plan

Proposed amendments to existing provision, and proposed new provisions are shown as underlined. Proposed deletions are shown as ~~struck-out~~.

Volume 1 Amendments

Chapter 8 - Residential

Insert new Appendix 8.4 - 'East Taieri Structure Plan and Design Assessment Criteria' to Residential Zone: Rules section
(see appendix attached)

Amend bullet point for East Taieri add new bullet point and zone description for the East Taieri Structure Plan Area

8.5 Zone Descriptions

Residential 6

Special Areas

Within the Residential 6 Zone are special areas which need conditions to protect the special amenity, the urban service infrastructure from the adverse effects of development or redevelopment. These areas are:

- East Taieri south of Cemetery Road (does not include East Taieri Structure Plan Area)
- East Taieri between McFadden Drive and Wingatui
- East Taieri Structure Plan Area
- Doctors Point

(list continues)

East Taieri

There are ~~two~~ three separate areas with special amenity values in the East Taieri area, ~~both of which are all~~ to the south east of and adjacent to Gladstone Road, which separates them from the railway corridor.

The first area runs south from Cemetery Road, while the second area lies between McFadden Drive and the township of Wingatui. The amenity value of both areas is high, as they are slightly elevated above the rest of the Taieri Plain, lie well to the sun, have large areas of adjacent rural land and a relatively quiet neighbourhood. As some nearby land has had some incidences of instability, and most of the sections in both areas are built on, further intensive subdivision and development of these areas is not encouraged. In addition, while water and drainage servicing the area is adequate, spare capacity of the drainage system is limited. The retention of these areas as open, low density housing on the perimeter of the built-up area will ensure that amenity values are protected and service capacity is not exceeded.

The third area, the East Taieri Structure Plan Area, has an approximate area of 45.9 ha. It is bounded to the south by Main South Road and adjoins residential and industrial developments. Development in this area is controlled by a structure plan to give greater certainty as to the final outcome. The structure plan identifies key infrastructure and identifies the density of development for different parts of the zone.



Add new Rule 8.12.1(i)(o) in the Residential 6 zone as follows:

Rule 8.12.1 Permitted Activities

The following activities are permitted activities provided that they comply with the relevant conditions in Rule 8.12.2 of the Residential 6 Zone:

- (i) Residential Activity in:
 - (o) East Taieri Structure Plan Area at a density of not less than 750m² of site area per residential unit or, alternatively, at a density of not less than 300m² of site area per residential unit within the region marked 'Area A' on the annexed East Taieri Structure Plan, provided that no more than 20% of the land used for residential purposes within 'Area A' is at the alternative density.

Amend Rule 8.12.2 as follows:

Rule 8.12.2 Conditions' Attaching to Permitted Activities

- (i) Minimum Yards
 - (a) For all sites except the ~~two~~ East Taieri Residential 6 Zones south of Cemetery Road, and East Taieri Residential 6 Zone between McFadden Drive and Wingatui, the Wakari Residential 6 Zone and the Abbotsford Residential 6 Zone [Amended by Plan Change 4, 3/3/08]
 - (i) Front Site
 - (a) Front Yard 4.5 m
 - (b) All Other Yards 2.0 m
 - (ii) Rear Site
 - (a) All Yards 2.0 m
 - (b) For the ~~two~~ East Taieri Residential 6 Zones south of Cemetery Road, and the East Taieri Residential 6 Zone between McFadden Drive and Wingatui
 - (i) Front Site
 - (a) Front Yard 9.0 m
 - (b) All Other Yards 6.0 m
 - (ii) Rear Site
 - (a) All Yards 6.0 m



- (iv) Maximum Site Coverage [Amended by Plan Change 4, 3/3/08]
- (a) For all sites except the Abbotsford Residential 6 Zone, and the alternative density sites (300 m²) in 'Area A' of the East Taieri Structure Plan Residential 6 Zone, the maximum site coverage shall be 30% of site area.
- (b) For the Abbotsford Residential 6 Zone, the maximum site coverage shall be 40% or, alternatively, 60% within the regions marked 'Subzone A' on the annexed Grandvista Estate Structure Plan, provided that the units proposed at this alternative density comprise attached, multi-level dwellings.
- (c) For the alternative density sites (300 m²) in 'Area A' of the East Taieri Structure Plan Residential 6 Zone, the maximum site coverage shall be 50% of site area. For rear sites, maximum site coverage shall be 50% of site area excluding the access strip.

(vi) Separation Distances

For all sites, except in the two East Taieri Residential 6 Zones south of Cemetery Road, and East Taieri Residential 6 Zone between McFadden Drive and Wingatui, development containing more than one residential unit that does not share a common wall shall be separated by a distance of no less than 4 m.

In the two East Taieri Residential 6 Zones south of Cemetery Road, and East Taieri Residential 6 Zone between McFadden Drive and Wingatui, development containing more than one residential unit that does not share a common wall shall be separated by a distance of no less than 12 m.

(xi) Minimum Site

- (a) Minimum Area for Front and Rear Sites (excluding the access strip)

(xv) East Taieri Structure Plan Area

(a) Allotments to be: 750m²

(b) Alternatively, within the region marked 'Area A' on the annexed East Taieri Structure Plan, provided that no more than 20% of the land used for residential purposes within 'Area A' is at the alternative density, then: 300 m²

(xvi) East Taieri Structure Plan Residential 6 Zone

- (a) Flood Risk – Specified Floor Level Area identified in the East Taieri Structure Plan in Appendix 8.4

Any residential unit within the 'Specified Floor Level' area shall have the finished floor levels for dwellings above the 1:50 year flood level in accordance with the New Zealand Building Code.

- (b) Stormwater Detention Areas

No landscaping shall be implemented, or structures constructed, within any stormwater detention area shown on the structure plan, that has the effect of diverting water or reducing the storage capacity of the detention area.



Rule 8.12.4

The following activities are discretionary activities (restricted):

- (iii) Residential activity at a density of not less than 750 m² of site area per residential unit, or at the alternative density (300 m²) in 'Area A', on a site located in the East Taieri Structure Plan Area in Appendix 8.4 but not created pursuant to Rule 18.5.12. The Council's discretion is restricted to the extent to which the development does not comply with the East Taieri Structure Plan and Design Assessment Criteria in Appendix 8.4, unless other rules are also breached, in which case these rules can also be considered.

Add a new Assessment Matter 8.13.22:

8.13.22 East Taieri Structure Plan and Design Assessment Criteria

The degree to which the development complies with the East Taieri Structure Plan and Design Assessment Criteria.

Chapter 18 Subdivision Section

Amend Rule 18.5.12 (c) as follows:

Rule 18.5.12 Structure Plans

Subdivision of land subject to a structure plan shall be in accordance with the relevant Structure Plan as follows:

- (a) Mosgiel East - Appendix 8.2
 (b) Abbotsford - Appendix 8.3 [Amended by Plan Change 4, 3/03/08]
 [Inserted by C17/2008, 12/02/08]
 (c) East Taieri Structure Plan Area – Appendix 8.4

Add new Rule 18.5.13 as follows:

Rule 18.5.13 East Taieri Structure Plan Residential 6 Zone

Any new title issued for a property containing land within the 'Specified Floor Level' as identified on the East Taieri Structure Plan, shall have registered on it, by way of a consent notice, the finished floor levels required for dwellings which must be above the 1:50 year flood level in accordance with the New Zealand Building Code.

Amend 18.6.1 Assessment Matters for all Subdivision Activities as follows:

- (c) Stormwater Disposal from and within Subdivision Activities including:
- any adverse effects of the proposed subdivision on drainage on or from adjoining



- properties, and mitigation measures proposed to control any adverse affects
- the practicality of retaining open natural water body systems for stormwater disposal in preference to piped or canal systems and any impacts of stormwater disposal on existing water bodies.
 - with respect to Mosgiel East (as shown in Appendix 8.2), stormwater management systems (retention/detention and secondary flowpaths etc.) shall be designed for a 1 in 100 average recurrence interval event. Stormwater retention/detention measures shall be provided on-site as part of the overall subdivision plan approval.
 - with respect to Mosgiel East (as shown in Appendix 8.2), individual discharge of stormwater into the Silverstream or Owhiro Stream will not be permitted.
 - with respect to East Taieri Structure Plan Area (as shown in Appendix 8.4), stormwater management systems (retention/detention areas etc.) shall be designed for a 1 in 100 average recurrence interval event. Stormwater retention/detention measures shall be provided on-site as part of the overall subdivision plan approval.

Insert Assessment Matter 18.6.2(C):

18.6.2 Assessment Matters for Subdivision Activities for land identified in Structure Plans *[Inserted by C17/2008, 12/02/08]*

The extent to which the subdivision meets the intent of the structure plan.

- (a) Mosgiel East
 - Structure Plan and Design Assessment Criteria – Appendix 8.2
- (b) Abbotsford *[Amended by Plan Change 4, 3/03/08]*
 - Abbotsford Residential 6 Zone (Grandvista) Structure Plan – Appendix 8.3
- (c) East Taieri Structure Plan Area
 - Structure Plan and Design Assessment Criteria – Appendix 8.4

Volume 2 Amendments

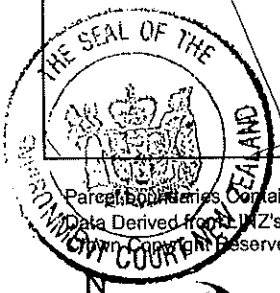
Amend the following maps to reflect the new zonings:

- *Zone Map 42*
- *Noise Map 62*
- *High Class Soil Map 75 (delete East Taieri Structure Plan Area)*





R6 East Taieri Structure Plan




Parcel boundaries contain
Data Derived from NZ's DCDB
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Map 42: Plan Change 15
- Rezoning from Rural to R6

Legend

 East Taieri Structure Plan Area



55 Dt/40Nt dBA within 50m of a residence

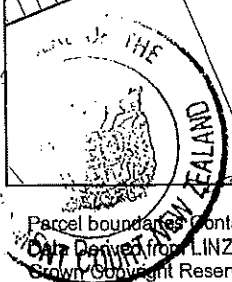
50Dt/40Nt dBA, 45SP dBA

50Dt/35Nt dBA, 45SP dBA

55Dt/40Nt dBA

R6 East Taieri Structure Plan
50Dt/40Nt dBA, 45SP dBA

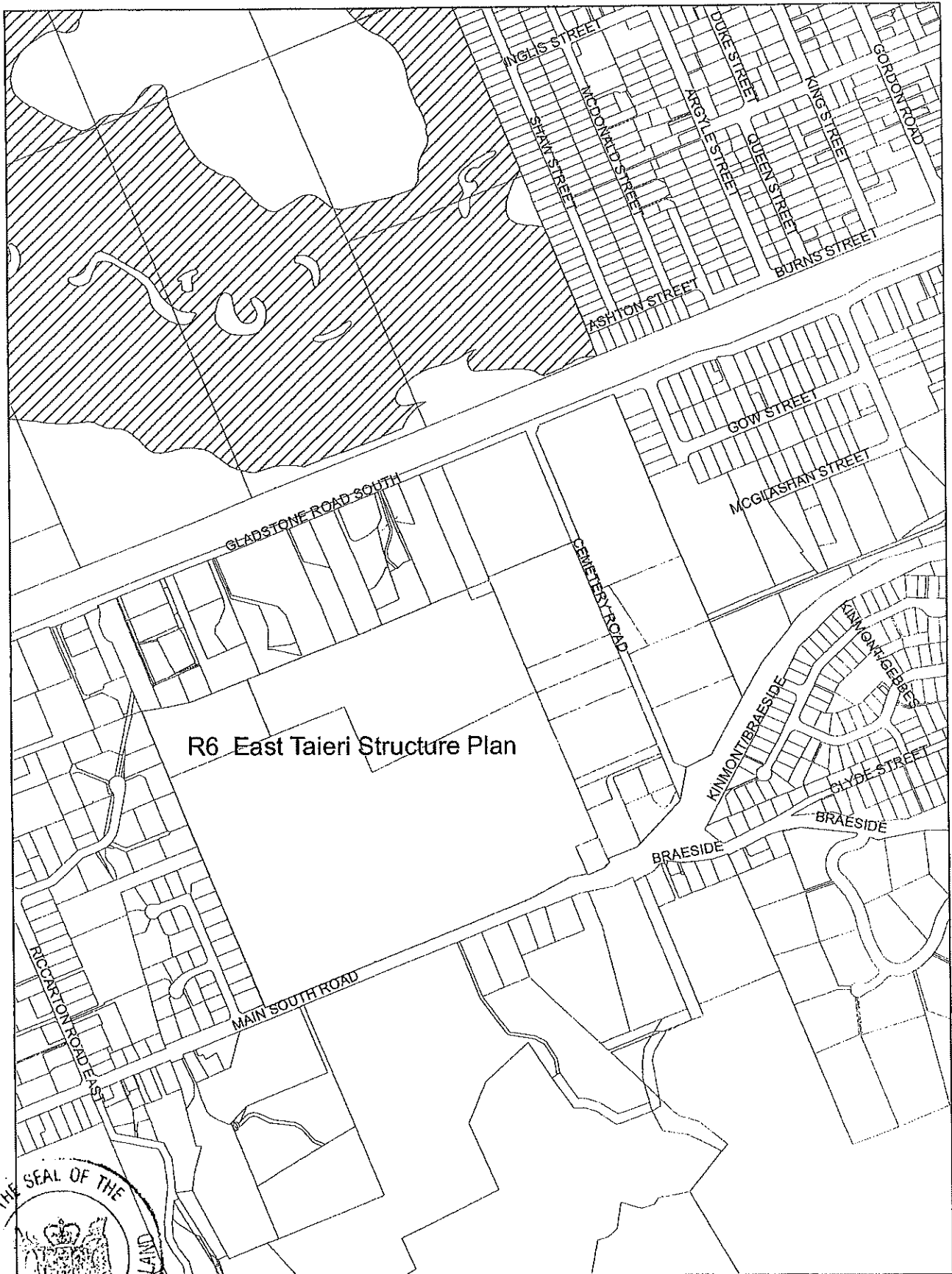
55 Dt/40Nt dBA within 50m of a residence



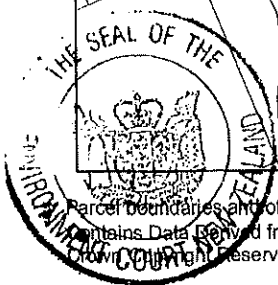
Parcel boundaries contain
Data Derived from LINZ's DCDB
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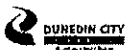
Plan Change 15 (East Taieri Structure Plan) Area to be Indicated in
50 Dt/40 Nt dBA, 45SP dBA Noise Area on Noise Map 62



R6 East Taieri Structure Plan




Parcel boundaries and other Cadastral derived data
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Plan Change 15 (East Taieri Structure Plan) Area to
 Be Shown As Urban Zone on Map 75 High Class Soil

Legend

 High Class Soil

IN THE MATTER of the Resource Management Act 1991
AND
IN THE MATTER of an appeal under Clause 14 of the First
Schedule to the Act
BETWEEN NEW ZEALAND TRANSPORT AGENCY
(formerly Transit New Zealand)
ENV-2006-AKL-000248
Appellant
AND DUNEDIN CITY COUNCIL
Respondent

BEFORE THE ENVIRONMENT COURT

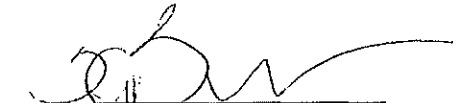
Environment Judge L J Newhook sitting alone under section 279 of the Act

IN CHAMBERS at Auckland.

CORRIGENDUM

- [1] It has come to the Court's attention that decision C 117/09 (dated 21 November 2009) was issued with an incorrect appeal number recorded. Accordingly, the intituling is amended to record the appeal number as ENV-2006-AKL-000248.
- [2] The remainder of the decision is unchanged.

DATED at Auckland this 25th day of November 2009.



S G Butley
Deputy Registrar

On behalf of
L J Newhook
Environment Judge

