

ATTACHMENT 2: ASSESSMENT OF ALTERNATIVE POLICIES AND METHODS

LANDSCAPE VALUES

The Council's objectives for the Plan Change in terms of landscape values are:

Landscape values

To ensure that development within the zone has a significantly lesser effect on the outstanding natural landscape of the Cardrona Valley (as compared to the current zoning)

To ensure that development is contained and that a defined urban edge is established in order to ensure against sprawl

KEY FINDINGS OF THE LANDSCAPE ASSESSMENT:

The key findings of the landscape assessment (Appendix 1) can be summarised as follows:

Upper Terrace Escarpment and Upper Slopes (Land above 640masl)

- Farm management to stay as Rural General.

Upper terrace 605– 640masl

- Development limited to walking and bridle tracks with associated seating.
- Fencing post and wire.

Mid terrace 580 – 605masl

- Development of a low intensity. Single storey.
- Buildings/development to be in muted natural tones
- natural built material to dominate (i.e. stacked stone, rammed earth, wood grass roofs)
- Native plantings dominant – tussocks and grasses, hebes, matagouri.
- Fencing post and wire, stone.

Lower terrace 550-580masl

- Dense development, double storey dwellings in areas that do not break the skyline.
- Feature colours on trims (i.e. around windows) with natural colours still dominant.
- Exotic planting as feature trees, gardens however must be drought resistant and hardy.
- Fencing post and wire, stone, post and rail.
- Buffer along terrace edge.
 - Low shrubs – no development other than walking/bridle track.
 - Planting only form of enhancement or development along the top of terrace escarpment.
 - Fencing on upper slope of buffer area rather than lower slope.

River/creeks

- Fenced off from stock (Post and wire) to regenerate – unless already in stock free area.
- Additional native planting for ecological gain.

Escarpment

- Landscape management either in the form of grazing or regeneration.
- Potential for pedestrian walking track.

PROPOSED ISSUE, OBJECTIVE, POLICIES AND METHODS

ISSUE	OBJECTIVE	POLICIES	METHODS	APPROPRIATENESS
The Zone is located within an Outstanding Natural Landscape, and the visual amenity values of this and the surrounding landscape need to be recognised and provided for.	<p>Objective 2: Development recognises and responds to the values and character of the landscape.</p> <p>Objective 3: Development areas within the Zone are contained and a defined urban edge is established in order to prevent 'urban sprawl'.</p> <p>Objective 4: Landscaping within the Zone responds to the opportunities and constraints of the site and its surrounds and reinforces cultural landscape patterns in the wider</p>	<p>1. <i>Through the provision of a Structure Plan, to achieve:</i></p> <ul style="list-style-type: none"> - <i>an overarching design framework, facilitating the establishment of a coherent built environment that responds to the natural environment and existing landscape values of the site and its surrounds;</i> - <i>clear boundaries to the Zone that relate to topography and landscape features;</i> - <i>areas of open space throughout the Zone that provide a relationship between built form and the surrounding open landscape, reinforce natural patterns in the landscape and protect the areas of visual prominence such as the escarpment face.</i> <p>2. <i>To create a strong sense of place and a character that reflects the cultural and</i></p>	Combination of District Plan rules, guidelines and consent notices on title.	<p>Imposing controls in the District Plan is considered the most appropriate method to ensure that a clear boundary to development is achieved, and given that this boundary is derived from comprehensive landscape assessment, imposing such a clear boundary ensures that the development 'fits' within the landscape.</p> <p>While the key parameters for the development can be established within the District Plan through imposing a structure plan and related rules, rules in the District Plan can only control what we don't want to occur, and therefore guidance is needed to identify key elements that we want to encourage.</p> <p>There are types of lighting that are not acceptable, and these are restricted by the Council's Lighting Strategy. However, it is also useful to provide guidance on how lighting can be used to achieve the Council's objectives. Guidelines also provide opportunity to adopt new technology when it becomes available.</p> <p>Use of appropriate colour and materials is important in ensuring that the development 'fits' within the landscape. To include the lists of appropriate colours and materials within the District Plan would be too cumbersome. In addition, if new colours or materials become available that are appropriate but not contained within the list, the</p>

	<p>Cardrona Valley.</p>	<p><i>heritage values of Cardrona Valley.</i></p> <p>3. <i>To maintain views of the night sky through ensuring that street lighting is low level and is directed away from Cardrona Valley Road.</i></p> <p>4. <i>To ensure that the colour and materials of buildings and structures complements the dominant colours in the landscape.</i></p> <p>5. <i>To provide landscaping within the Zone that complements the surrounding natural and cultural landscape values, and where necessary, mitigates the effects of development.</i></p> <p>6. <i>To avoid buildings that break the skyline when viewed from the Cardrona Valley Road, and where possible to mitigate the effects of buildings when viewed from surrounding public places.</i></p>	<p>guidelines could be amended, whereas if the list were contained within the District Plan any changes would require a plan change.</p> <p>Because of the importance of appropriate materials and colours, a mechanism to control their use is required. This can be achieved through the provision for a Design Review Board, and a requirement that all buildings must be approved by the Board prior to construction.</p> <p>Ensuring a consistent landscape treatment that is sustainable and complementary to the surrounding landscape is critical. Therefore, this needs to be reflected in the controlled activity subdivision provisions so that future public spaces (such as roads and footpaths) are constructed in a manner that achieves the vision for Mount Cardrona Station. Guidance through illustrations can assist in the interpretation of these provisions.</p> <p>Landscaping within individual allotments also needs to be controlled; imposing a consent notice on each title that requires approval of landscape plans is considered necessary to achieve a consistent approach to landscaping between the public and private realms. Landscape plans can be assessed by the Design Review Board at the time the building is assessed.</p> <p>The most appropriate method to avoid skyline effects when viewed from Cardrona Valley Road is a clear set of rules within the District Plan that ensure the location and height of buildings is such that they don't break the skyline.</p>
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URBAN DESIGN

The Council's objectives for the Plan Change in terms of urban design are:

To ensure high quality mixed use and mixed density development, which provides accommodation for residents, visitors, and seasonal workers in an integrated manner
To require best practice urban design principles to be employed throughout
To ensure the MCS land and existing village develop in a complementary way, which enables a sustainable and integrated community to establish within the Valley

KEY FINDINGS OF THE URBAN DESIGN ASSESSMENT

The Urban Design Assessment (Appendix 2) identifies a set of design principles for the Mount Cardrona Station Plan Change. Of particular relevance, it makes the following findings with respect to the planning mechanisms available for achieving these principles:

A number of mechanisms are available to address the urban design principles set out above. The District Plan objectives and policies set out the overarching framework and approach for development. The activity list and rules will also perform an important role in setting out the broad development parameters. However, they can provide only limited assistance in relation to design matters. It is recommended that the plan change provisions include a structure or concept plan to set out a broad spatial framework for development of the Village. This is particularly useful to provide guidance on the spatial distribution of the main movement network and open space network, together with variations in activity mix and building forms.

An Open Space Zone should be utilised to protect and enhance key natural and cultural features such as the escarpment, Homestead Gully and the water races, and to ensure good physical and visual linkages between urban areas and the surrounding landscape.

It is also recommended that Design Guidelines are provided for the Village. Guidelines are useful in setting out and explaining the design intent for an area, but provide for a greater level of latitude to respond to different design responses than rules can do. This is useful to enable appropriate responses to the complex relationship between different design considerations. The use of design review panels is becoming more common, both within the Queenstown-Lakes District and throughout the country. Design Guidelines can provide a useful tool for such panels to guide their decision making.

PROPOSED ISSUE, OBJECTIVES, POLICIES AND METHODS

The following issues, objectives, policies and methods are considered the most appropriate in achieving the design principles identified within the Urban Design Assessment. The first issue, objectives and policies relate to providing an integrated community. The second relate to spatial planning and design.

ISSUE	OBJECTIVES	POLICIES	METHODS	APPROPRIATENESS
Integrated Community				
<p>The potential for coordinated development to occur in a manner that provides for a sustainable and integrated community.</p>	<p>To enable a complementary mix of uses within the Zone in order to create an integrated and sustainable community.</p>	<ol style="list-style-type: none"> 1. <i>To establish a mix of residential, visitor accommodation, educational, and commercial activities, and recreational and community activities including open space and walkway linkages, throughout the Zone.</i> 2. <i>To establish a range of accommodation options and densities for residents, workers (including seasonal workers) and visitors that is integrated throughout the Zone.</i> 3. <i>To encourage the construction of secondary units within the Zone for the purpose of providing accommodation for permanent residents and/or long term rental accommodation for workers. .</i> 4. <i>To encourage permanent residents through the provision of a range of densities and housing options, and where practical, through the provision of community, recreational and educational facilities.</i> 5. <i>To recognise the limitations for development of the site (defined by natural topographical boundaries, development form and style, and servicing constraints), while ensuring that the development yield provided is adequate to establish a sustainable and vibrant community.</i> 	<p>District Plan rules that require different densities, heights and uses within different activity areas identified on a structure plan.</p>	<p>In order to achieve a variety of densities and uses, a structure plan needs to be imposed. This ensures that a range of different activity types and uses are achieved in a logical pattern throughout the Village.</p> <p>Without such requirements it is likely that all sites would be developed to their maximum yield, in which case no diversity would be achieved.</p> <p>Secondary units can be encouraged through enabling higher building coverage where secondary units are provided. Guidance can also be provided on how best they can be accommodated within a site.</p> <p>The Structure Plan ensures that the development is contained within a specific area, and that higher density development is located where it can best be absorbed.</p> <p>An appropriate yield for the site has been identified as 1000 units. This can be achieved through requiring specific lot sizes and densities within the Structure Plan. This yield is based on the critical mass required in order to achieve a sustainable community. It is also within the development yield that could be derived from the existing RVZ.</p> <p>Given the above, it is considered appropriate to</p>

				achieve the policies through imposing District Plan rules. These provide the parameters for future development.
Spatial planning and design				
Site planning and design controls are important in establishing coordinated development.	A coherent site layout that provides a heart to the Village, and creates a legible, safe, attractive and efficient environment with a strong character and identity that reflects its unique location.	<ol style="list-style-type: none"> 1. <i>To provide a clear framework for locating activities, building volumes and densities that are appropriate to their location within the Village, and their function and form.</i> 2. <i>To ensure building and subdivision design occurs that:</i> <ul style="list-style-type: none"> - <i>Contributes positively to the overall Village structure;</i> - <i>Creates an integrated network of safe and pleasant streets and walkways;</i> - <i>Is in harmony with the natural environment;</i> - <i>Recognises the character of the Cardrona Valley and the vision for the Zone;</i> - <i>Creates a vibrant and integrated community;</i> - <i>Enables the creation of a high quality living environment.</i> 3. <i>To design the bulk, form and mass of individual buildings to blend with the natural form and character of the landscape and to reflect the cultural and historical associations of the Cardrona Valley.</i> 4. <i>To achieve a public realm and built environment that contributes to the creation of a strong sense of place/identity.</i> 5. <i>To ensure that development occurs in accordance with the Structure Plan.</i> 6. <i>To ensure the location of open spaces and alignment of streets reinforces key views and vistas.</i> 	Combination of District Plan rules, guidelines and consent notices on titles.	<p>As discussed above, the Structure Plan ensures that the village develops in a comprehensive manner, with different densities and uses located in a manner that respects the landscape, and achieves urban design principles.</p> <p>While district plan rules can be used to control heights and densities, they can not in themselves necessarily achieve good design. Therefore, it is necessary to both impose rules, and provide guidelines which can assist in their interpretation.</p> <p>Appropriate design of buildings within the site is extremely important if the vision is to be achieved. Given this importance, it is proposed that prior to construction, every building must be approved by a Design Review Board. The Review Board would comprise representatives of the Council and the landowner, in addition to a landscape architect, architect and urban designer. Given the expertise provided by such a Board, and the ability to provide them with a suite of guidelines with which to assess each building, this approach is considered more effective than requiring resource consents. It is also more cost and time efficient and provides for greater flexibility in process.</p> <p>Given the importance of retaining a compact urban form, and avoiding sprawl, it is necessary to impose a strong edge to the development. This is best achieved through District Plan rules.</p> <p>By imposing a Structure Plan that has been designed based on the form of the landscape, it</p>

		<p>7. <i>Buildings and structures are designed and located in such a manner that they:</i></p> <ul style="list-style-type: none"> - <i>Positively address the street and public places in order to contribute to neighborhood amenity values including pedestrian accessibility and safety, and streetscape values such as diversity and attractiveness;</i> - <i>Optimise solar access;</i> - <i>Promote social interaction through placing buildings on site so that they front public open space;</i> - <i>Retain human scale;</i> - <i>Provide for efficient and comprehensive infrastructural servicing.</i> <p>8. <i>Within the Village Precinct, encourage building design that can adapt to a range of activity mixes, and provide effectively for the provision of commercial activities at ground level.</i></p> <p>9. <i>To ensure that parking areas and garaging do not dominate the street, and within the Village Precinct, to encourage the provision of underground car parking where feasible.</i></p> <p>10. <i>To promote higher density development and commercial activities within Activity Areas 1 and 2, and reduce density towards the perimeter of the Zone.</i></p> <p>11. <i>Activities within Activity Areas 3 and 4 should be in keeping with residential intensity and character, and should not create nuisance effects such as noise, odour or obtrusive lighting.</i></p>		<p>can be ensured that as development proceeds key views to the surrounding landscape can be maintained.</p> <p>The purpose of requiring a minimum stud height in Area 1 is to enable a range of uses at ground floor level. A rule in the District Plan is clear and effective in ensuring that this occurs.</p> <p>District Plan rules can be imposed that require garaging to be set back from the front façade of the house. By requiring that a minimum number of car parks be provided for each dwelling we can help reduce demand for on-street parking. Without rules adequate on-site parking will not be provided, and garages will be located in the most efficient location. Therefore it is appropriate that this Policy is achieved through District Plan rules.</p> <p>Promoting higher density development within Areas 1 and 2 can be achieved through enabling a smaller minimum allotment size.</p> <p>Restrictions on activities such as visitor accommodation and commercial activities within Areas 3 and 4 ensure that any potential adverse effects from these activities are managed effectively.</p>
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ECOLOGICAL VALUES

The Council's objective for the Plan Change in terms of ecological values is:

Ecological values
To enhance the ecological values of the Mount Cardrona site

KEY FINDINGS OF THE ECOLOGICAL ASSESSMENT

The Ecological Assessment (Appendix 4) makes the following key findings:

- There is no indigenous vegetation or indigenous flora of significance within the site.
- There are opportunities to enhance ecological values across the escarpment face, and within the Homestead Gully.

The ecological assessment identified a list of tree species that would be appropriate for the site, given the dry, cold climate.

PROPOSED ISSUE, OBJECTIVES AND POLICIES AND METHODS

ISSUE	OBJECTIVES	POLICIES	METHODS	APPROPRIATENESS
Farming and gold mining activities have resulted in a reduction of the natural ecosystem values and endemic species within the environment of the MCS, and there is potential to improve this.	To improve ecological values where possible within the Zone.	<ol style="list-style-type: none"> 1. <i>To identify suitable areas for the protection and enhancement of ecosystems, with a focus on the natural character and ecological values of the water courses within the Zone.</i> 2. <i>To encourage the integration of public and private open space areas with nature conservation values within the Zone.</i> 3. <i>To encourage riparian planting within the Homestead Gully and planting across the eastern escarpment face that enhances ecological and amenity values.</i> 4. <i>To encourage the use of endemic species in any landscaping plans where their use is practical and complementary to the enhancement of the ecological values of the site and its surrounds.</i> 	<p>Open Space and Heritage Zoning</p> <p>Landscape plan required as part of subdivision consent.</p> <p>Guidelines</p>	<p>Given the lack of ecological values associated with the site, there is no need for strong rules controlling vegetation clearance or rehabilitation. Instead, it is considered more appropriate to encourage ecological enhancement through policy provisions and landscape guidelines.</p> <p>Through imposing open space zoning on areas of potential ecological enhancement, these areas can be protected from future development, and their improvement encouraged.</p> <p>Requiring a landscaping plan as part of the subdivision consent ensures that appropriate species are used.</p> <p>A list of species is provided in the Design Guidelines. Because landscaping must be approved by the Design Review Board any deviation from this list can be managed. This ensures that only those species suitable to the site are used.</p>

HERITAGE VALUES

The Council’s objective for the Plan Change in terms of heritage is:

Heritage Values

To recognise and enhance heritage values that exist within the zone.

KEY FINDINGS OF THE ARCHAEOLOGICAL ASSESSMENT

The Archaeological Assessment (Appendix 3) provided a comprehensive history of the site and its surrounds, identifying a history of pastoral grazing and gold mining. The Report identified that while there are some interesting features on the site, such as the site of an old chaff cutter, and sod hut remains, the most significant are the two water races, Walter Littles and Cardrona, which traverse the site above 620masl.

The Report recommends the protection of the water races, and recognition of the other historical values associated with the site.

PROPOSED ISSUES, OBJECTIVES, POLICIES AND METHODS

ISSUE	OBJECTIVES	POLICIES	METHODS	APPROPRIATENESS
<p>A rich cultural heritage exists within the Cardrona Valley associated with gold mining and pastoral farming. This needs to be recognised and provided for.</p>			<p>Open Space and Heritage zoning</p> <p>Design Guidelines</p>	<p>The heritage and open space zoning imposes restrictions on land use in order to protect the heritage values associated with these areas of the site. In particular, the water races, and the open pastoral character are protected.</p> <p>The design guidelines promote the use of natural materials and design forms reminiscent of Cardrona's past. While the guidelines are non-statutory, the requirement that each building is approved by the Design Review Board is a legal requirement, and as such ensures that building design is appropriate, and achieves the policies.</p>

INFRASTRUCTURE

The Council's objectives for the Plan Change with respect to the provision of infrastructure are:

<p>Infrastructure <i>To ensure that infrastructure is provided in an environmentally acceptable manner, and, where practicable, is coordinated with the existing Cardrona village.</i> <i>To achieve the principles of SNZ HB44:2001</i></p>

KEY FINDINGS OF THE INFRASTRUCTURE REPORT

The Infrastructure Report (Appendix 9) identifies that the Plan Change can be adequately serviced. It then recommends techniques to increase the sustainability of the development. These include restricting water use so that only rainwater or greywater can be used for irrigation, encouraging water saving techniques, and requiring initiatives such as dual flush toilets. The Infrastructure report identifies the most appropriate means of wastewater disposal as a communal system located alongside the Cardrona Valley Road. This system would dispose onto land, and use

a cut and carry operation, thus removing nitrates from the land. Stormwater management can be provided effectively in the Plan Change design, with the ability to use grass swales and on-site ponds to ensure that post development stormwater flows are no greater than pre-development.

In addition, a Traffic Assessment has been completed (Appendix 10). This identifies the most appropriate access point to the Plan Change, and finds that only one access from the Cardrona Valley Road is appropriate. It makes recommendations for the provision of an internal road network that are consistent with findings of the Urban Design Report. It also finds that by providing accommodation in this location vehicle trips between the Cardrona ski fields and Wanaka and Queenstown will be reduced.

In addition, the Council has commissioned investigations into the feasibility of integrated service provision for the Cardrona Valley. While it is acknowledged that such integration is an objective of the Council's for this Plan Change, it can be achieved through either the Plan Change or implementation of the existing zone, and therefore is not considered further in this assessment.

Both of these reports have assisted in the formulation of the following issues, objectives, policies and methods.

PROPOSED ISSUES, OBJECTIVES, POLICIES AND METHODS

ISSUE	OBJECTIVES	POLICIES	METHODS	APPROPRIATENESS
Development of the Zone will require the provision of services including roading access, water supply, sewage disposal, stormwater, telecommunications and electricity supply. There is an opportunity to provide these services in a sustainable manner.	Long term environmental sustainability of the Village and its surrounds.	<p>Roading</p> <ol style="list-style-type: none"> 1. <i>To provide safe and efficient road access to the Zone from the Cardrona Valley Road, and the Cardrona ski field access road.</i> 2. <i>To establish a distinctly rural character for streets throughout the Zone that reflects the rural character of the surrounding environment. This includes the avoidance of kerb and channelling and obtrusive lighting.</i> 3. <i>To provide a high level of connectivity throughout the Zone by providing well connected vehicle, pedestrian, bridle and cycling networks.</i> 4. <i>To design local streets to ensure safe, low speed traffic environments.</i> 	<p>Structure Plan.</p> <p>District Plan Rules-subdivision controls and assessment matters</p> <p>Design Guidelines</p>	<p>While the majority of roads shown on the Structure Plan are indicative, the Plan identifies the key road linkages that must be adhered to. This ensures that the access identified within the Traffic Report is used, ensuring safety into the future. The road layout shown in the Structure Plan has been designed to achieve high levels of connectivity. Following detailed survey work the exact location of roads and pedestrian linkages may change slightly at the time of subdivision, and therefore it is appropriate that the Structure Plan provides indicative road layouts, and the associated rules require that development is 'in general accordance with the Structure Plan'.</p> <p>All subdivision within the Zone is a controlled activity, and must meet the Standards imposed by the District Council. However, in order to provide a more sustainable development, with a non-urban character, and high level of permeability, assessment matters are needed</p>

		<p>5. <i>To encourage the use of rear lane access to residential allotments and the provision of 'farm yard car parks' that provide access and car parking to a number of residential units.</i></p> <p>6. <i>To encourage the provision of a comprehensive underground car parking facility within the Village Precinct.</i></p> <p>Water management</p> <p>8. <i>To encourage sustainable water use practices, including:</i></p> <ul style="list-style-type: none"> - <i>the collection and use of roof water,</i> - <i>the recycling and use of grey water, and</i> - <i>the avoidance of using potable water for irrigation purposes.</i> <p>9. <i>As far as practicable, to retain and where possible enhance the natural water courses and wetlands within the Zone.</i></p> <p>10. <i>To incorporate stormwater and sediment management options that:</i></p> <ul style="list-style-type: none"> - <i>protect water quality;</i> - <i>ensure that the rate of run-off throughout the development cycle is similar to the pre-development levels;</i> - <i>integrates stormwater management runoff with the maintenance and enhancement of natural waterways, heritage values, provision of recreational opportunities and pedestrian and cycle access.</i> 	<p>that guide the developer and Council towards adopting a less 'engineered' design.</p> <p>Rear lane access is encouraged through implementation of the Structure Plan and Design Guides.</p> <p>The Design Guidelines provide illustrations of the anticipated character of the streetscape. This can be used by designers when designing the subdivision. It is proposed that in addition to the resource consent process, the subdivision design is reviewed by the Design Review Board to ensure that it is in keeping with the vision for the Plan Change. Creating good design can not be achieved by a suite of rules alone, and therefore it is considered most appropriate to provide guidance.</p> <p>In order to reduce water use a range of methods is required, including:</p> <ul style="list-style-type: none"> - Restrictive covenants that restrict the use of water for irrigation purposes - Requiring that each dwelling has a water meter, and can only use a certain amount of water per day. - Encouraging reduced water use through providing information to future landowners. <p>These methods need to be used together; while significant reductions in water use can be achieved through imposing cost implications for high water use and imposing restrictions, education is also needed, and can have a significant positive effect.</p> <p>Water courses can be maintained as far as possible through subdivision design. This is controlled by the Structure Plan which has been derived from detailed analysis of the site's natural characteristics.</p>
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RECREATION

The Council's objective for the Plan Change with respect to recreation is:

To provide for and encourage recreational opportunities within the zone and in connection with other development in the vicinity

While no report was commissioned on potential recreation values, findings of consultation have been used to identify the recreational resources that are desired by the Cardrona Community. In summary these are:

- Sports grounds and facilities
- Walkways
- Education facilities

The following issue, objectives, policies and methods have been derived for the purposes of achieving the Council's objective, and enabling the provision of key recreational resources as identified by the community.

PROPOSED ISSUES, OBJECTIVES, POLICIES AND METHODS

ISSUE	OBJECTIVES	POLICIES	METHODS	APPROPRIATENESS
<p>There are significant recreational activities already being undertaken within the Cardrona Valley. It is anticipated that these activities will grow in diversity as a result of an increase in the local population. Such growth could be complemented by the Zone.</p>	<p>To provide for and encourage recreational opportunities and activities within the Zone and linking with recreational activities throughout the Cardrona Valley</p>	<ol style="list-style-type: none"> 1. <i>To provide a trail network throughout the Zone that has the ability to connect to existing and future trails within the Cardrona Valley and the surrounding area.</i> 2. <i>To provide open space for active and passive recreational activities throughout the Zone.</i> 3. <i>To integrate well managed open space areas with valuable amenity into the Zone and to maximise their use.</i> 4. <i>Activities, buildings and structures should enhance passive and active recreation activities, and should be integrated with the surrounding public access linkages.</i> 5. <i>To restrict residential and commercial activities within the Heritage and Open Space Areas to ensure that they are available for passive and active recreation.</i> 	<p>Structure plan that identifies key walkway linkages</p> <p>District Plan rules requiring provision of walkway linkages prior to development commencing.</p> <p>Identification of open space zones with provision for public access.</p> <p>Identification of an education precinct.</p>	<p>Given the importance of providing a trail network within the Zone, and connection to the existing Village, it is appropriate to require the identification and provision of these key linkages at the outset of the development through District Plan rules.</p> <p>The identification of open space zones that provide public access ensures that these areas will be kept free of buildings into the future, and will be available to the community through the use of access easements established at the time of subdivision.</p> <p>It is proposed that an education and community precinct is identified within the Zone. If, after 10 years, it is shown that there is no demand for education facilities (which requires at least 150 students) this area can be transferred to residential development.</p> <p>It is noted that the exact location and size of parks and reserves to be vested in Council will be identified at the time of subdivision.</p>

SUSTAINABLE MANAGEMENT

As identified above, when considering the provision of infrastructure for the Plan Change, the Council identified the following objective:

To achieve the principles of SNZ HB44:2001

Each of the technical reports received recognises the importance of achieving sustainable management within the Mount Cardrona Station Zone, and building on these reports, there are many facets of the Plan Change that are proposed for the purposes of achieving sustainable management.

However, in order to understand an objective of 'sustainable management', we need to define what it means in the context of this Plan Change. It is therefore proposed that the above objective is built on further to define the meaning of sustainable management in the context of Mount Cardrona Station. The following table identifies the issue, objectives, and policies, and the methods proposed to achieve them. In many cases these are provided for through the objectives and policies identified above under issues such as landscape, urban design and infrastructure. Therefore, this table should be read in conjunction with those preceding, but provides a general summary of the most appropriate means of achieving sustainable management within the Mount Cardrona Station Special Zone.

PROPOSED ISSUES, OBJECTIVES, POLICIES AND METHODS

ISSUE	OBJECTIVES	POLICIES	METHODS	APPROPRIATENESS
In order to achieve the objective of sustainable management, there is a need to understand what the term means for the MCS.	The Zone provides a community that minimises its effects on the environment and provides for the social and economic wellbeing of the people living within.	<p><i>Sustainable management in the context of the Zone is made up of the following components:</i></p> <p><i>Ecological sustainability</i> <i>To encourage the planting of species that are suited to the climate and landscape, needing little maintenance. Where possible, encourage the planting of species that are indigenous to the area so that they attract indigenous flora and reflect the past ecological structure of the Valley.</i></p> <p><i>Social and economic sustainability</i> <i>To establish a Village that</i></p>	<p>District Plan rules controlling location, bulk and form of buildings and restricting certain activities.</p> <p>Design Guidelines providing guidance on how sustainable practices can be achieved.</p> <p>Restrictive land covenants which require certain levels of insulation and building design approval.</p>	<p>Achieving the principles of sustainable management can best be achieved through adopting a range of methods.</p> <p>District Plan rules are imposed that ensure buildings will be located and designed in a manner that achieves optimum solar gain, and does not detract from the surrounding landscape values.</p> <p>There are also some controls that by necessity have to sit outside the District Plan because of their specificity and complexity; for instance, controls on insulation. It is considered most appropriate that these are provided as restrictive covenants on each certificate of title. They are therefore enforceable, but through a more efficient and effective process than what could be provided by the District Plan.</p>

		<p><i>provides for the health and wellbeing of residents and visitors, with design that is conducive to social interaction and the establishment of a sense of place. Through providing a mix of uses, recreational opportunities and housing opportunities, to provide an environment that appeals to a range of people..</i></p> <p><i>Heritage (historic value) sustainability</i> <i>To build on the heritage values that exist in the Cardrona Valley, and use the heritage values to assist in providing an identity for the Zone.</i></p> <p><i>Energy sustainability</i> <i>To ensure that the Zone is energy efficient; and the following is achieved:</i> <i>buildings are aligned to achieve maximum solar gain;</i> <i>where possible renewable energy sources are used, particularly solar heating.</i></p> <p><i>Sustainable infrastructure provision</i> <i>To ensure that infrastructure supporting the Village has minimal impacts on the natural functioning of the environment through:</i> <i>Minimising water takes and disposal of waste</i> <i>Designing infrastructure</i></p>		<p>In addition to rules and restrictions, guidelines are also needed to assist future landowners in their understanding of sustainable practices. The District Plan can provide the baseline, but for even better outcomes information and advocacy is needed.</p>
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