

Section

4

THE VILLAGE STRUCTURE PLAN

4.1 Village Structure Plan Vision

The vision for Junction Hill is a simple one. It is to:

...achieve a self-reliant cohesive village community by providing a public village core and expanding the diversity of dwelling types, settings and pricing while promoting and/or maintaining the qualities and character that are distinctive to the site and Junction Hill...

Imbedded in this vision is a positive and earnest desire by the applicant to “maintain the qualities that are distinctive to the site”. This means more than simply “amenity qualities” it goes to the cultural, scenic, physical, ecological and social “qualities” which are distinctive of the site and locality.

4.2 Aims of this Structure Plan

The aims of the Structure Plan are to:

- Provide a high quality and residential environment of a scale and character compatible with the location;
- Promote the provision of appropriately located and functional public open space;
- Improve the connectivity and access between the subject site and the existing village areas;
- Protect and conserves culturally sensitive values;
- Protect, conserves and manage on-site native vegetation;
- Manage inputs, in particular water quality;
- Promote environmentally sustainable design; and
- Implement the strategy for Junction Hill identified in the Clarence Valley Residential Strategy.

4.3 Guiding Principles

The adopted Structure Plan will need to have some degree of flexibility to allow for circumstances to change over time. However the following “Guiding Principles”, defined in relation to each of the Structure Plan themes, will hold over time and will provide a practical benchmark for Development Application assessments.

- Incorporate design elements that reflect the riparian and rural themes of the site;
- Encourage and facilitate a “North Coast – rural” architectural form;
- Incorporate landscape elements and planting for each of the site’s residential precincts to establish strong landscape characters and a sense of place, particularly a sense of been part of the vast valley beyond the site;
- The residential types are to be distributed in response to the unique characteristics of the Junction Hill site, particularly the topography, available views and juxtaposition to the existing village area;
- Promote a high level of residential amenity and housing choice;
- Allotments to be arranged to promote solar benefits. House siting and design must reflect the climate of the region;
- Integrate development with local and regional community needs as well as infrastructure and cultural considerations;
- Ensure that any items of Aboriginal cultural significance are protected;
- Protect all riparian vegetation and include riparian areas in public reserves;
- Protect any threatened flora and fauna species;
- Incorporate water conservation re-use principles of WSUD;
- Ensure no net increase in pollutant load leaving the site;
- Provide for road access and circulation which recognises and reinforces the existing Junction Hill street hierarchy;
- Provide for pedestrian access which facilitates ready movement within the site, provides strong links to recreational areas and readily joins to the existing Junction Hill pedestrian network;
- Proceed to release a residential subdivision in an orderly way that best suits utility installation, marketing and site environmental management.

- To carryout development in a manner which is consistent with *Planning for Bushfire Protection 2006* (or revised guidelines);
- Ensure that water, sewerage, electricity and communications utility services are available to meet the needs of the development at the time of release of individual stages;
- To provide each park or reserve with its own character but linked in an overall design context and in a pedestrian network;
- Develop the public domain at the same time (or a little before the release of subdivisional land in the immediate vicinity);
- Provide for safe and comfortable access for the likely user groups who will frequent parks in the development;
- Ensure that the character of the public domain provides a central hub and contributes to the village community and assists in achieving the primary vision of a "self-reliant cohesive village community ...";
- Provide for a range of recreational experiences;
- Make ESD best practice a hallmark of the Junction Hill village project;
- Ensure that a precautionary approach is adopted in relation to all risks; and
- Ensure conservation and enhancement of biological diversity and ecological integrity.

4.4 Scale of Development & Integration with Existing Landscape



The Junction Hill Structure Plan is a product of comprehensive site analysis detailed in Section 3 and consideration of statutory parameters. The site analysis work has identified that the land is suitable in terms of ground conditions, grade and other physical aspects for housing purposes. This site analysis has also identified some limited constraints in terms of soil contamination from past land uses, preservation of a possible Aboriginal archaeological site and preservation and enhancement of existing flora and fauna values.

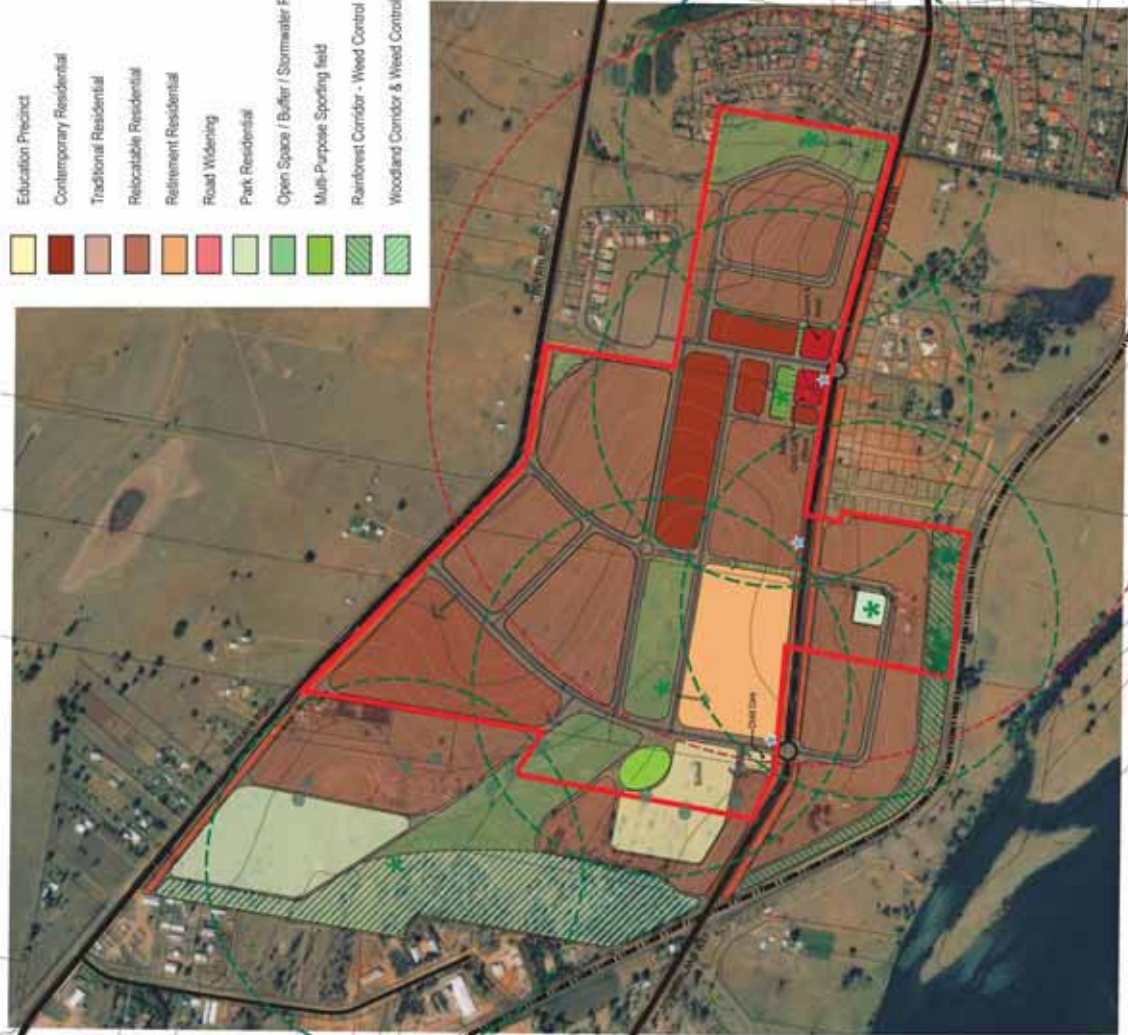
Accordingly, development as envisaged by the Structure Plan will have little impact on the landscape or scenic quality of the locality. Views from the site, particularly the elevated parts of the land have been retained.

Plan 4.1 is an illustration of a layout prepared adopting the guiding principles described for each of the Structure Plan themes and having regard to the statutory and policy framework.



- ### Legend
- Land owned by M & R Dougherty
 - Village Core
 - Education Precinct
 - Contemporary Residential
 - Traditional Residential
 - Relocatable Residential
 - Retirement Residential
 - Road Widening
 - Park Residential
 - Open Space / Buffer / Stormwater Retention
 - Multi-Purpose Sporting field
 - Rainforest Corridor - Weed Control & Plantings
 - Woodland Corridor & Weed Control
 - Pedestrian Link
 - Active Recreation
 - 800m Catchment
 - 400m catchment
 - Existing Arterial Road
 - Proposed Road
 - North Coast Railway
 - Drainage Culvert
 - Old Growth Vegetation*
 - Old Growth Trees*
 - Remnant Rainforest Vegetation*

* Vegetation analysis provided by Peter Parker Environmental Consultants Pty Ltd.



Development Statistics

Total Site Area	155.17 ha
Road Widening	6.6 ha
Total Open Space (designated stormwater and lot-to-lot)	35.321 ha
Major Roads (internal road network are not included)	11.56 ha
Total NETT Area	101.689 ha
Total Village Core	0.9 ha
Total Educational facilities	5.52 ha
Total Traditional Development @ 9 lots / ha (600m ² lots)	64.179 ha / 577 lots
Total Contemporary Development @ 12 lots/ha (600m ² lots)	6.32 ha / 75 lots
Total Relocatable Development @ 20 lots/ha (300m ² lots)	9.63 ha / 192 lots
Total Retirement Development @ 20 lots/ha (300m ² lots)	7.25 ha / 145 lots
Total Park Residential Development @ 2 lots/ha (4000m ² lots)	7.89 ha / 15 lots
Total No. of lots	1004 lots

Assumptions:
Development extent is based on A Fletcher and Ass. Survey Drawing No. 7935/01.
Detailed vegetation survey is required.

The yields outlined above are mathematically calculated and may vary in detailed design + or - 10%.

The contents of this plan are conceptual only for discussion purposes. All areas and dimensions are approximate and subject to relevant studies, surveying engineering and council approval.

4.5 Structure Plan Elements

The significant elements of the Structure Plan are the provisions of a village core for Junction Hill and the provision of a diversity of housing types with an integrated open space/ street/ pedestrian network. The village core will have a total area of 9000m². The village core will have a centrally located Summerland Way frontage but will be accessed from the internal road system. The village core will include retailing; a community use building site, village green and space for some other village compatible commercial uses.

A diversity of residential types will be provided for as follows:

Table 4.1 Proposed Types of Residential Development

Residential type	Number of lots	Area (ha)
Traditional residential	577	64.179
Contemporary residential	75	6.23
Relocatable residential	192	9.63
Retirement residential	145	7.25
Park residential	15	7.89
TOTAL RESIDENTIAL	1004	95.179

Provision has been made for a child care centre and a primary school (if consider necessary) on the corner of Summerland Way and the link road.

A corridor of open space and rural residential development has been provided along the northern boundary of the site to provide a buffer to the adjoining industrial area. An extensive open space network has been provided throughout the development. This includes a sporting field adjacent to the future primary school.



An open space corridor has been provided along the northern boundary of the existing village area. This will provide an opportunity to reinforce the open space provided in the earlier subdivision and provide opportunities to reinforce the remnants of the woodland vegetation. An open space network has also been provided to protect the drainage areas to the north of the site with the spine of open space continuing into the centre of the site. Open space corridor buffers have been provided along the North Coast Railway Line and Summerland Way consistent with the remainder of the village. These open space networks will provide extensive opportunities to expand the existing pedestrian/bicycle network.

The extension to the Junction Hill village will include a hierarchal streetscape layout that defines key locations and accesses. The

future connector road between the Summerland Way and Trenayr Road and the link to the village core will be defined as significant routes within the site.

Minor streets that provide access to a limited number of residences will be treated to accommodate local traffic and to encourage pedestrian movement. Streets will have a strong visual character, adopt WSUD principles, incorporate appropriate indigenous plant species, provide for and encourage pedestrian movement and contribute to the overall “character” of the site. The street network will be permeable, minimise cul-de-sacs and avoid a ‘spaghetti-type’ subdivision pattern. Streets will be orientated to maximise views and connections to public places, parks, and the hinterland. Bus stops and shelters will be incorporated to provide for the use of public transport.

A number of experts were engaged to analysis the elements of the Structure Plan in terms of land use needs, likely noise impacts, engineering feasibility and traffic and transport impacts. These reports are included in **Appendices E to H** and are summarised in Sections 4.7 to 4.10 below.

4.6 Estimate of Village Population

Core Economics concluded the following in regard to the ultimate population of the village and surrounding areas:

At capacity, the Junction Hill Village is expected to contain approximately 1,683 households with a population of approximately 4,237 people at capacity. Based on the current community profile, it is expected that Junction Hill residents will consist largely of high earning, working couples with children.

Combined with the additional Outer Catchment dwellings (996) and population (2,493) by 2016, the areas of influence are estimated to comprise approximately 6,766 people. In comparison to Grafton which is expected to experience a decline in resident numbers, greater population growth is anticipated for the areas of influence given they are designated future growth areas.

4.7 Land Use Need Review

A land use needs analysis was completed by Core Economics on 3 August 2007. Their report is included in **Appendix E**.

Core Economics noted the following in regard to the existing infrastructure servicing Junction Hill:

Junction Hill and surrounding rural residents are serviced by:

- *Four supermarket-anchored centres within the greater Grafton area;*
- *A limited scale and mix of local convenience and food and beverage services in Junction Hill and Copmanhurst;*

- *Education facilities (child care, primary, secondary and most tertiary) within Grafton or other regional centres;*

Consequently, travel to Grafton is generally required for residents situated with the areas of influence to fulfil a large range of their retail and service needs, with only a small scale and mix of proximate convenience retail, service and educational facilities available for residents to access.

Core Economics have identified the following land use needs for the future population which would be generated from implementation of the Structure Plan:

- *Based upon the site's location, the demographic profile of Junction Hill residents and the generally limited level of infrastructure catering to surrounding rural residents, potential demand exists for a convenience centre within the subject site of up to 1,600 Sq M GFA, consisting of a mixture of uses (impulse/personal/service retail, food and beverage and other professional services), with the opportunity for tavern facilities. This could increase to 3,000 Sq M if the existing uses are relocated.*
- *To potentially accommodate such a centre, allowances should be made for a site in the order of 4,000 Sq M (or 7,500 Sq M for a consolidated centre) (based on 40% site coverage). While potential demand may exist in the future for a centre of this scale, staging of the development is recommended. Alternate uses (such as residential) should be strongly considered for the site in the event of less retail space being required. Planning consideration must be given to the fractured nature of both new and existing convenience centres, and also within the new centre itself where the Village Core is separated into two corners. Centre consolidation should be considered to ensure optimal centre efficacy and community benefit.*
- *A small amount of space (1,000 Sq M) should also be planned for service professionals. This space is not included in the above allocation and could be located in a second level.*
- *Based upon the anticipated size and demographic profile of the community (which consists of a large share of high earning working couples with dependent children), allowances should also be made in planning for the addition of one to possibly two child care centres depending on demonstrated demand, along with increased fuel service facilities.*

The Village Core represented in the Structure Plan has been subsequently adjusted as recommend above.

Core Economics further noted that by *allowing for the previous infrastructure and giving consideration to the outlined planning and operational issues, the transition of Junction Hill towards a more self-reliant and cohesive village is likely to be encouraged.*

4.8 Environmental Noise Impact Assessment

A preliminary Environmental Noise Impact Assessment was completed by Carter Rytenskild Group on 16 July 2007. Their report is included in **Appendix F**.

Overall, the proposed development will generally be within acceptable levels of the adopted criterion, subject to the acoustic treatments recommended in Section 6 being integrated into the design and construction of the development.

Carter Rytenskild notes that this is a preliminary assessment of the proposed Structure Plan and as such additional noise assessments are required prior to the granting of development consent.

4.9 Engineering Feasibility

A preliminary engineering assessment of the Structure Plan was completed by CARDNO on 30 May 2007. Their report is included in **Appendix G**.

CARDNO has concluded from their preliminary engineering assessment that:



- Roads would need to conform to local guidelines but no major constraints are foreseen,
- No major earthworks are likely,
- Regional flooding should not have a major influence on the development,
- The development should be adequately serviced with the existing infrastructure,
- Provision of water reticulation to the development should not be an issue with the existing infrastructure, and
- Provision of electrical and Telstra services should be achievable with existing infrastructure

4.10 Traffic and Transport Planning Assessment

A traffic and transport planning assessment was completed by Carter Rytenskild Group. Their report is included in **Appendix H**.

Carter Rytenskild Group has concluded in their report that:

- The Summerland Way has adequate traffic carrying capacity to accommodate the proposed development;
- Trenayr Road will need to be upgraded between the proposed development and the Summerland Way to Collector Road standard;
- Pedestrian refuge islands will need to be provided on the Summerland Way to link existing residents located on the

western side of the road to the proposed community (incl. school) and commercial facilities;

- The existing 50 km/hr speed zone on the Summerland Way and Trenayr Road, through Junction Hill, will need to be extended to approximately 100 metres north of the northern primary intersection (roundabout on Summerland Way);
- The proposed Structure Plan allows a school or public bus to travel through the site and circulate between the Summerland Way and Trenayr Road;
- All residents of the proposed development will be located within 400 metres of a bus route; and
- The resultant increase in population will allow the provision of public transport between Junction Hill and Grafton to be more economically sustainable.

4.11 Community Engagement



A Community Engagement Day in regard to the draft Structure Plan was held on site at Junction Hill. The aims of the Community Engagement Day were to ensure;

- Residents were fully aware of the proposals for future development of Junction Hill,
- That the development proposals addressed the “real” issues,
- That the development proposals could be implemented and were sustainable, and
- That residents remained engaged in the future decision making process for the development of Junction Hill.

The community was made aware of the Community Engagement Day via newspaper articles and notices and a household letter drop. The letter drop included a double sided A3 sized brochure which provided an extract of the draft Structure Plan.

A tent was erected at the end of Angus Drive, within the area of the new subdivision, from 10am to 3pm on Saturday 4 August 2007. Copies of the draft Structure Plan and various background analysis maps were displayed in the tent together with copies of the various expert reports. Town Planners Steve Connelly and Chris Pratt, together with the proponent Mike Dougherty, were available on site to answer questions and take submissions from some 200 people who attended the Community Engagement Day.

Almost all the responses to the proposed Structure Plan, by those that attended the Community Engagement Day, were positive. Mostly people were appreciative of the proposed commercial centre, including the opportunities for local

professionals (e.g. accountants, architects) to establish their office at the new Junction Hill commercial centre. Other positive comments related to the provision of child care centres, the retirement residential area, the school and the relocatable residential area so as to provide for full life cycle opportunities in Junction Hill, if so desired by residents.

The following table provides a summary of the specific submissions received and the project team’s response and/or proposed action in relation to those submissions.

Table 4.2 Community Submissions and Comments

Submissions and Comments
<p>Report states that the existing 50 Km / Hr speed zone on the Summerland Way <i>will need to be extended to approximately 100 metres north of the northern primary intersection (roundabout)</i>. Will the 50km/hr speed limit need to be similarly moved on Trenayr Road?</p> <p>Comment: Traffic expert Luke Rytenskiid has provided the following response:</p> <p><i>Whilst Trenayr Road will not provide direct access to residential allotments, it would be appropriate to reduce the speed limit to 50 km/hr between the proposed new intersection and the Summerland Way. This section of Trenayr Road will be used for local access between the development and the Summerland Way, and will also function as a school bus route. Speed limit advisory signs should be placed on Trenayr Road, north of the proposed new intersection, so to advise motorists that they are approaching the village of Junction Hill.</i></p>
<p>A couple that owned the house on Trenayr Road, opposite the entry to Martin Cres, reported that the stormwater from Trenayr Road is diverted across their land. They were concerned about the stormwater from the catchment just to the North of Martin Crescent discharging into this system and thereby exacerbating their stormwater “problems”. Their question was; where would the stormwater from the “Stormwater Quality Zone” shown on the “Stormwater Drainage Layout Plan” discharge and would there be any stormwater works carried out in Trenayr Road that would alleviate their stormwater problem.</p> <p>Comment: Civil Engineers from Cardino have advised as follows –</p> <p><i>From aerial photographs we have identified the assumed property and drainage path and culvert. We do not have any further detail than that viewed on the aerial photograph; however it does seem obvious that a culvert crosses Trenayr Road approximately 100m to the north of the Martin Crescent access to Trenayr Road. It may also be assumed that the catchment indicated directly to the north of Martin Crescent contributes run-off to this culvert, but this is only an assumption as no ground levels are currently available south of this catchment to confirm this assumption. It is our present understanding that this culvert will remain untouched unless specifically requested by local authorities for this to be upgraded as part of the proposed developments development conditions.</i></p>

Submissions and Comments

The issue of detaining increased run-off generated due to the development is discussed in section 2.4.5 in our Preliminary Engineering Advice dated 30 May 2007. It is standard engineering practice to ensure that no increase in the peak flow generated after development than that which is generated in the existing condition. This is generally done through a detention system located on the development site. The sizing and position of this system is normally finalized at development application and/or Construction Certificate phase. It will be necessary to size this detention system and get it approved by the local authorities to ensure downstream properties are not adversely affected by the proposed development.

Therefore in answer to residents query, the normal practice is that the detention discharge from the site would continue to discharge where it is currently discharging, however flows would be detained on site such that there is no nett increase to existing peak flows for events up to the Q100 event as a result of the proposed development.

Subsequent to the Community Engagement Day a submission was received from a resident of Junction Hill. He raises the issue of noise emanating from the Retail area and Tavern. He made the following statement in his submission:

....I'm opposed to the establishment of a retail area and tavern within the development. A retail and tavern precinct was not foreshadowed in existing or previous plans for the area and will destroy the existing residential amenity of the area. The normal activities and operations of these businesses will have a significant noise and social impact on surrounding residents.

Such concerns about noise from the Tavern were also raised by residents on the day, some of whom said that they had recently relocated into the new subdivision across the road to "get away from Pubs in Grafton".

Comment: Noise expert Jay Carter from Carter Rytenskild Group has provided the following response to these submissions -

As the project integrates both residential and commercial uses, there is opportunity to effectively control potential noise impacts right from the initial planning phase, which is often not possible when developing "infill" sites, where a Developer does not have control over the design and layout of both dwellings and commercial premises.

Noise sources associated with retail facilities are as follows:

- *Usage of carpark (e.g. car door closure, car movements);*
- *Goods delivery (e.g. trucks entering site and accessing loading dock, truck unloading);*
- *Mechanical plant (e.g. air conditioners, refrigeration compressors, exhaust fans).*

Legislation applicable to control of noise is pursuant to the Protection of the Environment Act, and the New South Wales EPA "Industrial Noise Policy".

Submissions and Comments
<p><i>Noise sources associated with Taverns and Hotels are as follows:</i></p> <ul style="list-style-type: none"> ○ <i>Usage of carpark (e.g. car door closure, car movements);</i> ○ <i>Goods delivery (e.g. trucks entering site and accessing loading dock, truck unloading);</i> ○ <i>Bottle disposal;</i> ○ <i>Patrons talking;</i> ○ <i>Amplified entertainment;</i> ○ <i>Mechanical plant (e.g. air conditioners, refrigeration compressors, exhaust fans).</i> <p><i>Legislation applicable to control of noise is pursuant to the Protection of the Environment Act, the Department of Gaming & Racing’s Liquor Administration Board regulations, and the New South Wales EPA “Industrial Noise Policy”.</i></p> <p><i>Noise control for the Retail and Tavern components can be applied through management practice, and through physical control. Physical controls include the following:</i></p> <ul style="list-style-type: none"> ○ <i>Location of noise generating sources inside buildings that are appropriately sound proofed;</i> ○ <i>Location of noise generating sources inside semi-enclosures that are appropriately sound rated (this may include selection of materials and requirements for sound absorbing materials within enclosures) for mechanical plant;</i> ○ <i>Location and orientation of buildings to provide screening from activity areas to dwellings;</i> ○ <i>Construction of acoustic barriers to screen activity areas to dwellings;</i> ○ <i>Selection of low noise generating plant and equipment. Management principles are generally only recommended where the potential impacts of the noise under investigation are relatively low order, with higher order potential impacts requiring physical controls (see above).</i> <p><i>Management principles generally include:</i></p> <ul style="list-style-type: none"> ○ <i>Limitation to hours of goods delivery;</i> ○ <i>Limitation to hours of operation of the facility;</i> ○ <i>Training of Staff in quieter work practices (e.g. operating forklifts without excessive revving, or turning off trucks during goods unloading)</i>
<p>The submission that was received from a resident of Junction Hill subsequent to the Community Engagement Day also included the following statement:</p> <p><i>....there is no designated recreational park area on the western side of the Summerland Way. Whilst there are designated recreational park facilities on the eastern side of the Summerland Way, the road presents a major barrier to residents on the western side to access these park facilities. Open space does not substitute for public park as such areas are usually never maintained and are generally inaccessible to the public.</i></p>

Submissions and Comments

Comment: In response to this submission a 4000m² recreational park area has been provided on the western side of Summerland Way. The location of the park is complimentary to the existing open space catchments and provides additional recreation opportunity for local residents.