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PART 13 - PLANNING SCHEME POLICIES

Preliminary

The provisions in this part comprise the following planning scheme policies:

- (a) Parks and Recreational Facilities Planning Scheme Policy (**Section 13.2**)
- (c) Environmental Management Plans Planning Scheme Policy (**Section 13.3**);
- (f) Flooding and Inundation Planning Scheme Policy (**Section 13.4**);
- (g) Lake Awoonga Catchment Planning Scheme Policy (**Section 13.5**);
- (h) Landscaping Planning Scheme Policy (**Section 13.6**);
- (i) Lighting Nuisance Planning Scheme Policy (**Section 13.7**);
- (j) Master Plans Planning Scheme Policy (**Section 13.8**);
- (k) On-Site Effluent Disposal Planning Scheme Policy (**Section 13.9**);
- (l) Operational Works (Earthworks) Planning Scheme Policy (**Section 13.10**);
- (m) Soil Erosion and Sedimentation Controls Planning Scheme Policy (**Section 13.11**);
- (n) Reconfiguring a Lot Administration Planning Scheme Policy (**Section 13.12**);
- (o) Transport, Access and Services Planning Scheme Policy (**Section 13.13**)
- (p) Engineering Design and Infrastructure Standards Planning Scheme Policy. (**Section 13.14**)

13.2 Parks and Recreational Facilities Planning Scheme Policy

13.2.1 Purpose

The purpose of the Parks and Recreational Facilities Planning Scheme Policy is to provide applicants for development requiring the provision or inclusion of parkland areas with an understanding of Council's requirements in relation to the type and quality of public open space to be provided.

Council's vision is to provide public open space that in turn will provide for a range of active and passive recreational opportunities for the community whilst maintaining biodiversity and environmental protection values.

This policy does not apply to self assessable development.

13.2.2 Intent

- The community has a need for parkland for a range of recreational, amenity and open space purposes at the local, district and regional level. The intent of this Policy is to ensure that sufficient, conveniently located and suitable quality public parkland is provided to meet the recreational and amenity needs of the community.

The parkland is to be suitable for its intended use and provided with appropriate facilities, ranging from a basic provision of water for park maintenance and power and lighting for safety, to more developed parkland with play equipment, seating, shelter and other amenities. Furthermore it is intended that park facilities be provided in a coordinated manner to maximise the effectiveness of the open space network within the Shire.

13.2.3 The Role of Parkland

Parkland can take a wide range of forms including sports fields for clubs, parklands for walking, picnicking or informal games, semi-natural areas for nature based activities, town parks or squares for having lunch or to rest and interact, and neighbourhood parks with play equipment for children.

13.2.4 The Need for Parkland

The need for parkland rises from a variety of development activities:-

- new communities in developing areas need open space for playing fields, neighbourhood parks and informal recreation
- commercial areas need parks for casual use by staff, shoppers and visitors, as well as to beautify the commercial area
- some areas will undergo a degree of redevelopment to higher densities that will generate a need for upgrading of existing parkland or for additional parkland
- urban development and redevelopment for commercial and residential purposes increases pressure on the urban open spaces and creates a need for their redevelopment or refurbishment, as well as additional open spaces
- industrial areas need open space to provide a break in the industrial landscape for worker recreation and visitors to enjoy.
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13.2.5 Broad Goals for Parkland Provision

1. A variety of open space areas should be provided for active and passive use depending on the needs of a particular area. This includes local and district parks, sporting area and environmental reserves or other uses.
2. Parkland provision is based on contributing an area of developed parkland which overall averages:
 - for residential 10% of the site area
 - for rural residential 5% of the site area
 - for commercial 3% of the site area
 - for industrial 3% of the site area.
3. Land intended for parkland should be useable for its intended purpose and complement other open space areas and be reasonably accessible to local residents and other users, i.e. be suitable for the activities likely to be undertaken and capable of future development consistent with its proposed use.
4. The retention of natural vegetation and landscape features, such as natural watercourses or wooded hillsides or ridges is encouraged and incorporated into parkland design wherever possible.
5. Parkland should be of a shape that maximises its useability, e.g. a square or circular shape generally has the greatest use potential for a sports field, whereas a linear shape is suitable for a linkage.
6. Parkland should provide connectivity for walking and cycling, and complement any public transport facilities (refer “shaping up” by Queensland Transport).

13.2.6 Classification of Parkland

The following parkland types are provided for:-

- (a) Civic Precinct;
- (b) Local Park;
- (c) Local Park (Sporting);
- (d) District Park;
- (e) Regional Park;
- (f) Regional Park (Sporting);
- (g) Linear Park;
- (h) Demand Space; and
- (i) Special Recreation Facility

The policy provides general information relative to these classifications in later sections.

13.2.7 Overview

All parkland should be designed to meet the following criteria:-

- Half road construction for the required road frontages;
- The site should be graded to facilitate safe play, convenient and accessible circulation and appropriate water management regimes;
- The site is grassed to cover using robust turf or seed (established);
- Removal of unwanted trees;
- Vehicle barriers installed to road frontages;
- Planting and landscaping;
- Benches, furniture;
- Play equipment and soft fall;
- Pathways;
- Fencing to adjoining residential blocks to balance the need for casual surveillance of the parkland with the need for residential privacy (use of CPTED principles); and
- Water, sewerage and power supply connection points should be provided along the primary street frontage.

13.2.8 Preferred Size and Suitability of Parkland

The following Table sets out the preferred dimensions for parkland. Parkland is to be of a suitable size, shape and topography, and is to be

- reasonably level or as appropriate to the park's use;
- of reasonable dimensions to accommodate the intended uses, ;
- capable of being used for the purposes intended; and
- compatible with existing and likely future adjoining uses.

Park Type	Preferred Size Range	Minimum Width	Minimum Useable* Width	Preferred Road Frontage
Civic Precinct	>500 m ²	25 m	20 m	50% of boundary
Local Park	1-5 ha	100 m	50 m	50% of boundary
Local Park (Sporting)	2-10 ha	150 m	150 m	25% of boundary
District Park	5-20 ha	150m	50m	200m
Regional Park	20ha+	200m	50m	200m
Regional Park (Sporting)	10ha+	150m	150m	200m
Linear Park	-	10m to 80m depending upon function	6m to 20m, depending on function	6m to 60m at road crossings, depending upon function

Demand Space	2-20ha	100m	50m	200m
Special Recreation Facility	-	-	-	-

* Useable meaning able to be used for smooth, continuous, general “easy” access with cross falls no greater than 8%, and longitudinal slope preferably less than 8% but not greater than 18% (also avoiding riparian vegetation).

13.2.9 Access and Visibility of Parkland

Parkland is to be highly accessible to local communities.

In particular:

- local parkland should be within 500 m walk of any dwelling it is intended to service;
- parkland should not be separated from the catchment it is intended to serve by physical barriers such as heavily trafficked roads;
- parkland should provide for safe and convenient bike and pedestrian access;
- no significant earthworks associated with roadworks should encroach into parkland; and
- visibility from surrounding houses is important to provide for community surveillance of parkland, which assists in minimising problems relating to personal security.

Parkland should therefore:

- have a minimum of local road frontage as per the table in section 13.2.8 and
- contain vegetation features that do not block views to the main area, and in particular playgrounds.

13.2.10 Strategic Parks Network Plan

Council may prepare a strategic or structure plan for parkland, to ensure that appropriate spacing and linkages are planned into the parks network. This will assist in determining the extent and nature of parkland contribution which Council will be seeking for the community (including on ground facilities or a monetary contribution). The principles contained in the “Boyne Tannum Open Space Development Plan (1998)” may be utilised by Council as a guide for ensuring that network issues are appropriately addressed over the Shire area.

13.2.11 Waterfront Lands

Council has for some years now pursued a philosophy of securing land along river and water fronts in public ownership. The consistent application of this philosophy since the late 1960’s has enabled significant improvements to be achieved in the provision of public open space for the benefit of the community.

Council believes that rivers and ocean areas are natural features not to be possessed by private individuals, and that public access to such features should also be preserved. There is great community benefit in securing land which can later be utilised in an enhanced manner into public ownership. Council’s objective is to secure in public ownership relevant areas of land which provide access to natural features such as rivers and oceans so that such features may be freely accessed and enjoyed by the general public.

Waterfront land will be considered for inclusion into parkland by Council when examining development applications in the following circumstances:

1. The ocean foreshore along the whole coastline of the Shire, including The Narrows;

2. The Boyne River downstream of The Awoonga Dam, in the case of urban or rural residential developments;
3. The Calliope River, including the Anabranh, from its mouth upstream to Double Creek, in the case of urban, rural residential, rural or industrial developments;
4. Any other waterfront area within the Shire, considered by the Council at the time to be of such significance so as to require its securing into public ownership.

Where a development fronts lands within the scope of this section, the developer shall contribute this land to Council for the purposes of parkland. The preferred size of the parkland should accord with that for a Linear Park.

The land contributed shall have useable widths located at least 1m above Highest Astronomical Tide suitable for a pedestrian link along the waterfront. Minimum widths specified shall also be from above the level of the Highest Astronomical Tide. This land will be credited as parkland in accordance with this Planning Scheme Policy.

13.2.12 Ridgelines

Council believes that there is public benefit in ensuring that areas developed for urban or rural residential purposes do not encroach into ridgeline areas, and that undeveloped corridors link the ridgeline areas to other open space areas and the community they serve. Council's objective is to secure in public ownership relevant areas of land which provide a relatively preserved habitat area and a green back drop to the land around the urban areas of the Shire, by securing the tenure of land unable to be serviced by water reticulation.

Ridgeline land will be considered for inclusion into parkland by Council when examining development applications in the defined water service area with full mains pressure in relation to land above the water service level.

In the Boyne Island Tannum Sands area, the water service level is RL 40.0 metres AHD. In the Calliope township area, Benaraby and Wurdong Heights areas, the water service level varies according to the pressure zone.

Where a development contains lands above the water service level, this land will be contributed to Council as parkland such that the habitat and the vegetation shall remain conserved. This land will be credited as parkland in accordance with this Planning Scheme Policy. The preferred size of the parkland should accord generally with that for a Local Park, however, this may need to vary to account for issues such as connectivity and completeness.

13.2.13 Land Unsuitable as Parkland

As a guide, Council may consider land unsuitable as parkland where such land:

- is likely to serve primarily as a buffer to a transport corridor;
- does not safely and effectively contribute to the network of parks and open spaces areas;
- is offered in small parcels in uncoordinated locations;
- is contaminated land or otherwise in a potentially hazardous area;
- is subject to the 20% AEP event;
- is less than 10m wide unless an appropriate linkage function can be shown;

- has an area of less than 4000m² (except for civic precinct parkland);
- contains oil and gas supply easements or powerline easements;
- is excessively steep (ie, more than 1 in 6); or
- could impose a high maintenance cost to Council.

13.2.14 Flooding and Waterways

Flood liable land will only be considered suitable for parkland where this would result in a recreational benefit to the public. Land adjacent to watercourses or subject to flooding may be considered suitable if it:

- is free of regular inundation, being land that is generally located above the 2% AEP event. Land below the 2% AEP event will normally be part of a waterway corridor
- does not comprise part of a high velocity overland flow path, which could pose a danger to the public or result in erosion or other damage to parkland, and does not consist of areas used for long duration storage of flood waters
- is suitable for active recreation, eg sport

For the purposes of this Policy, a 'watercourse' refers to any element of a river, creek or stream including the bed and extending to the high floodway bank, as well as associated wetland areas.

Sufficient land above the 1% AEP flood event will need to be dedicated to accommodate any proposed structures which are generally associated with parkland facilities, e.g. clubhouse, changing rooms. The extent of land will generally have to also contain the flow from a 1% AEP flood event. Where the width of flow exceeds the minimum width required, the additional park dedication shall not be credited as park land.

13.2.15 Conditions Applicable to Contribution of Land

The following conditions will apply to land contributed for parkland:

- the developer shall provide a park landscape plan, prepared by a person with suitable qualifications and experience, for all parkland contributed to Council;
- existing vegetation, and in particular mature trees, is to be retained where possible, and landscaping is to be consistent with a park landscaping plan approved by Council;
- landforms and vegetation in the parkland identified to be preserved are not to be disturbed during the development of the subdivision;
- any landscaping works or improvements to be carried out by the developer on the land for contribution are to be carried out in accordance with a park landscaping plan approved by the Council and to comply with at least the following standards:-
 - construct log rails/bollards in the parkland to prevent unauthorised vehicle access
 - provide a lock rail and a vehicle crossover into the parkland for Council 's maintenance vehicles
 - provide at least a 25 mm reticulated water service and water meter
 - provide an electricity supply pillar
 - remove all weeds in the proposed parkland

- all open ground in the proposed parkland is to be levelled, top soiled, grassed with perennial grasses and suitable for mowing
- remove any dead trees or branches that might present a public risk
- remove all rubbish from the proposed parkland
- instigate a 12 month maintenance period for all works in the proposed parkland;
- the park landscaping plan should incorporate natural design principles, low maintenance requirements and provision for a high level of biodiversity by addressing the following:
 - areas should be designated for naturalised, indigenous species planting, including the use of native grasses to reduce watering, maintenance and mowing requirements, where appropriate to the parkland theme
 - use the natural topography and natural overflow paths to facilitate stormwater flows
 - reinstatement of light and water regimes to preserved vegetation areas to maintain current plant species and prevent establishment of invasive plants and grasses; and
- where areas of open space or waterways corridor are in a degraded state, the park landscape plan should outline a rehabilitation strategy, including measures to control weed infestation. The plan should provide for ongoing community rehabilitation where desired.
- Note: Further guidance for developers as to the provision of parkland may be contained in a strategic parks network plan, with specific details for the provision of on ground facilities further explained in standards or specifications adopted by Council.

13.2.16 Land with Limited Utility as Parkland

Part of the land provided as parkland may comprise land with limited utility as parkland, but only in the circumstances where:

- it is agreed by Council that there is a complementary benefit to existing or proposed open space adjacent to the land;
- a detention basin is proposed as parkland. If, because of the design or susceptibility to flooding, it has limited utility as a parkland, up to 50% of the area of that basin may be deemed to be included in the contribution provided that:
 - the size and design of the basin allows active recreation
 - the design provides for the water level to rise to a maximum in no shorter period than 15 minutes and to drain approximately 2-3 hours after the rain has stopped
 - underground drainage has been provided to at least the 10% AEP flood event and suitable sub-surface drainage has been provided to ensure that the surface can be drained and is dry in 24 hours
 - slopes are generally less than 1 in 6. In some cases, rock or retaining walls may be used. Diversity of slopes and angles are preferred
 - the basin has the appearance of parkland and meets general parkland and landscape criteria
 - the design has been approved by Council;
- a permanent water body is proposed as parkland. Up to 50% of the area of that water body may be deemed to be included in the contribution provided that the water body complies with water volume and quality criteria approved by the Council including water balance calculations ensuring that 80% of the full design capacity is maintained at all times;

- land below 20% AEP flood level is proposed as parkland. Up to 10% of the area of that land may be deemed to be included in the contribution, provided that the whole of the land is not reshaped and existing vegetation is not disturbed or removed;
- land steeper than 1 in 6 is proposed as parkland. Up to 50% of the total area of that land may be deemed to be included in the contribution (Ridgeline areas excluded);
- land steeper than 1 in 3 is proposed as parkland. Up to 10% of the area of that land may be deemed to be included in the contribution (Ridgeline areas excluded);
- that part or the total of those parts do not constitute more than 30% of the total contribution (Ridgeline areas excluded).

13.2.17 High Voltage Electricity Supply

Any land subject to a High Voltage Electricity Supply Easement has limited value as parkland or as a developer's contribution towards an open space provision. Council will only accept such land as a component of a parkland contribution where it complies with any easement management guidelines developed from time to time by Council and/or the relevant electricity supply entity and:

- it forms a logical connection to the parkland system, or
- it can be clearly demonstrated that it has significant visual, ecological or short stay recreational potential.

The proportion, if any, of land within power line easements which may be deemed to satisfy part or all of Council's parkland requirements will vary depending on the circumstances of each situation.

Council may, on the advice of the electricity supply entity, also require one or more of the following measures:

- security fencing of all or part of the land within the easement, such fencing to be of a type approved by the relevant electricity supply entity;
- erection of warning and/or information signs;
- construction of roadways, pedestrian ways and cycle ways only where they cross the easement by the shortest possible path, and where Council and the electricity supply entity agree; and/or
- prohibition of carparking within the easement.

13.2.18 Delivery of Parkland

Because of the legal complication with respect to the development of large parks facilities on Crown land, Council may require that the areas to be contributed for parkland be transferred to Council in freehold title.

13.2.19 Civic Precinct

A civic precinct is defined as an area for the interaction and relaxation of shoppers, visitors, and workers within or adjacent to a commercial and/or retail centre or industrial development. It should be easily accessible on foot from the centre of the area and be located in areas of pedestrian activity. Civic precinct spaces may include paving, vegetation, seating, toilets, telephones and childrens' play equipment and should reflect the local setting or character of the precinct.

13.2.20 Local Park

Local parks should provide space for informal, non competitive recreation and relaxation for residents within a local neighbourhood. Local means an area that attracts or services people from within a local neighbourhood or suburb. Local parks are defined as a “walk to” park usually accessible to residents within a radius of 500 metres. Typical facilities may include playground equipment, picnic tables, shelters and seating nodes. Above all, local parks should be representative of the specific age, cultural or use requirements of a local community, whilst retaining a broad diversity of recreational opportunity.

13.2.21 Local Park (Sporting)

A local park (sporting) is to be used primarily for organised sporting activities, although they can include areas for casual uses, outside the actual playing fields. They cater for the competitive recreation and sporting needs of people in the local community. A local park (sporting) should preferably be integrated as part of the linear open space system, and should wherever possible be accessible by foot, bicycle and car. Local park (sporting) may include a clubhouse or change rooms, lighting, water/power and carparking, depending on the type of sport or activity undertaken.

13.2.22 District Park

A characteristic of a district park is that it is an area which attracts or services people in several neighbourhoods, or possibly in more than one town. District parks are major open spaces that should cater for informal, non competitive recreation, an appreciation of the natural/cultural heritage, social interaction and solitude. They are generally sites of greater than local significance and support visits of a longer duration than local parks. Some district parks may contain many of the features of a local park, and may serve as local parks for nearby residents.

13.2.23 Regional Park

These are major destination parks which cater for or attract visitors from all parts of the region. Regional parks should provide opportunities for informal recreation and/or appreciation of specific elements of the natural and cultural heritage of the region. They may include features of regional, State or National significance and generally allow scope for visits of several hours. The provision of facilities should be complementary to the specific character and purpose of the regional park. Where appropriate, the provision of educational information services should be encouraged to facilitate better understanding and appreciation of the sites attributes.

13.2.24 Regional Park (Sporting)

Regional parks (sporting) are major open spaces that cater for competitive recreation and sporting activities. Typically, these are highly developed areas under the management of individual clubs or sporting associations. These sites cater for visits of a longer duration than local parks and may serve as regional parks outside of scheduled sporting hours. Regional parks of a sporting nature will typically include features such as clubhouses, change rooms, spectator mounds, scoreboards, flood lighting, water/power and appropriate car and bus parking to suit the level of facility provision. Special recreation facilities (refer 13.2.27) are quite often incorporated within a regional park.

13.2.25 Linear Park

Linear Parks serve a number of important purposes including:

- (a) to preserve unique natural features;
- (b) to provide wildlife habitat and corridors;
- (c) to provide opportunities for walking or riding trails;
- (d) to provide linkages to other open space areas so as to establish an integrated open space network;

- (e) to provide street to street access;
- (f) linking open space areas;
- (g) the provision of cycleways and pathways;
- (h) providing access to parks, schools, shops, etc; and
- (i) esplanade and waterfront parks.

Linear parks provide recreational, practical and convenient links between facilities, and may vary in size and function in much the same way that roads do. Access and (non vehicular) transportation are the primary function of linear parks, however, they often serve to provide for multiple use as linkages for fauna, the preservation of valuable vegetation and even the conveyance of stormwater. To accommodate the different features and functions of linear parks, Council has several classifications such as Preserved (corridors of significant vegetation with limited development works to complement the natural values), and Modified (dual use linear park and drainage reserve). Linear parks may include a diversity of recreational opportunities and amenities which are typical of other park types such as local parks.

13.2.26 Demand Space

Demand space is defined as land set aside for future provision of open space and/or recreation/community facilities. Demand space should preferably be located on the frontier of urban development, providing the opportunity to connect and continue the existing open space system in association with development sequencing.

13.2.27 Special Recreation Facility

Special recreation facilities provide for the particular sporting, recreational or cultural pursuits of a community, such as indoor recreation centres, indoor sports halls, swimming pools and the like. Preferably they allow for dual or multi multipurpose use. These facilities are found at the District or Regional level, and may be co-located with other parkland. The distribution of special recreation facilities is generally dependent upon user demand and the availability and suitability of land. Facilities should be multipurpose wherever possible and cater for a broad range of community requirements. The development of facilities should be sympathetic to adjacent land uses with regard to environmental impact such as lighting and noise.

13.2.28 Parks Design Standards

The principles contained in this policy should be read in conjunction with any other policy, standard or specification adopted by the Council.

13.2.29 Parks Contributions

Details and requirements relating to developer contributions towards the provision of land and facilities for parkland are contained within Part 13(p) "Engineering Design and Infrastructure Standards Planning Scheme Policy" of this part.

13.3 Environmental Management Plans Planning Scheme Policy

13.3.1 Purpose

Where a development is required to prepare an Environmental Management Plan (EMP) in compliance with the applicable code(s), the following provides guidelines to applicants as to the nature and content of the EMP for the particular development proposed.

13.3.2 Aquaculture

An Environmental Management Plan is to be prepared by a suitably qualified person and is to include:

- (a) details of the operation of the proposed facility;
- (b) the nature of any waste discharge from the premises and how this complies with the EPP (water);
- (c) the nature of any odours emitted from the site, any mitigation measures proposed and how this complies with the EPP(Air); and
- (d) measures to mitigate impacts during the construction phase;
- (e) consideration of the cumulative effects of other aquaculture facilities in the local area;
- (f) details of regular monitoring that will be implemented over the life of the use; and
- (g) rehabilitation measures at the cessation of use of the land for aquaculture purposes..

13.3.3 Cattle Feedlots, Piggeries and Poultry Farms

An Environmental Management Plan is to be prepared by a suitably qualified person and is to include:

- (a) details of the operation of the proposed facility;
- (b) the nature of any waste discharge from the premises and how this complies with relevant guidelines and standards in regards to water quality;
- (c) the nature of any odours emitted from the site, any mitigation measures proposed and how this complies with the EPP(Air); and
- (d) measures to mitigate impacts during the construction phase;
- (e) consideration of the cumulative effects of other facilities in the local area;
- (f) details of regular monitoring that will be implemented over the life of the use; and
- (g) rehabilitation measures at the cessation of use of the land for Cattle Feedlots, Piggeries and Poultry Farms purposes.

All matters are to be in compliance with the best practice management principles established within any relevant industry specific Code of Practice or similar document. Refer to Table 13.3 -1 "Applicable Industry Specific Codes/Guidelines" for details.

Table 13.3 – 1 Applicable Industry Specific Codes/Guidelines

Purpose of Development	Document Reference
Cattle Feedlots	Establishment and Operation of Beef Cattle Feedlots (DPI) 2000.
Piggeries	Environmental Code of Practice for Queensland Piggeries
Poultry Farms	Guidelines for Poultry Farming in Queensland.

13.4 Flooding & Inundation Planning Scheme Policy

13.4.1 Purpose

The purpose of the Flooding and Inundation planning scheme policy is to:-

- (a) provide details of the flood immunity and requirements for development to ensure that there is no unreasonable risk from flooding; and
- (b) safeguard occupants of buildings from illness or injury, and protect buildings against damage caused from surface water by ensuring the statutory requirements of Queensland's Standard Building Regulation are met, particularly for "habitable rooms".

13.4.2 The Uncertainties of Flooding Estimation

Although flood levels may be determined scientifically and by modelling, there are quite a number of uncertainties in the nature of flood estimation.

Water levels during a flood can vary due to a number of hydraulic variables such as wind set-up, wave action, afflux, and water velocity, as well as bed movement and changes in the catchment such as the variation of vegetation cover in water courses and flood plains and the increase in impermeable ground covers.

When interpreting flood information, allowance must also be made for uncertainty with the analysis of flood levels due to unavoidable inaccuracies in statistics, survey information, hydrology, changes within the catchment and hydraulic engineering methods.

Flood levels are based on a level of risk known as an Annual Exceedance Probability or AEP. The Annual Exceedance Probability adopted by Council (and adopted generally in Queensland as an acceptable risk) is one percent (ie 1%AEP). This means through statistical analysis the amount of rainfall has a one percent chance of occurring in any one year. This does not preclude two of the same events occurring one year apart, nor even larger and higher flood events occurring during the same period.

13.4.3 Catchment Issues

The Shire contains several river catchment systems, including:-

- the Boyne River;
- the Calliope River
- Raglan Creek
- A small part of the Don River catchment, drawing into the Dawson River.

Each of these systems has the capabilities of causing flood issues for lands within their catchments. Council has varying levels of flood information available to it for these catchments, ranging from recently prepared documentation and modelling for the Boyne River and its main tributaries downstream of Awoonga Dam, to no hydrological or hydraulic modelling at all for other systems. The downstream section of Calliope River is currently the subject of a coordinated flood study which will greatly assist in flooding estimations once completed.

The Shire also has a significant coastal area where storm surge can be an issue. Council has been able to reference a report which investigated storm surge issues on Port Curtis and provided information as to water levels likely to be encountered from cyclonic storm surge and tides. The findings of this report were adopted by Council, and a 1% AEP event (plus a margin for uncertainty) was interpreted from the report and has been consistently used by Council since 1984 as the “development level” in affected areas.

In circumstances where no hydraulic modelling is available, potential flooding impacts have to be estimated from historical levels and events, and an evaluation made on determining a credible 1% AEP value. All calculations using historical data should include an appropriate freeboard to account for reliability and reputability concerns. Where flood levels are not known the Integrated Planning Act 1997 provides that it is the applicants’ responsibility to obtain all information to allow assessment of the application by the Assessment Manager or certifier.

13.4.4 Interpretation of Flooding and Storm Surge Information

It would be unrealistic for Council to expect that no development could occur below the adopted flood level. As to be expected, prior to the current flood level information being available to Council, some areas now identified as flood affected have already been developed. It is also unrealistic to expect that all land below the adopted flood level would be purchased for inclusion into the public land portfolio, due partly to cost and partly to the fact that some activities and land uses are quite acceptable on land below the adopted flood level. Nonetheless, in a general sense development does need to have a level of protection from the risk of flooding, and Council intends to ensure that all new development which should have flood immunity is provided with the appropriate controls.

The following Table 13.4-1 sets out Council’s development level requirements for certain developments within various zones in the scheme area.

Table 13.4-1 Immunity Requirements for Certain Developments in all zones (with the exception of the Conservation Zone, the Forestry Zone and the Open Space and Recreation Zone).

Flooding Source	MINIMUM DEVELOPMENT LEVELS (m AHD)			
	Allotment Earthworks for Reconfiguring of a Lot or Material Change of Use Applications	Development including Material Change of Use and Building Works (except Class 10 structures)		
		Habitable room & Hazardous Materials	Residential Non-habitable Areas	Other Non-habitable Areas
Boyne or Calliope River	1% AEP +0.8 m	1% AEP +1.0 m	1% AEP +0.3 m	1% AEP
Creek or Waterway	1% AEP +0.3 m	1% AEP +0.5 m	1% AEP +0.3 m	1% AEP
Localised over land flow path, or designed open channel	1% AEP +0.3 m	1% AEP +0.5 m	1% AEP +0.3 m	1% AEP
Storm Surge	1% AEP+0.8 m	1% AEP +1.0 m	1% AEP +0.8 m	1% AEP

For new allotments created, the following Table 13.4-2 sets out Councils criteria in terms of the proportion of land required to be above the development level.

Table 13.4-2 Minimum Useable Land Area (ie land above the levels shown in Table 13.4-1)

Zone	Minimum Useable Land Area of allotment with flood immunity
Commercial	80%
Community Use	50%
Conservation	No set minimum
Forestry	No set minimum
Gladstone State Development Area	50%
Local Industry	800m ² (20m X 40m)
Major Industry	50%
Major Infrastructure	50%
Open Space and Recreation	No set minimum
Residential	600m ² (20m x 30m) – unless Master planned residential development which can be 80%
Rural Residential	600m ² (20m X 30m)
Rural	1200m ² (30m X 40m)
Urban Expansion	1200m ² (30m X 40m)
Village	600m ² (20m X 30m)

Notes to Tables

The 1% AEP flood level for the Boyne River downstream of Awoonga Dam has been derived from the report "Report on Awoonga Dam, Boyne River Dam Break and Flooding Study" Sunwater October 2003.

The 1% AEP storm surge level for Port Curtis has been derived from the report "Report of an Investigation into Probable Water Levels in the Gladstone Area Resulting from the Interaction of Cyclonic Storm Surges and Astronomical Tides" Blain Bremmer and Williams Pty Ltd, January 1980.

The 1% AEP flood level from other flooding sources is to be derived from existing hydrologic and hydraulic studies, or hydrologic and hydraulic models, or historical levels and events investigated and interpreted, to provide an acceptable level.

Where a report is required, the report is to be certified by an Engineer with suitable registration (RPEQ or NPER3) and experience, use recognised and locally accepted data and design methodologies, and use calculations for flood modelling that include options based on a vegetated riparian zone including ground cover, understorey and canopy vegetation.

13.5 Lake Awoonga Catchment Planning Scheme Policy

13.5.1 Purpose

The purpose of the Lake Awoonga Catchment Planning Scheme Policy is to provide details of the type and nature of technical reports required when developing within the Lake Awoonga Catchment (defined by the extent of the Lake Awoonga Overlay Maps).

13.5.2 Lot Sizes and Additional Information

Where it is proposed to undertake reconfiguration of lot into a lot size for the purposes of Intensive Development (defined in the Lake Awoonga Overlay Code) then the following information is required with any application:

- (a) a geotechnical report which provides comprehensive data on slope, soil depth, variation in the ground water table and soil stability. Slopes exceeding 10% are to be identified by shading on a contour plan that shows contours at 1 m intervals.
- (b) a site evaluation report that details how the proposed method of waste treatment and disposal complies with the AS/NZS 1547:2000 and NR&Ms On Site Sewerage Code. For on-site effluent disposal a minimum of 3 test holes per lot is made prior to Council endorsing approval of a survey plan. The locations of test holes are to be plotted by survey on the proposed survey plan. The setbacks are met in relation to the location of test holes. Every test is to be reported regardless of the results.

13.6 Landscaping Planning Scheme Policy

13.6.1 Purpose

The purpose of the Landscaping Planning Scheme Policy is to provide guidance for applicants when preparing a Development application where landscaping is to be provided.

13.6.2 Acceptable Landscape Species

Landscaping to the site has the following characteristics:

- (a) tree species are to be capable of reaching a height at maturity of at least 5 m and are not less than 1.5m high at planting;
- (b) tree species have high spreading branches and do not require pruning at maturity;
- (c) semi-advanced plants are used in conjunction with shrubs and ground covers;
- (d) native and endemic species are used where possible; and
- (e) species which are noxious or poisonous or drop limbs are avoided.

13.7 Lighting Nuisance Planning Scheme Policy

13.7.1 Purpose

- (1) The purpose of the Lighting Nuisance Planning Scheme Policy is to provide guidance for applicants when preparing a Development application where Lighting Nuisance is an issue to be addressed.

13.7.2 Supporting Information

In order to demonstrate that the proposed outdoor lighting will meet the required standards, provide to the Council the following information:

- (a) a lighting plan prepared by the lighting manufacturer or installer showing:
 - (i) the type of lighting to be provided;
 - (ii) control measures to reduce light spillage; and
 - (iii) light emission contours demonstrating compliance with the provisions of the relevant code.

13.8 Master Plans Planning Scheme Policy

13.8.1 Purpose

The purpose of the Master Planning Planning Scheme policy is to provide guidance in regards to the level of detail required and issues to be addressed where Council requires a master plan for proposed development.

13.8.2 Development in the Urban Expansion Zone and in Key Sites

For urban development in the Urban Expansion Zone or a relevant Key Site, a master plan will address the following:

- (a) the network of roads including integration with the major road network
- (b) location of community centres including shopping, education and recreation facilities;
- (c) location and capacity and sequencing of infrastructure (including community centres);
- (d) likely development yields to be achieved;
- (e) remnant endangered and of concern regional ecosystems as identified in the Vegetation Management Act 1999;
- (f) remnant vegetation of State significance for biodiversity conservation
- (g) wildlife corridors including areas identified as State Wildlife Corridors under the Vegetation Management Act 1999.
- (h) buffer areas including:
 - continuous corridors (200m in width minimum) joining areas of endangered and of concern vegetation
 - areas protecting high value vegetation and vegetation on adjoining sites
 - areas either side of watercourses and drainage
- (i) areas subject to bushfire, landslip and inundation risk;
- (j) areas unable, because of height or other circumstance, to be provided with appropriate services;
- (k) retention of ridgeline features;
- (l) development program and staging likely to be followed in achieving the development yield;
- (m) integration with existing urban development and opportunity for further integration with as yet undeveloped land.

13.8.3 Development on Small Lots (<600m²)

Development involving reconfiguration of a lot including lots of less than 600 m², are to submit to the Council with any development application showing:

- (a) a concept layout of all building areas, other structures, private open space areas for each dwelling unit, landscaped areas, car parking and fencing, roadways and proposed allotments; and
- (b) finished site levels and floor levels.

13.9 On-Site Effluent Disposal Planning Scheme Policy

13.9.1 Purpose

The purpose of the On-site Effluent Disposal Planning Scheme Policy is to provide guidance for applicants when preparing a Development application where On-site Effluent Disposal is to be provided.

13.9.2 Supporting Information

In order to demonstrate that the proposed on-site effluent facility will meet the required standards, any application where such facility is proposed is to provide to the Council the following information:

- (a) A technical report prepared by a competent person which demonstrates suitability of the proposed site to accommodate an appropriate on-site sewerage treatment facility, including the disposal of treated effluent, having regard to -:
 - (i) nature of the proposed use;
 - (ii) land area;
 - (iii) land slope;
 - (iv) soil type;
 - (v) vegetation;
 - (vi) surface water;
 - (vii) nearby sensitive uses;
 - (viii) flood prone land; and
 - (ix) the potential for cumulative impact of additional on site sewerage treatment facilities.
 - (x) groundwater
- (b) The assessment will show compliance with the requirements of the DNR&M "On Site Sewerage Code" and AS/NZS 1547:2000 for on site sewerage treatment", including if necessary any particular details which need to be addressed to ensure there is an environmental management strategy to accommodate effluent disposal on the site.

13.10 Operational Works (Earthworks) Planning Scheme Policy

13.10.1 Purpose

The purpose of the Operational Works (Earthworks) Planning Scheme Policy is guide applicants where additional information will be required for large scale earthworks and disturbance of acid sulfate soils.

13.10.2 Filling areas >1000m² or > 1300m³ material shifted

For filling or excavation of total areas in excess of 1000 m² or for total material cut or filled in excess of 1300 m³ a report is to be provided to Council detailing impact mitigation measures of the activity addressing:

- (a) total amount of material to be moved to or from the site;
- (b) truck haulage routes;
- (c) types of vehicles to be used;
- (d) times and number of truck movement
- (e) methods of preventing spillage from vehicles; and
- (f) methods of prevention, or clean up of material deposited on roads by vehicles entering or leaving the site.

13.11 Soil Erosion and Sedimentation Controls Planning Scheme Policy

13.11.1 Purpose

The purpose of the Soil Erosion and Sedimentation Controls Planning Scheme Policy is to provide guidance for applicants when preparing a development application for earthworks.

13.11.2 Supporting Information

In order to demonstrate that the proposed construction, operation and maintenance of the works will meet the required standards, provide to the Council the following information:

- (a) a report prepared by a qualified person that clearly demonstrates how relevant environmental values and water quality objectives for the receiving waters are achieved in accordance with Council's Road Design and Utilities requirements or an applicable Urban Stormwater Quality Management Plan; and
- (b) an Erosion and Sediment Control Program in accordance with Councils Road Design and Utilities requirements.

13.12 Reconfiguring a Lot Administration Planning Scheme Policy

13.12.1 Purpose

The Reconfiguration of a Lot Administration Planning Scheme Policy sets out the Council administrative procedures for processing applications.

13.12.2 Application to Council

An application should be accompanied by four (4) copies of the proposal plan. Each application should be accompanied by a copy of the current Certificate of Title of the land proposed to be subdivided. The proposal plan should be a black and white print and should be accurately plotted with the north point upwards, and drawn to scale as outlined below.

Area of allotment Size in Subdivision Allotment	Minimum Scale
1,000 m ² or less	1:1,000
Greater than 1,000 m ² but not exceeding 5,000 m ²	1:2,000
Greater than 5,000 m ² but not exceeding 2 hectares	1:5,000
Greater than 2 hectares but not exceeding 30 Hectares	1:10,000
Greater than 30 hectares	1:20,000

The plan should preferably be coloured so as to show all new roads and reserves tinted pink, exiting roads and reserves tinted brown, and the boundaries of the land to be involved in the proposed subdivision indicated clearly on the plan by the light shading of all separately owned parcels in other distinctive colours.

13.12.3 Information Required

The proposal plan should preferably show the following information and particulars:-

- (a) The real property description of the land and the name and postal address of the owner of the land;
- (b) The location of all watercourses, waterholes, the Flood Lines/levels and inundating levels correlated to Australian Height Datum, and the high water mark of any tidal water;
- (c) The contours of the levels of the natural surface of the subject land above the Australian Height Datum sufficient to determine the intended level, the rate of rates of inclination and the cross falls of each new road, the natural drainage features and any problem connected with access to a proposed allotment.
- (d) The position of any existing building within ten 10 m of the subject land and whether any building on such land is to be retained or demolished;
- (e) The lines of all existing septic tanks, soakage trenches, sewers and drains and/or all existing pipes or means for the supply of water, electricity or telecommunications;
- (f) The drainage discharge location with respect to a natural water course or other legal point of discharge of stormwater;

- (g) All existing roads (with their respective names and widths) adjacent to the land to be subdivided and all allotments adjoining the land and all proposed allotments properly numbered into which the land is proposed to be subdivided, together with the approximate measurements and area of each proposed allotment, reserve, road lane and pathway, as determined by preliminary survey and design. Each proposed road shall also be numbered or named;
- (h) If applicable the area proposed by the subdivider to be transferred to the Crown for park or recreation space;
- (i) All existing and proposed easements and the purpose of each easement;
- (j) Where the proposal involves a new road, or where no new road is involved but the method of surface drainage is important, sufficient levels to enable proper consideration of the proposal should be provided. These levels should be referred to as Australian Height Datum and should be shown in the form of contours. In addition, the plan should properly define the catchment areas of all drainage upon the property. In the case of a subdivision of land within a residential precinct, the contours of the land should be shown at a contour interval of 0.1-0.5 metre but if the gradient of the ground is steeper than 1:5 the contour interval may be 2 metres;
- (k) The extent of filling proposed to be carried out on the subject land, and where such land is to be substantially filled, both the existing contours and proposed future contours should be shown;
- (l) Every longitudinal or transverse section of a new road should clearly show the horizontal and vertical scales used;
- (m) All proposed new roads, truncations, lanes, pathways, reserves, existing roads, lanes or pathways within the boundaries of the subject land;
- (n) Vegetation Management Act 1999 classification and any management plans required under the Act.
- (o) In non-sewered areas, a soil suitability report to satisfy the requirements of other codes and Planning Scheme Policies.
- (p) Point of access to the proposed allotment (rural areas)
- (q) Any other reports required under the Calliope Shire Planning Scheme or as requested by Council.

In the case of a proposal containing **one or more residential allotments**, whether in a residential precinct or not, but in which the whole of the land is not proposed to be immediately subdivided, the balance of the land should preferably be designed and shown by broken lines on the proposal plan, together with all necessary topographical information, so as to show the existing and proposed means of access to each separate parcel. Where necessary, the road system should be shown through and over adjoining lands.

The proposed layout of the road system for future development of the whole subdivision should preferably be indicated, together with all other relevant information. Where necessary the road system should be shown over adjoining lands to indicate the proper relationship of road with the future road systems of the locality generally.

The application for approval of a **staged reconfiguration** concept should preferably:

- (a) denote the boundaries of and label each proposed stage;
- (b) show the order in which stages will be developed;
- (c) include details of proposals for the discharge of stormwater on and from the subject land;

- (d) contain estimates of the respective dates on which commencement of works on each stage is to take place; and
- (e) contain estimates of the respective dates on which completion of works on each stage is to take place.

13.12.4 Reconfiguration Approval

Plans Approved by the Council

Where a proposal plan has been approved by the Council, notification of such approval should be furnished to the applicant by the Council along with a copy of the original proposal plan duly endorsed by the Council. The Council should retain remaining copies of the proposal plan.

Where the proposal plan is approved by the Council subject to conditions, notification of such conditions should be furnished to the applicant by the Council. The Council may either mark amendments required to be made by reason of such conditions on the original of the proposal plan and return it to the applicant, or it may require the applicant to prepare a new proposal plan incorporating such amendments and submit it in duplicate to the Council.

The 'proposal plan', in relation to staged development, should include the whole of the subject land

If the Council imposes as a condition of approval of an application to which this policy applies, a condition that the Applicant should provide materials and perform works of the construction of roads and drainage installations, the reticulation of a water supply and the provision of sewerage, the Applicant should within two years or such longer period as the Council may allow from the date of notification of such approval, lodge with the Council for examination of Council, plans and specifications and other relevant information together with an estimate of the cost of such materials and work prepared by an engineer registered pursuant to the *Professional Engineers Act 1988*, and should amend such plans and specifications if reasonably required to ensure compliance with good engineering practice.

The Council may, at the request of the Subdivider, undertake the preparation of plans and specifications for road and drainage works required for any subdivision and/or the supervision of the construction. In such case, the Council should charge the Subdivider for such work in accordance with fees as set on application.

13.12.5 Portable Long Service Leave

Where a Development Permit for reconfiguration or Operational Works is required for works in excess of \$80,000, the applicant for such a permit shall furnish evidence that payment of portable long service as required under the Building and Construction Industry (Portable Long Service Leave) Act has been made on an approved form issued by the authority signifying, for the work:

- (a) payment of levy ; or
- (b) payment of the first instalment of levy ; or
- (c) an exemption from payment of levy ; or
- (d) an exemption from immediate payment of levy.

13.12.6 Requirements as to Works

Works required to be performed as part of the subdivision should be executed and carried out under the supervision of a Civil Engineer, registered under the *Professional Engineers Act 1988* and on the completion of the works the applicant should give to the Council a certificate from such Civil Engineer to the effect that all works have been completed in accordance with the plans and specifications approved by the Council. Refer Codes and Engineering and Development Guidelines for further details.

The Developer shall invite Council to inspect the operational works at such stages and times, and give such notice as required by Council in the *Engineering and Development Guidelines*.

Except as otherwise provided in this policy, the applicants should carry out at his expense, all works which are necessary to conform to the conditions of the Council's approval of the subdivision, good engineering practice and good quality workmanship.

13.12.7 Public Utilities

The Developer shall be responsible for the supply of any public utilities required under the Planning Scheme, Development Permit or Engineering and development Guidelines. The Developer will also be responsible for any alterations to electricity, telecommunications, water mains, sewers and/or any other public utility installations that may be affected by the construction of the roads and/or drainage, or any other works associated with the reconfiguration.

13.12.8 Road Names

The applicant may submit three suggested names for each proposed new road in the development. Council may allocate a name submitted by such applicant as the name of a new road or allocate such other name as it deems appropriate. Council may alter the name of a road at any time after the development. The Council is not be obliged to approve a road name which is similar to or the same as the name of another road in the area of the Calliope Shire or Gladstone City Council.

The applicant should supply and erect road name signs upon roads within the subject land and also at each intersection of a road within the subject land with a road outside the subject land and such signs should include street numbers to an acceptable standard.

All road name signs should in accordance with the Engineering and Development Guidelines.

13.12.9 Plan of Survey to be Submitted

Within a period as designated by Integrated Planning Act or the Council in the Development Permit, the Applicant should submit to the Council a Plan of Survey or the Development Permit will lapse. The submitted Plan of Survey should be generally in accordance with the proposal plan approved by the Council to a standard acceptable to the office of the Registrar of Titles, duly certified by a Licensed Surveyor and signed by the owners.

If the Council upon examination finds the Plan of Survey conforms with the approved proposal plan, and all material conditions of the approval of the proposal plan have been complied with to the satisfaction of the Council, the Plan of Survey should be endorsed under Seal of the Council.

The Developer shall provide free of cost, all truncations and easements for drainage, or for other purposes, to the requirements of Council.

The Developer is advised that Council will not sign the Plan of Survey until all rates and charges on the subject land have been paid in accordance with Section 3.7.2(3)(c) of the *Integrated Planning Act 1997*.

Alternatively, the Council may endorse the Plan of Survey upon the Applicant entering in to an agreement with the Council for the completion of all necessary subdivisional works within six months from the date of the release of the Plan of Survey and upon the giving by the Applicant of security to the Council in accordance with the requirements of Council.

If in respect of any subdivision (or stage thereof approved by Council) two or more plans of survey are lodged with and consented to by Council. Council may endorse each such plan at the Titles Office conditional upon all such plans being registered contemporaneously.

The Council may refuse to grant consent to Plans of Survey until "as constructed" plans have been provided to Council to the satisfaction of the Council, with respect to the provision of water supply, sewerage, allotment filling and drainage.

The surveyor shall if practical provide a digital copy of the plan of survey in a format compatible with AutoCad drawing or DXF format either by E-mail or Disk.

When a Development Permit for allotment reconfiguration relates to a staged development, Council will not endorse its consent on a Survey Plan unless such Survey Plan or Plans cover the whole of the land contained in the stage of development, the subject of the approval.

The Developer is to show street names on the Survey Plan, and shall submit new street names to Council for approval.

13.12.10 Maintenance of Works

On the completion of any subdivisional works required to be carried out, the Applicant should provide a certificate to the Council from an Engineer registered under the *Professional Engineers Act 1988*, stating that such works have been carried out and supervised properly and in accordance with the plans and specifications approved by the Council, and should also provide "as constructed" drawings of the work together with security to the satisfaction of the Council to an amount equal to not less than 5% of the Council's estimate of the cost of such works plus an amount for maintenance of footpaths and erosion and sediment control devices. The maintenance period shall be twelve months following the acceptance of same by Council "on maintenance" unless performance of the works is unsatisfactory whereupon the period maybe extended. Longer maintenance periods may be required for non-conforming or questionable quality works. Refer Engineering and Development Guidelines for a complete list of on maintenance points for the different parts of the works.

Maintenance works required to be carried out by the developer during the maintenance period include rectification of non-performing or defective works, mowing of footpaths, removal of transported sediments and maintenance of erosion and sediment control measures. Should the developer not carry out this work within 7 days of a written request of Council, Council may carry out the works drawing on the maintenance bond.

Such security should not be released until the maintenance period has expired and the cost any maintenance works considered necessary by the Council (with the exception of that works which in the opinion of Council is attributable to "fair wear and tear") has been met by the Applicant to the satisfaction of Council. Any works or items outstanding from the Development Permits or on maintenance inspections shall be also completed prior to the release including final "as constructed" information.

In the event that the Applicant should fail to comply with the requirements of this clause, the Council should be entitled to carry out such works and to recoup the cost thereof from the security lodged pursuant to this clause. In the event that the cost of any remedial work carried out by Council exceeds the amount of the security held, the council may proceed to recover such additional cost in any Court of competent jurisdiction.

13.13 Transport, Access and Services Planning Scheme Policy

13.13.1 Purpose

The purpose of the Transport, Access and Services Planning Scheme Policy is provide guidance in regards to the details of a transport, access and services report required when a development is likely to generate significant impact on transport, access and services.

13.13.2 Transport/Land Use Report Guidelines

For most development applications, it will be sufficient that the design complies with the requirements of the guidelines in the schedules and other applicable codes. However, applications for major developments, capable of having significant impact on the external transport systems or the adjacent community, should be accompanied by a report addressing the transport impacts of the proposal, prepared by a qualified person.

- (a) Such a report (a “transport/land use” report) should address the following issues:
- (i) specific measures to ensure the proposal will contribute towards encouraging walking, cycling and greater use of public transport in preference to using private cars;
 - (ii) the need to improve public transport services and infrastructure as a result of the development;
 - (iii) measures to ensure maximum accessibility to public transport, including future expanded services;
 - (iv) a review of the existing and proposed traffic network and traffic operating conditions based on an appropriate planning horizon (with a minimum of 10 years);
 - (v) the amount of other traffic likely to be generated by the development, particularly in relation to the capacity of the road system in the locality and the probable effect of traffic on the movement of other traffic on the road system. This includes the impact of generated traffic on:
 - key nearby intersections
 - local streets in the neighbourhood of the development
 - the environment
 - existing nearby major traffic generating development
 - the major road network
 - (vi) existing parking supply and demand in the vicinity of the proposed development;
 - (vii) level of provision for parking in the development based on land use and public transport provision;
 - (viii) whether the proposed means of ingress to or egress from the site of the development are adequate and located appropriately according to the Shire’s Road Hierarchy;
 - (ix) adequate provision to be made for the loading, unloading, manoeuvring and parking of vehicles within that development or on that land;
 - (x) movements of freight carrying vehicles associated with the proposal and how these are to be minimised;

- (xi) the possibility of integration with adjacent development;
 - (xii) the effects on public transport, traffic operations and parking, of any temporary works required during construction;
 - (xiii) any comments made by either Queensland Transport or the Department of Main Roads that comply with the rights and powers of these departments;
 - (xiv) the existing and likely future amenity of the surrounding area;
 - (xv) a statement of all of the assumptions made in the preparation of the report and the design parameters adopted in the technical analysis.
- (b) Land uses expected to lead to higher levels of public transport usage, if located on a public transport route, include but are not limited to:
- (i) airline stations
 - (ii) backpackers hostels
 - (iii) large business premises including office parks
 - (iv) coach stations
 - (v) educational establishments particularly schools
 - (vi) hospitals
 - (vii) hotels
 - (viii) major indoor and outdoor sport and recreation facilities
 - (ix) higher density residential
 - (x) restaurants
 - (xi) retirement villages
 - (xii) shopping centres
 - (xiii) sport and convention centres.

13.14 Engineering Design and Infrastructure Standards Planning Scheme Policy

13.14.1 Purpose

The purpose of the Engineering Design and Infrastructure Standards Planning Scheme Policy is to outline to applicants, Council's required development standards when undertaking development within Calliope Shire.

13.14.2 Documents related to this policy have been provided separately and include:

- Roads and Transport Standard
- Stormwater Drainage Design Standard
- Water Supply Standard
- Sewerage Design Standard
- Planning Scheme Policy No. 1 – Developer Contribution Policy – Sewerage Facilities
- Planning Scheme Policy No. 2 – Developer Contribution Policy – Water Supply
- Planning Scheme Policy No. 3 – Developer Contribution Policy – Tannum Sands/Boyne Island Arterial Roads
- Planning Scheme Policy No. 4 – Developer Contribution Policy – Calliope Major Roads
- Planning Scheme Policy No. 5 – Developer Contribution Policy – Beecher Area Roads
- Planning Scheme Policy No. 6 – Developer Contribution Policy – Constant Flow Water Supply in the Beecher Area
- Planning Scheme Policy No. 7 – Subdivider Contribution Policy – Upton Road/Boundary Road Benefited Area
- Planning Scheme Policy No. 8 – Developer Contribution Policy - Constant Flow Water Supply in the Upton Road/Boundary Road Benefited Area
- Planning Scheme Policy No. 9 – Developer Contribution Policy – Water Supply in Applin Place and Broadacres Drive, Tannum Sands
- Planning Scheme Policy No. 10 – Developer Contribution Policy – Parks and Recreational Facilities