

Schedule 6 Planning Scheme Policies

SC 6.1 Planning Scheme Policy Index

The table below lists all the planning scheme policies applicable to the planning scheme area.

Table SC6.1.1 Planning scheme policy index

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SC 6.2 Engineering works & services planning scheme policy

SC 6.2.1 Purpose

The purpose of this planning scheme policy is to prescribe the standards required within the City of Mount Isa for the design and construction of:

- (a) civil engineering works and associated works, which includes but is not necessarily limited to the following:
- excavation and filling;
 - roads, including associated works within the verge;
 - water supply infrastructure;
 - sewerage infrastructure;
 - stormwater drainage infrastructure;
 - cycle paths;
 - *landscaping*; and
- (b) those aspects of other development that affect the above items, where the term “development” has the meaning defined in the Sustainable Planning Act 2009.

SC 6.2.2.1 Quality assurance

All design for works that fall within the scope of this policy must be carried out in accordance with the following Aus-spec specification:

- 0010 - Quality assurance requirements for design.

SC 6.2.2.2 Detailing

Unless shown otherwise in the certified design documentation, all details must comply with the standard drawings produced by the Institute of Public Works Engineers of Australia (IPWEA) (Queensland division).

Detailing in design documentation must not be varied from that shown in the IPWEA(Q) drawings without the prior approval of Council.

SC 6.2.2.3 Erosion and sediment control

Erosion and sediment control measures are to be put in place for all works which fall within the scope of this policy.

Erosion and sediment control measures are to be designed in accordance with the International Erosion Control Association (IECA) Australasia Best Practice Erosion and Sediment Control Guidelines (November 2008)

SC 6.2.2.4 Excavation and drilling

Excavation and filling must be designed in accordance with the accepted principles of structural mechanics, soil mechanics and rock mechanics, and in accordance with the following Aus-spec specification:

0021 – *Site* regrading.

For new roads that form part of a reconfiguration of a lot, the transition from the road formation to the natural surface must comply with the detail “Verge without pathways” on the IPWEA(Q) standard drawing no R-0031.

All surfaces of earth structures must be stabilized to prevent erosion.

SC 6.2.2.5 Water supply

Water supply systems must be designed in accordance with the following Aus-spec specification:

0071 Water Supply – reticulation (Design); and

- 0072 Water Supply – pump stations (Design).

The water supply servicing for each allotment must include:

(a) a pipe that:

- (i) connects the main water supply pipe to a point on or inside the allotment boundary for the purpose of supplying water to the allotment at the specified discharge rate and residual pressure, and
- (ii) crosses no other land except the allotment serviced, or a road reserve, or an easement for water supply purposes, and

(b) a water meter that:

- (i) is located 300 millimetres inside the allotment boundary; and
- (ii) is connected to the pipe described in (a) above and sized for development design and demand, or
- (iii) Unless approved otherwise, is a minimum of:
 - 20 millimetres for single *dwelling*; or
 - 25 millimetres for *dual occupancy* or two *dwellings* on the same lot; or
 - 32 millimetres for three to six *dwellings*; or
 - 50 millimetres for seven *dwellings* or more.

SC 6.2.2.6 Sewerage systems

Sewerage systems must be designed in accordance with the following Aus-spec specification:

- 0076 – Sewerage Systems – reticulation (Design); and
- 0077 - Sewerage Systems – pump stations (Design).

Unless approved otherwise, the sewerage servicing of each allotment must include a branch pipe that:

- (a) connects the main sewer pipe to a point on or inside the boundary of the allotment in a location and at a depth which commands the entire allotment (i.e the upstream end of the branch pipe may be located anywhere on the allotment so long as it can be connected to the downstream end of a sanitary drain); and
- (b) is laid at a grade and depth not less than the minimum grades and depths specified in *Australian Standard 3500*; and
- (c) crosses no other land except the allotment serviced, a road reserve or an easement for sewerage purposes; and

- (d) is a minimum of 100mm for a single *dwelling*, *dual occupancy* or up to two *dwellings* on the allotment or is a minimum of 150mm for three *dwellings* or more; and
- (e) is of sufficient grade and diameter to accommodate the design discharge from any other use.

SC 6.2.2.7 Stormwater drainage

Stormwater drainage systems must be designed in accordance with the Queensland Urban Drainage Manual (QUDM) and the following Aus-spec specification:

- 0074 - Stormwater drainage (design).

Where the stormwater drainage system includes underground pipe drains, for each allotment there must be a branch pipe that:

- (a) connects the main pipe drain to a point on or within the boundary of the allotment in a location and at a depth that commands the whole allotment, in accordance with the following (ie the upstream end of the branch pipe may be connected to the downstream end of an underground pipe drain whose upstream end may be anywhere on the allotment);
- (b) is laid at the minimum depth specified by the relevant Australian standard for the pipe material,
- (c) has the capacity to accommodate the design discharge from all roofs and paved areas constructed on the allotment;
- (d) crosses no other land except the allotment serviced, or a road reserve, or an easement for stormwater drainage purposes; and
- (e) is of sufficient grade and diameter to accommodate the design discharge.

SC 6.2.2.8 Stormwater pumps

The stormwater pumps are to be designed in accordance with the following design criteria adapted from Brisbane City Council's Subdivision and Development Guidelines Part B: Infrastructure Elements Chapter 2 Stormwater Drainage 2008:

The pump well storage and pump capacities must be designed for the minimum 10 year ARI critical storm burst. The critical storm burst is the storm duration that dictates the maximum active storage size, and this storm duration is usually independent of the subcatchment time of concentration. Typically pumping and storage characteristics during smaller storm events (eg 2, 5 and 10 year ARI) for a range of duration (say up to 2 hours) would need to be investigated, to ensure that the pump operates within the manufacturer's recommendations.

In some instances, the 10 year ARI design event may be inadequate. For example, pumps may need to be sized for more extreme storm events when dewatering *basement* carparks or where overland sheet flows cannot be achieved.

Council prefers that the pumped systems be discharged directly to a gully, a manhole or a drainage line. Direct discharge to a kerb and channel is not preferred. Where the kerb and channel is the only lawful point of discharge, the outlet from the pump should feed to a storage manhole which then drains by gravity to the kerb and channel. Regardless of these disposal methods, a check of road capacity and existing drainage system is required to demonstrate that there are no adverse impacts.

Storage areas can be a combination of underground and aboveground areas, for example, shaped car park or landscaped area to hold water until pumping system restarts. However, care needs to be exercised with aboveground storage area that public safety or amenity is not compromised.

The pump well design must consider the following factors:

- Minimise deposition of solids.
- Excessive foaming and air entrainment (usually caused by stormwater dropping from a high level inlet pipe) in the wet well to be avoided.
- Structural design to resist uplift, soil and water pressures.
- Suitable openings to enable pump removal, and for electrical and pipework access.

- Sufficient space to be provided around the chamber for maintenance access and sufficient headroom for lifting tackle to be erected so as to raise the pumps if necessary.

In addition to the operating duty pump, an equivalent standby pump (ie of equal size to duty pump) must be installed to safeguard against mechanical failure.

In order to assure reliability of the standby pump, the pumping system must be set up by automatic rotation to ensure that the hours run by both the duty and standby pumps are approximately similar.

The most likely stormwater pump station configuration is usually the submersible wet well centrifugal type pumps normally employed in the wastewater industry. These pumps are available off the shelf and come in an extensive range of sizes and configurations. They are also not self priming ie they require a positive head at their inlet in order to commence pumping without initial priming (removal of air from the pump casing).

Pump sizing calculations must incorporate the system resistance, pump duty point, frequency of pump motor starts, etc.

The property owner is responsible for all costs associated with installation, operation and maintenance; and is liable for all damages as a result of system malfunction.

SC 6.2.2.9 Stormwater quality control

The design criteria for stormwater quality control measures are to be in accordance with the State Planning Policy Water Quality and associated guidelines.

Notwithstanding the requirements of State Planning Policy, the following requirements must be applied to in the design of any permanent stormwater treatment system:

- No bioretention system; and
- Stormwater collection and reuse tanks shall be in accordance with State Government requirements

SC 6.2.2.10 Roads

Roads must be designed in accordance with the following Aus-spec specifications:

- 0041 - Geometric road layout;
- 0042 - Pavement design; and
- 0043 - Subsurface drainage (Design).

Roads in urban areas are to be provided with kerb and channel and must be sealed with an approved material that will avoid dust generation by vehicle movements.

Roads in rural residential zones must be sealed with an approved material that will avoid dust generation by vehicle movements.

Road signs and line marking are to be provided in accordance with the Department of Transport and Main Road's *Manual of Uniform Traffic Control Devices* (MUTCD) 2011.

SC 6.2.2.11 Cycle paths and pedestrian pathways

Cycle paths must be designed in accordance with the following Aus-spec specifications:

- 0042 - Pavement design ;
- 0042 - Sub-surface drainage (Design); and
- 0043 - Pathways and cycle-ways (Design).

SC 6.2.2.12 Other structures

Structures composed of materials other than earth materials and bituminous materials shall be designed in accordance with the following Aus-spec specification:

- 0061 - Bridges and related structures.

SC 6.2.2.13 Access driveways

In urban areas the following requirements are to apply to access driveways.

Driveways for vehicular access across the verge from the carriageway of a road to other land are to be constructed of a durable, stable and dust-free material, such as concrete, segmental pavers or asphaltic concrete, in accordance with the dimensions and grades shown in the IPWEA(Q) standard drawings. Transitions for changes in grade are to comply with the Queensland Development Code part no. nmp 1.1.

SC 6.2.2.14 Alignments for underground services

Underground services that are installed within a road reserve must be laid on standard alignments with specified corridors dedicated to particular types of services in accordance with the IPWEA(Q) standard drawings.

Builders are to investigate positions of existing services in the area prior to designing and/or constructing.

SC 6.2.2.15 Building in the vicinity of Council's underground Stormwater and Water Supply services

For building over or close to Council Sewer, please refer to the Queensland Development Code (QDC)

SC 6.2.3 Construction

SC 6.2.3.1 Quality control

The construction of all works that fall within the scope of this policy must be carried out under a quality system and with quality controls, all as required by the following Aus-spec specifications:

- 0161 - Quality (construction).

SC 6.2.3.2 Engineer's certification

When required by a condition of a development permit, the works must be supervised by a qualified civil engineer who is actively practising in the supervision of works of this nature. The supervision of the works must be sufficiently detailed for the supervising engineer to be in a position to issue an unqualified certificate to the effect that the works have been constructed in accordance with the design documentation including certification of as-constructed drawings.

Note—Queensland state law requires a person providing professional engineering services to be registered as a Registered Professional Engineer of Queensland.

SC 6.2.3.3 Requirements for construction

All works which fall within the scope of this policy must be constructed in accordance with the applicable sections of the following Aus-spec specifications:

- C0136 - General requirements (Construction)
- 1101 - Control of traffic
- 1102 - Control of erosion and sedimentation (Construction)
- 1111 - Clearing and grubbing
- 1112 - Earthworks (Roadways)
- 1351 - Stormwater drainage (Construction)

- 1352 - Pipe drainage
- 1353 - Precast box culverts
- 1354 - Drainage structures
- 1121 - Open drains including kerb and channel (Gutter)
- 1171 - Subsurface drainage
- 1172 - Subsoil and foundation drains
- 1173 - Pavement drains
- 1174 - Drainage mats
- 1113 - Stabilisation
- 1141 - Flexible pavements
- 1143 - Sprayed bituminous surfacing
- 1144 - Asphaltic concrete (Roadways)
- 1132 - Lean mix concrete sub-base
- 1133 - Plain or reinforced concrete base
- 1145 - Segmental paving
- 1146 - Bituminous slurry-surfacing
- 1191 - Pavement markings
- 1192 - Signposting
- 1193 - Guide posts
- 1194 - Non-rigid road safety barrier systems
- 1195 - Boundary fence for road reserves
- 0319 - Minor concrete works
- 0257 - Landscape-roadways and street trees
- 1341 - Water supply reticulation (Construction)
- 1342 - Water supply – pump stations (construction)
- 1361 - Sewerage systems – reticulation (Construction)
- 1362 - Sewerage systems – pump stations (Construction)
- 0281 - Bushfire perimeter tracks

SC 6.2.2.4 Details

Unless specified otherwise in the design documentation, all details are to be constructed in accordance with the standard drawings produced by the Institute of Public Works Engineers of Australia (Queensland division).