

## 9.4.5 Infrastructure Works Code

The proposed development is assessable against the provisions of the Infrastructure Works Code of the Douglas Shire Planning Scheme 2018.

### 9.4.5.3 Criteria for assessment

**Table 9.4.5.3.a – Infrastructure Works Code –assessable development**

Performance outcomes	Acceptable outcomes	Compliance
<b>For self-assessable and assessable development</b>		
<b>Works on a local government road</b>		
<p><b>PO1</b> Works on a local government road do not adversely impact on footpaths or existing infrastructure within the road verge and maintain the flow, safety and efficiency of pedestrians, cyclists and vehicles.</p>	<p><b>AO1.1</b> Footpaths/pathways are located in the road verge and are provided for the hierarchy of the road and located and designed and constructed in accordance with Planning scheme policy SC5 – FNQROC Regional Development Manual.</p> <p><b>AO1.2</b> Kerb ramp crossovers are constructed in accordance with Planning scheme policy SC 5 – FNQROC Regional Development Manual.</p> <p><b>AO1.3</b> New pipes, cables, conduits or other similar infrastructure required to cross existing footpaths: (a) are installed via trenchless methods; or (b) where footpath infrastructure is removed to install infrastructure, the new section of footpath is installed to the standard detailed in the Planning scheme policy SC5 – FNQROC Regional Development Manual, and is not less than a 1.2 metre section.</p>	<p><b>Complies</b> The site fronting road reserves do not contain any existing nor require the construction of any footpaths.</p> <p>The required crossover will be constructed in accordance with Planning scheme policy SC 5 – FNQROC Regional Development Manual.</p>

	<p><b>AO1.4</b> Where existing footpaths are damaged as a result of development, footpaths are reinstated ensuring: (a) similar surface finishes are used; (b) there is no change in level at joins of new and existing sections; (c) new sections are matched to existing in terms of dimension and reinforcement.</p> <p>Note – Figure 9.4.5.3.a provides guidance on meeting the outcomes.</p> <p><b>AO1.5</b> Decks, verandahs, stairs, posts and other structures located in the road reserve do not restrict or impede pedestrian movement on footpaths or change the level of the road verges.</p>	<p><b>Not Applicable</b> The site fronting road reserves do not contain any existing nor require the construction of any footpaths.</p>
<b>Accessibility structures</b>		
<p><b>PO2</b> Development is designed to ensure it is accessible for people of all abilities and accessibility features do not impact on the efficient and safe use of footpaths.</p> <p>Note – Accessibility features are those features required to ensure access to premises is provided for people of all abilities and include ramps and lifts.</p>	<p><b>AO2.1</b> Accessibility structures are not located within the road reserve.</p> <p><b>AO2.2</b> Accessibility structures are designed in accordance with AS1428.3.</p> <p><b>AO2.3</b> When retrofitting accessibility features in existing buildings, all structures and changes in grade are contained within the boundaries of the lot and not within the road reserve.</p>	<p><b>Not Applicable</b> The proposed development does not include any accessibility structures within the road reserve.</p>

<b>Water supply</b>		
<p><b>PO3</b> An adequate, safe and reliable supply of potable, fire fighting and general use water is provided.</p>	<p><b>AO3.1</b> The premises is connected to Council's reticulated water supply system in accordance with the Design Guidelines set out in Section D6 of the Planning scheme policy SC5 – FNQROC Regional Development Manual;</p> <p>or</p> <p><b>AO3.2</b> Where a reticulated water supply system is not available to the premises, on site water storage tank/s with a minimum capacity of 10,000 litres of stored water, with a minimum 7,500 litre tank, with the balance from other sources (e.g. accessible swimming pool, dam etc.) and access to the tank/s for fire trucks is provided for each new house or other development. Tank/s are to be fitted with a 50mm ball valve with a camlock fitting and installed and connected prior to occupation of the house and sited to be visually unobtrusive.</p>	<p><b>Complies</b> The site is not serviced by the reticulated water supply network.</p> <p>The proposed Dwelling incorporates on site water storage tank/tanks fitted with a 50mm ball valve with a camlock fitting with a minimum capacity of 10,000 litres of stored water and access to the tank/s for fire trucks is provided.</p>
<b>Treatment and disposal of effluent</b>		
<p><b>PO4</b> Provision is made for the treatment and disposal of effluent to ensure that there are no adverse impacts on water quality and no adverse ecological impacts as a result of the system or as a result of increasing the cumulative effect of systems in the locality.</p>	<p><b>AO4.1</b> The site is connected to Council's sewerage system and the extension of or connection to the sewerage system is designed and constructed in accordance with the Design Guidelines set out in Section D7 of the Planning scheme policy SC5 – FNQROC Regional Development Manual;</p> <p>or</p>	<p><b>Will Comply</b> The site is not serviced by the reticulated sewer network.</p> <p>An on-site effluent disposal system will be designed and installed by suitably qualified persons in accordance with all PSP and other applicable requirements..</p>

	<p><b>AO4.2</b> Where not in a sewerage scheme area, the proposed disposal system meets the requirements of Section 33 of the <i>Environmental Protection Policy (Water) 1997</i> and the proposed on site effluent disposal system is designed in accordance with the <i>Plumbing and Drainage Act (2002)</i>.</p>	
<b>Stormwater quality</b>		
<p><b>PO5</b> Development is planned, designed, constructed and operated to avoid or minimise adverse impacts on stormwater quality in natural and developed catchments by: (a) achieving stormwater quality objectives; (b) protecting water environmental values; (c) maintaining waterway hydrology.</p>	<p><b>AO5.1</b> A connection is provided from the premises to Council's drainage system;  or  <b>AO5.2</b> An underground drainage system is constructed to convey stormwater from the premises to Council's drainage system in accordance with the Design Guidelines set out in Sections D4 and D5 of the Planning scheme policy SC5 – FNQROC Regional Development Manual.  <b>AO5.3</b> A stormwater quality management plan is prepared, and provides for achievable stormwater quality treatment measures meeting design objectives listed in Table 9.4.5.3.b and Table 9.4.5.3.c, reflecting land use constraints, such as: (a) erosive, dispersive and/or saline soil types; (b) landscape features (including landform); (c) acid sulfate soil and management of nutrients of concern; (d) rainfall erosivity.  <b>AO5.4</b> Erosion and sediment control practices are designed, installed, constructed, monitored, maintained, and carried out in accordance with an erosion and sediment control plan.</p>	<p><b>Complies</b> The site drains naturally to the surrounding environment and stormwater generated by the development will be drained to a legal point of discharge in accordance with all PSP and other applicable requirements.</p>

	<p><b>AO5.5</b> Development incorporates stormwater flow control measures to achieve the design objectives set out in Table 9.4.5.3.b and Table9.4.5.3.c, including management of frequent flows, peak flows, and construction phase hydrological impacts.</p> <p>Note – Planning scheme policy SC5 – FNQROC Regional Development Manual provides guidance on soil and water control measures to meet the requirements of the <i>Environmental Protection Act 1994</i>.</p> <p>Note – During construction phases of development, contractors and builders are to have consideration in their work methods and site preparation for their environmental duty to protect stormwater quality.</p>	
<b>Non-tidal artificial waterways</b>		
<p><b>PO6</b> Development involving non-tidal artificial waterways is planned, designed, constructed and operated to:</p> <ul style="list-style-type: none"> <li>(a) protect water environmental values;</li> <li>(b) be compatible with the land use constraints for the site for protecting water environmental values;</li> <li>(c) be compatible with existing tidal and non-tidal waterways;</li> <li>(d) perform a function in addition to stormwater management;</li> <li>(e) achieve water quality objectives.</li> </ul>	<p><b>AO6.1</b> Development involving non-tidal artificial waterways ensures:</p> <ul style="list-style-type: none"> <li>(a) environmental values in downstream waterways are protected;</li> <li>(b) any ground water recharge areas are not affected;</li> <li>(c) the location of the waterway incorporates low lying areas of the catchment connected to an existing waterway;</li> <li>(d) existing areas of ponded water are included.</li> </ul> <p><b>AO6.2</b> Non-tidal artificial waterways are located:</p> <ul style="list-style-type: none"> <li>(a) outside natural wetlands and any associated buffer areas;</li> <li>(b) to minimise disturbing soils or sediments;</li> <li>(c) to avoid altering the natural hydrologic regime in acid sulfate soil and nutrient hazardous areas.</li> </ul> <p><b>AO6.3</b> Non-tidal artificial waterways located adjacent to, or connected to a tidal waterway by means of a weir, lock, pumping system or similar ensures:</p> <ul style="list-style-type: none"> <li>(a) there is sufficient flushing or a tidal range of</li> </ul>	<p><b>Not Applicable</b> The proposed development does not involve any non-tidal artificial waterways.</p>

	<p>&gt;0.3 m; or</p> <p>(b) any tidal flow alteration does not adversely impact on the tidal waterway; or</p> <p>(c) there is no introduction of salt water into freshwater environments.</p> <p><b>AO6.4</b> Non-tidal artificial waterways are designed and managed for any of the following end-use purposes:</p> <p>(a) amenity (including aesthetics), landscaping or recreation; or</p> <p>(b) flood management, in accordance with a drainage catchment management plan; or</p> <p>(c) stormwater harvesting plan as part of an integrated water cycle management plan; or</p> <p>(d) aquatic habitat.</p> <p><b>AO6.5</b> The end-use purpose of the non-tidal artificial waterway is designed and operated in a way that protects water environmental values.</p> <p><b>AO6.6</b> Monitoring and maintenance programs adaptively manage water quality to achieve relevant water quality objectives downstream of the waterway.</p> <p><b>AO6.7</b> Aquatic weeds are managed to achieve a low percentage of coverage of the water surface area, and pests and vectors are managed through design and maintenance.</p>	
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Wastewater discharge		
<p><b>PO7</b> Discharge of wastewater to waterways, or off site:</p> <ul style="list-style-type: none"> <li>(a) meets best practice environmental management;</li> <li>(b) is treated to:                             <ul style="list-style-type: none"> <li>(i) meet water quality objectives for its receiving waters;</li> <li>(ii) avoid adverse impact on ecosystem health or waterway health;</li> <li>(iii) maintain ecological processes, riparian vegetation and waterway integrity;</li> <li>(iv) offset impacts on high ecological value waters.</li> </ul> </li> </ul>	<p><b>AO7.1</b> A wastewater management plan is prepared and addresses:</p> <ul style="list-style-type: none"> <li>(a) wastewater type;</li> <li>(b) climatic conditions;</li> <li>(c) water quality objectives;</li> <li>(d) best practice environmental management.</li> </ul> <p><b>AO7.2</b> The waste water management plan is managed in accordance with a waste management hierarchy that:</p> <ul style="list-style-type: none"> <li>(a) avoids wastewater discharge to waterways; or</li> <li>(b) if wastewater discharge cannot practicably be avoided, minimises wastewater discharge to waterways by re-use, recycling, recovery and treatment for disposal to sewer, surface water and ground water.</li> </ul> <p><b>AO7.3</b> Wastewater discharge is managed to avoid or minimise the release of nutrients of concern so as to minimise the occurrence, frequency and intensity of algal blooms.</p> <p><b>AO7.4</b> Development in coastal catchments avoids or minimises and appropriately manages soil disturbance or altering natural hydrology and:</p> <ul style="list-style-type: none"> <li>(a) avoids lowering ground water levels where potential or actual acid sulfate soils are present;</li> <li>(b) manages wastewater so that:                             <ul style="list-style-type: none"> <li>(i) the pH of any wastewater discharges is maintained between 6.5 and 8.5 to avoid mobilisation of acid, iron, aluminium and other metals;</li> <li>(ii) holding times of neutralised wastewater ensures the flocculation and removal of any dissolved iron prior to release;</li> </ul> </li> </ul>	<p><b>Will Comply</b> Wastewater discharge will be incorporated into the on-site effluent system design.</p>

	<p>visible iron floc is not present in any discharge;</p> <p>(iv) precipitated iron floc is contained and disposed of;</p> <p>(iii) wastewater and precipitates that cannot be contained and treated for discharge on site are removed and disposed of through trade waste or another lawful method.</p>	
<b>Electricity supply</b>		
<p><b>PO8</b> Development is provided with a source of power that will meet its energy needs.</p>	<p><b>AO8.1</b> A connection is provided from the premises to the electricity distribution network;</p> <p>or</p> <p><b>AO8.2</b> The premises is connected to the electricity distribution network in accordance with the Design Guidelines set out in Section D8 of the Planning scheme policy SC5 – FNQROC Regional Development Manual.</p> <p>Note - Areas north of the Daintree River have a different standard.</p>	<p><b>Complies</b> A connection will be provided from the premises to the electricity distribution network.</p>
<p><b>PO9</b> Development incorporating pad-mount electricity infrastructure does not cause an adverse impact on amenity.</p>	<p><b>AO9.1</b> Pad-mount electricity infrastructure is:</p> <p>(a) not located in land for open space or sport and recreation purposes;</p> <p>(b) screened from view by landscaping or fencing;</p> <p>(c) accessible for maintenance.</p> <p><b>AO9.2</b> Pad-mount electricity infrastructure within a building, in a Town Centre is designed and located to enable an active street frontage.</p> <p>Note – Pad-mounts in buildings in activity centres should not be located on the street frontage.</p>	<p><b>Not Applicable</b> The proposed Development does not involve any pad-mount electricity infrastructure.</p>

<b>Telecommunications</b>		
<p><b>PO10</b> Development is connected to a telecommunications service approved by the relevant telecommunication regulatory authority.</p>	<p><b>AO10</b> The development is connected to telecommunications infrastructure in accordance with the standards of the relevant regulatory authority.</p>	<p><b>Will Comply</b> The development will be connected to telecommunications infrastructure in accordance with the standards of the relevant regulatory authority.</p>
<p><b>PO11</b> Provision is made for future telecommunications services (e.g. fibre optic cable).</p>	<p><b>AO11</b> Conduits are provided in accordance with Planning scheme policy SC5 – FNQROC Regional Development Manual.</p>	<p><b>Not Applicable</b> The development site is remote and does not require any conduits for future infrastructure.</p>
<b>Road construction</b>		
<p><b>PO12</b> The road to the frontage of the premises is constructed to provide for the safe and efficient movement of: (a) pedestrians and cyclists to and from the site; (b) pedestrians and cyclists adjacent to the site; (c) vehicles on the road adjacent to the site; (d) vehicles to and from the site; emergency vehicles.</p>	<p><b>AO12.1</b> The road to the frontage of the site is constructed in accordance with the Design Guidelines set out in Sections D1 and D3 of the Planning scheme policy SC5 – FNQROC Regional Development Manual, for the particular class of road, as identified in the road hierarchy.</p> <p><b>AO12.2</b> There is existing road, kerb and channel for the full road frontage of the site.</p> <p><b>AO12.3</b> Road access minimum clearances of 3.5 metres wide and 4.8 metres high are provided for the safe passage of emergency vehicles.</p>	<p><b>Complies</b> The site has frontage and access via a Council maintained road.</p>
<b>Alterations and repairs to public utility services</b>		
<p><b>PO13</b> Infrastructure is integrated with, and efficiently extends, existing networks.</p>	<p><b>AO13</b> Development is designed to allow for efficient connection to existing infrastructure networks.</p>	<p><b>Complies</b> Development is designed to allow for efficient connection to existing infrastructure networks.</p>

<p><b>PO14</b> Development and works do not affect the efficient functioning of public utility mains, services or installations.</p>	<p><b>AO14.1</b> Public utility mains, services and installations are not required to be altered or repaired as a result of the development;</p> <p>or</p> <p><b>AO14.2</b> Public utility mains, services and installations are altered or repaired in association with the works so that they continue to function and satisfy the relevant Design Guidelines set out in Section D8 of the Planning scheme policy SC5 – FNQROC Regional Development Manual.</p>	<p><b>Complies</b> Public utility mains, services and installations are not required to be altered or repaired as a result of the development</p>
<b>Construction management</b>		
<p><b>PO15</b> Work is undertaken in a manner which minimises adverse impacts on vegetation that is to be retained.</p>	<p><b>AO15</b> Works include, at a minimum:</p> <ul style="list-style-type: none"> <li>(a) installation of protective fencing around retained vegetation during construction;</li> <li>(b) erection of advisory signage;</li> <li>(c) no disturbance, due to earthworks or storage of plant, materials and equipment, of ground level and soils below the canopy of any retained vegetation;</li> <li>(d) removal from the site of all declared noxious weeds.</li> </ul>	<p><b>Will Comply</b> All works will be carried out in accordance with applicable requirements and undertaken in a manner which minimises adverse impacts on vegetation that is to be retained.</p>
<p><b>PO16</b> Existing infrastructure is not damaged by construction activities.</p>	<p><b>AO16</b> Construction, alterations and any repairs to infrastructure is undertaken in accordance with the Planning scheme policy SC5 – FNQROC Regional Development Manual.</p> <p>Note - Construction, alterations and any repairs to State-controlled roads and rail corridors are undertaken in accordance with the Transport Infrastructure Act 1994.</p>	<p><b>Will Comply</b> Construction, alterations and any repairs to infrastructure is undertaken in accordance with the Planning scheme policy SC5 – FNQROC Regional Development Manual.</p>

<b>For assessable development</b>		
<b>High speed telecommunication infrastructure</b>		
<b>PO17</b> Development provides infrastructure to facilitate the roll out of high speed telecommunications infrastructure.	<b>AO17</b> No acceptable outcomes are prescribed.	<b>Complies</b> The installation of future infrastructure will not be impeded by the proposed development.
<b>Trade waste</b>		
<b>PO18</b> Where relevant, the development is capable of providing for the storage, collection treatment and disposal of trade waste such that: (a) off-site releases of contaminants do not occur; (b) the health and safety of people and the environment are protected; (c) the performance of the wastewater system is not put at risk.	<b>AO18</b> No acceptable outcomes are prescribed.	<b>Not Applicable</b> The proposed Development does not involve any trade waste.
<b>Fire services in developments accessed by common private title</b>		
<b>PO19</b> Hydrants are located in positions that will enable fire services to access water safely, effectively and efficiently.	<b>AO19.1</b> Residential streets and common access ways within a common private title places hydrants at intervals of no more than 120 metres and at each intersection. Hydrants may have a single outlet and be situated above or below ground.  <b>AO19.2</b> Commercial and industrial streets and access ways within a common private title serving commercial properties such as factories and warehouses and offices are provided with above or below ground fire hydrants located at not more than 90 metre intervals and at each intersection. Above ground fire hydrants have dual-valved outlets.	<b>Not Applicable</b> The proposed Development does not involve any land accessed by common private title.

<p><b>PO20</b> Hydrants are suitable identified so that fire services can locate them at all hours.</p> <p>Note – Hydrants are identified as specified in the Department of Transport and Main Roads Technical Note: 'Identification of street hydrants for fire fighting purposes' available under 'Publications'.</p>	<p><b>AO20</b> No acceptable outcomes are prescribed.</p>	<p><b>Not Applicable</b> The proposed Development does not required any new hydrant installations.</p>
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