1.

### Works, services and infrastructure code

#### Application

This code applies to development identified as requiring assessment against the Works, services and infrastructure code by the tables of assessment in **Part 5 (Tables of assessment)**.

#### Purpose and overall outcomes

1. The purpose of the Works, services and infrastructure code is to ensure that development works and the provision of infrastructure and services meets the needs of the development, and is undertaken in a professional and sustainable manner.
2. The purpose of the Works, services and infrastructure code will be achieved through the following overall outcomes:-
	1. works are undertaken such that environmental harm and nuisance resulting from construction activities is avoided or minimised and the environmental values of water are protected;
	2. development is designed and constructed to a standard that meets community expectations, maintains public health and safety, prevents unacceptable off-site impacts and minimises whole of life cycle costs;
	3. physical and human infrastructure networks that provide basic and essential services and facilities to local communities are able to meet the planned increase in demand resulting from a planned increase in development density;
	4. development is provided with an appropriate standard of water supply, wastewater treatment and disposal, drainage, energy and communications infrastructure and other services;
	5. infrastructure is designed, constructed and provided in a manner which maximises resource efficiency and achieves acceptable maintenance, renewal and adaptation costs;
	6. infrastructure is integrated with surrounding networks;
	7. development over or near infrastructure does not compromise or interfere with the integrity of the infrastructure;
	8. filling and excavation does not adversely or unreasonably impact on the natural environment, drainage conditions or adjacent properties;
	9. development has appropriate infrastructure and access for emergency services vehicles for the protection of people, property and the environment from fire and chemical incidents; and
	10. marina development facilitates the installation, maintenance and availability of reception facilities for ship-sourced pollutants to prevent marine pollution.

#### Specific benchmarks for assessment

Requirements for operational work accepted subject to requirements

| **Performance outcomes** | **Acceptable outcomes** | **Compliance / Representations** |
| --- | --- | --- |
| ***Infrastructure, services and utilities*** |  |
| **PO1**The design and construction of works ensures safe and convenient use by users of the site and the general public. | **AO1**All development works are designed and constructed in accordance with the **Planning scheme policy for development works**. | Provide a brief description how your proposal complies with the relevant Acceptable outcome (if applicable) or a detailed analysis how compliance is achieved with the Performance outcome. |
| **PO2**Development works and connections to infrastructure and services are undertaken in accordance with acceptable engineering standards. | **AO2.1**All development works are certified by a Registered Professional Engineer Queensland (RPEQ).**AO2.2**All connections to infrastructure and services are in accordance with the requirements of the relevant infrastructure entity. | Click and provide your representations.  |

Benchmarks for assessable development

| **Performance outcomes** | **Acceptable outcomes** |  |
| --- | --- | --- |
| ***Infrastructure, services and utilities*** |  |
| **PO3**Development is provided with infrastructure, services and utilities that:-1. are appropriate to its location and setting;
2. are commensurate with the needs of the development and its users; and
3. maintain acceptable public health and environmental standards.
 | **AO3.1**Subject to availability, development is provided with an appropriate connection to reticulated sewerage, water supply, stormwater drainage, electricity, gas and telecommunications services at no cost to the Council, including provision by way of dedicated road, public reserve or as a minimum by way of easements to ensure continued access is available to these services.**AO3.2**Where not located in a sewered area, development is provided with an on-site effluent treatment and disposal system in accordance with the requirements of the *Plumbing and Drainage Act 2018.***AO3.3**Where development is located in an area where reticulated water supply is not available, appropriate on-site rainwater collection and/or other means to service the anticipated water supply needs of the development is provided, including but not limited to potable water supply and fire fighting needs. **AO3.4**Where reticulated water supply is not available and the development involves persons working, visiting and temporarily staying on premises (i.e. not permanently residing on the site), potable water supply complies with the *Australian Drinking Water Guidelines* (NHMRC, 2011). | Click and provide your representations. |
| **PO4**Development provides for infrastructure, services and utilities that are planned, designed and constructed in a manner which:-1. ensures appropriate capacity to meet the current and planned future needs of the development;
2. is integrated with and efficiently extends existing networks;
3. minimises risk to life and property;
4. avoids areas of environmental significance;
5. minimises risk of environmental harm;
6. achieves acceptable maintenance, renewal and adaptation costs;
7. can be easily and efficiently maintained;
8. ensures the ongoing construction or operation of the development is not disrupted;
9. where development is staged, each stage is fully serviced before a new stage is released;
10. ensures adequate clearance zones are maintained between utilities and dwellings to protect residential amenity and health; and
11. minimises adverse visual impacts, to the extent practicable.
 | **AO4.1**Infrastructure is planned, and appropriate contributions made, in accordance with the Local Government Infrastructure Plan or any other applicable infrastructure charging instrument. **AO4.2**Infrastructure is planned, designed and constructed in accordance with the Council’s Local Government Infrastructure Plan, and the **Planning scheme policy for development works,**or where applicable, the requirements of the service provider.**AO4.3**Compatible public utility services are co-located in common trenching in order to minimise the land required and the costs for underground services.**AO4.4**Stormwater drainage, sewerage and sullage systems are designed so that overflows do not enter residences. **AO4.5**Infrastructure, services and utilities are located, designed and constructed to:- 1. avoid disturbance of areas of environmental significance;
2. minimise earthworks; and
3. avoid crossing watercourses or wetlands.

**AO4.6**The selection of materials used in the construction of infrastructure is suitable, durable, easy to maintain and cost effective, taking into account the whole of life cycle cost, and achieves best practice environmental management and energy savings.**AO4.7**In urban areas, electrical and telecommunications reticulation infrastructure is provided underground. | Click and provide your representations. |
| ***Development over or near sewerage, water and stormwater drainage infrastructure*** |  |
| **PO5**Development near or over the Council’s stormwater infrastructure and/or sewerage and water infrastructure:- 1. protects the infrastructure from physical damage; and
2. allows ongoing necessary access for maintenance purposes.
 | **AO5**Development near or over the Council’s stormwater infrastructure and/or sewerage and water infrastructure complies with the **Planning scheme policy for development works**.Editor’s note—QDC MP1.4 applies to building work for a building or structure proposed to be carried out on a lot that contains, or is adjacent to a lot that contains, relevant infrastructure. | Click and provide your representations. |
| ***Excavation and filling*** |  |
| **PO6**Excavation and filling:-1. does not cause environmental harm;
2. does not impact adversely on visual amenity;
3. does not impact adversely on adjoining properties;
4. maintains natural landforms as far as reasonably practicable;
5. is stable in both the short and long term;
6. does not prevent or create difficult access to the property; and
7. does not result in ponding, concentration or diversion of overland runoff flows that cause damage to adjacent lands or infrastructure.
 | **AO6.1**Development provides that:-1. on sites of:-
	1. 15% or more in slope, the extent of excavation (cut) and fill does not involve a total change of more than 1.5m relative to the natural ground level at any point; or
	2. in other areas, the extent of excavation (cut) and fill does not involve a total change of more than 1m relative to the natural ground level at any point;
2. no part of any cut or fill batter is within 1.5m of any property boundary except cut and fill involving a change in ground level of less than 200mm that does not necessitate the removal of any vegetation;
3. retaining walls are no greater than 1m high; and
4. retaining walls are constructed a minimum 150mm from property boundaries.

**AO6.2**Driveways are able to be constructed and maintained accordance with the requirements of the **Planning scheme policy for development works.****AO6.3**For filling and excavation work altering overland runoff flows, no acceptable outcome is provided.  | Click and provide your representations. |
| ***Fire services in developments accessed by common private title*[[1]](#footnote-1) [[2]](#footnote-2)** |  |
| **PO7**Hydrants are located in positions that will enable fire services to access water safely, effectively and efficiently. | **AO7.1**Residential streets and common access ways within a common private title should have hydrants placed 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.AO7.2Commercial and industrial streets and access ways within streets serving commercial properties such as factories, warehouses and offices should be provided with above or below ground fire hydrants at not more than 90 metre intervals and at each street intersection. Above ground fire hydrants should have dual valved outlets.  | Click and provide your representations. |
| **PO8**Road widths and construction within the development area adequate for fire emergency vehicles to gain access to a safe working area close to dwellings and near water supplies whether or not on-street parking spaces are occupied. | **AO8**Road access minimum clearances of 3.5 metres wide and 4.8 metres high are provided for safe passage of emergency vehicles.  | Click and provide your representations. |
| **PO9**Hydrants are suitably identified so that fire services can locate them at all hours. | **AO9**Hydrants are identified as specified in the DTMR Traffic and Road Use Management manual (TRUM) Volume 1: Guide to Traffic Management, Part 10.Editor’s note—For further information on how to address the above benchmarks please see Queensland Fire and Emergency Service: Fire hydrant and vehicle access guidelines for residential, commercial and industrial lots.  | Click and provide your representations. |
| ***Ship-sourced pollutants reception facilities in marinas with six or more berths*** |  |
| **PO10**Marina development provides facilities for the handling and disposal of ship-sourced pollutants. | **AO10.1**Common user facilities for the handling and disposal of ship-sourced pollutants including oil, garbage and sewerage are provided at a suitable location at the marina;**AND**Facilities shall be designed and operated to ensure the risk of spillage from operations is minimised;**AND**Appropriate equipment to contain and remove spillages is stored in a convenient position near the facility and is available for immediate use;**AND**Boats visiting the marina are able to use the ship-sourced pollutants reception facilities.Editor’s note—Refer to: Australian and New Zealand Environment and Conservation Council (ANZECC), 1997, Best Practice Guidelines for Waste Reception Facilities at Ports, Mariners and Boat Harbours in Australia and New Zealand. **AO10.2**Where practical, the marina pollutant reception facility is connected to sewerage or other waste reception infrastructure.Editor’s note—Reception facilities require compliance assessment under the Plumbing and Drainage Act 2018. The plumbing compliance assessment process will ensure that the proposed facilities address ‘peak load’.  | Click and provide your representations. |

Additional benchmarks for operational work only

| **Performance outcomes** | **Acceptable outcomes** |  |
| --- | --- | --- |
| ***Excavation and filling*** |  |
| **PO11**Filling or excavation is consistent with the intended use of the site and does not:-1. result in any contamination of land or water;
2. pose a health or safety risk to users and neighbours of the site; and
3. directly, indirectly or cumulatively cause any flooding or drainage problems or worsen any existing problems.
 | **AO11.1**Development provides that:-1. the extent of filling or excavation is in accordance with a current development approval for material change of use, reconfiguring a lot or building work;
2. all stored material is:-
	1. contained wholly within the site;
	2. located in a single manageable area that does not exceed 50m2; and
	3. located at least 10m from any property boundary; and
3. any batter or retaining wall is structurally adequate.

**AO11.2**Development provides that:-1. no contaminated material is used as fill;
2. for excavation, no contaminated material is excavated or contaminant disturbed; and
3. waste materials are not used as fill, including:-
	1. commercial waste;
	2. construction/demolition waste;
	3. domestic waste;
	4. garden/vegetation waste; and
	5. industrial waste.

**AO11.3**Filling and excavation material must be sourced from and disposed to lawfully approved sites. | Click and provide your representations. |
| **PO12**Filling or excavation, including the associated transportation of materials:-1. does not cause significant impacts through truck movements, dust or noise, on the amenity of the locality in which the works are undertaken or along routes taken to transport the material; and
2. minimises adverse impacts on the road system.
 | **AO12**Filling or excavation, and transportation of material, is undertaken in accordance with the requirements of the **Planning scheme policy for development works**. | Click and provide your representations. |
| ***Construction management*** |  |
| **PO13**Air emissions, noise or lighting arising from construction activities and works do not adversely impact on surrounding areas.  | **AO13.1**Dust emissions do not extend beyond the boundary of the site. **AO13.2**Air emissions, including odours, are not detectable at the boundary of the site.**AO13.3**Noise generating equipment is enclosed, shielded or acoustically treated in a manner which ensures the equipment does not create environmental harm. **AO13.4**Outdoor lighting complies with *AS4282-1997 Control of the Obtrusive Effects of Outdoor Lighting.* | Click and provide your representations. |
| **PO14**Construction activities and works provide for:-1. the protection of the aesthetic and environmental values of retained vegetation; and
2. impacts on fauna to be minimised.
 | **AO14.1**The health and stability of retained vegetation is maintained during construction activities by:-1. clearly marking vegetation to be retained with temporary fencing and flagging tape;
2. installing secure barrier fencing around the outer drip line and critical root zone of the vegetation;
3. preventing any filling, excavation, stockpiling, storage of chemicals, fuel or machinery within the fenced protection area;
4. using low impact construction techniques in the vicinity of vegetation to minimise interference with the vegetation; and
5. removing all declared noxious weeds and environmental weeds from the site.

**AO14.2**All works carried out in the vicinity of retained vegetation comply with *AS4970 Protection of Trees on Development Sites* and *AS4687 Temporary Fencing and Hoarding*.**AO14.3**Where construction activities will result in adverse impacts upon fauna and/or the clearing and/or removal of fauna habitat:-1. all vacant hollows and nests are relocated or rendered unusable to prohibit fauna return during clearing works; and
2. all fauna is suitably relocated or humanely dealt with during the pre-clearing inspections or during clearing.
 | Click and provide your representations. |
| **PO15**Construction activities and works, including disposal of cleared vegetation:-1. minimises waste;
2. maximises reuse and/or recycling;
3. minimises impacts on public health and safety and on the amenity of the surrounding area; and
4. minimises the spread of weed species and non-indigenous plants.
 | **AO15**No acceptable outcome provided. | Click and provide your representations. |
| **PO16**Construction activities and works (including traffic and parking generated by construction activities) are managed to ensure that:- 1. existing utilities and road and drainage infrastructure continue to function efficiently and can be accessed by the relevant authority for maintenance purposes;
2. Impacts on the transport network and on the amenity of the surrounding area are minimised; and
3. the environmental values of water and the functionality of stormwater infrastructure are protected from the impacts of erosion, turbidity and sedimentation.
 | **AO16.1**Existing utilities and road and drainage infrastructure are protected or relocated in accordance with the standards specified in the **Planning scheme policy for development works.****AO16.2**The costs of any alterations or repairs to utilities and road and drainage infrastructure are met by the developer. **AO16.3**Traffic and parking generated by construction activities is managed in accordance with a Traffic and Parking Management Plan.**AO16.4**Development is located, designed and constructed in accordance with an Erosion and Sediment Control Plan prepared in accordance with the requirements specified in the **Planning scheme policy for development works***.*  | Click and provide your representations. |

1. Note—these outcomes apply where the development:

	1. is for a material change of use or reconfiguring a lot where part of the development or any dwelling is more than 90 metres from the nearest located fire hydrant; and
	2. for buildings not covered in other legislation or planning provisions mandating fire hydrants; and
	3. the proposed development will include streets and common access ways within a common private title in areas serviced by reticulated water. [↑](#footnote-ref-1)
2. Editor’s note—the term common private title covers areas such as access roads in community title developments or strata title unit access which are private and under group or body corporate control. [↑](#footnote-ref-2)