

4.14 WORKS, SERVICES & INFRASTRUCTURE CODE

4.14.1 Applicability

The following Code is applicable to assessable development that identifies the Works, Services and Infrastructure Code as relevant assessment criteria in the Level of Assessment Tables.

4.14.2 Overall Outcomes for the Works, Services and Infrastructure Code

The overall outcomes are the purpose of the Works, Services and Infrastructure Code. The overall outcomes are as follows –

- a) Ensure that development is provided with the level of services expected by the community and that unacceptable off-site impacts are prevented.

4.14.3 Compliance with the Works, Services and Infrastructure Code

Development that is consistent with the performance criteria (below) complies with the Works, Services and Infrastructure Code.

The code is divided into a number of discrete sections that deal with different elements of the engineering components of the projects including:

- a) Infrastructure Provision and integration
- b) Filling and Excavation
- c) Flooding Management
- d) Lakes and Water Bodies

4.14.4 Development Guidelines

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTION/S
General Infrastructure Provision And Integration	
<p>PC1 Land used for urban purposes must be serviced adequately with regard to water, waste disposal, drainage, telecommunication and electricity infrastructure.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p><i>Note:</i> Compliance with the Performance Criteria for development in established areas at the initial development application stage can generally be demonstrated by:</p> <ul style="list-style-type: none"> - Identifying what services, works and infrastructure are not available to the development and are to be provided. - Identifying the relevant connection points for the services and infrastructure. - Providing a conceptual design for the required services, works and infrastructure. </div>	<p>AS1.1 Development provides infrastructure in accordance with PC2 to PC7 and Council's Plans for Trunk Infrastructure.</p>
<p>PC2 An adequate, safe and reliable supply of potable and general use water is provided.</p>	<p>AS2.1 The use is connected to a reticulated water supply. OR Where the lot does not have access to reticulated water – rainwater tanks are</p>



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	<p>provided to accommodate the water demand generated from development, with a minimum supply of 20,000 litres.</p> <p>AS2.2 The water supply solution is designed and constructed in accordance with Planning Scheme Policy No. 2 - Development Manual.</p>
<p>PC3 Provision is made for the treatment of sewerage and disposal of effluent to ensure there are no adverse impacts on water quality (both ground water and surface waters) 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>AS3.1 The use is connected to a reticulated sewerage system.</p> <p style="text-align: center;">OR</p> <p>Development in the Rural, Rural Residential Zone and Park Residential Zoned lots created prior to gazettal of this Planning Scheme: If development cannot be connected to a reticulated sewerage system, sewerage disposal can be accommodated within the site boundaries and complies with Australian Standards 1547:2000</p> <p>AS3.2 The sewerage solution is designed and constructed in accordance with Planning Scheme Policy No 2 - Development Manual</p>
<p>PC4 Land is provided with an internal and external stormwater system to control runoff and impacts on receiving waters (both surface and ground water).</p>	<p>AS4.1 A reticulated and natural overland stormwater system is provided, including all necessary attenuation or downstream works to allow for connection to the existing drainage network.</p> <p>AS4.2 A reticulated roofwater system is provided on each allotment and connected to the drainage network.</p> <p>AS4.3 All stormwater drainage is designed and constructed in accordance with the Planning Scheme Policy No 2 - Development Manual.</p>
<p>PC5 Land is provided with an electricity supply.</p>	<p>AS5.1 The site/development is connected to an electricity supply system.</p>
<p>PC6 Telecommunication facilities are provided to all sites and/or development.</p>	<p>AS6.1 The site/development is connected to a telecommunication system.</p>
<p>PC7 Roads are provided to allow for –</p> <ol style="list-style-type: none"> safe and efficient movement of vehicles on the road adjacent to the site; the safe and efficient movement of vehicles to and from the site; the safe and efficient movement of pedestrian and cyclists adjacent to the site; and the safe and efficient movement of pedestrians and cyclists to and from the site. 	<p>AS7.1 Vehicular access is provided to all lots.</p> <p>AS7.2 Road networks and access is designed in accordance with Planning Scheme Policy No 2 – Development Manual.</p> <p>AS7.3 Pedestrian and cyclist facilities are provided on site in accordance with Planning Scheme Policy No 2 – Development Manual.</p>
Flood Management	
<p>PC8 Development design must reduce property damage and where applicable, ensure public safety by ensuring that the development levels are set above the relevant design flood event, and by avoiding causing exposure to undue flood hazard.</p>	<p>AS8.1 Habitable and non-habitable floor levels are located above the minimum flood immunity levels identified in Table 1.</p> <p>AS8.2 Development is designed and constructed to address flood hazards in accordance with the 'Degree of Flood Hazard by Land Use Table' contained in Planning Scheme Policy No 2 – Development Manual.</p>
<p>PC9 Development must not compromise flood evacuation procedures, with</p>	<p>AS9.1 Development does not –</p> <ol style="list-style-type: none"> increase the number of people



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sufficient access of egress available to enable evacuation during a range of floods up to and beyond the designated flood event.	<p>calculated to be at risk from flooding;</p> <p>b) increase the number of people likely to need evacuation;</p> <p>c) shorten flood warning times;</p> <p>d) impact on the ability of traffic to use evacuation routes, or unreasonably increase traffic volumes on evacuation routes;</p> <p>e) place additional burdens on Council's resources or emergency services;</p> <p>f) increase the duration of flooding unless the increase is part of a Council approved strategy.</p> <p>AS9.2 The design and location of access routes is in accordance with Planning Scheme No. 2 – Development Manual.</p>
<p>PC10 The proposed stormwater management system or site works must not adversely impact on flooding or drainage of properties that are upstream, downstream or adjacent to the subject site.</p>	<p>AS10.1 The proposal meets the requirements of Planning Scheme Policy No. 2 – Development Manual, and does not result in an increase in flood level or flood duration on upstream, downstream or adjacent properties.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p><i>Note: Compliance with this acceptable solution can be demonstrated the submission of a Stormwater Management Report identifying potential flooding impacts on upstream, downstream or adjacent properties.</i></p> </div>
<p>PC11 Development must not reduce the flood storage capacity of the creek or waterway.</p>	<p>AS11.1 No filling occurs below the Q100 flood level.</p>
<p>PC12 Development protects and enhances the environmental values in a creek or waterway, including it's banks and vegetation..</p>	<p>AS12.1 Development does not cause the adjacent waterway or overland flow paths to scour.</p> <p>AS12.2 Existing riparian vegetation is retained.</p>
<p>PC13 Landscaping must not impede a natural watercourse, flood channel or overland flow path.</p>	<p>No acceptable solution specified.</p>
Filling and Excavation	
<p>PC14 Filling or excavation does not result in reduced visual amenity and instability of a site or adjacent land.</p>	<p>AS14.1 Filling or excavation:</p> <p>a) does not exceed one vertical metre in relation to ground level; or</p> <p>b) where exceeding one vertical metre in relation to ground level, is designed and constructed in accordance with Planning Scheme Policy No. 2 – Development Manual.</p> <p>AS14.2 Retaining walls, embankments and other structures used for the supporting of fill and excavated areas:</p> <p>a) do not exceed 0.9 metres in height; or</p> <p>b) where exceeding 0.9m, are designed and constructed in accordance with Planning Scheme Policy No. 2 – Development Manual.</p> <p>AS14.3 Filling or excavation:</p> <p>a) does not occur within two metres of the site boundary; or</p> <p>b) where within two metres of the site</p>



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	boundary is designed and constructed in accordance with Planning Scheme Policy No. 2 – Development Manual.
PC15 Filling or excavation does not result in the contamination of land.	AS15.1 The fill material is solid clean earth, free of putrid or refuse material or acid sulphate soils. AS15.2 The site is not on the contaminated land register.
PC16 Changes to site characteristics as a result of filling or excavation has no detrimental impact upon the site or upstream or downstream land.	AS16.1 Filling or excavation is carried out in accordance with Planning Scheme Policy No. 2 – Development Manual to ensure: <ul style="list-style-type: none"> a) no ponding of water on the site or adjacent land; b) no uncontrolled increase or decrease in flow of water, including peak flow, velocity and timing across the site or any other land; and c) no uncontrolled increase or decrease in the volume of water or concentration of water in a watercourse or overland flow paths.
PC17 Earthworks are carried out in a manner to ensure no adverse impact upon surrounding land including groundwater, watercourses, drainage lines, wetlands, and native vegetation.	AS17.1 All earthworks are carried out in accordance with Planning Scheme Policy No. 2 - Development Manual.
PC18 Embankment location and construction does not impact upon neighbouring properties in terms of – <ul style="list-style-type: none"> a) hydrology; b) alteration of existing overland flow paths and patterns; c) landslip or failure of dam wall; and d) effluent disposal areas. 	AS18.1 The earthworks shall comply with design and construction requirements within Planning Scheme Policy No. 2 - Development Manual.



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Table 1

Column 1 Land use	Column 2 Designated Flood Event	Column 3 Freeboard	Column 4 Habitable Floor Level	Column 5 Non Habitable Floor Level
Open space, parkland	50% AEP	0 mm	50% AEP + freeboard	50% AEP
Rural Uses (all), car parks,	10% AEP	150 mm	10% AEP + freeboard	10% AEP
Accommodation building, bed and breakfast, caretakers residence, caravan park, house, home business, motel, multiple residential, relocatable home park, display home/office, funeral parlour, licensed premises, local store, office, outdoor sales premises, restraint, shop, veterinary facility, extractive industry, industry, mechanical repair workshop, service stations, special industry (where not defined elsewhere in this table), cemetery, correctional facilities, indoor recreation, outdoor recreation (where not defined elsewhere in this table), park facility (where not defined elsewhere in this table), passenger terminal	1% AEP	300mm (when adjacent to floodplains) 500mm (when adjacent to confined waterways)	1% AEP + freeboard	1 % AEP
Retirement village, equipment and vehicle depot, warehouse, childcare centre, community facilities (where not defined elsewhere in this table), minor public utility, police/fire stations, places of refuge, hazardous chemical storage (eg fuel depot)	0.5% AEP	300mm (when adjacent to floodplains) 500mm (when adjacent to confined waterways)	0.5% AEP + freeboard	0.5% AEP
Medical centre, hospital, disaster management facilities, power stations, major electrical infrastructure, water treatment plants	0.2% AEP	300mm (when adjacent to floodplains) 500mm (when adjacent to confined waterways)	0.2% AEP + freeboard	0.2% AEP

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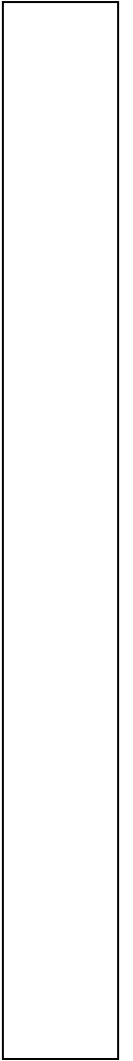
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PERFORMANCE CRITERIA	ACCEPTABLE SOLUTION/S
Lakes and Water Bodies	
PC19 Development must be designed and constructed to avoid causing exposure to undue flood hazard	AS19.1 Development is to be designed and constructed so that uses are not exposed to a greater degree of flood hazard than shown in the 'Degree of Flood Hazard by Land Use Table' of Planning Scheme Policy No 2 – Development Manual.
PC20 Lades and water bodies are integrated into the neighbourhood design and allow for public access, access for maintenance purposes, safety and avoidance of exclusive use.	<p>AS20.1 Public access to and from the lake or water body is facilitated by locating public roads and open space between the lake or water body and surrounding development sites.</p> <p>AS20.2 A minimum of 50% of the lake or water body is adjacent to a public road.</p> <p>AS20.3 Design of lakes or water bodies facilitates the safe egress of persons exiting the lake or water body.</p> <p>AS20.4 The water body includes:</p> <ol style="list-style-type: none"> warning signs; and fencing of areas where access is restricted, such as steep sided embankments or large drops.
PC21 Water bodies must not cause adverse stormwater drainage impacts on areas external and internal to the site.	AS21.1 Design and construction of water bodies is carried out in accordance with Planning Scheme Policy No. 2 – Development Manual.
PC22 New water bodies must be suitable for their intended uses and must maintain or enhance the water quality of existing water bodies connecting to them.	AS22.1 Design and construction of water bodies is carried out in accordance with Planning Scheme No. 2 – Development Manual.



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Amendment 01.2007: 23rd July 2007. Amendment 02.2007: 21st November 2008.