

City Plan code template

This code template supports the preparation of a development application against either the acceptable outcome(s) or performance outcome(s) contained in the code. Development assessment rules are outlined in **Section 5.3.3** of the City Plan.

Please note:

For assessment against the overall outcomes, refer to the appropriate code.

Note: The whole of the planning scheme is identified as the assessment benchmark for impact assessable development. This specifically includes assessment of impact assessable development against this strategic framework. The strategic framework may contain intentions and requirements that are additional to and not necessarily repeated in zone, overlay or other codes. In particular, the performance outcomes in zone codes address only a limited number of aspects, predominantly related to built form. Development that is impact assessable must also be assessed against the overall outcomes of the code as well as the strategic framework.

9.4.1 Change to ground level and creation of new waterways code

9.4.1.1 Application

This code applies to assessing operational work (change to ground level) and bulk earthworks undertaken as part of an operational work (works for infrastructure) application where indicated within **Part 5 Tables of assessment**.

When using this code, reference should be made to **Section 5.3.2** and, where applicable, **Section 5.3.3**, in **Part 5**.

Supporting information is prepared by a suitably-qualified person in accordance with **SC6.11 City Plan policy – Land development guidelines**, **Section 8 – Engineering drawings, documents and reports** and/or **SC6.10 City Plan policy – Geotechnical stability assessment guidelines**.

9.4.1.2 Purpose

- (1) The purpose of the Change to ground level and creation of new waterways code is to protect the environment from impacts of earthworks and the creation or expansion of waterways.
- (2) The purpose of the code will be achieved through the following overall outcomes:

- (a) Ground level changes are undertaken with geotechnically and ecologically sound practices.

Note: For guidance on how to meet this overall outcome refer to **SC6.10 City Plan policy – Geotechnical stability assessment guideline**.

- (b) Development does not increase the risk of flood damage to life or property.
- (c) Development does not increase the rate or volume of run-off during a flood.
- (d) Soil disturbance and development of land containing potential and actual acid sulfate soils does not result in environmental damage.

- (e) Construction phase erosion and sediment controls are implemented to minimise erosion and ensure total suspended solids in receiving waters meet the water quality objectives (*Environmental Protection (Water) Policy 2009*).
- (f) Changes to existing ground levels, including the creation of new waterways do not adversely affect the amenity and landscape values.
- (g) The environment and public safety are protected from impacts arising from the creation or expansion of non-tidal artificial waterways, such as urban lakes.
- (h) Development does not adversely affect the quality of stormwater discharging from the development site.
- (i) The drainage capacity of the Woongoolba Flood Mitigation Scheme Area for rainfall events up to 1 in 10 year, 72 hours is maintained (contained within the Scheme drains within a 4 day period) and this capacity is not eroded due to cumulative impact of development.

9.4.1.2 Specific benchmarks for assessment

Table 9.4.1-1: Change to ground level and creation of new waterways code – for assessable development

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets <u>either</u> the performance outcome or overall outcome	Internal use
Finished surface levels			
PO1 The finished surface level is free draining and free from localised flooding.	AO1 Development is free draining and the surface gradient of the fill and/or excavated area is between 0.5% to 1.5%. OR For steep surface gradients, integration with the surrounding topography must be achieved so that the finished profile does not interrupt or materially change the surface water.	AO1 COMPLIES The surface does not interrupt the surface water flow and is integrated with the surrounding topography.	
Stormwater drainage			
PO2 Development does not cause adverse stormwater drainage impacts on or off the site.	AO2.1 The change to ground level maintains flood conveyance through the site for flood events up to a 1 in 100 (Q100) year Average Recurrence Interval (ARI) storm event using the drainage strategy in accordance with SC6.11 City Plan policy –Land development guidelines, Section 4 – Stormwater	AO2.1 COMPLIES The change to ground level maintains flood conveyance through the site for flood events up to a 1 in 100 (Q100) year Average Recurrence Interval (ARI) storm event using the drainage strategy in accordance with SC6.11.	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets <u>either</u> the performance outcome or overall outcome	Internal use
	drainage and water sensitive urban design standards.		
	AO2.2 The change in ground level does not involve fill below the designated flood level, unless approved as part of a development approval for material change of use or reconfiguration of a lot.	AO2.2 COMPLIES The change in ground level does not involve fill below the designated flood level.	
	AO2.3 The change in ground level does not result in an alteration of overland flows onto other properties or create an increase in flood damage to other properties.	AO2.3 COMPLIES The change in ground level does not result in an alteration of overland flows onto other properties or creation of an increase in flood damage to other properties.	
Woongoolba Flood Mitigation Scheme Catchment Area			
PO3 In the Woongoolba Flood Mitigation Scheme Catchment Area, shown on the Water catchments and dual reticulation overlay map , peak outflow and its timing for Q2, Q5 and Q10 for rainfall events up to 72 hours does not change as a result of development.	AO3 No acceptable outcome provided.	AO3 COMPLIES Peak outflow and its timing for Q2, Q5 and Q10 for rainfall events up to 72 hours does not change as a result of development.	
Stormwater quantity			
PO4 Development ensures that there is no impact on local drainage systems, so that no damage is caused to any property upstream or downstream of the site.	AO4 A site stormwater quantity management plan is prepared by a suitably qualified professional and demonstrates: (a) achievable stormwater quantity control measures for discharge during both the construction and operational phases of development designed in accordance with the <i>Queensland Urban Drainage</i>	AO4 COMPLIES A stormwater management report has previously been approved as part of ROL201800026. A new Stormwater Maintenance Plan has been attached as part of this approval (Refer Appendix C as part of original submission) to incorporate maintenance activities and life cycle costings (as per original submission to Council). The Stormwater Maintenance Report is consistent with the outcomes in the approved Stormwater	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets <u>either</u> the performance outcome or overall outcome	Internal use
	<i>Manual (QUDM) unless subject to specific requirements of SC6.11 City Plan policy – Land development guidelines, Section 4 – Stormwater drainage and water sensitive urban design; and</i> (b) on-site detention systems are designed to restrict peak outflows for Q2, Q5, Q10, Q20 Q50 and Q100 to pre-development conditions. OR A Site Stormwater Quantity Management Plan is consistent with that approved in a related development approval.	Management Report. Thus, compliance is achieved.	
Erosion and sediment control			
PO5 All construction and operational work is designed and managed with specific regard to the density, scale, layout and staging of development. All reasonable and practicable measures are taken to protect the environmental values of waters and the functionality of stormwater infrastructure from the impacts of erosion, turbidity and sedimentation, on and downstream of the development site.	AO5.1 An assessment is undertaken in accordance with the criteria in Table 9.4.1-2: Erosion hazard assessment .	AO5.1 COMPLIES An assessment is undertaken in accordance with the criteria in Table 9.4.1.2 – Erosion Management Assessment. Refer to the development plans in Appendix A (as per original submission to Council).	
	AO5.2 Where the Erosion hazard assessment has a risk score <u>less than or equal to 10</u>: a deemed-to-comply report is prepared by a suitably qualified person for Council's approval, including conceptual location and design drawings of each treatment measure in plan and section views, in accordance with the criteria within the guidelines entitled: <i>Urban Stormwater Quality Planning Guidelines by the Department of Environment and Heritage</i>	AO5.2 COMPLIES The erosion hazard assessment has a risk score of less than 10 . An erosion and sediment control plan has been prepared by a suitably qualified person for Council's approval in accordance with the: Best Practice Erosion and Sediment Control International Erosion Control Association (ICEA) 2008. Refer to Appendix A - Sediment and Erosion Control Plan for further details (as per original submission to Council).	

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	<i>Protection.</i> OR Where the Erosion hazard assessment has a risk score <u>greater than 10</u>: an Erosion and Sediment Control Plan (ESCP) is prepared by a suitably qualified person for Council's approval in accordance with the: <i>Best Practice Erosion and Sediment Control International Erosion Control Association (ICEA) 2008, Australasia Chapter 2008</i> detailing the stormwater (quality and flow) treatment measure during the construction phase of development, demonstrating how the minimum design objectives in Table 9.4.1-3 Summary of design objectives for management of stormwater quality – construction phase are achieved including: (a) measures to ensure that the release of sediment-laden stormwater for the nominated design storm are minimised when the design storm is exceeded; (b) detailed design, installation, construction, monitoring and maintenance requirements of all approved proprietary products in accordance with local conditions and manufacturers recommendations; (c) detailing how the ESCP accompanying the Operational work (change to ground level) aligns with the Reconfiguration of lot staging.		

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets <u>either</u> the performance outcome or overall outcome	Internal use
	AO5.3 Where development is on a lot less than 850m ² , provide an ESCP in accordance with SC6.11 City Plan policy – Land development guidelines, Section 4 – Stormwater drainage and water sensitive urban design and Section 8 – Engineering drawings, documents and reports.	AO5.3 NOT APPLICABLE The overall site is subject to lots greater than 850m ² .	
	AO5.4 Where development is on a lot equal to or more than 850m ² , provide an ESCP in accordance with SC6.11 City Plan policy – Land development guidelines, Section 4 – Stormwater drainage and water sensitive urban design and Section 8 – Engineering drawings, documents and reports.	AO5.4 COMPLIES The overall site is subject to lots greater than 850m ² . Accordingly, an ESCP has been prepared in accordance with SC6.9 City Plan policy – Land development guidelines. Refer to the Erosion and Sediment Control Details prepared by icubed consulting within Appendix A for further details (as per original submission to Council).	

Hydraulic considerations

PO6 Any change to the level of the land does not have adverse flooding and drainage impacts.	AO6 An Hydraulic report is prepared by a suitably qualified professional to accord with the Council's hydraulic requirements, demonstrating that the change to the level of the land does not: (a) cause ponding on the site or nearby land; (b) increase flooding which adversely affects the safety or use of any land upstream and downstream; (c) adversely affect the flow of water in any overland flow path, or otherwise.	PO6 COMPLIES The land does not cause flooding, and does not adversely affect the flow of water in an overland flow path. Overland flow paths will be further reduced when the subdivided lots are further developed, capturing smaller catchments and discharging to the underground stormwater road network.	
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Geotechnical fill

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Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets <u>either</u> the performance outcome or overall outcome	Internal use
PO7 Material used as fill has the ability to adequately support future development of the land.	AO7 The fill material type, composition and source is geotechnically suitable and adequately compacted to support future development, in accordance with SC6.11 City Plan policy – Land development guidelines, Section 3 – Change to ground level standards.	AO7 COMPLIES The fill material type, composition and source is geotechnically suitable and adequately compacted to support future development, in accordance with SC6.11 City Plan policy – Land development guidelines.	
Geotechnical stability			
PO8 All earthworks are carried out in a location which is not at risk from geotechnical instability.	AO8 The site is free of compressible soils (e.g. soft clays underneath the site). OR Where the site is underlain by compressible soils, a Geotechnical stability assessment report is prepared by a suitably qualified professional demonstrating the treatment of compressible soils achieves a stable ground able to support future structures.	AO8 COMPLIES The site is free of compressible soils (soft clays underneath the site).	
Batters and retaining wall			
PO9 Batters and retaining walls do not create a negative visual impact on the area.	AO9 Batters and retaining walls are in accordance with SC6.11 City Plan policy – Land development guidelines, Section 3 – Change to ground level standards.	AO9 COMPLIES Batters and retaining walls are in accordance with SC6.11 City Plan policy – Land development guidelines.	
Local amenity, noise and emissions			
PO10 Change to ground level or bulk earthwork activities do not impact on the amenity of the area.	AO10.1 Development work, which has the potential to generate dust is controlled by: (a) daily water spraying of exposed	AO10.1 N/A The proposed development does not anticipate generating dust, but if it does the risk will be mitigated by relevant onsite measures.	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets <u>either</u> the performance outcome or overall outcome	Internal use
	areas; (b) sealed roads; (c) protective covering of exposed areas; and (d) installing wind barriers.		
	AO10.2 All earthworks on the site is undertaken within the following days and hours: Day Hours Monday to Friday between 6am and 6pm Saturday between 7am and 6pm	AO10.2 COMPLIES All earthworks on the site will be undertaken within the following days and hours: Day Hours Monday to Friday between 6am and 6pm Saturday between 7am and 6pm	
Managing contamination risk			
PO11 Any filling or excavation material does not result in the contamination of land.	AO11 All fill material is solid clean earth or clean inert material, free of organic, putrescible or refuse matter.	AO11 N/A No fill material is expected to be needed – reuse acceptable site won material.	
Haulage activity and amenity			
PO12 Haulage activities do not impact on the amenity of the area.	AO12.1 Where transportation of fill material to or from the site is involved, the following applies: loads are covered; (a) spilled or wheel-tracked material is immediately cleaned from external roads; and (b) heavy vehicle traffic is controlled.	AO12.1 N/A All excess material will be covered when being removed from site, and will utilise the following elements; (a) spill or wheel-tracked material will be immediately cleaned from external roads; and (b) heavy vehicle traffic will be controlled.	
	AO12.2 All waste material, including vegetation from the site is disposed of in an approved location.	AO12.2 COMPLIES All waste material, including vegetation from the site is disposed of in an approved location.	
	AO12.3	AO12.3 N/A	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets <u>either</u> the performance outcome or overall outcome	Internal use					
	All haulage routes are approved: (a) for declared main roads – by the Department of Transport and Main Roads; (b) for all other roads – by the Council.	No haulage activities are proposed as part of this application.						
	AO12.4 All haulage to and from the site is conducted within the following days and hours: <table><tr><td>Day</td><td>Hours</td></tr><tr><td>Monday to Friday</td><td>between 6am and 6pm</td></tr><tr><td>Saturday</td><td>between 7am and 6pm</td></tr></table>	Day	Hours	Monday to Friday	between 6am and 6pm	Saturday	between 7am and 6pm	AO12.4 N/A No haulage activities are proposed as part of this application.
Day	Hours							
Monday to Friday	between 6am and 6pm							
Saturday	between 7am and 6pm							
Created new waterways								
PO13 The waterway contributes to the amenity of the development and the surrounding area.	AO13.1 Created waterways within an Operational work (change to ground level) application are designed and managed for any of the following end-uses: (a) amenity, aesthetics, landscaping or recreation; (b) flood management; (c) stormwater harvesting within an integrated water-cycle management plan; and (d) aquatic habitat.	AO13.1 N/A This application does not involve the creation of new waterways.						
	AO13.2 The end-use of the created waterway is designed and operated to protect water environmental values.	AO13.2 N/A This application does not involve the creation of new waterways.						
PO14 The created waterway location is compatible with the land-use constraints of the site protecting water	AO14.1 The created waterway within the Operational work (change to ground level) application achieves the	AO14.1 N/A This application does not involve the creation of new waterways.						

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets <u>either</u> the performance outcome or overall outcome	Internal use
environmental values in existing natural waterways.	following: (a) environmental values in downstream waterways are protected; (b) groundwater recharge areas are not affected; (c) the waterway location incorporates low-lying areas of a catchment connected to an existing waterway; and (d) any existing areas of ponded water are included.		
	AO14.2 Created waterways: (a) are located outside natural wetlands, waterways and associated buffer areas; (b) avoid soil or sediment disturbance; and (c) avoid alteration of the natural hydrologic regime in acid sulfate soil and nutrient hazard areas.	AO14.2 N/A This application does not involve the creation of new waterways.	
PO15 The created waterway's location is compatible with existing tidal waterways.	AO15 Where the created waterway is adjacent or connected to a tidal waterway by a weir, lock, pumping system or similar: (a) there is sufficient flushing or a tidal range of >0.3m; OR (b) any tidal flow alteration does not adversely impact on the tidal waterway; OR (c) there is no introduction of salt	AO15 N/A This application does not involve the creation of new waterways.	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets <u>either</u> the performance outcome or overall outcome	Internal use
	water into freshwater environments.		
PO16 Created waterways are designed and managed to support the legislated environmental values and water quality objectives within <i>Environmental Protection (Water) Policy 2009</i> of connected receiving water environments.	AO16.1 The created waterway within the Operational work (change to ground level) application is designed, constructed and managed by a suitably qualified Registered Professional Engineer Queensland (RPEQ) with specific artificial waterway experience.	AO16.1 N/A This application does not involve the creation of new waterways.	
	AO16.2 The created waterway within the Operational work (change to ground level) application is supported by a Water Quality Management Plan, prepared by a suitably qualified professional, demonstrating the following: water quality of the created waterway is the same or higher standard as the existing water quality; long-term maintenance of the water quality standard is achieved; and (a) breeding potential of biting insects is minimised.	AO16.2 N/A This application does not involve the creation of new waterways.	
	AO16.3 The created waterway does not have deep, isolated holes that stratify and increase the possibility of algal blooms occurring.	AO16.3 N/A This application does not involve the creation of new waterways.	
	AO16.4 Pumping from a created waterway to maintain water quality is avoided.	AO16.4 N/A This application does not involve the creation of new waterways.	
	AO16.5 The created waterway is designed with	AO16.5 N/A This application does not involve the creation of new	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets <u>either</u> the performance outcome or overall outcome	Internal use
	a suitable outlet to ensure that flooding is possible, if required.	waterways.	
	AO16.6 Stormwater is treated before any stormwater enters a created waterway.	AO16.6 N/A This application does not involve the creation of new waterways.	
PO17 Operational work does not cause geotechnical bank instability, erosion, bed scour or revetment wall collapse to existing or newly created waterway.	AO17 Edge treatments certified by a suitably qualified person are in place during and post-construction phase to strengthen the embankment and protect from damage.	AO17 N/A This application does not involve the creation of new waterways.	
PO18 The waterway is managed and operated to achieve the water quality objectives (<i>Environmental Protection (Water) Policy 2009</i>) in natural waterways.	AO18.1 Monitoring and maintenance programs manage the waterway to achieve the water quality objectives downstream.	AO18.1 N/A This application does not involve the creation of new waterways.	
	AO18.2 Aquatic weeds are managed to achieve a low percentage (less than 10%) coverage of the water surface area. Pests and vectors are managed by avoiding stagnant water areas, providing for native fish predators, and, if necessary, other best practices for monitoring and treating pests.	AO18.2 N/A This application does not involve the creation of new waterways.	
	AO18.3 The created waterway is managed and operated under agreement by an appropriate entity for the life of the waterway. A Waterway Management Plan is incorporated within the Community Management Statement for the principal body corporate that: identifies the waterway; (a) states the period of responsibility of the entity;	AO18.3 N/A This application does not involve the creation of new waterways.	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets <u>either</u> the performance outcome or overall outcome	Internal use
	(b) states a process for transfer of responsibility for the waterway; (c) states required actions for monitoring water quality of the waterway and receiving waters; (d) states required actions for maintaining the waterway to achieve the policy outcomes of the <i>Environmental Protection (Water) Policy 2009</i> and approval conditions; and (e) identifies funding sources for the above matters including bonds, headworks charges or levies.		
Access to new waterways			
PO19 Created waterways are designed to provide maintenance access to revetment walls and cleaning of the waterway.	AO19 Access is provided to the waterways by: (a) dedication of land to the Crown; or (b) existing access arrangements.	AO19 N/A This application does not involve the creation of new waterways.	
PO20 Created waterways to be transferred to public ownership are supported by infrastructure to ensure public safety.	AO20 Created waterways are designed to create a safe public asset by including: (a) warning signs; and (b) fenced areas restricting access to steep-sided embankments or large drops.	AO20 N/A This application does not involve the creation of new waterways.	