9.4.3 Site earthworks code

9.4.3.1 Application - Site earthworks code

This code applies to assessing development, if:

- 1. self-assessable or assessable development where this code is an applicable code identified in the assessment criteria column of a table of assessment (Part 5);
- 2. impact assessable development (Part 5).

When using this code, reference should be made to 5.3.2 Determining the level of assessment and, where applicable, 5.3.3 Determining the level of assessment located in Part 5.

For development made self-assessable or assessable for this code in Part 5:

- 1. Part A of the code applies only to self-assessable development;
- 2. Part B of the code applies only to assessable development.

9.4.3.2 Purpose - Site earthworks

- 1. The purpose of the Site Earthworks code will be achieved through the following overall outcomes:
 - a. Safe, convenient, functionally efficient and attractive communities and environments are created, that are consistent with the character and amenity of the relevant zone.
 - b. Infrastructure and services are provided in an efficient manner.
 - c. The development manages stormwater to:
 - i. ensure the discharge of stormwater does not adversely affect the quality, environmental values or ecosystem functions of downstream receiving waters;
 - ii. prevent stormwater contamination and the release of pollutants;
 - iii. maintain or improve the structure and condition of drainage lines and riparian areas;
 - iv. avoid off-site adverse impacts from stormwater.
 - d. The development does not result in unacceptable impacts on the safety of the external road network.
 - e. Site works including earthworks are managed to be safe and have minimal impacts on adjoining or adjacent premises, the streetscape or the environment.
 - f. The construction of dams, filling and excavation minimise adverse impacts on the amenity, stability, drainage and environmental quality of the lot and surrounding area.
 - g. Development avoids areas subject to constraint, limitation, or environmental value. Where development cannot avoid these identified areas, it responds by:
 - i. adopting a 'least risk, least impact' approach when designing, siting and locating development in any area subject to a constraint, limitation or environmental value to minimise the potential risk to people, property and the environment;
 - ii. ensuring no further instability, erosion or degradation of the land, water or soil resource;
 - iii. when located within a Water buffer area, complying with the Water Quality Vision and Objectives contained in the Seqwater Development Guidelines: Development Guidelines for Water Quality Management in Drinking Water Catchments 2012.

- iv. maintaining, restoring and rehabilitating environmental values, including natural, ecological, biological, aquatic, hydrological and amenity values, and enhancing these values through the provision of planting and landscaping, and facilitating safe wildlife movement and connectivity through:
 - A. the provision of replacement, restoration, rehabilitation planting and landscaping;
 - B. the location, design and management of development to avoid or minimise adverse impacts on ecological systems and processes;
 - C. the requiring of environmental offsets in accordance with the Environmental Offsets Act 2014.
- v. protecting native species and protecting and enhancing species habitat;
- vi. protecting and preserving the natural, aesthetic, architectural historic and cultural values of significant trees, places, objects and buildings of heritage and cultural significance;
- vii. establishing effective separation distances, buffers and mitigation measures associated with identified infrastructure to minimise adverse effects on sensitive land uses from odour, noise, dust and other nuisance generating activities;
- viii. establishing, maintaining and protecting appropriate buffers to waterways, wetlands, native vegetation and significant fauna habitat;
- ix. ensuring it promotes and does not undermine the ongoing viability, integrity, operation, maintenance and safety of identified infrastructure;
- x. ensuring effective and efficient disaster management response and recovery capabilities;
- xi. where located in an overland flow path:
 - A. development siting, built form, layout and access responds to the risk presented by the overland flow and minimises risk to personal safety;
 - B. development is resilient to the impacts of overland flow by ensuring the siting and design accounts for the potential risks to property associated with the overland flow;
 - C. development does not impact on the conveyance of the overland flow for any event up to and including the 1% AEP for the fully developed upstream catchment;
 - D. development directly, indirectly and cumulatively avoid an increase in the severity of overland flow and potential for damage on the premises or other premises, public lands, watercourses, roads or infrastructure.

9.4.3.3 Assessment criteria

To determine if development is self-assessable, development must comply with the self-assessable acceptable outcomes set out in Part A, Table 9.4.3.1. Where development does not meet an acceptable outcome (SAO) of the relevant criteria Part A Table 9.4.3.1, assessment is against the corresponding performance outcome (PO) identified in the table below. This only occurs whenever a self-assessable SAO is not met, and is therefore limited to the subject matter of the self-assessable SAOs that are not complied with. To remove any doubt, for those SAOs that are complied with, there is no need for assessment against the corresponding PO.

Self-assessable SAO	Corresponding PO
SAO1	PO1
SAO2	PO1
SAO3	PO1
SAO4	PO2
SAO5	PO3
SAO6	PO3
SAO7	PO3
SAO8	PO5
SAO9	PO6

Self-assessable SAO	Corresponding PO
SAO10	PO6
SAO11	PO6
SAO12	PO6
SAO13	PO6
SAO14	PO6
SAO15	PO7
SAO16	P07
SAO17	PO9
SAO18	PO9
SAO19	PO10
SAO20	PO10
SAO21	PO6
SAO22	PO6
SAO23	PO6
SAO24	PO6
SAO25	PO6
SAO26	PO6
SA027	PO6
SAO28	PO11
SAO29	PO6
SAO30	PO6
SAO31	PO6
SAO32	PO6
SAO33	PO6
SAO34	PO6
SAO35	PO11
SAO36	P012-P024
SAO37	PO25
SAO38	PO26
SAO39	PO27
SAO40	PO27
SAO41	PO27
SAO42	PO28
SAO43	PO29
SAO44	PO30

Self-assessable SAO	Corresponding PO
SAO45	PO31
SAO46	PO32, PO33, PO34, PO36, PO37, PO38
SAO47	PO32, PO33, PO34, PO36, PO37, PO38
SAO48	PO32-34
SAO49	PO35
SAO50	PO39
SAO51	PO40

Part A - Criteria for self-assessable development - Site earthworks

Table 9.4.3.1 Self-assessable development - Site earthworks

Self-asse	Self-assessable acceptable outcomes		
General criteria			
Construc	Construction management		
SAO1	 Works incorporate temporary stormwater runoff, erosion and sediment controls and trash traps designed in accordance with the Urban Stormwater Quality Planning Guidelines, Planning Scheme Policy - Stormwater management and Planning scheme policy - Integrated design including, but not limited to the following: a. stormwater is not discharged to adjacent properties in a manner that differs significantly from pre-existing conditions; b. stormwater discharged to adjoining and downstream properties does not cause scour and erosion; c. stormwater discharge rates do not exceed pre-existing conditions; d. the 10% AEP storm event is the minimum design storm for all temporary diversion drains; e. the 50% AEP storm event is the minimum design storm for all silt barriers and sedimentation basins. 		
SAO2	Stormwater run-off, erosion and sedimentation controls are constructed prior to commencement of any filling or excavation and are maintained and adjusted as necessary at all times to ensure their ongoing effectiveness. Note - The measures are adjusted on-site to maximise their effectiveness.		
SAO3	The completed earthworks area is stabilised using turf, established grass seeding, mulch or sprayed stabilisation techniques to control erosion and sediment and dust from leaving the property.		
SAO4	No dust emissions extend beyond the boundaries of the site during soil disturbances and construction works.		
SAO5	All native vegetation to be retained on site is temporarily fenced or protected prior to and during development works.		
	Note - Refer to Values and constraints SAO's in this table for classes of vegetation to be retained for self-assessable development.		

	Γ	
	Note - No parking of vehicles or storage of machinery or goods is to occur in these areas during development works.	
SAO6	All declared weeds, stumps, fallen trees, rubbish, car bodies, scrap metal and the like are removed and disposed of in a Council land fill facility.	
SAO7	Disposal of cleared vegetation is managed in one or more of the following ways:	
	a. cleared vegetation is taken off site to an approved waste disposal facility; or	
	b. all native vegetation with a diameter below 400mm is to be chipped and stored on-site.	
SAO8	Any material dropped, deposited or spilled on the road(s) as a result of construction processes associated with the site are to be cleaned at all times.	
Earthwor	ks	
SAO9	All cut and fill batters are provided with appropriate scour, erosion protection and run-off control measures including catch drains at the top of batters and lined batter drains as necessary.	
SAO10	Stabilisation measures are provided, as necessary, to ensure long-term stability and low maintenance of steep rock slopes and batters.	
	Note - Inspection and certification of steep rock slopes and batters may be required by a suitably qualified and experienced RPEQ.	
SAO11	All fill and excavation is contained on-site.	
SAO12	All fill and excavation is free draining.	
SAO13	All fill placed on-site is:	
	a. limited to that required for the necessary approved use;	
•	b. clean and uncontaminated (i.e. no building waste, concrete, green waste or contaminated materia etc. is used as fill).	
SAO14	The site is prepared and the fill placed on-site in accordance with AS3798.	
\cap	Note - The fill is to be inspected and tested in accordance with Planning scheme policy - Operational works inspection, maintenance and bonding procedures.	
SAO15	No filling or excavation is undertaken in an easement issued in favour of Council or a public sector entity	
	Note - Public sector entity is defined in the Sustainable Planning Act 2009.	
SAO16	Filling or excavation that would result in any of the following is not carried out on-site:	
	a. a reduction in cover over any Council or public sector entity infrastructure service to less than 600mm;	
	 an increase in finished surface grade over, or within 1.5m on each side of, the Council or public sector entity infrastructure above that which existed prior to the earthworks being undertaken. 	
	Note - Public sector entity as defined in the Sustainable Planning Act 2009.	

SAO17	Where the earthworks is associated with a dam and on-site water impoundment (other than swimming pools), batter slopes are no steeper than the following:	
	a. outer slope of dam wall – 1 vertical to 2 horizontal;	
	b. all internal slopes – 1 vertical to 4 horizontal.	
SAO18	Cut and fill batters, (other than batters to dams and water impoundments), have a finished slope no steeper than the following:-	
	a. any cut batter is no steeper than:-	
	i. for sand – 2 horizontal to 1 vertical;	
	ii. for silt – 4 horizontal to 1 vertical;	
	iii. for firm clay – 1 horizontal to 1 vertical;	
	iv. for soft clay – 3 horizontal to 2 vertical;	
	b. any fill batter, (other than a compacted fill batter), is no steeper than 4 horizontal to 1 vertical;	
	c. any compacted fill batter is no stepper than:-	
	i. for sand – 5 horizontal to 2 vertical;	
	ii. for silt – 4 horizontal to 1 vertical;	
	iii. for firm clay – 2 horizontal to 1 vertical.	
SAO19	Any retaining walls or embankments are setback at least the equivalent height of the wall or embankment from any boundary of the site.	
SAO20	Any embankments more than 1.5 metres in height are stepped, terraced and landscaped.	
	Figure - Embankment	
	i San mai	
SAO21	All filling or excavation works are completed within 3 months of the commencement date.	
SAO22	Stormwater discharge from dams and other water impoundments on the development site is undertaken in a manner which does not:	
	a. concentrate the flow onto adjacent land; or	
	b. cause scour and erosion on adjacent land; or	
	c. increase the flow rates of stormwater over the affected section of the adjacent land above the pre-existing situation; or	
	d. cause nuisance or annoyance to any person, property or premises.	

SAO34	Dam spillways have surface protection to prevent erosion and scour during all flood events. Values and constraints criteria	
SAO33	Dams have a spillway bypass with sufficient flow capacity to prevent floodwater overtopping the dam embankment.	
SAO32	Dams with an embankment height up to 3 metres have a minimum embankment crest width of 2.5 me	
SAO31	The freeboard between the top water level and the top of the embankment is not less than 1 metre	
SAO30	Dam embankments are constructed by a suitably experienced and qualified construction contracto	
	d. where a dam break would threaten the lives of occupiers of downstream premises.	
	c. with an impoundment volume exceeding 5 megalitres; or	
	b. a top water level surface area greater than 5,000m ² ; or	
	a. an embankment height greater than 3 metres at any point; or	
SAO29	Dams with the following features are designed, constructed and inspected by a suitably qualified and experienced RPEQ:	
	d. any exposed sediment or soil in excavation puts or trenches is treated with agricultural lime to neutralise acidity and prevent further acid generation at a minimum application rate of 5.0kg agricultural lime/m ³ .	
	 c. the stockpiling and neutralisation of excavated sediment or soil is carried out on an impermeat treatment pad, which prevents acid leaching and contains stockpile runoff; 	
	 otherwise treat, any disturbed or excavated soil or sediment with fine agricultural lime to neutra acidity. A minimum application rate of 80kg agricultural lime/m³ is used (assumes oxidisable sulp of 1.0% and a bulk density of 1.7); 	
	OR	
	a. undertake a soil test to determine that Acid Sulfate Soils are not being disturbed (i.e. the soil contains no acid sulfate);	
SAO28	When identified on Overlay map - Acid sulfate soils and excavating more than 100m ³ of material be RL 5.0m AHD or filling (includes the dam embankment) more than 500m ³ of material on land that is below RL 5.0m AHD:	
SAO27	The top water surface in the dam is setback a minimum 10 metres from any property boundary.	
SAO26	Earth embankments are fully and thoroughly compacted.	
SAO25	The dam embankment is constructed with a clay core and cut-off trench to prevent seepage through the embankment. The cut-off trench is taken down a minimum of 600mm into impervious soil and bac filled with good quality clay that is thoroughly compacted.	
SAO24	All fill (including the embankment) for dams is setback a minimum of 10 metres from any property boundary.	
	A preliminary geotechnical assessment of the suitability of the dam site in terms of soil and slope stabili has been carried out by an appropriately experienced and quality geotechnical engineer to confirm th dam site is suitable and stable.	

Note - The relevant values and constraints criteria do not apply where the development, the subject of the application, is associated and consistent with, and subsequent to a current Development permit for Reconfiguring a lot or Material change of use, where that approval, under this or a superseded planning scheme, has considered and addressed (e.g. through a development footprint plan or similar, or conditions of approval) the identified value or constraint under this planning scheme. Acid sulfate soils - (refer Overlay map - Acid sulfate soils to determine if the following assessment criteria apply) Note - Planning scheme policy - Acid sulfate soils provides guidance for self-assessable development that has the potential to disturb acid sulfate soils i.e. development involving filling or excavation works below the thresholds of 100m³ and 500m³ respectively. **SAO35** Filling or excavation works, other than dams, does not involve: excavation or otherwise removing of more than 100m³ of soil or sediment where below 5m Australian а. Height Datum AHD, or b. filling of land of more than 500m³ of material with an average depth of 0.5m or greater where below the 5m AHD. Surface Elevation <5m AHD Surface Elevation >5m and <20m AHD Surface Elevation ≥20m AHD +20m AHD-Excavation area +15m AHD-Assessable development Self assessable development +10m AHD-+5m AHD-CIRIS A Om AHD 5m AHD

Environmental areas (refer Overlay map - Environmental areas to determine if the following assessment criteria apply)

- Note The following are exempt from the native clearing provisions of this planning scheme:
- a. Clearing of native vegetation located within an approved development footprint;

b.

- Clearing of native vegetation within 10m from a lawfully established building reasonably necessary for emergency access or immediately required in response to an accident or emergency;
- c. Clearing of native vegetation reasonably necessary to remove or reduce the risk vegetation poses to serious personal injury or damage to infrastructure;
- d. Clearing of native vegetation reasonably necessary to construct and maintain a property boundary fence and not exceed 4m in width either side of the fence where in the Rural, Rural residential and Environmental Management and Conservation zones. In any other zone, clearing is not to exceed 2m in width either side of the fence;
- e. Clearing of native vegetation reasonably necessary for the purpose of maintenance or works within a registered easement for public infrastructure or drainage purposes;
- f. Clearing of native vegetation in accordance with a bushfire management plan prepared by a suitably qualified person, submitted to and accepted by Council;
- g. Clearing of native vegetation associated with removal of recognised weed species, maintaining existing open pastures and cropping land, windbreaks, lawns or created gardens;

h. Gra	h. Grazing of native pasture by stock;			
i. Nati	i. Native forest practice where exempt under Part 1, 1.7.7 Exempt development.			
Note - Defi	Note - Definition for native vegetation is located in Schedule 1 Definitions.			
environme Schedule	Note - Native vegetation subject to this criteria primarily comprises of matters of national environmental significance (MNES), matters of state environmental significance (MSES). They also comprise some matters of local environmental significance (MLES). A MLES is defined in Schedule 1.2, Administrative definitions. A list of the elements that apply to the mapped MSES and MLES is provided in Appendix 1 of the Planning scheme policy - Environmental areas.			
	ote - The accuracy of overlay mapping can be challenged through the development application process (code assessable ent) or by way of a planning scheme amendment. See Council's website for details.			
Editors' No	ote - When clearing native vegetation within a MSES area, you may still require approval from the State government.			
SAO36	Filling or excavation does not result in clearing of native vegetation in High Value Area or Value Offset Area.			
	e resources transport routes (refer Overlay map - Extractive resources (transport route and buffer) nine if the following assessment criteria apply)			
SAO37	Filling or excavation is not carried out in the Extractive resources transport route or buffer, other than on public roads.			
Note - Plac landscape heritage si	the following assessment criteria apply) Note - Places, including sites, objects and buildings having local cultural heritage significance, are identified on Overlay map - Heritage and landscape character and listed in Schedule 1 of Planning scheme policy - Heritage and landscape character. Places also having cultural heritage significance at a State level and being entered in the Queensland Heritage Register, are also identified in Schedule 1 of Planning scheme policy - Heritage and landscape character.			
SAO38	A cultural heritage conservation management plan is prepared in accordance with Planning scheme policy – Heritage and landscape character and submitted to Council prior to the commencement of any preservation, maintenance, repair and restoration works. Any preservation, maintenance, repair and restoration works are in accordance with the Council approved cultural heritage conservation management plan. This does not apply to Listed item 99 in Schedule 1 - List of sites, objects and buildings of significant historical and cultural value of Planning scheme policy - Heritage and landscape character.			
SAO39	Development does not result in the removal of or damage to any significant tree identified on Overlay map – Heritage and landscape character and listed in Appendix 2 of Planning scheme policy – Heritage and landscape character.			
SAO40	The following development does not occur within 20m of the base of any significant tree, identified on Overlay map – Heritage and landscape character and listed in Appendix 2 of Planning scheme policy – Heritage and landscape character:			
	 a. construction of any building; b. laying of overhead or underground services; c. any sealing, paving, soil compaction; d. any alteration of more than 75mm to the ground level prior to work commencing. 			

SAO41	Pruning of a significant tree occurs in accordance with Australian Standard AS 4373-2007 - Pruning of Amenity Trees.		
	Infrastructure buffers (refer Overlay map - Infrastructure buffers to determine if the following assessment criteria apply)		
SAO42	Filling or excavation does not occur in the Bulk water supply infrastructure buffer.		
SAO43	Filling or excavation does not not occur in the Gas pipeline buffer.		
SAO44	Filling or excavation does not occur in the High voltage electricity line buffer.		
	e - land having a slope greater 15% (refer Overlay map - Landslide hazard - land having a slope 5% to determine if the following assessment criteria apply)		
SAO45	 Development does not: a. involve earthworks exceeding 50m³; b. involve cut and fill having a height greater than 600mm; c. involve any retaining wall having a height greater than 600mm; d. redirect or alter the existing flow of surface or groundwater. 		
Overland flow path (refer Overlay map - Overland flow path to determine if the following assessment criteria apply)			
SAO46	Development for a material change of use or building work does not involve the construction of a building or structure in an Overland flow path area.		
SAO47	Development for a material change of use or operational work does not impede the flow of flood waters through the premises or worsen flood flows to other premises. Note - A report from a suitably qualified Registered Professional Engineer Queensland is required certifying that the development does not increase the potential for significant adverse impacts on an upstream, downstream or surrounding premises. Note - Reporting to be prepared in accordance with Planning scheme policy – Flood hazard, Coastal hazard and Overland flow		
SAO48	Development for a material change of use or building work ensures that fencing in an overland flow path area is at least 50% permeable.		
SAO49	Development for a material change of use or building work that involves a hazardous chemical ensures the hazardous chemicals is not located within an overland flow path area.		
SAO50	Development for a material change of use or building work for a Park ⁽⁵⁷⁾ ensures that work is provided in accordance with the requirements set out in Appendix B of the Planning scheme policy - Integrated design.		
following Note - W1 wetland se			
SAO51	No development is to occur within:		
	a. 50m from top of bank for W1 waterway and drainage line		
	b. 30m from top of bank for W2 waterway and drainage line		

c. 20m from top of bank for W3 waterway and drainage line
d. 100m from the edge of a Ramsar wetland, 50m from all other wetlands.
Note - W1, W2 and W3 waterways and drainage lines, and wetlands are mapped on Schedule 2, Section 2.5 Overlay Maps – Riparian and wetland setbacks.
Note - In some cases, the top of bank may not be easily defined, as such a hydraulic measurement may be applied instead. Moreton Bay Regional Council will provide further direction on how to determine and locate the setback boundary in these locations.
Note - The minimum setback distance applies to the each side of waterway.

Part B - Criteria for assessable development - Site earthworks

Where development is code assessable development in the Table of Assessment, the assessment criteria for that development are set out in Part B, Table 9.4.3.2.

Where development is impact assessable, the assessment criteria becomes the whole of the planning scheme.

Table 9.4.3.2 Assessable development - Site earthworks	
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Performance outcome	Acceptable outcome
Construction management	
 PO1 All works on-site are managed to: a. minimise as far as practicable, impacts on adjoining or adjacent premises and the streetscape in regards to erosion and sedimentation, dust, noise, safety and light; b. minimise as far as practicable, impacts on the natural environment; c. ensure stormwater discharge is managed in a manner that does not cause nuisance or annoyance to any person or premises; d. avoid adverse impacts on street trees and their critical root zone. Note - Refer to Planning scheme policy - Integrated design for details and examples. 	 AO1.1 Works incorporate temporary stormwater runoff, erosion and sediment controls and trash traps designed in accordance with the Urban Stormwater Quality Planning Guidelines, Planning Scheme Policy - Stormwater management and Planning scheme policy - Integrated design including but not limited to the following: a. stormwater is not discharged to adjacent properties in a manner that differs significantly from pre-existing conditions; b. stormwater discharged to adjoining and downstream properties does not cause scour and erosion; c. stormwater discharge rates do not exceed pre-existing conditions; d. the 10% AEP storm event is the minimum design storm for all temporary diversion drains; e. the 50% AEP storm event is the minimum design storm for all silt barriers and sedimentation basins.

	Stormwater runoff, erosion and sediment controls are constructed prior to commencement of any clearing earthworks and are maintained and adjusted as necessary at all times to ensure their ongoing effectiveness. Note - The measures are adjusted on-site to maximise their effectiveness. AO1.3 The completed earthworks area is stabilised using the established grass seeding, mulch or sprayed stabilisat techniques to control erosion and sediment and dust file aving the property. AO1.4 Where works are proposed in proximity to an existin street tree, an inspection and a root management pl
PO2	is undertaken by a qualified arborist which demonstrational and ensures that no permanent damage is caused to tree.
Dust suppression measures are implemented during soil disturbances and construction works to protect nearby premises from unreasonable dust impacts.	No dust emissions extend beyond the boundaries of site during soil disturbances and construction works.
 PO3 The clearing of vegetation on-site: a. is limited to the area of infrastructure works, buildings areas and other necessary areas for the works; b. includes the removal of declared weeds and other 	AO3.1 All native vegetation to be retained on-site is temporal fenced or protected prior to and during development works. Note - No parking of vehicles of storage of machinery or goods is to occur in these areas during development works.
materials which are detrimental to the intended use of the land;	A03.2
 c. is disposed of in a manner which minimises nuisance and annoyance to existing premises. Note - No burning of cleared vegetation is permitted. 	 Disposal of materials is managed in one or more of the following ways: a. all cleared vegetation, declared weeds, stumps rubbish, car bodies, scrap metal and the like ar removed and disposed of in a Council land fill facility; or b. all native vegetation with a diameter below 400r
PO4	is to be chipped and stored on-site. No acceptable outcome provided.

dist	rthworks are to be undertaken to ensure that soil turbances are staged into manageable areas of not ater than 3.5 hectares.	
	ote - Soil disturbances of greater than 1 hectare require a site ecific Erosion and Sediment Control Plan (ESCP).	
	ote - Council will consider clearing of larger areas in exceptional cumstances based on the staging of development.	
РО	5	A05.1
fror exis are	works on-site and the transportation of material to and m the site are managed to not negatively impact the sting road network, the amenity of the surrounding the or the streetscape.	Construction traffic including contractor car parking is controlled in accordance with a traffic management plu prepared in accordance with the Manual of Uniform Traffic Control Devices (MUTCD) to ensure all traffic movements to and from the site are safe.
tha	an 50m ³ , a haulage route must be identified and approved by	A05.2
	buncil.	All contractor car parking is either provided on the development site, or on an alternative site in the gene locality which has been set aside for car parking. Contractors vehicles are generally not to be parked i existing roads.
		Note - A Traffic Management Plan may be required for the site in accordance with the Manual of Uniform Traffic Control Devices (MUTCD).
		AO5.3
		Any material dropped, deposited or spilled on the road as a result of construction processes associated with site are to be cleaned at all times.
Ear	rthworks	
РО	6	AO6.1
On	-site earthworks are designed to consider:	All cut and fill batters are provided with appropriate sco
a.	the natural topographical features of the site;	erosion protection and run-off control measures includi catch drains at the top of batters and lined batter drai
b.	short and long-term slope stability;	as necessary.
c.	soft or compressible foundation soils;	AO6.2
d.	reactive soils;	Stabilisation measures are provided, as necessary, to
e.	low density or potentially collapsing soils;	ensure long-term stability and low maintenance of stere rock slopes and batters.
f.	existing fill and soil contamination that may exist on-site;	AO6.3
g.	the stability and maintenance of steep rock slopes and batters;	Inspection and certification of steep rock slopes and batters is required by a suitably qualified and experience

h. the visual impact of the excavation (cut) and fill and impacts on the amenity of adjoining lots (e.g.	AO6.4 All filling or excavation is contained on-site.
i. special requirement for dams.	
i. special requirement for dams.	AO6.5
Note - Filling or excavation works are to be completed within six (6) months of the commencement date.	All filling or excavation is free draining.
	AO6.6
	All fill placed on-site is:
	a. limited to that required for the necessary approved use;
	b. clean and uncontaminated (i.e. no building waste, concrete, green waste or contaminated material etc. is used as fill).
	AO6.7
	The site is prepared and the fill placed on-site in accordance with AS3798.
	Note - The fill is to be inspected and tested in accordance with Planning scheme policy - Operational works inspection, maintenance and bonding procedures.
	AO6.8
XO	Stormwater discharge from dams and other water impoundments on the development site is undertaken in a manner that does not:
	a. concentrate the flow onto adjacent land; or
	b. cause scour and erosion on adjacent land; or
	c. increase the flows rates of stormwater over the affected section of the adjacent land above the pre-existing situation; or
	d. cause nuisance or annoyance to any person or premises.
	AO6.9
	A preliminary geotechnical assessment of the suitability of the dam site in terms of soil and slope stability has been carried out by an appropriately experienced and quality geotechnical engineer to confirm the dam site is stable.
	AO6.10
	All fill (including the embankment) for dams is setback a minimum of 10 metres from any property boundary.

		AO6.11
		The dam embankment is designed by a suitably qualified and experienced RPEQ.
		A06.12
		The dam embankment is constructed with a clay core and cut-off trench to prevent seepage through the embankment.
		AO6.13 The top water surface in the dam is setback a minimum 10 metres from any property boundary.
		A06.14
		The crest width of the dam embankment is not less than 2.5 metres.
		AO6.15
		Dams have a spillway bypass with sufficient flow capacity to prevent floodwater overtopping the dam embankment.
		AQ6.16
		Dam spillways have surface protection to prevent erosion and scour during all flood events.
	P07	A07.1
	Filling or excavation is undertaken in a manner that: a. does not adversely impact on Council or public	No filling or excavation is undertaken in an easement issued in favour of Council or a public sector entity.
	 sector entity maintained infrastructure or any drainage feature on, or adjacent to the site; does not preclude reasonable access to Council or public sector entity maintained infrastructure or any 	Note - Public sector entity is defined in the Sustainable Planning Act 2009.
	drainage feature on, or adjacent to the site for	A07.2
	monitoring, maintenance or replacement purposes. Note - Public sector entity is defined in the Sustainable Planning Act 2009.	Filling or excavation that would result in any of the following are not carried out on-site:
		 a reduction in cover over any Council or public sector entity infrastructure service to less than 600mm;
		 an increase in finished surface grade over, or within 1.5m on each side of, the Council or public sector entity infrastructure above that which existed prior to the filling or excavation works being undertaken.
		Note - Public sector entity is defined in the Sustainable Planning Act 2009.
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PO8	No acceptable outcome provided.
Filling or excavation does not result in:	
 a. adverse impacts on the hydrological and hydraulic capacity of the waterway or floodway; b. increased flood inundation outside the site; c. any reduction in the flood storage capacity in the flood way; and d. any clearing of native vegetation. Note - To demonstrate compliance with this outcomes, Planning Scheme Policy - Stormwater Management provides guidance on the preparation of a site based stormwater management plan by a suitably qualified professional. Refer to Planning Scheme Policy - Integrated Design for guidance on infrastructure design and modelling requirements.	
PO9	A09.1
Filling and excavation does not result in land instability. Note - Steep rock slopes and batters are inspected and certified for long-term stability by a suitably qualified and experienced geotechnical engineer with RPEQ qualifications. Stabilisation measures are provided, as necessary, to ensure long-term stability and low maintenance.	 Where the earthworks is associated with a dam or on-site water impoundment (other than swimming pools), batter slopes are no steeper than the following: a. outer slope of dam wall – 1 vertical to 2 horizontal; b. all internal slopes – 1 vertical to 4 horizontal. AO9.2 Cut and fill batters, (other than batters to dams and water impoundments), have a finished slope no steeper than the following: a. any cut batter is no steeper than: i. for sand – 2 horizontal to 1 vertical; ii. for silt – 4 horizontal to 1 vertical; iii. for firm clay – 1 horizontal to 2 vertical; b. any fill batter, (other than a compacted fill batter), is no steeper than 4 horizontal to 1 vertical; c. any compacted fill batter is no steeper than: i. for sand – 5 horizontal to 2 vertical; ii. for silt – 4 horizontal to 1 vertical; ii. for silt – 4 horizontal to 2 vertical;
PO10	AO10.1

Embankments are stepped, terraced and landscaped to Any retaining walls or embankments are setback at least the equivalent height of the wall or embankment from not adversely impact on the visual amenity of the surrounding area. any boundary of the site. AO10.2 Any embankments more than 1.5 metres in height are stepped, terraced and landscaped. Figure - Embankment Values and constraints criteria Note - The relevant values and constraints criteria do not apply where the development, the subject of the application, is associated and consistent with, and subsequent to a current Development permit for Reconfiguring a lot or Material change of use, where that approval, under this or a superseded planning scheme, has considered and addressed (e.g. through a development footprint plan or similar, or conditions of approval) the identified value or constraint under this planning scheme. Acid sulfate soils - (refer Overlay map - Acid sulfate soils to determine if the following assessment criteria apply) Note - To demonstrate achievement of the performance outcome, an Acid sulfate soils (ASS) investigation report and soil management plan is prepared by a qualified engineer. Guidance for the preparation an ASS investigation report and soil management plan is provided in Planning scheme policy - Acid sulfate soils. **PO11** AO11 Development avoids disturbing acid sulfate soils. Where Development does not involve: development disturbs acid sulfate soils, development: excavation or otherwise removing of more than а. is managed to avoid or minimise the release of 100m³ of soil or sediment where below than 5m а. surface or groundwater flows containing acid and Australian Height datum AHD; or metal contaminants into the environment; b. filling of land of more than 500m³ of material with protects the environmental and ecological values an average depth of 0.5m or greater where below b. the 5m Australian Height datum AHD. and health of receiving waters; protects buildings and infrastructure from the effects C. of acid sulfate soils. Environmental areas (refer Overlay map - Environmental areas to determine if the following assessment criteria apply) Note – The following are exempt from the native vegetation clearing provisions of this planning scheme:

- a. Clearing of native vegetation located within an approved development footprint;
- b. Clearing of native vegetation within 10m from a lawfully established building reasonably necessary for emergency access or immediately required in response to an accident or emergency;
- c. Clearing of native vegetation reasonably necessary to remove or reduce the risk vegetation poses to serious personal injury or damage to infrastructure;

- d. Clearing of native vegetation reasonably necessary to construct and maintain a property boundary fence and not exceed 4m in width either side of the fence where in the Rural, Rural residential and Environmental Management and Conservation zones. In any other zone, clearing is not to exceed 2m in width either side of the fence;
- e. Clearing of native vegetation reasonably necessary for the purpose of maintenance or works within a registered easement for public infrastructure or drainage purposes;
- f. Clearing of native vegetation in accordance with a bushfire management plan prepared by a suitably qualified person, submitted to and accepted by Council;
- g. Clearing of native vegetation associated with removal of recognised weed species, maintaining existing open pastures and cropping land, windbreaks, lawns or created gardens;
- h. Grazing of native pasture by stock;
- i. Native forest practice where exempt under Part 1, 1.7.7 Exempt development

Note - Definition for native vegetation is located in Schedule 1 Definitions.

Note - Native vegetation subject to this criteria primarily comprises of matters of national environmental significance (MNES), matters of state environmental significance (MSES). They also comprise some matters of local environmental significance (MLES). A MLES is defined in Schedule 1.2, Administrative definitions. A list of the elements that apply to the mapped MSES and MLES is provided in Appendix 1 of the Planning scheme policy - Environmental areas.

Editors' Note - The accuracy of overlay mapping can be challenged through the development application process (code assessable development) or by way of a planning scheme amendment. See Council's website for details.

Note - To demonstrate achievement of the performance outcome, an ecological assessment, vegetation management plan and fauna management plan, as required, are prepared by a suitably qualified person. Guidance for the preparation of above mentioned reports is provided in Planning scheme policy - Environmental areas.

Vegetation clearing, ecological value and connectivity			
P012	No acceptable outcome provided.		
Development avoids locating in a High Value Area or a Value Offset Area. Where it is not practicable or reasonable for development to avoid establishing in these areas, development must ensure that:			
 a. the quality and integrity of the biodiversity and ecological values inherent to a High Value Area and a Value Offset Area is maintained and not lost or degraded; b. on-site mitigation measures, mechanisms or processes are in place demonstrating the quality and integrity of the biodiversity and ecological values inherent to a High Value Area and a Value Offset Area area maintained. For example, this can be achieved through replacement, restoration or rehabilitation planting as part of any proposed covenant, the development of a Vegetation Management Plan, a Fauna Management Plan, and any other on-site mitigation options identified in the Planning scheme policy - Environmental areas*. * Editor's note - This is not a requirement for an environmental offset under the Environmental Offsets Act 2014. 			

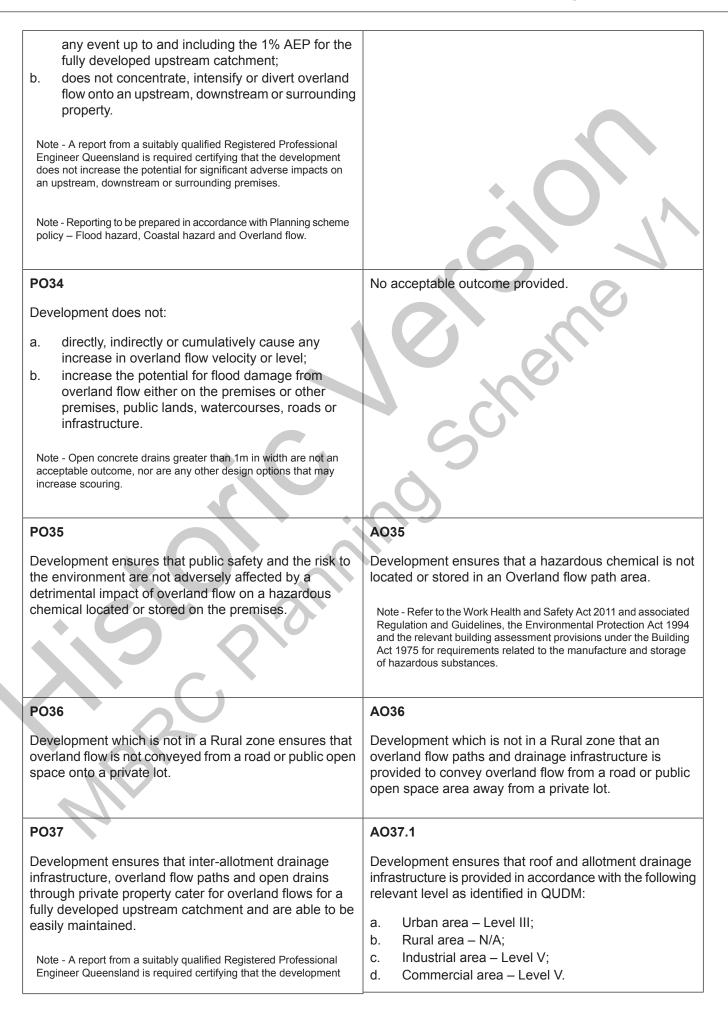
PO13	No acceptable outcome provided.
Development provides for safe, unimpeded, convenient and ongoing wildlife movement and establishes and maintains habitat connectivity by:	
 a. retaining habitat trees; b. providing contiguous patches of habitat; c. provide replacement and rehabilitation planting to improve connectivity; d. avoiding the creation of fragmented and isolated patches of habitat; 	
e. providing wildlife movement infrastructure.	
Editor's note - Wildlife movement infrastructure may include refuge poles, tree boulevarding, 'stepping stone' vegetation plantings, tunnels, appropriate wildlife fencing; culverts with ledges, underpasses, overpasses, land bridges and rope bridges. Further information is provided in Planning scheme policy – Environmental areas.	C ne
Vegetation clearing and habitat protection	
PO14	No acceptable outcome provided.
Development ensures that the biodiversity quality and integrity of habitats is not adversely impacted upon but maintained and protected.	6
P015	No acceptable outcome provided.
 Development does not result in the net loss or degradation of habitat value in a High Value Area or a Value Offset Area. Where development does result in the loss or degradation of habitat value, development will: a. rehabilitate, revegetate, restore and enhance an area to ensure it continues to function as a viable and healthy habitat area; b. provide replacement fauna nesting boxes in the event of habitat tree loss in accordance with Planning scheme policy - Environmental areas; c. undertake rehabilitation, revegetation and restoration in accordance with the South East Queensland Ecological Restoration Framework. 	
 PO16 Development ensures safe, unimpeded, convenient and ongoing wildlife movement and habitat connectivity by: a. providing contiguous patches of habitat; b. avoiding the creation of fragmented and isolated patches of habitat; 	No acceptable outcome provided.
c. providing wildlife movement infrastructure;	

PO17	No acceptable outcome provided.
Development does not:	
 a. result in soil erosion or land degradation; b. leave cleared land exposed for an unreasonable periods of time but is rehabilitated in a timely manner. 	
PO18	No acceptable outcome provided.
Development does not leave cleared land exposed for an unreasonable periods of time but is rehabilitated in a timely manner.	S
Vegetation clearing and water quality	
PO19	No acceptable outcome provided.
Development maintains or improves the quality of groundwater and surface water within, and downstream, of a site by:	
 a. ensuring an effective vegetated buffers and setbacks from waterbodies is retained to achieve natural filtration and reduce sediment loads; b. avoiding or minimising changes to landforms to maintain hydrological water flows; c. adopting suitable measures to exclude livestock 	
from entering a waterbody where a site is being used for animal husbandry ⁽⁴⁾ and animal keeping ⁽⁵⁾ activities.	
PO20 Development minimises adverse impacts of stormwater run-off on water quality by:	No acceptable outcome provided.
 a. minimising flow velocity to reduce erosion; b. minimising hard surface areas; c. maximising the use of permeable surfaces; d. incorporating sediment retention devices; e. minimising channelled flow. 	
Vegetation clearing and access, edge effects and ur	oan heat island effects
P021	No acceptable outcomes provided.
Development retains safe and convenient public access in a manner that does not result in the adverse edge effects or the loss or degradation of biodiversity values within the environment.	
P022	No acceptable outcome provided.
Development minimises potential adverse edge effects	

â	Э.	providing dense planting buffers of native vegetation between a development and environmental areas;	
k	D.	retaining patches of native vegetation of greatest possible size where located between a development and environmental areas;	
0	C .	restore, rehabilitate and increase the size of existing patches of native vegetation;	
0	d.	ensuring that filling or excavation are setback as far as possible from environmental areas and corridors;	
e	Э.	landscaping with native plants of local origin.	
	detri popi inva light	or's note - Edge effects are factors of development that go to imentally affecting the composition and density of natural ulations at the fringe of natural areas. Factors include weed sion, pets, public and vehicle access, nutrient loads, noise and pollution, increased fire frequency and changes in the indwater and surface water flow.	Cherne
F	PO2	3	No acceptable outcome provided.
	does	elopment avoids adverse microclimate change and s not result in increased urban heat island effects. erse urban heat island effects are minimised by: pervious surfaces; providing deeply planted vegetation buffers and	
		green linkage opportunities;	
	С.	landscaping with local native plant species to achieve well-shaded urban places;	~
0	d.	increasing the service extent of the urban forest canopy.	
1	/eg	etation clearing and Matters of Local Environmer	tal Significance (MLES) environmental offsets
\vdash	PO2		No acceptable outcome provided.
r	nativ	re development results in the unavoidable loss of ve vegetation within a Value Offset Area MLES	
		erway buffer or a Value Offset Area MLES wetland er, an environmental offset is required in accordance	
1	vith	the environmental offset requirements identified in ning scheme policy - Environmental areas.	
	lan	Thing scheme policy - Environmental areas.	
		or's note - For MSES Koala Offsets, State Planning Regulatory vision environmental offset provisions apply.	
	=vtr	active resources transport route (refer Overlay m	ap - Extractive resources (transport route and buffer)
		etermine if the following assessment criteria app	
F	PO2	5	AO25
			Filling or excavation is not carried out in a Extractive resources transport route, other than on public roads.
1			

Development does not prevent or constrain the acquisition, construction or function and efficient transport of extractive material using the Extractive resources transport route.				
	Heritage and landscape character (refer Overlay map - Heritage and landscape character to determine if the following assessment criteria apply)			
Note	Note - The identification of a development footprint will assist in demonstrating compliance with the following performance criteria.			
PO2	6	No acceptable outcome provided		
Worl	ks do not:			
a.	reduce public access to a heritage place, building, item or object;			
b.	create the potential to adversely affect views to and from the heritage place, building, item or object;			
C.	obscure or destroy any pattern of historic subdivision, historical context, landscape setting or the scale and consistency of the urban fabric relating to the local heritage place.			
PO2	7	No acceptable outcome provided.		
Works retain significant trees and incorporates them into the provision of infrastructure.				
	astructure buffers (refer Overlay map - Infrastruct eria apply)	ture buffers to determine if the following assessment		
PO2	8	AO28		
	elopment within a Bulk water supply infrastructure er is located, designed and constructed to:	Filling or excavating does not occur in a Bulk water supply infrastructure buffer.		
a. b.	protect the integrity of the water supply pipeline; maintain adequate access for any required maintenance or upgrading work to the water supply pipeline;			
PO2	9	AO29		
Deve	elopment in the Gas pipeline buffer:	Filling or excavating does not occur in the Gas pipeline		
a.	maintains adequate access for any required maintenance or upgrading work;	buffer.		
b.	minimises risk of harm to people and property.			
PO3	0	AO30		
Deve	elopment in a High voltage electricity line buffer:	Filling or excavating does not occur in a High voltage electricity line buffer.		

a.	is located and designed in a manner that maintains a high level of security of supply;	
b.	is located and design so not to impede upon the functioning and maintenance of high voltage electrical infrastructure.	
Lon	delide (refer Overlay man I andelide bezard to d	starming if the following approximate with via
Note	e - To demonstrate achievement of the performance outcomes, a s	etermine if the following assessment criteria apply site-specific geotechnical assessment report is prepared by a qualifie report is provided in Planning scheme policy – Landslide hazard.
PO3	31	A031
Dev	elopment:	Development does not:
a.	maintains the safety of people and property on a site and neighbouring sites from landslides;	 a. involve earthworks exceeding 50m³; b. involve cut and fill having a height greater than
b.	ensures the long-term stability of the site considering the full nature and end use of the	600mm; c. involve any retaining wall having a height great
C.	development; ensures site stability during all phases of	than 600mm; d. redirect or alter the existing flow of surface or
d.	construction and development; minimises disturbance of natural drainage patterns of the site and does not result in the redirection or alteration of the existing flow if surface or	groundwater.
e.	groundwater minimises adverse visual impacts on the amenity of adjoining residents and provides a positive interface with the streetscape.	\mathcal{O}
app	ly)	path to determine if the following assessment crite
PO3	elopment:	No acceptable outcome provided.
a. b.	minimises the risk to persons from overland flow; does not increase the potential for damage from overland flow either on the premises or other premises, public land, watercourses, roads or infrastructure.	
PO3	33	AO33
Dev	elopment:	No acceptable outcome provided.



does not increase the potential for significant adverse impacts on an upstream, downstream or surrounding premises. Note - Reporting to be prepared in accordance with Planning scheme policy – Flood hazard, Coastal hazard and Overland flow	AO37.2 Development ensures that inter-allotment drainage infrastructure is designed to accommodate any event to and including the 1% AEP for the fully developed upstream catchment.
 PO38 Development protects the conveyance of overland flow such that an easement for drainage purposes is provided over: a. a stormwater pipe if the nominal pipe diameter exceeds 300mm; b. an overland flow path where it crosses more than one premises; c. inter-allotment drainage infrastructure. Note - Refer to Planning scheme policy - Integrated design for details and examples. Note - Stormwater Drainage easement dimensions are provided in accordance with Section 3.8.5 of QUDM. Additional criteria for development for a Park ⁽⁵⁷⁾ PO39 Development for a Park ⁽⁵⁷⁾ ensures that the design and layout responds to the nature of the overland flow affecting the premises such that: a. public benefit and enjoyment is maximised; b. impacts on the asset life and integrity of park structures is minimised; c. maintenance and replacement costs are minimised. 	No acceptable outcome provided.
Riparian and wetland setbacks PO40	AO40
 Development provides and maintains a suitable setback from waterways and wetlands that protects natural and environmental values. This is achieved by recognising and responding to the following matters: a. impact on fauna habitats; b. impact on wildlife corridors and connectivity; 	 Development does not occur within: a. 50m from top of bank for W1 waterway and drainage line b. 30m from top of bank for W2 waterway and drainage line

C.	impact on stream integrity;	C.	20m from top of bank for W3 waterway and
d.	impact of opportunities for revegetation and rehabilitation planting;	d.	drainage line 100m from the edge of a Ramsar wetland, 50m
		u.	from all other wetlands.
e.	edge effects.		
			e - W1, W2 and W3 waterway and drainage lines, and wetlands mapped on Schedule 2, Section 2.5 Overlay Maps – Riparian
		and	wetland setbacks.