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APPLICATION REF
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Proposed Residential Development

Secondary Codes assessment

16 Hawkden Cl, Doolandella

CLIENT/Duc Vu
REFERENCE/2520
REVISION /A
DATE/15.03.26

9.4.3 Filling and excavation code

9.4.3.3 Performance outcomes and acceptable outcomes

Table 9.4.3.3.A—Performance outcomes and acceptable outcomes

Performance outcomes	Acceptable outcomes	Comments
<p>PO1 Development for filling or excavation minimises visual impacts from retaining walls and earthworks.</p>	<p>AO1 Development ensures that the total height of any cut and fill, whether or not retained, does not exceed:</p> <ul style="list-style-type: none"> a. 2.5m in a zone in the Industry zones category; b. 1m in all other zones, or if adjoining a sensitive zone. 	<p>Complies; No Bulk Earthworks</p>
<p>PO2 Development of a retaining wall proposed as a result of filling or excavation:</p> <ul style="list-style-type: none"> a. is designed and constructed to be fit for purpose; b. does not impact adversely on significant vegetation; c. is capable of easy maintenance. <p>Editor's note—A retaining wall also needs to comply with the Building Regulation and embankment gradients will need to comply with the Building Regulation. Note—Guidance on the protection of native vegetation is included in the Biodiversity areas planning scheme policy.</p>	<p>AO2.1 Development of a retaining structure, including footings, surface drainage and subsoil drainage:</p> <ul style="list-style-type: none"> a. is wholly contained within the site; b. if the total height to be retained is greater than 1m, then: <ul style="list-style-type: none"> i. the retaining wall at the property boundary is no greater than 1m above the ground level; ii. all further terracing from the 1m high boundary retaining wall is 1 vertical unit:1 horizontal unit; iii. the distance between each successive retaining wall (back of lower wall to face of higher wall) is no less than 1m horizontally to incorporate planting areas. <p>AO2.2</p>	<p>Complies; No Retaining Walls are to be constructed</p>

	<p>Development of a retaining wall over 1m in height protects significant vegetation on the site and on adjoining land and is designed and constructed in accordance with the structures standards in the Infrastructure design planning scheme policy and certified by a Registered Professional Engineer Queensland.</p>	
	<p>AO2.3 Development provides a retaining wall finish that presents to adjoining land that is maintenance free if the setback is less than 750mm from the boundary.</p>	
	<p>AO2.4 Development for filling only uses clean fill that does not include any construction rubble, debris, weed seed or viable parts of plant species listed as an undesirable plant species in the Planting species planning scheme policy.</p>	
<p>PO3 Development ensures that a rock anchor is designed and constructed to be fit for purpose.</p>	<p>AO3 Development ensures that a rock anchor:</p> <ol style="list-style-type: none"> a. is constructed in accordance with the standards in the Infrastructure design planning scheme policy; b. where it extends beyond the property boundary, is supported by a letter of consent from the adjoining land and building owners. 	<p>NA</p>
<p>PO4 Development protects all services and public utilities.</p>	<p>AO4 Development protects services and public utilities and ensures that any alteration or relocation of services or public utilities meets the standard design specifications of the responsible service authorities.</p>	<p>Complies; All existing services and public utilities will be protected or relocated as required.</p>
<p>PO5</p>	<p>AO5</p>	<p>Complies;</p>

<p>Development provides surface and sub-surface drainage to prevent water seepage, concentration of run-off or ponding of stormwater on adjacent land.</p>	<p>Development ensures all flows and subsoil drainage are directed to a lawful point of discharge of a surface water diversion drain, including to the top or toe of a retaining wall in accordance with the stormwater drainage section of the Infrastructure design planning scheme policy.</p>	<p>All subsoil drainage will be directed to the legal point of discharge.</p>
<p>PO6 Development ensures that the design and construction of all open drainage works is undertaken in accordance with natural channel design principles, being the development of a stormwater conveyance system for major flows, by using a vegetated open channel or drain that approximates the features and functions of a natural waterway to enhance or improve riparian values of those stormwater conveyance systems. Editor's note—Guidance on natural channel design principles can be found in the Council's publication Natural channel design guidelines.</p>	<p>AO6 Filling or excavation does not involve the construction of open drainage.</p>	<p>NA</p>
<p>PO7 Development for filling or excavation: a. does not degrade water quality or adversely affect environmental values in receiving waters; b. ensures site sediment and erosion control standards are best practice.</p>	<p>AO7.1 Development for filling or excavation provides water quality treatment that complies with the stormwater drainage section of the Infrastructure design planning scheme policy.</p> <p>AO7.2 Development provides erosion and sediment control standards that are in accordance with the stormwater drainage section of the Infrastructure design planning scheme policy.</p>	<p>Complies; Water quality treatment measures will be put in place to comply with the stormwater drainage section of the infrastructure design planning scheme policy (If required).</p> <p>Erosion Sediment Controls will be implemented on site.</p>
<p>PO8 Development for filling or excavation is conducted such that adverse impacts at a sensitive use due to noise and dust are prevented or minimised.</p>	<p>AO8.1 Development ensures that no dust emissions extend beyond the boundary of the site, including dust from construction vehicles entering and leaving the site.</p>	<p>Complies All filling or excavation proposed will ensure that no dust emissions extend beyond the boundary of the site, including dust from construction vehicles entering and leaving the site. .</p>

<p>Note—A noise and dust impact management plan prepared in accordance with the Management plans planning scheme policy can assist in demonstrating achievement of this performance outcome.</p>	<p>AO8.2 Development for filling or excavation activity only occurs between the hours of 6:30am and 6:30pm Monday to Saturday, excluding public holidays.</p>	
<p>PO9 Development ensures that vibration generated by the filling or excavation operation does not exceed the vibration criteria in Table 9.4.3.3.B, Table 9.4.3.3.C, Table 9.4.3.3.D and Table 9.4.3.3.E. Note—A noise management report prepared in accordance with the Noise impact assessment planning scheme policy can assist in demonstrating achievement of this performance outcome.</p>	<p>AO9 Development involving filling or excavation does not cause a ground-borne vibration beyond the boundary of the site.</p>	<p>Complies; On-site activity will not exceed the criteria Table 9.4.3.3.B, Table 9.4.3.3.C, Table 9.4.3.3.D and Table 9.4.3.3.E. Note—A noise management report prepared</p>
<p>PO10 Development ensures that heavy trucks hauling material to and from the site do not affect the amenity of established areas and limits environmental nuisance impact on adjacent land.</p>	<p>AO10 Development ensures that heavy trucks hauling material to and from the site: a. occur for a maximum of 3 weeks; b. use a major road to access the site; c. only use a minor road for the shortest-most-direct route that has the least amount of environmental nuisance if there is no major road alternative.</p>	<p>Complies; Any proposed trucks will comply with a, b & c.</p>
<p>PO11 Development for filling or excavation protects the environment and community health and wellbeing from exposure to contaminated land and contaminated material.</p>	<p>AO11 Development does not involve: a. excavation on land previously occupied by a notifiable activity or on land listed on the Environmental Management Register or the Contaminated Land Register; b. filling with material containing a contaminant.</p>	<p>Complies The development will ensure that no; a. excavation on land previously occupied by a notifiable activity or on land listed on the Environmental Management Register or the Contaminated Land Register; b. filling with material containing a contaminant.</p>
<p>PO12 Development provides for: a. landscaping for water conservation purposes; b. water sensitive urban design measures which are</p>	<p>AO12.1 Development provides drainage for artificial growing environments which is connected to the stormwater drain.</p>	<p>NA</p>

<p>employed within the landscape design to maximise stormwater use;</p> <p>c. drainage and stormwater measures to reduce any adverse impacts on the landscape;</p> <p>d. stormwater harvesting to be maximised and any adverse impacts of stormwater minimised;</p> <p>e. reticulated irrigation to all artificial growing environments.</p> <p>Note—The Landscape design planning scheme policy provides guidance on information to be provided to demonstrate compliance with the performance outcome and acceptable outcomes.</p>	<p>AO12.2 Development ensures that the maximum site stormwater harvest capacity is utilised to meet the irrigation demand of the development before alternative irrigation sources are utilised and is in compliance with the standards in the Landscape design planning scheme policy.</p>	NA
	<p>AO12.3 Development provides areas of pavement, turf, landscaping and mulched garden beds which are drained. Note—This may be achieved through the provision and/or treatment of swales, spoon drains, field gullies, sub-surface drainage and stormwater connections.</p>	
	<p>AO12.4 Development provides a reticulated irrigation system to all landscaping areas in accordance with the Landscape design planning scheme policy.</p>	NA
<p>PO13 Development ensures cutting and filling for the development of canals or artificial waterways avoids adverse impacts on coastal resources and processes.</p>	<p>AO13 Development does not involve the creation of canals or artificial waterways.</p>	NA

9.4.4 Infrastructure design code

9.4.4.3 Performance outcomes and acceptable outcomes

Table 9.4.4.3.A—Performance outcomes and acceptable outcomes

Performance outcomes	Acceptable outcomes	Comments
<p>PO1 Development provides roads, pavement, edging and landscaping which:</p> <ul style="list-style-type: none"> a. are designed and constructed in accordance with the road hierarchy; b. provide for safe travel for pedestrians, cyclists and vehicles; c. provide access to properties for all modes; d. provide utilities; e. provide high levels of aesthetics and amenity, improved liveability and future growth; f. provide for the amelioration of noise and other pollution; g. provide a high-quality streetscape; h. provide a low-maintenance asset with a minimal whole-of-life cost. <p>Note—This can be demonstrated in an engineering report prepared and certified by a Registered Professional Engineer Queensland in accordance with the Infrastructure design planning scheme policy.</p>	<p>AO1 Development provides roads and associated pavement, edging and landscaping which are designed and constructed in compliance with the road corridor design standards in the Infrastructure design planning scheme policy.</p>	<p>NA The re configuration of a lot is an infill development within an established residential area. No new road is proposed.</p>
<p>PO2 Development provides road pavement surfaces which:</p> <ul style="list-style-type: none"> a. are well designed and constructed; b. durable enough to carry the wheel loads of the 	<p>AO2 Development provides road pavement surfaces which are designed and constructed in compliance with the road corridor design standards in the Infrastructure</p>	<p>NA The re configuration of a lot is an infill development within an established residential area. No new road is proposed.</p>

<p>intended types and numbers of travelling and parked vehicles;</p> <ul style="list-style-type: none"> c. ensures the safe passage of vehicles, pedestrians and cyclists, the discharge of stormwater run-off and the preservation of all-weather access; d. allows for reasonable travel comfort. 	<p>design planning scheme policy.</p>	
<p>PO3 Development provides a pavement edge which is designed and constructed to:</p> <ul style="list-style-type: none"> a. control vehicle movements by delineating the carriageway for all users; b. provide for people with disabilities by allowing safe passage of wheelchairs and other mobility aids. 	<p>AO3 Development provides pavement edges which are designed and constructed in compliance with the road corridor design standards in the Infrastructure design planning scheme policy.</p>	<p>NA The re configuration of a lot is an infill development within an established residential area. No new road is proposed.</p>
<p>PO4 Development provides verges which are designed and constructed to:</p> <ul style="list-style-type: none"> a. provide safe access for pedestrians clear of obstructions and access areas for vehicles onto properties; b. provide a sufficient area for public utility services; c. be maintainable by the Council. 	<p>AO4 Development provides verges which are designed and constructed in compliance with the road corridor design and streetscape locality advice standards in the Infrastructure design planning scheme policy.</p>	<p>NA The re configuration of a lot is an infill development within an established residential area. No new verges are proposed existing are compliant.</p>
<p>PO5 Development provides a lane or laneway identified on the Streetscape hierarchy overlay map or in a neighbourhood plan which:</p> <ul style="list-style-type: none"> a. allows equitable access for all modes; b. is safe and secure; c. has 24-hour access; d. is a low-speed shared zone environment; e. has a high-quality streetscape. 	<p>AO5 Development provides a lane or laneway identified on the Streetscape hierarchy overlay map or in a neighbourhood plan which is embellished in compliance with the streetscape locality advice standards in the Infrastructure design planning scheme policy.</p>	<p>NA The re configuration of a lot is an infill development within an established residential area. No Lanes are proposed.</p>

<p>PO6 Development of an existing premises provides at the frontage to the site, if not already provided, the following infrastructure to an appropriate urban standard:</p> <ul style="list-style-type: none"> a. an effective, high-quality paved roadway; b. an effective, high-quality roadway kerb and channel; c. safe, high-quality vehicle crossings over channels and verges; d. safe, accessible, high-quality verges compatible and integrated with the surrounding environment; e. safe vehicle access to the site that enables ingress and egress in a forward gear; f. provision of and required alterations to public utilities; g. effective drainage; h. appropriate conduits to facilitate the provision of required street-lighting systems and traffic signals. 	<p>AO6 Development of an existing premises provides at the frontage of the site, if not already existing, the following infrastructure to the standard that would have applied if the development involved new premises as stated in the road corridor design standards in the Infrastructure design planning scheme policy:</p> <ul style="list-style-type: none"> a. concrete kerb and channel; b. forming and grading to verges; c. crossings over channels and verges; d. a constructed bikeway; e. a constructed verge or reconstruction of any damaged verge; f. construction of the carriageway; g. payment of costs for required alterations to public utility mains, services or installations; h. construction of and required alterations to public utility mains, services or installations; i. drainage works; j. installation of electrical conduits. 	<p>Complies;</p> <p>All new driveway crossings will be constructed in accordance with the Infrastructure Design Planning Scheme Policy. All new concrete footpaths will be constructed in accordance with the Infrastructure Design Planning Scheme Policy.</p> <p>Redundant vehicular crossings and kerb outlets will be removed and the footpath and kerb will be re-instated in accordance with the Infrastructure Design Planning Scheme Policy.</p> <p>Service Conduit and mains will be installed as required in accordance with the Infrastructure Design Planning Scheme Policy</p>
<p>PO7 Development provides both cycle and walking routes which:</p> <ul style="list-style-type: none"> a. are located, designed and constructed to their network classification (where applicable); b. provide safe and attractive travel routes for pedestrians and cyclists for commuter and recreational purposes; c. provide safe and comfortable access to properties for pedestrians and cyclists; d. incorporate water sensitive urban design into stormwater drainage; e. provide for utilities; 	<p>AO7 Development provides cycle and walking routes which are located, designed and constructed in compliance with the road corridor design and off-road pathway design standards in the Infrastructure design planning scheme policy.</p>	<p>NA</p>

<p>f. provide for a high level of aesthetics and amenity, improved liveability and future growth;</p> <p>g. are a low-maintenance asset with a minimal whole-of-life cost;</p> <p>h. minimise the clearing of significant native vegetation.</p> <p>Note—This can be demonstrated in an engineering report prepared and certified by a Registered Professional Engineer Queensland in accordance with the Infrastructure design planning scheme policy.</p>		
<p>PO8 Development provides refuse and recycling collection, separation and storage facilities that are located and managed so that adverse impacts on building occupants, neighbouring properties and the public realm are minimised.</p>	<p>AO8.1 Development provides refuse and recycling collection and storage facilities in accordance with the Refuse planning scheme policy.</p> <p>AO8.2 Development ensures that refuse and recycling collection and storage location and design do not have any adverse impact including odour, noise or visual impacts on the amenity of land uses within or adjoining the development. Note—Refer to the Refuse planning scheme policy for further guidance.</p>	<p>NA</p>
<p>PO9 Development ensures that:</p> <p>a. land used for an urban purpose is serviced adequately with regard to water supply and waste disposal;</p> <p>b. the water supply meets the stated standard of service for the intended use and fire-fighting purposes.</p>	<p>AO9.1 Development ensures that the reticulated water and sewerage distribution system for all services is in place before the first use is commenced.</p> <p>AO9.2 Development provides the lot with reticulated water supply and sewerage to a standard acceptable to the distributor—retailer.</p>	<p>Complies; The development is for reconfiguring a lot (1 into 5). All proposed allotments will be provided with Sewerage and Water Connections in accordance with Urban Utilities Standards.</p>
<p>PO10 Development provides public utilities and street lighting which are the best current or alternative technology and facilitate accessibility, easy maintenance, minimal whole-</p>	<p>AO10.1 Development provides public utilities and street lighting which are located and aligned to:</p> <p>a. avoid significant native vegetation and areas</p>	<p>Complies; The development is for reconfiguring a lot (1 into 5). All proposed allotments will be provided with Sewerage and Water Connections in accordance with Urban</p>

<p>of-life costs, and minimal adverse environmental impacts.</p>	<p>identified within the Biodiversity areas overlay map;</p> <ul style="list-style-type: none"> b. minimise earthworks; c. avoid crossing waterways, waterway corridors and wetlands or if a crossing is unavoidable, tunnel-boring techniques are used to minimise disturbance, and a disturbed area is reinstated and restored on completion of the work. <p>Note—Guidance on the restoration of habitat is included in the Biodiversity areas planning scheme policy.</p> <p>AO10.2 Development provides compatible public utility services and street-lighting services which are co-located in common trenching for underground services.</p> <hr/> <p>AO10.3 Development provides public utilities and street lighting which are designed and constructed in compliance with the public utilities standards in the Infrastructure design planning scheme policy.</p>	<p>Utilities Standards.</p> <p>NA Existing infrastructure exists adjacent to the development.</p> <p>NA Existing infrastructure exists adjacent to the development.</p>
<p>PO11 Development ensures that land used for urban purposes is serviced adequately with telecommunications and energy supply.</p>	<p>AO11 Development provides land with the following services to the standards of the approved supplier:</p> <ul style="list-style-type: none"> a. electricity; b. telecommunications services; c. gas service where practicable. 	<p>Complies; Electricity and telecommunications will be provided to each lot prior to the registration of the lots.</p>
<p>PO12 Development ensures that major public projects promote the provision of affordable, high-bandwidth telecommunications services throughout the city.</p>	<p>AO12 Development provides conduits which are provided in all major Council and government works projects to enable the future provision of fibre optic cabling, if:</p> <ul style="list-style-type: none"> a. the additional expense is unlikely to be prohibitive; or b. further major work is unlikely or disruption would be 	<p>If required the proposed development, will provide conduits for future fibre optic cabling.</p>

	<p>a major concern, such as where there is a limited capacity road; or</p> <p>c. there is a clear gap in the telecommunications network; or</p> <p>d. there is a clear gap in the bandwidth available to the area.</p> <p>Editor's note—An accurate, digital 'as built' three-dimensional location plan is to be supplied for all infrastructure provided in a road.</p>	
<p>PO13 Development provides public art identified in a neighbourhood plan or park concept plan which:</p> <p>a. is provided commensurate with the status and scale of the proposed development;</p> <p>b. is sited and designed:</p> <p>i. as an integrated part of the project design;</p> <p>ii. as conceptually relevant to the context of the location;</p> <p>iii. to reflect and respond to the cultural values of the community;</p> <p>iv. to promote local character in a planned and informed manner.</p>	<p>AO13 Development provides public art identified in a neighbourhood plan or park concept plan which is sited and designed in compliance with the public art standards in the Infrastructure design planning scheme policy.</p>	NA
<p>PO14 Development provides signage of buildings and spaces which promote legibility to help users find their way.</p>	<p>AO14 Development provides public signage:</p> <p>a. at public transport interchanges and stops, key destinations, public spaces, pedestrian linkages and at entries to centre developments;</p> <p>b. which details the location of the key destinations, public spaces and pedestrian linkages in the vicinity, the services available within the development and where they are located.</p> <p>Editor's note—Signage is to be in accordance with Local Law Number 1 (Control of Advertisements Local Law).</p>	NA

<p>PO15 Development that provides community facilities which form part of the development is functional, safe, low maintenance, and fit for purpose.</p>	<p>AO15 Development that provides community facilities which form part of the development is designed in compliance with the community facilities standards in the Infrastructure design planning scheme policy.</p>	<p>NA</p>
<p>PO16 Development provides public toilets which: a. are required as part of a community facility or park; b. are located, designed and constructed to be: i. safe; ii. durable; iii. resistant to vandalism; iv. able to service expected demand; v. fit for purpose.</p>	<p>AO16 Development that provides public toilets is designed and constructed in compliance with the public toilets standards in the Infrastructure design planning scheme policy.</p>	<p>NA</p>
<p>PO17 Development provides bridges, tunnels, elevated structures and water access structures that are designed and constructed using proven methods, materials and technology to provide for: a. safe movement of intended users; b. an attractive appearance appropriate to the general surroundings and any adjacent structures; c. functionality and easy maintenance; d. minimal whole-of-life cost; e. longevity; f. current and future services. Note—All bridges and elevated and associated elements must be designed and certified by a Registered Professional Engineer Queensland in accordance with the Infrastructure design planning scheme policy.</p>	<p>AO17 Development that provides bridges, tunnels, elevated structures and water access structures is designed and constructed in compliance with the standards in the Infrastructure design planning scheme policy.</p>	<p>NA</p>
<p>PO18 Development provides culverts which are designed and</p>	<p>AO18 Development that provides culverts is designed and</p>	<p>NA</p>

<p>constructed using proven methods, materials and technology to provide for:</p> <ul style="list-style-type: none"> a. safety; b. an attractive appearance appropriate to the general surroundings; c. functionality and easy maintenance; d. minimal whole-of-life cost; e. longevity; f. future widening; g. current and future services; h. minimal adverse impacts, such as increase in water levels or flow velocities, and significant change of flood patterns. <p>Note—All culverts and associated elements are to be designed and certified by a Registered Professional Engineer Queensland in accordance with the applicable design standards.</p>	<p>constructed in compliance with the structures standards in the Infrastructure design planning scheme policy.</p>	
<p>PO19 Development provides batters, retaining walls, and seawalls and river walls which are designed and constructed using proven methods, materials and technology to provide for:</p> <ul style="list-style-type: none"> a. safety; b. an attractive appearance appropriate to the surrounding area; c. easy maintenance; d. minimal whole-of-life cost; e. longevity; f. minimal water seepage. <p>Note—All retaining walls and associated elements are to be designed and certified by a Registered Professional Engineer Queensland in accordance with the applicable design standards.</p>	<p>AO19 Development that provides batters, retaining walls, seawalls and river walls is designed and constructed in compliance with the structures standards in the Infrastructure design planning scheme policy.</p>	<p>NA</p>
<p>If for development with a gross floor area greater than 1,000m²</p>		

<p>PO20 Development ensures that construction is managed so that use of public spaces and movement on pedestrian, cyclist and other traffic routes is not unreasonably disrupted and existing landscaping is adequately protected from short- and long-term impacts. Note—The preparation of a construction management plan can assist in demonstrating achievement of this performance outcome. Note—The Transport, access, parking and servicing planning scheme policy provides advice on the management of vehicle parking and deliveries during construction.</p>	<p>AO20 Development ensures that during construction:</p> <ol style="list-style-type: none"> the ongoing use of adjoining and surrounding parks and public spaces, such as malls and outdoor dining, is not compromised; adjoining and surrounding landscaping is protected from damage; safe, legible, efficient and sufficient pedestrian, cyclist and vehicular accessibility and connectivity to the wider network are maintained. 	<p>Complies; Development ensures that during construction: (a) the ongoing use of adjoining and surrounding parks and public spaces, such as malls and outdoor dining, is not compromised; (b) adjoining and surrounding landscaping is protected from damage; (c) safe, legible, efficient and sufficient pedestrian, cyclist and vehicular accessibility and connectivity to the wider network are maintained.</p>
<p>PO21 Development ensures that construction and demolition activities are guided by measures that prevent or minimise adverse impacts including sleep disturbance at a sensitive use, due to noise and dust, including dust from construction vehicles entering and leaving the site. Note—A noise and dust impact management plan prepared in accordance with the Management plans planning scheme policy can assist in demonstrating achievement of this performance outcome.</p>	<p>AO21.1 Development ensures that demolition and construction:</p> <ol style="list-style-type: none"> only occur between 6:30am and 6:30pm Monday to Saturday, excluding public holidays; do not occur over periods greater than 6 months. <p>AO21.2 Development including construction and demolition does not release dust emissions beyond the boundary of the site.</p>	<p>Complies; Any demolition and construction will be conducted within the specified times. Any construction including demolition will not release dust emissions beyond the boundary of the site. Any demolition required involving asbestos-containing materials will be carried out by a contractor with all the required certifications.</p>
	<p>AO21.3 Development construction and demolition does not involve asbestos-containing materials.</p>	
<p>PO22 Development ensures that:</p> <ol style="list-style-type: none"> construction and demolition do not result in damage to surrounding property as a result of vibration; vibration levels achieve the vibration criteria in 	<p>AO22 Development ensures that the nature and scale of construction and demolition do not generate noticeable levels of vibration.</p>	<p>Complies; During any proposed construction works: The nature and scale of construction and demolition will not generate noticeable levels of vibration.</p>

<p>Table 9.4.4.3.B, Table 9.4.4.3.C, Table 9.4.4.3.D and Table 9.4.4.3.E.</p> <p>Note—A vibration impact assessment report prepared in accordance with the Noise impact assessment planning scheme policy can assist in demonstrating achievement of this performance outcome.</p>		
<p>If for a material change of use or reconfiguring a lot in an urban area (as defined in the Regulation) involving premises that is, or will be, accessed by common private title, where involving buildings, either attached or detached, that are not covered by other legislation mandating fire hydrants</p>		
<p>PO23 Development ensures that fire hydrants are:</p> <ol style="list-style-type: none"> a. installed and located to enable fire services to access water safely, effectively and efficiently; b. suitably identified so that fire services can locate them at all hours. 	<p>AO23.1 Above or below ground fire hydrants are provided on residential, commercial and industrial streets and private roads, at not more than 90m intervals, and at each street intersection.</p> <p>Note—On residential streets, above ground fire hydrants may be single outlet. On commercial and industrial streets above ground fire hydrants should have dual valved outlets.</p> <p>AO23.2 Fire hydrants are identified by:</p> <ol style="list-style-type: none"> a. raised reflectorised pavement markers (RRPM) on sealed roads; b. marker posts at the fence line where on an unsealed road, as road (HR) or path (HP) hydrants. 	<p>NA</p>
<p>PO24 Development ensures road widths and construction within the development, are adequate for refuse vehicles and for fire emergency vehicles to gain access to a safe working area close to buildings and near water supplies whether or not on-street parking spaces are occupied.</p>	<p>AO24 Internal private roads have a minimum roadway clearance between obstructions of 3.5m wide and 4.8m high in addition to any width required for on-street parking.</p>	<p>NA</p>
<p>Development for major electricity infrastructure and bulk water supply infrastructure identified on the State Planning Policy Interactive Mapping System where not in the Utility services zone precinct of the Special purpose zone</p>		

<p>PO25 Development avoids or otherwise minimises adverse impacts on surrounding land uses through the use of buffers and setbacks and the appropriate design and location of plant and operational areas within the site.</p>	<p>AO25 No acceptable outcome is prescribed.</p>	<p>NA</p>
<p>Development potentially impacting on major electricity infrastructure and bulk water supply infrastructure identified on the State Planning Policy Interactive Mapping System where the infrastructure is not in the Utility services zone precinct of the Special purpose zone</p>		
<p>PO26 Development is sited and designed to:</p> <ul style="list-style-type: none"> a. avoid safety risks to people or property; b. minimise noise and visual impacts to people and property; c. ensure the physical integrity and operation, maintenance and expansion of the infrastructure is not compromised. 	<p>AO26 No acceptable outcome is prescribed.</p>	<p>NA</p>

9.4.9 Stormwater code

9.4.9.3 Performance outcomes and acceptable outcomes

Table 9.4.9.3.A—Performance outcomes and acceptable outcomes

Performance outcomes	Acceptable outcomes	Comments
<p>Section A—If for a material change of use, reconfiguring a lot, operational work or building work Note—Compliance with the performance outcomes and acceptable outcomes in this section should be demonstrated by the submission of a site-based stormwater management plan for high risk development only.</p>		
<p>PO1 Development provides a stormwater management system which achieves the integrated management of stormwater to:</p> <ul style="list-style-type: none"> a. minimise flooding; b. protect environmental values of receiving waters; c. maximise the use of water sensitive urban design; d. minimise safety risk to all persons; e. maximise the use of natural waterway corridors and natural channel design principles. <p>Editor's note—The stormwater management system to be developed to address PO1 is not intended to require management of stormwater quality.</p>	<p>AO1 Development provides a stormwater management system designed in compliance with the Infrastructure design planning scheme policy.</p>	<p>Complies; The proposal involves a 1 into 5 Subdivision, reconfiguring a lot.</p> <p>The lawful point of discharge is to Hawken Close & Armisfield Street Road Reserve.</p>
<p>PO2 Development ensures that the stormwater management system and site work does not adversely impact flooding or drainage characteristics of premises which are up slope, down slope or adjacent to the site.</p>	<p>AO2.1 Development does not result in an increase in flood level or flood hazard on up slope, down slope or adjacent premises.</p> <p>AO2.2</p>	<p>Complies; The allotments have been graded to ensure the stormwater discharge from the development does not adversely impact flooding or drainage characteristics of premises which are up slope, down slope or adjacent to the site.</p>

	Development provides a stormwater management system which is designed in compliance with the standards in the Infrastructure design planning scheme policy.	Runoff from developed areas can be captured and discharged to the kerb and channel in accordance with the Infrastructure Design Planning Scheme Policy.
<p>PO3 Development ensures that the stormwater management system does not direct stormwater run-off through existing or proposed lots and property where it is likely to adversely affect the safety of, or cause nuisance to properties.</p>	<p>AO3.1 Development ensures that the location of the stormwater drainage system is contained within a road reserve, drainage reserve, public pathway, park or waterway corridor.</p>	<p>Complies; The lawful point of discharge is to Hawkden Close & Armisfield Street Road Reserve.</p> <p>Runoff from developed areas can be captured and discharged to the kerb and channel/ road reserve in accordance with the Infrastructure Design Planning Scheme Policy.</p> <p>No easements are proposed.</p>
	<p>AO3.2 Development provides a stormwater management system which is designed in compliance with the standards in the Infrastructure design planning scheme policy.</p>	
	<p>AO3.3 Development obtains a lawful point of discharge in compliance with the standards in the Infrastructure design planning scheme policy.</p>	
	<p>AO3.4 Where on private land, all underground stormwater infrastructure is secured by a drainage easement.</p>	
<p>PO4 Development provides a stormwater management system which has sufficient capacity to safely convey run-off taking into account increased run-off from impervious surfaces and flooding in local catchments.</p>	<p>AO4.1 Development provides a stormwater conveyance system which is designed to safely convey flows in compliance with the standards in the Infrastructure design planning scheme policy.</p> <p>AO4.2</p>	<p>Complies; Runoff from developed areas can be captured and discharged to the kerb and channel, designed with sufficient capacity in accordance with the Infrastructure Design Planning Scheme Policy.</p>

	Development provides sufficient area to convey run-off which will comply with the standards in the Infrastructure design planning scheme policy.	
PO5 Development designs stormwater channels, creek modification works, bridges, culverts and major drains to protect and enhance the value of the waterway corridor or drainage path for fauna movement.	AO5 Development ensures the design of stormwater channels, creek modifications or other infrastructure, permits terrestrial and aquatic fauna movement.	NA
PO6 Development ensures that location and design of stormwater detention and water quality treatment: a. minimises risk to people and property; b. provides for safe access and maintenance; c. minimises ecological impacts to creeks and waterways.	AO6.1 Development locates stormwater detention and water quality treatment: a. outside of a waterway corridor; b. offline to any catchment not contained within the development. AO6.2 Development providing for stormwater detention and water quality treatment devices are designed in compliance with the standards in the Infrastructure design planning scheme policy.	NA No detention systems are proposed.
PO7 Development is designed, including any car parking areas and channel works to: a. reduce property damage; b. provide safe access to the site during the defined flood event.	AO7.1 Development (including any ancillary structures and car parking areas) is located above minimum flood immunity levels in Table 9.4.9.3.B, Table 9.4.9.3.C, Table 9.4.9.3.D, Table 9.4.9.3.E and Table 9.4.9.3.F. Note—Compliance with this acceptable outcome can be demonstrated by the submission of a hydraulic and hydrology report identifying flood levels and development design levels (as part of a site-based stormwater management plan). AO7.2	NA The proposed development is for reconfiguring a lot and does not involve any car parking areas and channel works. The land is not identified in a Brisbane River or Creek/waterway flood planning area.

	<p>Development including the road network provides a stormwater management system that provides safe pedestrian and vehicle access in accordance with the standards in the Infrastructure design planning scheme policy.</p>	
<p>PO8 Development designs stormwater channels, creek modification works and the drainage network to protect and enhance the environmental values of the waterway corridor or drainage path.</p>	<p>A08.1 Development ensures natural waterway corridors and drainage paths are retained.</p> <p>A08.2 Development provides the required hydraulic conveyance of the drainage channel and floodway, while maximising its potential to maximise environmental benefits and minimise scour. Editor's note—Guidance on natural channel design principles can be found in the Council's publication Natural channel design guidelines.</p> <p>A08.3 Development provides stormwater outlets into waterways, creeks, wetlands and overland flow paths with energy dissipation to minimise scour in compliance with the standards in the Infrastructure design planning scheme policy.</p> <p>A08.4 Development ensures that the design of modifications to the existing design of new stormwater channels, creeks and major drains is in compliance with the standards in the Infrastructure design planning scheme policy.</p>	<p>NA</p>
<p>PO9 Development is designed to manage run-off and peak flows by minimising large areas of impervious material and maximising opportunities for capture and re-use.</p>	<p>A09 No acceptable outcome is prescribed.</p>	<p>Complies; The development will have minimal impact on runoff water quality. Therefore, it is proposed that runoff from the developed areas of this property be discharged in a conventional manner as</p>

		detailed in the Infrastructure Design Planning Scheme Policy.
<p>PO10 Development ensures that there is sufficient site area to accommodate an effective stormwater management system. Note—Compliance with the performance outcome should be demonstrated by the submission of a site-based stormwater management plan for high-risk development only.</p>	<p>AO10 No acceptable outcome is prescribed.</p>	<p>Complies; The development will have minimal impact on runoff water quality. Therefore, it is proposed that runoff from the developed areas of this property be discharged in a conventional manner as detailed in the Infrastructure Design Planning Scheme Policy.</p>
<p>PO11 Development provides for the orderly development of stormwater infrastructure within a catchment, having regard to the:</p> <ol style="list-style-type: none"> existing capacity of stormwater infrastructure within and external to the site, and any planned stormwater infrastructure upgrades; safe management of stormwater discharge from existing and future up-slope development; implication for adjacent and down-slope development. 	<p>AO11.1 Development with up-slope external catchment areas provides a drainage connection sized for ultimate catchment conditions that is directed to a lawful point of discharge.</p> <p>AO11.2 Development ensures that existing stormwater infrastructure that is undersized is upgraded in compliance with the Infrastructure design planning scheme policy.</p>	<p>NA</p> <p>NA</p>
<p>PO12 Development provides stormwater infrastructure which:</p> <ol style="list-style-type: none"> remains fit for purpose for the life of the development and maintains full functionality in the design flood event; can be safely accessed and maintained cost effectively; ensures no structural damage to existing stormwater infrastructure. 	<p>AO12.1 The stormwater management system is designed in compliance with the Infrastructure design planning scheme policy.</p> <p>AO12.2 Development provides a clear area with a minimum of 2m radius from the centre of an existing manhole cover and with a minimum height clearance of 2.5m.</p>	<p>Complies; The stormwater management system will be designed in accordance with the Infrastructure Design Planning Scheme Policy.</p> <p>NA</p>
<p>PO13 Development ensures that all reasonable and practicable measures are taken to manage the impacts of erosion,</p>	<p>AO13 No acceptable outcome is prescribed.</p>	<p>Complies; An acceptable solution will be achieved through the implementation of a Sediment & Erosion</p>

<p>turbidity and sedimentation, both within and external to the development site from construction activities, including vegetation clearing, earthworks, civil construction, installation of services, rehabilitation, revegetation and landscaping to protect:</p> <ul style="list-style-type: none"> a. the environmental values and water quality objectives of waters; b. waterway hydrology; c. the maintenance and serviceability of stormwater infrastructure. <p>Note—The Infrastructure design planning scheme policy outlines the appropriate measures to be taken into account to achieve the performance outcome.</p>		<p>Control program that requires the establishment and maintenance of controls in accordance with the Infrastructure Design Planning Scheme Policy.</p>
<p>PO14 Development ensures that:</p> <ul style="list-style-type: none"> a. unnecessary disturbance to soil, waterways or drainage channels is avoided; b. all soil surfaces remain effectively stabilised against erosion in the short and long term. 	<p>AO14 No acceptable outcome is prescribed.</p>	<p>Complies; A detailed ESC Plan will be implemented during the construction phase of the development.</p>
<p>PO15 Development does not increase:</p> <ul style="list-style-type: none"> a. the concentration of total suspended solids or other contaminants in stormwater flows during site construction; b. run-off which causes erosion either on site or off site. 	<p>AO15 No acceptable outcome is prescribed.</p>	<p>Complies; A detailed ESC Plan will be implemented during the construction phase of the development.</p>
<p>Section B—Additional performance outcomes and acceptable outcomes which apply to high-risk development, being one or more of the following:</p> <ul style="list-style-type: none"> a. a material change of use for an urban purpose which involves greater than 2,500m² of land that: <ul style="list-style-type: none"> i. will result in an impervious area greater than 25% of the net developable area; or ii. will result in 6 or more dwellings. 		

<p>b. reconfiguring a lot for an urban purpose that involves greater than 2,500m² of land and will result in 6 or more lots;</p> <p>c. operational work for an urban purpose which involves disturbing greater than 2,500m² of land.</p>		
<p>PO16 Development ensures that the entry and transport of contaminants into stormwater is avoided or minimised to protect receiving water environmental values. Note—Prescribed water contaminants are defined in the <i>Environmental Protection Act 1994</i>. Note—Compliance with the performance outcome should be demonstrated by the submission of a site-based stormwater management plan for high-risk development only.</p>	<p>AO16 Development provides a stormwater management system which is designed in compliance with the standards in the Infrastructure design planning scheme policy.</p>	NA – Site is not a High Risk Development
<p>PO17 Development ensures that:</p> <ol style="list-style-type: none"> the discharge of wastewater to a waterway or external to the site is avoided; or if the discharge cannot practicably be avoided, the development minimises wastewater discharge through re-use, recycling, recovery and treatment. <p>Note—The preparation of a wastewater management plan can assist in demonstrating achievement of this performance outcome. Editor's note—This code does not deal with sewerage which is the subject of the Wastewater code.</p>	<p>AO17 No acceptable outcome is prescribed.</p>	NA – Site is not a High Risk Development
<p>Section C—Additional performance outcomes and acceptable outcomes for assessable development for a material change of use or reconfiguring a lot</p>		
<p>PO18 Development protects stormwater infrastructure to ensure the following are not compromised:</p> <ol style="list-style-type: none"> the long term infrastructure for the stormwater network in the Long term infrastructure plans; 	<p>AO18 Development protects stormwater infrastructure in compliance with the following:</p> <ol style="list-style-type: none"> for long term infrastructure for the stormwater network, the Long term infrastructure plans; 	NA

<p>b. the existing and planned infrastructure for the stormwater network in the Local government infrastructure plan;</p> <p>c. the provision of long term, existing and planned infrastructure for the stormwater network which:</p> <ul style="list-style-type: none"> i. is required to service the development or an existing and future urban development in the planning scheme area; or ii. is in the interests of rational development or the efficient and orderly planning of the general area in which the site is situated. <p>Editor's note—A condition which requires a proposed development to keep permanent improvements and structures associated with the approved development clear of the area of long term infrastructure, may be imposed.</p>	<p>b. for existing and planned infrastructure for the stormwater network, the Local government infrastructure plan;</p> <p>c. the standards for stormwater drainage in the Infrastructure design planning scheme policy.</p>	
<p>PO19 Development provides for the payment of extra trunk infrastructure costs for the following:</p> <ul style="list-style-type: none"> a. for development completely or partly outside the priority infrastructure area in the Local government infrastructure plan; b. for development completely inside the priority infrastructure area in the Local government infrastructure plan involving: <ul style="list-style-type: none"> i. trunk infrastructure that is to be provided earlier than planned in the Local government infrastructure plan; ii. long term infrastructure for the stormwater network which is made necessary by development that is not assumed future urban development; iii. other infrastructure for the stormwater network associated with development that is 	<p>AO19 No acceptable outcome is prescribed.</p>	<p>NA</p>

<p>not assumed future urban development which is made necessary by the development.</p> <p>Editor's note—The payment of extra trunk infrastructure costs for development completely inside the priority infrastructure area in the Local government infrastructure plan is to be worked out in accordance with the Charges Resolution.</p> <p>Editor's note—See section 130 Imposing Development conditions (Conditions for extra trunk infrastructure costs) of the <i>Planning Act 2016</i>.</p>		
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