

9.4.3 Infrastructure code

9.4.3.1 Application

1. This code applies to:
 - a. material change of use:
 - i. that is accepted development (subject to requirements) or code assessable and for which the Infrastructure code is identified in the 'assessment benchmarks for assessable development and requirements for accepted development' column in a table of assessment in section 5.5 - Categories of development and assessment - Material change of use in Part 5 - Tables of assessment;
 - ii. that is made impact assessment in a table of assessment in section 5.5 - Categories of development and assessment - Material change of use or section 5.9 - Categories of development and assessment - Local plans in Part 5 - Tables of assessment;
 - b. reconfiguring a lot:
 - i. that is code assessable and for which the Infrastructure code is identified in the 'assessment benchmarks for assessable development and requirements for accepted development' column in Table 5.6.1 - Reconfiguring a lot in Part 5 - Tables of assessment;
 - ii. made impact assessment in Table 5.6.1 - Reconfiguring a lot in Part 5 - Tables of assessment;
 - c. operational work that is infrastructure work:
 - i. that is accepted development (subject to requirements) or code assessable and for which the Infrastructure code is identified in the 'assessment benchmarks for assessable development and requirements for accepted development' column Table 5.8.1 - Operational work in Part 5 - Tables of assessment.
2. When using this code, reference should be made to section 5.3.2 - Determining the category of development and category of assessment and, where applicable, section 5.3.3 - Determining the 'assessment benchmarks for assessable development and requirements for accepted development' located in Part 5 - Tables of assessment.

9.4.3.2 Purpose

1. The purpose of the code is to ensure that infrastructure is provided to service development.
2. The purpose of the code will be achieved through the following overall outcomes:
 - a. development protects the existing infrastructure and planned infrastructure networks being the:
 - i. movement network;
 - ii. park network;
 - iii. water network;

- iv. sewerage network;
- v. stormwater network;
- vi. other networks including electricity, gas and telecommunications;
- vii. land for community facilities network;
- b. development other than operational work provides infrastructure that is necessary to service the development, including elements of:
 - i. a safe, efficient and legible road network;
 - ii. a safe, efficient and legible public transport network;
 - iii. a safe, efficient and legible cycle network;
 - iv. a safe, efficient and legible pedestrian network;
 - v. a safe, efficient and legible parks network;
 - vi. a safe and efficient water network;
 - vii. a safe and efficient sewerage network;
 - viii. a safe and efficient stormwater network;
 - ix. safe and efficient other networks including electricity, gas and telecommunications;
 - x. a safe and efficient road lighting network;
 - xi. land for a community facilities network;
- c. development integrates with existing and planned infrastructure networks;
- d. infrastructure is designed and constructed to deliver a standard of service that is efficient and equitable;
- e. the cost to the community for the life of the infrastructure is minimised by providing for a suitable design life, ease of maintenance and ease of replacement;
- f. development appropriately manages refuse and recycling storage and collection;
- g. infrastructure protects personal health and safety and premises;
- h. infrastructure protects environmental values.

9.4.3.3 Assessment benchmarks for assessable development and requirements for accepted development

Part A - Requirements for accepted development (subject to requirements) and assessment benchmarks for assessable development

Table 9.4.3.3.1 - Infrastructure code: accepted development (subject to requirements) and assessable development

| Performance outcomes | Acceptable outcomes | Comments | Comme |
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| For accepted development (subject to requirements) and assessable development | | | |
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| Provision, design, construction and location of infrastructure | | | |
| <p>PO1 Development is demonstrated to be capable of being serviced by necessary infrastructure.</p> | <p>AO1 Reports, plans and drawings are provided in accordance with part 2 of Planning scheme policy 5 - Infrastructure.</p> | <p>AO1 – COMPLIES The development can be adequately serviced with all necessary engineering services, including sewer, water, stormwater drainage, electrical and telecommunication infrastructure. Engineering Services Report, reference 30216791-GA0001-01 - ESR by Arcadis should be referred to for further details.</p> | |
| <p>PO2 Development:</p> <ul style="list-style-type: none"> a. provides necessary infrastructure to service the development; b. provides that the design, construction and location of necessary infrastructure: <ul style="list-style-type: none"> i. protects existing and planned infrastructure networks; ii. services proposed development; iii. integrates with existing and planned infrastructure networks; iv. delivers a standard of service that is efficient and equitable; v. minimises the cost to the community for the life of the infrastructure by providing a suitable design life, ease of maintenance and ease of replacement; vi. protects personal health, safety and premises; vii. protects environmental values. | <p>AO2 Development:</p> <ul style="list-style-type: none"> a. in a water supply service area connects to the water network in accordance with the SEQ Water Supply and Sewerage Design and Construction Code; b. not in a water supply service area provides a tank with a minimum storage capacity of 45,000 litres; c. in a sewerage supply service area connects to the waste water network in accordance with the SEQ Water Supply and Sewerage Design and Construction Code; d. not in a sewerage supply service area complies with part 1 of the Queensland Plumbing and Wastewater Code; e. provides stormwater infrastructure in accordance with part 3.6 of Planning scheme policy 5 - Infrastructure; f. provides a movement network infrastructure in accordance with part 3.4 of Planning | <p>AO2 – COMPLIES The development shall make connection to Council's existing water and sewer supply services in accordance with the SEQ Code. Engineering Services Report, reference 30216791-GA0001-01 – ESR by Arcadis should be referred to for further details.</p> | |

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| | <p>scheme policy 5 - Infrastructure; g. provides parks in accordance with part 3.12 of Planning scheme policy 5 - Infrastructure; h. provides road lighting in accordance with part 3.5 of Planning scheme policy 5 - Infrastructure; i. provides electricity reticulation in accordance with part 3.8 of Planning scheme policy 5 - Infrastructure; j. provides gas and telecommunications reticulation in accordance with part 3.9 of Planning scheme policy 5 - Infrastructure. k. is consistent with the general planning layouts in part 7.2 of Planning scheme policy 5 - Infrastructure.</p> <p>Editor's note - The delivery of any part of a network identified in the plans for trunk infrastructure is governed by Part 4 - Local government infrastructure plan.</p> | | |
| Location of development | | | |
| <p>PO3 Development is located to protect trunk infrastructure networks.</p> | <p>AO3 Development is located outside a network identified in Local government infrastructure plan map LGIP-03.00 to 08.00 Plans for trunk infrastructure in Schedule 3 - Local government infrastructure plan mapping and tables.</p> | <p>AO3 – COMPLIES No trunk infrastructure upgrades are within the immediate vicinity of the site in accordance with Council Priority Infrastructure Planning maps. Engineering Services Report, reference 30216791-GA0001-01 - ESR by Arcadis should be referred to for further details.</p> | |
| Fire fighting | | | |
| <p>PO4 Development in a water service area accessed by common private title provides: a. fire hydrant infrastructure;</p> | <p>AO4 Development in a water service area involving a material change of use or reconfiguring a lot where, or to be, accessed by common private title</p> | <p>PO4 – NOT APPLICABLE The development does not propose any common private titles.</p> | |

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| <p>b. unimpeded access for emergency services vehicles. Editor's note - The term common private title refers to areas such as access roads in community title developments or strata title unit access, which are private and under group or body corporate control.</p> | <p>ensures that fire hydrant placement and technical requirements for streets and access ways are in accordance with:</p> <ul style="list-style-type: none"> a. Australian Standard (AS) 2419.1 - 2005 <i>Fire hydrant installations</i>; b. QFES: <i>Fire Hydrant and vehicle access guidelines for residential, commercial and industrial lots</i>. | | |
| <p>PO5 Development not in a water service area provides sufficient water storage with adequate pressure, volume and flow to service development for fire fighting purposes.</p> | <p>AO5 Development:</p> <ul style="list-style-type: none"> a. is connected to a reticulated water supply scheme that has sufficient flow and pressure characteristics for fire fighting purposes at all times with a minimum pressure and flow of 10 litres per second at 200kPa; or b. has on-site water storage in accordance with Table 9.4.3.3.2 - Water storage for fire fighting, dedicated or retained for fire fighting purposes that is made of fire resistant materials and is: <ul style="list-style-type: none"> i. a separate tank; or ii. a reserve section in the bottom part of the main water supply tankwater tank. <p>Editor's note - The requirement in AO5 is: - in addition to the requirement for potable water supply/storage in AO2 in Table 9.4.3.3.1 - Infrastructure code: accepted development (subject to requirements) and assessable development; - reflected in AO5 in Table 8.2.3.3.1 - Bushfire hazard overlay code: accepted development (subject to requirements) and assessable development.</p> | <p>AO5 – COMPLIES The development will be connected to a reticulated water supply network which shall be designed to provide adequate levels of service for firefighting and property service demands. Engineering Services Report, reference 30216791-GA0001-01 - ESR by Arcadis should be referred to for further details.</p> | |
| <p>Waste management</p> | | | |

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| <p>PO6 Development provides refuse and recycling collection 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>AO6.1 Development provides refuse and recycling collection and storage facilities in accordance with Planning scheme policy 9 - Waste management.</p> <p>AO6.2 Development ensures that the location and design of refuse and recycling collection and storage facilities does not have any adverse impact including odour, noise or visual impacts on the amenity of land uses within or adjoining the development.</p> <p>Note - Planning scheme policy 9 - Waste management provides guidance on how to achieve this outcome.</p> | <p>AO6 – COMPLIES The development provides refuse and recycling collection in accordance with Planning scheme policy 9 - Waste management. Engineering Services Report, reference 30216791-GA0001-01 - ESR by Arcadis should be referred to for further details.</p> |
| <p>Disposal of trade waste</p> | | |
| <p>PO7 The disposal of trade waste in a sewerage supply service area does not adversely affect the sewerage network.</p> | <p>AO7 The disposal of trade waste in a sewerage supply service area complies with the sewer admission standards in section 3.2.6 - Sewer admission standards in Planning scheme policy 3 - Environmental management.</p> | <p>AO7 – COMPLIES The development does not propose any sites which are to generate or dispose of trade waste.</p> |
| <p>Roof water drainage and surface water drainage</p> | | |
| <p>PO8 Development provides stormwater infrastructure for the drainage of the premises so as not to cause any of the following: a. ponding of stormwater on the premises; b. a hazard to personal health and safety; c. damage to premises; d. an increased risk of flooding to premises within the catchment.</p> | <p>AO8 Development complies with the standards for stormwater infrastructure specified in part 3.6 of Planning scheme policy 5 - Infrastructure.</p> | <p>AO8 – COMPLIES The development proposes to maintain a similar drainage regime as the existing scenario. The site shall be free draining and is to incorporate a combined bio retention/detention basin to treat and detain stormwater prior to discharging from the site in accordance with Council's planning scheme requirements. Stormwater Report, reference 30216791-GA0002-</p> |

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| | | 01 – SBSMP by Arcadis, should be referred to for further details. | |
| Natural flow of surface water | | | |
| <p>PO9 Development provides that the natural flow of surface water is:</p> <ul style="list-style-type: none"> a. not altered so as to cause a risk to personal health and safety or damage to property; b. not increased in intensity, velocity or frequency; c. not concentrated onto adjoining premises. | <p>AO9 Development complies with the standards for stormwater infrastructure specified in part 3.6 of Planning scheme policy 5 - Infrastructure.</p> | <p>AO9 – COMPLIES The development does not propose to significantly disturb the natural flow of surface water. Stormwater Report, reference 30216791-GA0002-01 – SBSMP by Arcadis, should be referred to for further details.</p> | |
| Water sensitive urban design | | | |
| <p>PO10 Development which provides stormwater infrastructure incorporates water sensitive urban design principles having regard to:</p> <ul style="list-style-type: none"> a. protecting existing natural features and ecological processes; b. protecting the natural hydrologic behaviour of catchments; c. protecting the existing natural flow and water quality regimes of waterways; d. protecting water quality of surface and ground waters; e. minimising demand on the water network; f. minimising sewage discharges to the natural environment; g. integrating water into the landscape to enhance visual and ecological values. | <p>AO10 Development complies with the standards for stormwater infrastructure specified in part 3.6 of Planning scheme policy 5 - Infrastructure.</p> | <p>PO10 – COMPLIES The development proposes to manage stormwater quantity and quality via a combined bioretention basin and detention basin. This has been designed in accordance with QUDM, and Council guidelines. Stormwater Report, reference 30216791-GA0002-01 – SBSMP by Arcadis, should be referred to for further details.</p> | |

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| Movement network | | |
| <p>PO11 The projected traffic levels for a use do not adversely affect the planned standards of service for a road or intersection.</p> | <p>AO11 Development does not cause or contribute to projected traffic levels: a. exceeding the maximum vehicle trips per day in Table 3.4.1.4.2 in Planning scheme policy 5 - Infrastructure; or b. exceeding the maximum control delays through intersections in peak periods in Table 3.4.1.4.3 in Planning scheme policy 5 - Infrastructure.</p> | <p>PO11 – COMPLIES Refer Traffic Impact Assessment for further details.</p> |
| Integrated movement concept report | | |
| <p>PO12 Development which generates more than 3,000 vehicle trips per average weekday is designed to integrate the movement network to minimise the transportation costs required to service the use.</p> | <p>AO12 Development which generates more than 3,000 vehicle trips per average weekday provides an integrated movement concept report which integrates the planning of the movement network in accordance with part 2 and 3 of Planning scheme policy 5 - Infrastructure.</p> | <p>PO12 – N/A Development likely to generate less than 3000 trips per a day.</p> |
| For assessable development only | | |
| Land use and transport integration | | |
| <p>PO13 Development within 400 metres of existing or future public passenger transport facilities where the total site area is 5,000m² or more: a. supports a road hierarchy which facilitates efficient, safe and accessible bus services connecting to existing and future public passenger transport facilities;</p> | <p>AO13 No acceptable outcome provided.</p> | <p>PO13 – COMPLIES The proposed development will incorporate a road network which is designed and constructed in accordance with Council’s guidelines. The road network will be designed to facilitate efficient, safe and accessible travel routes to support pedestrian and vehicle movements.</p> |

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| <p>b. enhances connectivity between existing and future public passenger transport facilities and other transport modes;</p> <p>c. optimises the walkable catchment to existing and future public passenger transport facilities;</p> <p>d. provides for direct and safe access to and use of existing or future public passenger transport facilities.</p> <p>Note - SPP code: Land use and transport integration in Appendix 4 of the state planning policy provides guidance to achieve this outcome.</p> | | |
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Table 9.4.3.3.2 - Water storage for fire fighting

| Column 1 Lot size / use type | Column 2 Water requirement |
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| For each residential lot: | |
| a. less than 1,000m ² | 5,000 litres |
| b. between 1,000m ² and less than 1 hectare | 10,000 litres |
| c. greater than 1 hectare | 20,000 litres |
| Multiple dwelling | 5,000 litres per dwelling up to a maximum of 20,000 litres |
| A use other than Multiple dwelling | 5,000 litres or the prevailing rural fire brigade standard |

9.4.2 Filling and excavation code

9.4.2.1 Application

1. This code applies to:
 - a. material change of use:
 - i. that is accepted development (subject to requirements) or code assessable and for which the Filling and excavation code is identified in the 'assessment benchmarks for assessable development and requirements for accepted development' column in a table of assessment in section 5.5 - Categories of development and assessment - Material change of use in Part 5 - Tables of assessment;
 - ii. that is made impact assessment in a table of assessment in section 5.5 - Categories of development and assessment - Material change of use or section 5.9 - Categories of development and assessment - local plans in Part 5 - Tables of assessment;
 - b. reconfiguring a lot:
 - i. that is code assessable and for which the Filling and excavation code is identified in the 'assessment benchmarks for assessable development and requirements for accepted development' column in Table 5.6.1 - Reconfiguring a lot in Part 5 - Tables of assessment;
 - ii. that is impact assessable in Table 5.6.1 - Reconfiguring a lot in Part 5 - Tables of assessment;
 - c. operational work that is accepted development (subject to requirements) and code assessable operational work - filling or excavation for which the Filling and excavation code is identified in the 'assessment benchmarks for assessable development and requirements for accepted development' column in Table 5.8.1 - Operational work.
2. When using this code, reference should be made to section 5.3.2 - Determining the category of development and category of assessment and, where applicable, section 5.3.3 - Determining the 'assessment benchmarks for assessable development and requirements for accepted development' located in Part 5 - Tables of assessment.

9.4.2.2 Purpose

1. The purpose of the code is to protect premises, people and natural processes from adverse impacts associated with filling or excavation.
2. The purpose of the code will be achieved through the following overall outcomes:
 - a. development protects:
 - i. natural physical processes and ecosystems;
 - ii. existing and planned infrastructure;
 - iii. personal health and safety and premises;
 - iv. visual amenity.

9.4.2.3 Assessment benchmarks for assessable development and requirements for accepted development

Part A - Requirements for accepted development (subject to requirements) and assessment benchmarks for assessable development

Table 9.4.2.3.1 - Filling and excavation code: accepted development (subject to requirements) and assessable development

| Performance outcomes | Acceptable outcomes | Comments | Comme |
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| For accepted development (subject to requirements) and assessable development | | | |
| Protection of natural processes and ecosystems | | | |
| <p>PO1 The discharge of sediments and pollutants from filling or excavation does not adversely affect a waterway or the stormwater network.</p> | <p>AO1 The discharge of sediments and pollutants to a waterway or stormwater network complies with part 3.3 - Filling and excavation standards in Planning scheme policy 5 - Infrastructure.</p> | <p>AO1 – COMPLIES The development site shall incorporate drainage, sediment, erosion and dust control measures to ensure works undertaken on site do not adversely affect the downstream waterway and stormwater network. Sediment and erosion control plans endorsed by a CPESC certified engineer will be provided at the time of operational works submission.</p> | |
| <p>PO2 Topsoil and spoil stockpiled on the premises do not adversely affect natural processes and ecosystems.</p> | <p>AO2 Topsoil and spoil is stockpiled to comply with part 3.3 - Filling and excavation standards in Planning scheme policy 5 - Infrastructure.</p> | <p>AO2 – COMPLIES Topsoil and spoil shall be stockpiled in select locations around the site during construction. Appropriate measures, including sediment and erosion control shall be implemented to ensure the stockpiling of such materials does not adversely affect natural processes and ecosystems.</p> | |
| <p>PO3 Filling is carried out using stable, solid and clean</p> | <p>AO3 Filling complies with part 3.3 - Filling and</p> | <p>AO3 – COMPLIES Filling on site shall be carried out using stable,</p> | |

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| earth, free of organic and putrescible waste, rubbish and refuse material. | excavation standards in Planning scheme policy 5 - Infrastructure. | solid and clean materials. It is expected that Level 1 geotechnical supervision shall be undertaken during the earthworks phase. | |
| Protection of existing and planned infrastructure | | | |
| PO4 Filling or excavation works do not adversely affect infrastructure, including any services. | AO4 Filling or excavation works comply with part 3.3 - Filling and excavation standards in Planning scheme policy 5 - Infrastructure. | AO4 – COMPLIES All earthworks conducted on site shall be undertaken in a manner which protects any existing or proposed infrastructure and services in accordance with the standards in planning scheme policy 5-Infrastructure. | |
| Protection and enhancement of personal health and safety and premises | | | |
| PO5 Filling or excavation works do not adversely affect personal health and safety. | AO5 Filling or excavation works comply with part 3.3 - Filling and excavation standards in Planning scheme policy 5 - Infrastructure. | AO5 – COMPLIES All earthworks conducted on site shall be undertaken in a safe manner, with appropriate workplace health and safety measures being implemented. | |
| Surface water flow | | | |
| PO6 Surface water drainage does not cause any of the following: a. ponding on any premises; or b. a hazard or adversely affect personal health and safety and premises; or c. diversion or concentration of flow from or onto adjoining premises or infrastructure. | AO6 Surface water drainage complies with part 3.3 - Filling or excavation standards in Planning scheme policy 5 - Infrastructure. | AO6 – COMPLIES The development proposes to maintain a similar drainage regime as the existing scenario. The site shall be free draining and is to incorporate a combined bio retention/detention basin to treat and detain stormwater prior to discharging from the site in accordance with Council's planning scheme requirements. Engineering Services Report, reference 103014002-GA0001-01 – ESR by Arcadis, should be referred to for further details. | |
| Batters | | | |

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| <p>PO7 A batter:</p> <ul style="list-style-type: none"> a. does not adversely affect the natural physical processes and ecosystems; b. protects existing and planned infrastructure; c. is safe, stable and easily maintained; d. is landscaped to enhance visual amenity. | <p>AO7 A batter is designed and constructed to comply with the standards specified in 3.3.6 - Batters and retaining walls in Planning scheme policy 5 - Infrastructure.</p> | <p>PO7 – COMPLIES Batters shall be designed and constructed to comply with the standards specified in section 3.3.6–Batters in planning scheme policy 5–Infrastructure where possible. The final design shall be submitted to Council for approval as part of a future development application.</p> |
| Retaining walls | | |
| <p>PO8 A retaining wall:</p> <ul style="list-style-type: none"> a. is not constructed of timber and is not located on existing or proposed lot boundaries, or movement networks; b. does not adversely affect the natural physical processes and ecosystems; c. is located to avoid conflict with adjoining premises; d. is located such that existing and planned infrastructure is not adversely affected; e. protects the visual amenity of adjoining premises or a public open space; f. is located within the premises that is being filled; g. is located within the premises that is cut and is designed to take any surcharge loading allowable on the uphill lot; h. is safe and stable; i. enables easy access for maintenance. | <p>AO8 A retaining wall is designed and constructed to comply with the standards specified in section 3.3.6.2 - Retaining walls in Planning scheme policy 5 - Infrastructure.</p> | <p>PO8 – COMPLIES Retaining walls shall be designed and constructed to comply with the standards specified in section 3.3.6.2–Batters and retaining walls in planning scheme policy 5–Infrastructure where possible. The final design shall be submitted to Council for approval as part of a future development application.</p> |
| Filling of a dam | | |

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| <p>PO9 The filling of a dam: a. does not adversely affect the natural physical processes and ecosystems; b. creates a safe and stable surface; c. is integrated into the landscape.</p> | <p>A09 The filling of a dam complies with part 3.3 - Filling and excavation standards in Planning scheme policy 5 - Infrastructure.</p> | <p>PO9 – COMPLIES Filling of the dam will comply with part 3.3.</p> | |
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