8.2.3 Bicycle network overlay code

8.2.3.1 Application

1. This code applies to assessing development of land adjoining or having frontage to (i.e. where the overlay sub-category is located in adjoining road reserve, public land or river), or traversed by, cycle routes or Riverwalks identified in the Bicycle network overlay map, if:
    a. assessable development where this code is an applicable code identified in the assessment benchmarks column of a table of assessment for an overlay (section 5.10); or
    b. impact assessable development.
2. The Bicycle network overlay map identifies the following sub-categories:
    a. Primary cycle route sub-category;
    b. Secondary cycle route sub-category;
    c. Local cycle route sub-category;
    d. Riverwalk — Typology 1 (City reaches north and south) sub-category;
    e. Riverwalk — Typology 2 (Urban reaches) sub-category;
    f. Riverwalk — Floating walkway (Riverwalk connection subject to future construction) sub-category.
3. When using this code, reference should be made to section 1.5 and section 5.3.3.

Note—The following purpose, overall outcomes, performance outcomes and acceptable outcomes comprise the assessment benchmarks of this code.

Note—Where this code includes performance outcomes or acceptable outcomes that relate to:

- bicycle network design and construction, guidance is provided in the Infrastructure design planning scheme policy;
- planting species selection, guidance is provided in the Planting species planning scheme policy.

Editor's note—The desired standard of service for the provision of trunk infrastructure is specified in the Local government infrastructure plan.

8.2.3.2 Purpose

1. The purpose of the Bicycle network overlay code is to:
    a. Implement the policy direction in the Strategic framework in particular:
        i. Theme 2: Brisbane's outstanding lifestyle and Element 2.1 — Brisbane's identity;
        ii. Theme 4: Brisbane's highly effective transport and infrastructure networks and Element 4.1 — Brisbane's transport infrastructure networks.
    b. Provide for the assessment of the suitability of development in the Bicycle network overlay.
2. The purpose of the code will be achieved through the following overall outcomes:
    a. Development contributes to the safe and efficient operation of the existing and planned bicycle network.
    b. Cycle routes and pathways are integrated, connected, direct, convenient, legible, safe and suitably shaded to cater for cyclists of all skill levels.

c. Cycle routes are designed and constructed to fulfil the transit functions corresponding to their network classification allowing commuter and recreation cyclists to travel efficiently and safely.
d. The Riverwalk component of the bicycle network provides a continuous inner-Brisbane riverside publicly dedicated shared pedestrian and cyclist pathway; including pavement, shade trees, furniture and lighting; as well as public amenity outcomes such as shade structures, public art and viewing platforms at key locations.
e. Development does not compromise the completion of the bicycle network.

8.2.3.3 Performance outcomes and acceptable outcomes

Table 8.2.3.3—Performance outcomes and acceptable outcomes

Performance outcomes	Acceptable outcomes	Comments
General		
PO1 Development contributes to the safe and efficient provision and operation of the bicycle network.	**AO1** Development provides cycle routes in accordance with the bicycle network classification and design standard identified on the Bicycle network overlay map and set out in the road corridor design and off-road pathways standards of the Infrastructure design planning scheme policy. Note—On a site not traversed or adjoining a route on the Bicycle network overlay map, pedestrian and cyclist movement and permeability is addressed by the Subdivision code (for reconfiguring a lot) and Centre or mixed use code or residential codes (for material change of use).	**Not Applicable with A01** The subject site fronts Waterworks Road, which classed as a secondary cycle route.
PO2 Development protects a cycle route or Riverwalk for the bicycle network shown on the Bicycle network overlay map to ensure the following are not compromised: a. the long term infrastructure for the bicycle network in the Long term infrastructure plans;	**AO2** Development protects a cycle route or Riverwalk for the bicycle network shown on the Bicycle network overlay map in compliance with the following: a. for long term infrastructure for the bicycle network in the Long term infrastructure plans;	**Complies with A02** The subject site fronts Waterworks Road, which classed as a secondary cycle route.

b. the existing and planned infrastructure for the bicycle network in the Local government infrastructure plan; c. the provision of long term, existing and planned infrastructure for the bicycle network which: i. is required to service the development or 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. 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.	b. the existing and planned infrastructure for the bicycle network in the Local government infrastructure plan; c. the standards for the bicycle network in the Infrastructure design planning scheme policy.	
PO3 Development provides for the payment of extra trunk infrastructure costs for the following: 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: i. trunk infrastructure that is to be provided earlier than planned in the Local government infrastructure plan; ii. long term infrastructure for the bicycle network which is made necessary by development that is not assumed future urban development; iii. other infrastructure for the bicycle network associated with development that is not assumed future urban	**AO3** No acceptable outcome is prescribed.	**Not Applicable with P03** The subject site fronts Waterworks Road, which classed as a secondary cycle route.

development which is made necessary by the development. 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. Editor's note—See section 130 Imposing Development conditions (Conditions for extra trunk infrastructure costs) of the Planning Act 2016.		
Additional performance outcomes and acceptable outcomes for a site adjacent to or traversed by the Riverwalk–Typology 1 sub-category or Riverwalk–Typology 2 sub-category		
PO4 Development contributes to the creation of publicly accessible riverfront by providing a shared, continuous riverside pathway.	**AO4** Development fronting the river provides a publicly accessible riverfront pathway via a linear land dedication of 10m width as measured from the riverfront ambulatory boundary.	**Not Applicable with A04** The subject site fronts Waterworks Road, which classed as a secondary cycle route.
PO5 Development provides a high-quality, vibrant and safe riverside path with a strong pedestrian and cyclist amenity focus.	**AO5.1** Development designs and constructs Riverwalk for the full river frontage of its site, including tree planting, furniture, lighting, balustrading and pavement treatments in compliance with the off-road pathways and public riverside facilities standards in the Infrastructure design planning scheme policy. **AO5.2** Development ensures that new Riverwalk sections are designed and constructed to connect to existing adjoining sections of the Riverwalk.	**Not Applicable with A05.1 & A05.2 & A05.3** The subject site fronts Waterworks Road, which classed as a secondary cycle route.
	AO5.3 Development provides connections between the Riverwalk and adjoining riverfront premises, street networks, pathways, public infrastructure and other destinations in compliance with the public riverside facilities standards in the Infrastructure design planning scheme policy.	

PO6 Development ensures that Riverwalk contributes to the sense of place and cultural significance of the river with inclusion of public art to highlight: a. activity nodes; b. entrances and gateways; c. landmarks and features of interest; d. visual connectors to the river.	**AO6** Development includes public art along the Riverwalk where specified in a neighbourhood plan, in compliance with the public art standards in the Infrastructure design planning scheme policy.	**Not Applicable with A06** The subject site fronts Waterworks Road, which classed as a secondary cycle route.
PO7 Development protects existing native riparian vegetation and enhances the Brisbane River's landscape values.	**AO7.1** Development retains and enhances existing riparian vegetation through the design and construction of Riverwalk. **AO7.2** Riverwalk and adjoining development is planted with large subtropical riparian tree species that are complementary in scale and height to the adjacent built form. Note—For suitable plant species, refer to the Planting species planning scheme policy.	**Not Applicable with A07.1 & A07.2** The subject site fronts Waterworks Road, which classed as a secondary cycle route.
PO8 Development adjoining Riverwalk: a. contributes to the creation of a vibrant and active waterfront; b. provides direct access to Riverwalk; c. allows for visual interaction and surveillance of the public domain.	**AO8.1** Development adjoining land in the Riverwalk — Typology 1 sub-category incorporates active frontages at the ground storey for a minimum of 90% of the riverside frontage. **AO8.2** Development adjoining land in the Riverwalk — Typology 2 sub-category orientates living areas, balconies and private open space at the ground storey to the Riverwalk frontage for passive surveillance.	**Not Applicable with A08.1 & A08.2** The subject site fronts Waterworks Road, which classed as a secondary cycle route.
PO9 Development ensures that the interface between the Riverwalk and the Brisbane River:	**AO9.1** Development ensures that the design and construction of any structure over water is in compliance with the	**Not Applicable with A09.1 & A09.2** The subject site fronts Waterworks Road, which classed as a secondary cycle route.

a. supports a safe and publicly accessible waterfront; b. enhances the views of the river, both near and far.	standards in the Infrastructure design planning scheme policy. **AO9.2** Development ensures that any revetment wall: a. minimises impact on the riparian edge; b. is constructed in compliance with the standards in Infrastructure design planning scheme policy.	

8.2.18 Road hierarchy overlay code

8.2.18.1 Application

1. This code applies to assessing development on of land adjoining or having frontage or access to roads identified in the Road hierarchy overlay, if:
    a. accepted development subject to compliance with identified requirements, where acceptable outcomes of this code are identified requirements in a table of assessment for an overlay (section 5.10); or
    b. assessable development, where this code is an applicable code identified in the assessment benchmarks column of a table of assessment for an overlay (section 5.10); or
    c. impact assessable development.
2. The Road hierarchy overlay map identifies the following sub-categories:
    a. Motorway sub-category;
    b. Arterial road sub-category;
    c. Suburban road sub-category;
    d. District road sub-category;
    e. Neighbourhood road sub-category;
    f. Local road sub-category;
    g. Future motorway sub-category;
    h. Future arterial road sub-category;
    i. Future suburban road sub-category;
    j. Future district road sub-category;
    k. Primary freight route sub-category;
    l. Primary freight access sub-category.
3. When using this code, reference should be made to section 1.5 and section 5.3.3.

Note—The following purpose, overall outcomes, performance outcomes and acceptable outcomes comprise the assessment benchmarks of this code.

Note—Where this code includes performance outcomes or acceptable outcomes that relate to road types, traffic impact reports and hierarchy design and construction, guidance is provided in the Infrastructure design planning scheme policy.

Note—Laneways are a type of public road identified in the Road hierarchy overlay and are required in locations where specified in the Streetscape hierarchy overlay map.

Editor's note—The desired standard of service for the provision of trunk infrastructure is specified in the Local government infrastructure plan.

Editor's note—For a proposal to be accepted development subject to compliance with identified requirements, it must meet all the identified acceptable outcomes of this code that relate to the applicable sub-category and any other applicable code. Where it does not meet all identified acceptable outcomes, the proposal becomes assessable development and a development application is required. Where a development application is triggered, only the specific acceptable outcomes that the proposal fails to meet need to be assessed against the corresponding assessable acceptable outcomes or performance outcomes and relevant overall outcomes. Other identified acceptable outcomes that are met are not assessed as part of the development application.

8.2.18.2 Purpose

1. The purpose of the Road hierarchy overlay code is to:
    a. Implement the policy direction in the Strategic framework, in particular:
        i. Theme 4: Brisbane's highly effective transport and infrastructure and Element 4.1 — Brisbane's transport infrastructure networks;
        ii. Theme 2: Brisbane's outstanding lifestyle and Element 2.1 — Brisbane's identity.
    b. Provide for the assessment of the suitability of development in the Road hierarchy overlay.
2. The purpose of the code will be achieved through the following overall outcomes:
    a. Development contributes to the safe and efficient operation of the existing and planned road hierarchy and to the function of the road as part of Brisbane's public domain.
    b. Development accessing roads is consistent with and does not compromise the road hierarchy in its use, function, flow, or capacity by buses, pedestrians and cyclists.
    c. Development that changes the function of a road by generating traffic does so such that the new function of the road in the hierarchy is compatible with the surrounding road hierarchy and where necessary is reconstructed to meet its new design parameters.
    d. Development that provides a new road internal and connecting to the road hierarchy complements or completes the existing road hierarchy.
    e. Development does not compromise the completion of the road hierarchy.
    f. Development ensures that land uses are located to support and implement a safe and efficient road hierarchy facilitating the efficient movement of people and goods.

8.2.18.3 Performance outcomes and acceptable outcomes

Table 8.2.18.3—Performance outcomes and acceptable outcomes

Performance outcomes	Acceptable outcomes	Comments
Section A—If for accepted development subject to compliance with identified requirements (acceptable outcomes only) or assessable development for a material change of use		
PO1 Development ensures that: a. vehicle access is provided to each premises, which has no significant impact on the safety, efficiency, function, convenience of use or capacity of:	**AO1.1** Development ensures that an access driveway is provided from: a. a minor road; b. a district road or suburban road if the development has high traffic-generating	**Complies with A01.1** The subject site only has access to Waterworks Road. Waterworks Road is classed as a Suburban Road. The existing access driveway is not proposed to change.

i. the road hierarchy shown on the Road hierarchy overlay map; ii. public transport operations; iii. pedestrian and cyclist movement; b. the safety and efficiency of primary freight routes are protected and enhanced, supporting major industry areas; c. site access driveways in the road area accommodate all turns only when such arrangements are safe and can be demonstrated to not inhibit transport system operation.	potential. **AO1.2** Development ensures that an access driveway is not provided to or from a primary freight route identified on the Road hierarchy overlay map.	**Complies with A01.2**
	AO1.3 Development ensures that a use other than a use with high traffic-generating potential gains all vehicular access, other than for service vehicles, via the lowest order road in the road hierarchy to which the site has frontage.	**Complies with A01.3**
	AO1.4 Development ensures that a turn to and from a major road is restricted to a left turn only.	**Not Applicable with A01.4**
	AO1.5 Development ensures that vehicle access is provided to an abutting site that only has frontage to an arterial road, to facilitate access to the abutting site via an alternative street.	**Not Applicable with A01.5**
Section B—If for assessable development for a material change of use		
PO2 Development does not compromise the safety, efficiency and function of the road hierarchy and addresses all the impacts to the road network.	**AO2.1** Development ensures that the traffic generated by the development is consistent with the road hierarchy classification, function and expected traffic flows for the area.	**Complies with A02.1**
	AO2.2 Development mitigates an impact on the road hierarchy if the development: a. is for a major development; or b. involves an access driveway to a major road; or c. involves an access driveway within 100m of a	**Not Applicable with A02.2**

	signalised intersection. Note—This can be demonstrated in a transport impact assessment report prepared and certified by a Registered Professional Engineer Queensland in accordance with the Transport, access, parking and servicing planning scheme policy.	
Section C—If for assessable development for a material change of use or reconfiguring of a lot		
PO3 Development makes provision for the extension, expansion and widening of the existing and future road network where required.	**AO3** No acceptable outcome is prescribed.	**Not Applicable with P03**
PO3A Development provides for the payment of extra trunk infrastructure costs for the following: 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: i. trunk infrastructure that is to be provided earlier than planned in the Local government infrastructure plan; ii. long term infrastructure for the road network which is made necessary by development that is not assumed future urban development; iii. other infrastructure for the road network associated with development that is not assumed future urban development which is made necessary by the development. 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	**AO3A** No acceptable outcome is prescribed.	**Not Applicable with P03A**

with the Charges Resolution. Editor's note—See section 130 Imposing Development conditions (Conditions for extra trunk infrastructure costs) of the *Planning Act 2016*.		
If on a site in or adjacent to the District road sub-category which has a width less than 20 metres, or to the Suburban road sub-category or to the Arterial road sub-category		
PO4 Development protects a corridor for the road network shown on the Road hierarchy overlay map to ensure the following are not compromised: a. the long term infrastructure for the road network in the Long term infrastructure plans; b. the existing and planned infrastructure for the road network in the Local government infrastructure plan; c. the provision of long term, existing and planned infrastructure for the road network which: i. is required to service the development or 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. 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.	**AO4** Development protects a corridor for the road network shown on the Road hierarchy overlay map in compliance with the following: a. for the long term infrastructure for the road network, the Long term infrastructure plans; b. for existing and planned infrastructure for the road network, the Local government infrastructure plan; c. the standards for the road network in the Infrastructure design planning scheme policy.	**Complies with A04** Waterworks Road is classified as a Suburban Road. No additional building works are proposed.
Section D—If reconfiguring a lot or involving an extension or change to the road hierarchy		
PO5 Development ensures that a new road connection provides: a. safe, efficient and convenient connectivity of the new road to the major road network;	**AO5** Development provides access to the road network in a manner that preserves the function of the road hierarchy and addresses all impacts to the road network.	**Not Applicable with A05**

b. a minimum number of intersections to the major road network.		
PO6 Development ensures that an extension of or change to the road network: a. provides internal connectivity and connects to the external road network; b. provides pedestrian connectivity to facilitate ease of access by the shortest reasonable route to neighbourhood facilities, parks, schools, shops, bus routes, transport facilities or open space systems; c. provides cycle connectivity to facilitate ease of access by the shortest reasonable distance to the next higher order cycle route; d. includes the provision of bus routes that provide ease of access to bus customers; e. minimises vehicle volumes and speed in residential streets while providing connectivity to major roads in a reasonable travel time; f. provides a street layout that minimises travel time and traffic volumes on minor roads; g. provides high permeability for pedestrian and cycle networks; h. provides safe accessibility to lots by having more than one street providing access to the area; i. preserves the function of the road hierarchy and addresses all impacts to the road network.	**AO6.1** Development ensures that a new or upgraded road is designed and constructed in accordance with its road hierarchy classification as shown on the Road hierarchy overlay and the standards in the Infrastructure design planning scheme policy. **AO6.2** Development preserves the function of the road hierarchy and addresses all impacts on the road network. Note—This can be demonstrated in a transport impact assessment report prepared and certified by a Registered Professional Engineer Queensland in accordance with the Transport, access, parking and servicing planning scheme policy and the Infrastructure design planning scheme policy (Traffic impact assessment and definitions section).	**Not Applicable with A06.1 & A06.2**
PO7 Development ensures that premises and vehicle access are located and controlled so as to have no significant impact on the safety, efficiency, function, convenience of use or capacity of the major road network and preserves the function of the road hierarchy.	**AO7** Development ensures that residential lots are laid out to ensure a future use does not directly ingress from or egress to a major road.	**Not Applicable with A07**

PO8 Development ensures that an intersection is designed and constructed in accordance with its hierarchical classification as shown on the Road hierarchy overlay map.	**AO8** Development ensures that an intersection is designed to the standard of the highest order road at the point of intersection in accordance with the road design standard in the Infrastructure design planning scheme policy.	**Not Applicable with A08**

8.2.20 Streetscape hierarchy overlay code

8.2.20.1 Application

1. This code applies to assessing development of land adjoining or having frontage to (i.e. where the overlay sub-category is located in adjoining road reserve or public land), or traversed by or containing, any of the overlay sub-categories identified in the Streetscape hierarchy overlay map, if:
    a. accepted development subject to compliance with identified requirements, where acceptable outcomes of this code are identified requirements in a table of assessment for an overlay (section 5.10); or
    b. assessable development where this code is an applicable code identified in the assessment benchmarks column of a table of assessment for an overlay (section 5.10); or
    c. impact assessable development.
2. The Streetscape hierarchy overlay map identifies the following sub-categories:
    a. Subtropical boulevard — in centre verge width 6m sub-category;
    b. Subtropical boulevard — in centre verge width 5m sub-category;
    c. Subtropical boulevard — in centre verge width 3.75/4.25m sub-category;
    d. Subtropical boulevard — out of centre verge width 6m sub-category;
    e. Subtropical boulevard — out of centre verge width 5m sub-category;
    f. Subtropical boulevard — out of centre verge width 3.75/4.25m sub-category;
    g. Centre street major sub-category;
    h. Centre street minor sub-category;
    i. Neighbourhood street major sub-category;
    j. Neighbourhood street minor sub-category;
    k. Industrial street sub-category;
    l. Pathway link sub-category;
    m. Corner land dedication sub-category;
    n. Locality street sub-category;
    o. Laneway sub-category;
    p. Wildlife movement solution sub-category.
3. When using this code, reference should be made to section 1.5 and section 5.3.3.

Note—The following purpose, overall outcomes, performance outcomes and acceptable outcomes comprise the assessment benchmarks of this code.

Note—Where this code includes performance outcomes or acceptable outcomes that relate to:
- design of public realm, guidance is provided in the Infrastructure design planning scheme policy.
- crime prevention through environmental design, guidance is provided in the Crime prevention through environmental design planning scheme policy.

Editor's note—The desired standard of service for the provision of trunk infrastructure is specified in the Local government infrastructure plan.

Editor's note—For a proposal to be accepted development subject to compliance with identified requirements, it must meet all the identified acceptable outcomes of this code that relate to the applicable sub-category and any other applicable code. Where it does not meet all identified acceptable outcomes, the proposal becomes assessable development and a development application is required. Where a development application is triggered, only the specific acceptable outcomes that the proposal fails to meet need to be assessed against the corresponding assessable acceptable outcomes or performance outcomes and relevant overall outcomes. Other identified acceptable outcomes that are met are not assessed as part of the development application.

8.2.20.2 Purpose

1. The purpose of the Streetscape hierarchy overlay code is to:
    a. Implement the policy direction in the Strategic framework, in particular:
        i. Theme 2: Brisbane's outstanding lifestyle and Element 2.1 — Brisbane's identity;
        ii. Theme 4: Brisbane's highly effective transport and infrastructure and Element 4.1 — Brisbane's transport infrastructure networks.
    b. Provide for the assessment of the suitability of development in the Streetscape hierarchy overlay.
2. The purpose of the code will be achieved through the following overall outcomes:
    a. Development ensures that verges are wide enough to support high levels of pedestrian movement and have sufficient space to accommodate large subtropical street tree plantings.
    b. Development ensures that existing street trees are retained and new subtropical tree species in the verge make a significant contribution to shade tree cover and carbon sequestration.
    c. Development ensures that subtropical planting reinforces city gateways, thresholds and nodes.
    d. Development ensures that verges comprise consistent and high-quality treatments with improved footpaths and increased shade and shelter appropriate to their anticipated pedestrian use and where the use will change from the current zone.
    e. Development protects and contributes to safe, direct and convenient access for pedestrians and cyclists of all ages and abilities throughout sites and throughout neighbourhoods.
    f. Development maintains options for the safe movement of wildlife along a corridor.

8.2.20.3 Performance outcomes and acceptable outcomes

Table 8.2.20.3.A—Performance outcomes and acceptable outcomes

Performance outcomes	Acceptable outcomes	Comments
Section A—If for accepted development subject to compliance with identified requirements (acceptable outcomes only) or assessable development		
PO1 Development must improve pedestrian movement and amenity by providing for verges to a width that is	**AO1** Development ensures that a verge is provided via a linear land dedication to create a minimum verge width as	**N/A**

appropriate to accommodate large subtropical street tree planting and high levels of pedestrian movement.	specified in Table 8.2.20.3.B and the streetscape locality advice and road corridor design standards in the Infrastructure design planning scheme policy.	
PO2 Development must construct verges including street tree planting, street furniture, paving, lighting and verge and kerb treatments that establish a high-quality subtropical streetscape with a strong pedestrian amenity focus.	**AO2.1** Development ensures that existing street trees are retained and protected. **AO2.2** Development ensures that street tree planting, street furniture, paving, lighting and verge and kerb treatment are designed and constructed in compliance with the specifications of the streetscape locality advice and road corridor design standards in the Infrastructure design planning scheme policy.	**N/A**
Section B—If for assessable development		
PO3 Development ensures that the design of a corner land dedication identified on the Streetscape hierarchy overlay map: a. facilitates a high level of pedestrian movement and activity; b. enforces the sense of arrival to individual precincts and major connections; c. provides a landmark definition through its materials and landscaping including deep-planting feature trees, seating and public art that integrates with the public realm.	**AO3.1** Development ensures that a corner land dedication is provided: a. where identified in the Streetscape hierarchy overlay map; b. in compliance with a neighbourhood plan and the road corridor design and streetscape locality advice standards in the Infrastructure design planning scheme policy. **AO3.2** Development ensures that landscaping including a large feature tree and seating is provided in a corner land dedication area in compliance with the specifications and standards in the road corridor design and streetscape locality advice standards in the Infrastructure design planning scheme policy. **AO3.3** Development ensures that public art is provided in a	**N/A** **N/A** **N/A**

	corner land dedication area where identified in a neighbourhood plan and in compliance with the specifications and standards in the streetscape locality advice and public art standards in the Infrastructure design planning scheme policy.	
If in or on a site adjoining the Wildlife movement solution sub-category		
PO4 Development incorporates effective wildlife movement infrastructure that enables safe wildlife movement across and past transport infrastructure.	**AO4** Development ensures that infrastructure solutions are: a. provided at the locations identified on the Streetscape hierarchy overlay map; b. designed to: i. account for daily and seasonal movement needs of native wildlife, such as foraging, breeding, predator and natural disaster avoidance; ii. achieve physical separation of native wildlife and the road; iii. adopt designs and treatments known to be used by native species, including significant fauna species listed in the Biodiversity area overlay code. Note—Refer to the Infrastructure design planning scheme policy for further guidance of the design of wildlife movement solutions.	**N/A**

Table 8.2.20.3.B—Required verge widths for the streetscape hierarchy

Streetscape type	Required width
Any Streetscape type adjoining the frontage of a lot which forms part of Council's public park network	In compliance with the Infrastructure design planning scheme policy
Subtropical boulevard — in centre verge width 6m	6m

Subtropical boulevard — in centre verge width 5m	5m
Subtropical boulevard — in centre verge width 3.75/4.25m	3.75m or 4.25m for new roads
Subtropical boulevard — out of centre verge width 6m	6m
Subtropical boulevard — out of centre verge width 5m	5m
Subtropical boulevard — out of centre verge width 3.75/4.25m	3.75m or 4.25m for new roads
Centre street major	5m
Centre street minor	3.75m or 4.25m for new roads
Neighbourhood street major	3.75m or 4.25m for new roads
Neighbourhood street minor	3.75m or 4.25m for new roads
Industrial street	3.75m or 4.25m for new roads
Pathway link	In compliance with Chapter 4 Pathway design outside the road corridor of the Infrastructure design planning scheme policy
Corner land dedication	Range $25m^2$ to $81m^2$
Locality street	In compliance with the Infrastructure design planning scheme policy
Laneway	In compliance with the Infrastructure design planning scheme policy

9.4.3 Filling and excavation code

9.4.3.1 Application

1. This code applies to assessing:
    a. accepted development subject to compliance with identified requirements, where acceptable outcomes of this code are identified requirements in a table of assessment for an overlay (section 5.10); or
    b. operational work for filling or excavation which is assessable development if this code is an applicable code identified in the assessment benchmarks column of a table of assessment for operational work (section 5.8) or an overlay (section 5.10); or
    c. a material change of use or reconfiguring a lot if:
        i. assessable development where this code is identified as a prescribed secondary code in the assessment benchmarks column of a table of assessment for material change of use (section 5.5) or reconfiguring a lot (section 5.6); or
        ii. impact assessable development, to the extent relevant.

Note—The following purpose, overall outcomes, performance outcomes and acceptable outcomes comprise the assessment benchmarks of this code.

Note—This code does not apply to building work as defined in the Act.

Note—A development application involving a rock anchor within an adjoining site is submitted with proof of consent from an adjoining land and building owner.

Editor's note—Guidance on managing the spread of invasive species in filling or excavation activities is provided in Minimising Pest Spread Advisory Guidelines prepared for the Petroleum industry.

Editor's note—Where filling or excavation is conducted on land previously occupied by a notifiable activity or on land listed on the Environmental Management Register or the Contaminated Land Register, the relevant Queensland Government department should be contacted for advice and guidelines.

2. When using this code, reference should be made to section 1.5 and section 5.3.3.

Note—Where this code includes performance outcomes or acceptable outcomes that relate to:

- air quality assessment, guidance is provided in the Air quality planning scheme policy;
- ecological assessment, koala habitat or development design, guidance is provided in the Biodiversity areas planning scheme policy;
- retaining wall construction, guidance is provided in the Infrastructure design planning scheme policy;
- landscape design, guidance is provided in the Landscape design planning scheme policy;
- noise and dust impacts during construction and/or demolition, guidance is provided in the Management plans planning scheme policy;
- noise impact assessment, guidance is provided in the Noise impact assessment planning scheme policy;
- the selection of planting species, guidance is provided in the Planting species planning scheme policy;
- significant vegetation, guidance is provided in the Vegetation planning scheme policy.

Editor's note—For a proposal to be accepted development, subject to compliance with identified requirements, it must meet all the identified acceptable outcomes of this code and any other applicable code. Where it does not meet all identified acceptable outcomes, the proposal becomes assessable development and a development application is required. Where a development application is triggered, only the specific acceptable outcome that the proposal fails to meet needs to be assessed against the corresponding acceptable outcome or performance outcome and relevant overall outcomes. Other identified acceptable outcomes that are met are not assessed as part of the development application.

9.4.3.2 Purpose

1. The purpose of the Filling and excavation code is to assess the suitability of development for filling or excavation.
2. The purpose of the code will be achieved through the following overall outcomes:
    a. filling or excavation does not adversely affect the visual character and amenity of the site or the surrounding area and provides access for maintenance to any structure as a result of filling or excavation.
    b. filling or excavation does not adversely impact significant vegetation, water quality or drainage of upstream, downstream and adjoining land.
    c. filling or excavation effectively manages the impacts associated with the activity.
    d. filling or excavation and any retaining structure is designed and constructed to be fit for purpose and to protect services and utilities.

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
PO1 Development for filling or excavation minimises visual impacts from retaining walls and earthworks.	**AO1** Development ensures that the total height of any cut and fill, whether or not retained, does not exceed: a. 2.5m in a zone in the Industry zones category; b. 1m in all other zones, or if adjoining a sensitive zone.	**Complies with A01**
PO2 Development of a retaining wall proposed as a result of filling or excavation: a. is designed and constructed to be fit for purpose; b. does not impact adversely on significant vegetation; c. is capable of easy maintenance.	**AO2.1** Development of a retaining structure, including footings, surface drainage and subsoil drainage: a. is wholly contained within the site; b. if the total height to be retained is greater than, then: i. the retaining wall at the property boundary is no greater than 1m above the ground level;	**Complies with A02.1**

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.	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.	
	AO2.2 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.	**Not Applicable with A02.2**
	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.	**Not Applicable with A02.3**
	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.	**Complies with A02.4**
PO3 Development ensures that a rock anchor is designed and constructed to be fit for purpose.	**AO3** Development ensures that a rock anchor: a. is constructed in accordance with the standards in the Infrastructure design planning scheme policy;	**Not Applicable with A03**

	b. where it extends beyond the property boundary, is supported by a letter of consent from the adjoining land and building owners.	
PO4 Development protects all services and public utilities.	**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.	**Complies with A04**
PO5 Development provides surface and sub-surface drainage to prevent water seepage, concentration of run-off or ponding of stormwater on adjacent land.	**AO5** 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.	**Complies with A05**
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.	**AO6** Filling or excavation does not involve the construction of open drainage.	**Complies with A06**
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.	**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. **AO7.2**	**Complies with A07.1 & A07.2**

	Development provides erosion and sediment control standards that are in accordance with the stormwater drainage section of the Infrastructure design planning scheme policy.	
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. 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.	**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. **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.	**Complies with A08.1 and A08.2**
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.	**AO9** Development involving filling or excavation does not cause a ground-borne vibration beyond the boundary of the site.	**Complies with A09**
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.	**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.	**Complies with A010**
PO11 Development for filling or excavation protects the environment and community health and wellbeing from	**AO11** Development does not involve:	**Complies with A011**

exposure to contaminated land and contaminated material.	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.	
PO12 Development provides for: a. landscaping for water conservation purposes; b. water sensitive urban design measures which are employed within the landscape design to maximise stormwater use; c. drainage and stormwater measures to reduce any adverse impacts on the landscape; d. stormwater harvesting to be maximised and any adverse impacts of stormwater minimised; e. reticulated irrigation to all artificial growing environments. Note—The Landscape design planning scheme policy provides guidance on information to be provided to demonstrate compliance with the performance outcome and acceptable outcomes.	**AO12.1** Development provides drainage for artificial growing environments which is connected to the stormwater drain. **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. **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. **AO12.4** Development provides a reticulated irrigation system to all landscaping areas in accordance with the Landscape design planning scheme policy.	**Complies with A012.1 to A012.4.**
PO13 Development ensures cutting and filling for the development of canals or artificial waterways avoids adverse impacts on coastal resources and processes.	**AO13** Development does not involve the creation of canals or artificial waterways.	**Complies with A013** Development does not involve the creation of canals or artificial waterways.

Table 9.4.3.3.B— Recommended intermittent vibration levels for cosmetic damage

Type of building	**Peak particle velocity (mm/s)**		
Reinforced or framed structures; industrial and heavy commercial buildings	50mm/s at 4Hz and above		
Unreinforced or light-framed structures; residential or light-commercial type buildings	Below 4Hz	4Hz to 15Hz	15Hz and above
	0.6mm/s	15mm/s at 4Hz increasing to 20mm/s at 15Hz	20mm/s at 15Hz increasing to 50mm/s at 40Hz and above

Table 9.4.3.3.C— Recommended blasting vibration levels for human comfort

Type of building	**Type of blasting operations**	**Peak component particle velocity (mm/s)**
Residences, educational establishments and places of worship	Operation blasting longer than 12 months or more than 20 blasts	5mm/s for 95% blasts per year 10mm/s maximum unless agreement is reached with the occupier that a higher limit may apply
Residences, educational establishments and places of worship	Operations lasting for less than 12 months or less than 20 blasts	10mm/s maximum unless agreement is reached with the occupier that a higher limit may apply
Industry or commercial premises	All blasting	25 mm/s maximum unless agreement is reached with the occupier that a higher limit may apply. For sites containing equipment sensitive to vibration, the vibration should be kept below manufacturer's specifications or levels that do not adversely affect the equipment operation.

Table 9.4.3.3.D— Recommended levels for continuous and impulsive vibration acceleration (m/s^2) 1—80Hz for human comfort

Location	**Assessment period(1)**	**Preferred values(3)**		**Maximum values(3)**	
Continuous vibration		z-axis	x and y axes	z-axis	x and y axes
Critical areas(2)	Day or night	0.005 m/s^2	0.0036 m/s^2	0.01 m/s^2	0.0072 m/s^2
Residences	Day	0.01 m/s^2	0.0071 m/s^2	0.02 m/s^2	0.014 m/s^2
-	Night	0.007 m/s^2	0.005 m/s^2	0.014 m/s^2	0.01 m/s^2
Offices, educational establishments and places of worship	Day or night	0.02 m/s^2	0.014 m/s^2	0.04 m/s^2	0.028 m/s^2
Workshops	Day or night	0.04 m/s^2	0.029 m/s^2	0.08 m/s^2	0.058 m/s^2
Impulsive vibration					
Critical areas	Day or night	0.005 m/s^2	0.0036 m/s^2	0.01 m/s^2	0.0072 m/s^2
Residences	Day	0.3 m/s^2	0.21 m/s^2	0.6 m/s^2	0.42 m/s^2
-	Night	0.1 m/s^2	0.071 m/s^2	0.2 m/s^2	0.14 m/s^2
Offices, educational establishments and places of worship	Day or night	0.64 m/s^2	0.46 m/s^2	1.28 m/s^2	0.92 m/s^2
Workshops	Day or night	0.64 m/s^2	0.46 m/s^2	1.28 m/s^2	0.92 m/s^2

Note—

(1) Day is 7am to 10pm and night is 10pm to 7am.

(2) Examples include hospital operating theatres and precision laboratories where sensitive operations are occurring.

(3) Situations exist where vibration above the preferred values can be acceptable, particularly for temporary or short-term events. Further guidance is given in the Noise impact assessment planning scheme policy.

Table 9.4.3.3.E— Recommended vibration dose values for intermittent vibration ($m/s^{1.75}$) for human comfort

Location	Daytime[1]		Night time[1]	
	Preferred value	Maximum value	Preferred value[3]	Maximum value[3]
Critical areas[2]	0.1 $m/s^{1.75}$	0.2 $m/s^{1.75}$	0.1 $m/s^{1.75}$	0.2 $m/s^{1.75}$
Residences	0.2 $m/s^{1.75}$	0.4 $m/s^{1.75}$	0.13 $m/s^{1.75}$	0.26 $m/s^{1.75}$
Offices, educational establishments and places of worship	0.4 $m/s^{1.75}$	0.8 $m/s^{1.75}$	0.4 $m/s^{1.75}$	0.8 $m/s^{1.75}$
Workshops	0.8 $m/s^{1.75}$	1.6 $m/s^{1.75}$	0.8 $m/s^{1.75}$	1.6 $m/s^{1.75}$

Note—

[1] Day is 7am to 10pm and night is 10pm to 7am.

[2] Examples include hospital operating theatres and precision laboratories where sensitive operations are occurring.

[3] Situations exist where vibration above the preferred values can be acceptable, particularly for temporary or short-term events. Further guidance is given in the Noise impact assessment planning scheme policy.

9.4.4 Infrastructure design code

9.4.4.1 Application

1. This code applies to assessing a material change of use, reconfiguring a lot or building work if:
    a. assessable development where this code is identified as a prescribed secondary code in the assessment benchmarks column of a table of assessment for a material change of use (section 5.5), reconfiguring a lot (section 5.6),operational work (section 5.8), or an overlay (section 5.10); or
    b. impact assessable development, to the extent relevant.
2. When using this code, reference should be made to section 1.5 and section 5.3.3.

Note—The following purpose, overall outcomes, performance outcomes and acceptable outcomes comprise the assessment benchmarks of this code.

Note—Where this code includes performance outcomes or acceptable outcomes that relate to:

- ecological assessment, koala habitat or development design, guidance is provided in the Biodiversity areas planning scheme policy;
- infrastructure design and construction works, guidance is provided in the Infrastructure design planning scheme policy;
- noise and dust impacts during construction and/or demolition, guidance is provided in the Management plans planning scheme policy;
- noise impact assessment, guidance is provided in the Noise impact assessment planning scheme policy;
- refuse and recycling, guidance is provided in the Refuse planning scheme policy;
- parking or servicing management during construction, guidance is provided in the Transport, access, parking and servicing planning scheme policy.

9.4.4.2 Purpose

1. The purpose of the Infrastructure design code is to assess the suitability of infrastructure for development.
2. The purpose of the code will be achieved through the following overall outcomes:
    a. Development is provided with a safe, connected and efficient transport network for all modes that has a minimal whole-of-life cost.
    b. Development provides for public utilities and services to the standards acceptable to the Council and the reasonable expectations of service providers.
    c. Development involving infrastructure which is intended to become a Council asset is safe, aesthetically pleasing, functional, fit for purpose, durable, minimises environmental impacts and has minimal whole-of-life cost.
    d. Development provides for a public space to be safe and inviting, allowing high levels of pedestrian activity.
    e. Development ensures that the community and environment are not unreasonably disrupted or impacted by construction or demolition for the development.
    f. Development involving infrastructure is designed with consideration of, and to integrate with, other related and interfacing infrastructure components.
    g. Development accessed by common private title is provided with appropriate fire hydrant infrastructure and has unimpeded access for refuse vehicles and for emergency service vehicles to protect people, property and the environment.
    h. Development ensures major electricity infrastructure and bulk water supply infrastructure identified on the State Planning Policy Interactive Mapping System is not compromised.

i. Development for major electricity infrastructure and bulk water supply infrastructure identified on the State Planning Policy Interactive Mapping System avoids or otherwise minimises adverse impacts on surrounding land uses.

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
PO1 Development provides roads, pavement, edging and landscaping which: 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. 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.	**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.	**Complies with A01** Driveway access will be retained from Waterworks Road.
PO2 Development provides road pavement surfaces which: a. are well designed and constructed; b. durable enough to carry the wheel loads of the intended types and numbers of travelling and parked vehicles;	**AO2** Development provides road pavement surfaces which are designed and constructed in compliance with the road corridor design standards in the Infrastructure design planning scheme policy.	**Not Applicable with A02** No new road pavement surfaces are required.

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.		
PO3 Development provides a pavement edge which is designed and constructed to: 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.	**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.	**Not Applicable with A03** No new road pavement surfaces are required.
PO4 Development provides verges which are designed and constructed to: 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.	**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.	**Not Applicable with A04** No new road pavement surfaces are required.
PO5 Development provides a lane or laneway identified on the Streetscape hierarchy overlay map or in a neighbourhood plan which: 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.	**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.	**Not Applicable with A05** No new road pavement surfaces are required.
PO6	**AO6**	**Complies with A06** No new road pavement surfaces are required. The

Development of an existing premises provides at the frontage to the site, if not already provided, the following infrastructure to an appropriate urban standard: 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.	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: 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.	existing access crossover will be retained for the existing dwelling house and the proposed 2nd dwelling (converted house extension).
PO7 Development provides both cycle and walking routes which: 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; f. provide for a high level of aesthetics and amenity, improved liveability and future growth;	**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.	**Not Applicable with A07** No new road pavement surfaces, cycle or walking routes are required, for the proposed Dual Occupancy.

g. are a low-maintenance asset with a minimal whole-of-life cost; h. minimise the clearing of significant native vegetation. 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.		
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.	**AO8.1** Development provides refuse and recycling collection and storage facilities in accordance with the Refuse planning scheme policy. **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.	**Complies with A08.1 & A08.2**
PO9 Development ensures that: a. land used for an urban purpose is serviced adequately with regard to water supply and waste disposal; b. the water supply meets the stated standard of service for the intended use and fire-fighting purposes.	**AO9.1** Development ensures that the reticulated water and sewerage distribution system for all services is in place before the first use is commenced. **AO9.2** Development provides the lot with reticulated water supply and sewerage to a standard acceptable to the distributor—retailer.	**Complies with A09.1 and A09.2** The existing dwelling house is connected to Urban Utilities services. The proposed second dwelling will also be connected to the existing services via a water approval from Urban Utilities.
PO10 Development provides public utilities and street lighting which are the best current or alternative technology and facilitate accessibility, easy maintenance, minimal whole-of-life costs, and minimal adverse environmental impacts.	**AO10.1** Development provides public utilities and street lighting which are located and aligned to: a. avoid significant native vegetation and areas identified within the Biodiversity areas overlay map; b. minimise earthworks;	**Complies with A010.1, A010.2 & A010.3** The proposed development will provide public utilities and street lighting, which will be designed and constructed in compliance with the public utilities standards in the Infrastructure design planning scheme policy.

	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. Note—Guidance on the restoration of habitat is included in the Biodiversity areas planning scheme policy. **AO10.2** Development provides compatible public utility services and street-lighting services which are co-located in common trenching for underground services.	
	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.	
PO11 Development ensures that land used for urban purposes is serviced adequately with telecommunications and energy supply.	**AO11** Development provides land with the following services to the standards of the approved supplier: a. electricity; b. telecommunications services; c. gas service where practicable.	**Complies with A011** if required, the proposed development will provide land with the following services, to the standards of the approved supplier.
PO12 Development ensures that major public projects promote the provision of affordable, high-bandwidth telecommunications services throughout the city.	**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: a. the additional expense is unlikely to be prohibitive; or b. further major work is unlikely or disruption would be a major concern, such as where there is a limited capacity road; or	**Complies with A012** if required, the proposed development will provide conduits.

	c. there is a clear gap in the telecommunications network; or d. there is a clear gap in the bandwidth available to the area. Editor's note—An accurate, digital 'as built' three-dimensional location plan is to be supplied for all infrastructure provided in a road.	
PO13 Development provides public art identified in a neighbourhood plan or park concept plan which: a. is provided commensurate with the status and scale of the proposed development; b. is sited and designed: i. as an integrated part of the project design; ii. as conceptually relevant to the context of the location; iii. to reflect and respond to the cultural values of the community; iv. to promote local character in a planned and informed manner.	**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.	**Not Applicable with A013**
PO14 Development provides signage of buildings and spaces which promote legibility to help users find their way.	**AO14** Development provides public signage: a. at public transport interchanges and stops, key destinations, public spaces, pedestrian linkages and at entries to centre developments; 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. Editor's note—Signage is to be in accordance with Local Law Number 1 (Control of Advertisements Local Law).	**Not Applicable with A014**
PO15	**AO15**	**Not Applicable with A015** The proposal does not include community facilities.

Development that provides community facilities which form part of the development is functional, safe, low maintenance, and fit for purpose.	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.	
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.	**AO16** Development that provides public toilets is designed and constructed in compliance with the public toilets standards in the Infrastructure design planning scheme policy.	**Not Applicable with A016** The proposed development will not provide public toilets.
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.	**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.	**Not Applicable with A017**
PO18	**AO18**	**Not Applicable with A018**

Development provides culverts which are designed and constructed using proven methods, materials and technology to provide for: 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. 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.	Development that provides culverts is designed and constructed in compliance with the structures standards in the Infrastructure design planning scheme policy.	
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: 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. 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.	**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.	**Not Applicable with A019**
If for development with a gross floor area greater than 1,000m^2		
PO20	**AO20**	**Not Applicable with A020**

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.	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.	The proposed development does not have a gross floor area greater than 1,000m^2
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.	**AO21.1** Development ensures that demolition and construction: a. only occur between 6:30am and 6:30pm Monday to Saturday, excluding public holidays; b. do not occur over periods greater than 6 months. **AO21.2** Development including construction and demolition does not release dust emissions beyond the boundary of the site. **AO21.3** Development construction and demolition does not involve asbestos-containing materials.	**Complies with A021.1 & A021.2 & A021.3** The proposed development does not have a gross floor area greater than 1,000m^2 The proposed Dual Occupancy will comply with demolition requirements and construction times as set out under A021.1, A021.2 & A021.3.
PO22 Development ensures that: a. construction and demolition do not result in damage to surrounding property as a result of vibration; b. vibration levels achieve the vibration criteria in 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. 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.	**AO22** Development ensures that the nature and scale of construction and demolition do not generate noticeable levels of vibration.	**Complies with A022.** The proposed development does not have a gross floor area greater than 1,000m^2 The proposed development will ensure that the nature and scale of construction and demolition do not generate noticeable levels of vibration.

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		
PO23 Development ensures that fire hydrants are: 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.	**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. 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. **AO23.2** Fire hydrants are identified by: 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.	**Not Applicable with A023.1 & A023.2**
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.	**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.	**Not Applicable with A024**
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		
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.	**AO25** No acceptable outcome is prescribed.	**Not Applicable with A025**

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		
PO26 Development is sited and designed to: 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.	**AO26** No acceptable outcome is prescribed.	**Not Applicable with A026**

Table 9.4.4.3.B—Recommended intermittent vibration levels for cosmetic damage

Type of building	**Peak particle velocity (mm/s)**		
Reinforced or framed structures; industrial and heavy commercial buildings	50mm/s at 4Hz and above		
Unreinforced or light-framed structures; residential or light commercial type buildings	Below 4Hz	4Hz to 15Hz	15Hz and above
	0.6mm/s	15mm/s at 4Hz increasing to 20mm/s at 15Hz	20mm/s at 15Hz increasing to 50mm/s at 40Hz and above

Table 9.4.4.3.C—Recommended blasting vibration levels for human comfort

Type of building	Type of blasting operations	Peak component particle velocity (mm/s)
Residences, educational establishments and places of worship	Operation blasting longer than 12 months or more than 20 blasts	5mm/s for 95% blasts per year 10mm/s maximum unless agreement is reached with the occupier that a higher limit may apply
Residences, educational establishments and places of worship	Operation blasting longer than 12 months or more than 20 blasts	10mm/s maximum unless agreement is reached with the occupier that a higher limit may apply
Industry or commercial premises	All blasting	25mm/s maximum unless agreement is reached with the occupier that a higher limit may apply. For sites containing equipment sensitive to vibration, the vibration should be kept below manufacturer's specifications or levels that do not adversely affect the equipment operation.

Table 9.4.4.3.D—Recommended levels for continuous and impulsive vibration acceleration (m/s^2) 1—80Hz for human comfort

Location	Assessment period(1)	Preferred values(3)		Maximum values(3)	
Continuous vibration		z-axis	x and y axes	z-axis	x and y axes
Critical areas(2)	Day or night	0.005 m/s^2	0.0036 m/s^2	0.01 m/s^2	0.0072 m/s^2
Residences	Day	0.01 m/s^2	0.0071 m/s^2	0.02 m/s^2	0.014 m/s^2
-	Night	0.007 m/s^2	0.005 m/s^2	0.014 m/s^2	0.01 m/s^2
Offices, educational establishments and places of worship	Day or night	0.02 m/s^2	0.014 m/s^2	0.04 m/s^2	0.028 m/s^2

Workshops	Day or night	0.04 m/s^2	0.029 m/s^2	0.08 m/s^2	0.058 m/s^2
Impulsive vibration					
Critical areas	Day or night	0.005 m/s^2	0.0036 m/s^2	0.01 m/s^2	0.0072 m/s^2
Residences	Day	0.3 m/s^2	0.21 m/s^2	0.6 m/s^2	0.42 m/s^2
-	Night	0.1 m/s^2	0.071 m/s^2	0.2 m/s^2	0.14 m/s^2
Offices, educational establishments and places of worship	Day or night	0.64 m/s^2	0.46 m/s^2	1.28 m/s^2	0.92 m/s^2
Workshops	Day or night	0.64 m/s^2	0.46 m/s^2	1.28 m/s^2	0.92 m/s^2

Note—

(1) Day is 7am to 10pm and night is 10pm to 7am.

(2) Examples include hospital operating theatres and precision laboratories where sensitive operations are occurring.

(3) Situations exist where vibration above the preferred values can be acceptable, particularly for temporary or short-term events. Further guidance is given in the Noise impact assessment planning scheme policy.

Table 9.4.4.3.E—Recommended vibration dose values for intermittent vibration ($m/s^{1.75}$) for human comfort

Location	**Daytime(1)**		**Night time(1)**	
	Preferred value	**Maximum value**	**Preferred value(3)**	**Maximum value(3)**
Critical areas(2)	0.1 $m/s^{1.75}$	0.2 $m/s^{1.75}$	0.1 $m/s^{1.75}$	0.2 $m/s^{1.75}$
Residences	0.2 $m/s^{1.75}$	0.4 $m/s^{1.75}$	0.13 $m/s^{1.75}$	0.26 $m/s^{1.75}$
Offices, educational establishments and places of worship	0.4 $m/s^{1.75}$	0.8 $m/s^{1.75}$	0.4 $m/s^{1.75}$	0.8 $m/s^{1.75}$
Workshops	0.8 $m/s^{1.75}$	1.6 $m/s^{1.75}$	0.8 $m/s^{1.75}$	1.6 $m/s^{1.75}$

Note—

(1) Day is 7am to 10pm and night is 10pm to 7am.

(2) Examples include hospital operating theatres and precision laboratories where sensitive operations are occurring.

(3) Situations exist where vibration above the preferred values can be acceptable, particularly for temporary or short-term events. Further guidance is given in the Noise impact assessment planning scheme policy.

9.4.5 Landscape work code

9.4.5.1 Application

1. This code applies to assessing:
    a. operational work for landscape work which is assessable development if this code is identified as a prescribed secondary code in the assessment benchmarks column of a table of assessment for operational work (section 5.8), or an overlay (section 5.10); or
    b. a material change of use or reconfiguring a lot if:
        i. assessable development where this code is identified as a prescribed secondary code in the assessment benchmarks column of a table of assessment for material change of use (section 5.5) reconfiguring a lot (section 5.6), or an overlay (section 5.10); or
        ii. impact assessable development, to the extent relevant.
2. When using this code, reference should be made to section 1.5 and section 5.3.3.

Note—The following purpose, overall outcomes, performance outcomes and acceptable outcomes comprise the assessment benchmarks of this code.

Note—Where this code includes performance outcomes or acceptable outcomes that relate to:

- crime prevention through environmental design, guidance is provided in the Crime prevention through environmental design planning scheme policy;
- maintenance, growing media, assessment with regards to climatic factors, water sensitive landscape design, irrigation and structural considerations, guidance is provided in the Landscape design planning scheme policy;
- planting species selection, guidance is provided in the Planting species planning scheme policy;
- landscaping to support the subtropical design of buildings or outdoor spaces, guidance is provided in the Subtropical building design planning scheme policy.

9.4.5.2 Purpose

1. The purpose of the Landscape work code is to assess the suitability of the landscape work aspect of development.
2. The purpose of the code will be achieved through the following overall outcomes:
    a. Landscape work retains, protects and integrates significant on-site vegetation into development design.
    b. Landscape work ensures acoustic barriers and landscaping create effective buffers to adjacent sites.
    c. Landscape work is sustainable, effective, functional and safe through appropriate maintenance, design for climate, structural considerations and growing media.
    d. Landscape work ensures planting species selection is appropriate to the planting environment, climate and development setting, long-term performance, and balances the intended form and scale of the development.
    e. Landscape work in artificial growing environments is designed, installed and maintained to ensure the intended functional and aesthetic outcomes required for the development are achieved and sustained over the long term.

9.4.5.3 Performance outcomes and acceptable outcomes

Table 9.4.5.3—Performance outcomes and acceptable outcomes

Performance outcomes	Acceptable outcomes	Comments
PO1 Development ensures that trees are protected from development impacts.	**AO1.1** Development ensures that trees identified in a landscape concept plan or development approval are retained and protected in accordance with AS 4970-2009 Protection of trees on development sites. **AO1.2** Development ensures that tree surgery and pruning is carried out in accordance with AS 4373-2007 Pruning of amenity trees for: a. vegetation damaged as a result of the development; b. vegetation requiring pruning of branches and/or roots.	**Not Applicable with A01.1** There are no existing protected trees on the site. The existing landscaping is proposed to retained. **Not applicable with A01.2**
PO2 Development provides acoustic barriers and long fences along street frontages which: a. are enhanced by appropriate planting; b. are of high visual quality; c. are designed for longevity; d. provide maintenance access and promote pedestrian permeability in appropriate circumstances.	**AO2.1** Development ensures that an acoustic barrier or fence which is required by a use code to be provided along a fence or within the site: a. is designed in compliance with the standards in the Infrastructure design planning scheme policy; b. incorporates elements of visual interest appropriate to the scale of the development for a fence or acoustic barrier over 40m long; c. incorporates a gate for maintenance access to the street frontage side of the barrier or fence if a gate can open on to a publicly accessible area within the site; d. incorporates a gate or appropriately designed opening for public pedestrian access where linking two publicly accessible areas. **AO2.2**	**Not applicable with A02.1** **Not applicable with A02.2**

	Development ensures that a planting buffer required by a use code for an acoustic barrier or fence incorporates: a. species in accordance with the Planting species planning scheme policy; b. a minimum of 2 tier planting.	
PO3 Development provides species as a screen or buffer which maintain the amenity of adjoining premises.	**AO3** Development ensures that a landscape buffer required by a use code incorporates: a. species in accordance with the Planting species planning scheme policy; b. a minimum of 2 tier planting.	**Not applicable with A03**
PO4 Development provides growing media and volumes appropriate for landscape work to ensure the long-term performance, ease of maintenance and sustainability of plantings.	**AO4.1** Development provides growing media and volumes for landscape work in accordance with the Landscape design planning scheme policy. Note—Notations of proposed growing media and soil volume calculations for the documented mature vegetation size and scale may assist in demonstrating compliance with the acceptable outcome. **AO4.2** Development provides species which are chosen to ensure the long-term performance and access requirements of the landscape.	**Complies with P04 - Not Applicable with A04.1 & A04.2** The existing buildings and landscaping are proposed to be retained.
	AO4.3 Development provides podium planting in compliance with the Infrastructure design planning scheme policy.	**Not Applicable with A04.3**
PO5 Development provides landscaping in a common area which provides for clear sightlines and good visibility to entrance and exit points.	**AO5.1** Development incorporates a plant selection along a pathway which ensures: a. a clear trunk height of minimum 1.8m at maturity; b. a shrub height of maximum 1m at maturity. Refer to the Crime prevention through environmental design planning scheme policy. **AO5.2**	**Not applicable with A05.1 & 5.2**

	Landscaping and mounding do not interfere with visibility along a pathway. Refer to the Crime prevention through environmental design planning scheme policy.	
PO6 Development provides landscaping which supports a legible environment that can be safely navigated by pedestrians and cyclists.	**AO6** Development ensures that the landscape design provides cues to distinguish between a public area, a semi-public area and a private area. Note—Cues could include changes in levels, surface or landscape treatment or fencing.	**Complies with A06**
PO7 Development provides a plant selection which achieves the functional and aesthetic outcomes to balance the form and scale of the development including: a. screening and buffering; b. street presentation; c. shading; d. amenity.	**AO7** Development provides species in accordance with the Planting species planning scheme policy.	**Complies with A07**
PO8 Development provides planting densities and stock sizes which are optimised to: a. reduce maintenance and erosion; b. achieve amenity and ecological outcomes; c. provide the level of coverage for any green facades, green walls or green roofs to achieve the functional and aesthetic outcomes of the landscape work for the life of the development. Note—The Landscape design planning scheme policy provides guidance on information to be provided to demonstrate compliance with the performance outcome and acceptable outcomes.	**AO8.1** Development provides planting densities and stock sizes when planting in natural ground which achieves: a. full coverage of the mulched planting areas within 2 years; b. 95% coverage of the extent of the elevation within 2 years where for green facades. **AO8.2** Development achieves the minimum planting coverage for any artificial growing environment as specified in the Landscape design planning scheme policy.	**Complies with A08.1** **Not Applicable with A08.2**
PO9	**AO9.1**	**Not Applicable with A09.1**

Development provides planting areas in open-air car parking areas which are designed and constructed to ensure that landscaping and shade trees thrive and achieve a minimum 50% shade cover within 5 years of planting.	Development provides species in a car park that are selected in accordance with the Planting species planning scheme policy. **AO9.2** Development provides planting areas within car parking areas that are protected by wheel stops or bollards.	**Not Applicable with A09.2**
PO10 Development for a shade structure does not compromise landscape outcomes.	**AO10** Development for a shade structure in a car park allows unimpeded access to natural sunlight and rainwater for landscaping and shade trees.	**Not Applicable with A010**
PO11 Development involving the construction of retaining walls provides for: a. safety; b. an attractive appearance appropriate to the surrounding area; c. easy maintenance; d. longevity; e. minimal water seepage impacts.	**AO11** Development of a retaining wall: a. is constructed in compliance with the structures standards in the Infrastructure design planning scheme policy and is certified by a Registered Professional Engineer Queensland; b. incorporates planting areas.	**Not Applicable with A011**
PO12 Development provides for: a. water sensitive urban design measures which are employed within the landscape design to maximise stormwater use; b. drainage and stormwater management measures to reduce any adverse impacts on the landscape; c. stormwater harvesting to be maximised and any adverse impacts of stormwater minimised; d. reticulated irrigation to all artificial growing environments.	**AO12.1** Development provides drainage for artificial growing environments which is connected to the stormwater drain. **AO12.2** Development ensures that the maximum site stormwater harvest capacity is utilised to meet the irrigation demand of the development before alternate irrigation sources are utilised, and is in accordance with the standards in the Landscape design planning scheme policy. **AO12.3** Development provides areas of pavement, turf, landscaping and mulched garden beds which are adequately drained.	**Not Applicable with A012.1** **Complies with A012.2** **Complies with A012.3**

Note—The Landscape design planning scheme policy provides guidance on information to be provided to demonstrate compliance with the performance outcome and acceptable outcomes.	Note—This may be achieved through the provision and/or treatment of swales, spoon drains, field gullies, sub-surface drainage and stormwater connections.	
	AO12.4 Development provides a reticulated irrigation system to all landscaping areas in accordance with the Landscape design planning scheme policy.	**Not Applicable with A012.4** The Lot owner will use a watering can and/or hose to water landscaping as required.
PO13 Development provides landscaping and supporting growing environments which: a. are safe; b. ensure efficient and effective maintenance; c. ensures success and long-term performance. Note—The Landscape design planning scheme policy provides guidance on information to be provided to demonstrate compliance with the performance outcome and acceptable outcomes.	**AO13.1** Development ensures that all turf areas on the site are accessible externally by standard lawn maintenance equipment and receive adequate sunlight. **AO13.2** Development ensures that where landscape work on structures are serviced from tank water, the control devices are located in a common area.	**Complies with A013.1 & A013.2**
	AO13.3 Development provides one hose cock within each private landscape and recreation area.	**Complies with A013.3**
	AO13.4 Development provides landscaping that uses appropriate materials to maintain the function of an overland flow path.	**Not Applicable with A013.4**
	AO13.5 Development ensures that all artificial growing environments are accessible for safe and practical maintenance from within the site.	**Complies with A013.5**
	AO13.6 Development ensures that all artificial growing environments are designed to be durable and to prevent material movement from structures.	**Complies with A013.6**
	AO13.7	**Complies with A013.7**

	Development ensures that artificial growing environments are designed to allow for flush out.	
	AO13.8 Irrigation systems are designed to prevent overspray outside of planting areas.	**Complies with A013.8** Any irrigation systems will be designed to prevent overspray outside of planting areas.
PO14 Development ensures that the location and type of planting do not compromise the function and accessibility of services and facilities.	**AO14** Development provides plant species which are selected and sited, taking into consideration the location and access requirements of overhead and underground services.	**Complies with A014**
PO15 Development ensures that landscaping in artificial growing environments is appropriately designed, located and supported to ensure long-term performance, safety and function. Note—Guidance is provided in the Landscape design planning scheme policy.	**AO15.1** Artificial growing environments are designed in accordance with the Landscape design planning scheme policy and are considered in the structural design of the development. **AO15.2** Artificial growing environments include appropriate drainage and waterproofing in accordance with the Landscape design planning scheme policy.	**Not Applicable with A015.1 & A015.2**
PO16 Development incorporating a rooftop garden provides landscaping that: a. is integrated into the rooftop garden design; b. ensures that landscaped open spaces dominate the built form elements; c. contributes to shade of communal open space; d. enhances the visual amenity and function of different rooftop garden spaces; e. contributes to greening the building appearance when viewed from external public vantage points.	**AO16.1** Development incorporating a rooftop garden provides landscaping that includes: a. planting at the perimeter of the rooftop for a minimum extent of 50% of the rooftop perimeter facing at least two different elevations of the building; b. a diverse mix of suitable planting species including ground covers, shrubs and trees at different heights in accordance with the Planting species planning scheme policy; c. suitable medium shrubs and small trees in accordance with the Planting species planning scheme policy providing a minimum 25% shade	**Not Applicable with A016.1 & A016.2**

Note—External public vantage points means from at least two mostly unobstructed views of the development from a public area.	cover of rooftop communal open space within 5 years. **AO16.2** Development for a rooftop garden where Section 1.7.7(3) applies, or where exceeding maximum building height, provides soft landscaping features that are: a. a minimum 75% open to the sky; b. provided in addition to any artificial soft landscape features.	

9.4.9 Stormwater code

9.4.9.1 Application

1. This code applies to assessing a material change of use, reconfiguring a lot or operational work if:
    a. assessable development where this code is identified as a prescribed secondary code in the assessment benchmarks column of a table of assessment for a material change of use (section 5.5), reconfiguring a lot (section 5.6) operational work (section 5.8) or an overlay (section 5.10); or
    b. impact assessable development, to the extent relevant.
2. When using this code, reference should be made to section 1.5 and section 5.3.3.

Note—The following purpose, overall outcomes, performance outcomes and acceptable outcomes comprise the assessment benchmarks of this code.

Note—Where this code includes performance outcomes or acceptable outcomes that relate to infrastructure design and construction works, guidance is provided in the Infrastructure design planning scheme policy.

9.4.9.2 Purpose

1. The purpose of the Stormwater code is to assess the suitability of the stormwater aspects of development.
2. The purpose of the code will be achieved through the following overall outcomes:
    a. Development achieves acceptable levels of stormwater run-off quality and quantity by applying water sensitive urban design principles as part of an integrated stormwater management framework.
    b. Development protects public health and safety and protects against damage or nuisance caused by stormwater flows.
    c. Development has a stormwater management system which maintains, recreates or minimises impact to natural catchment hydrological processes.
    d. Development ensures that the environmental values of the city's waterways are protected or enhanced.
    e. Development minimises run-off, including peak flows.
    f. Development maintains or enhances the efficiency and integrity of the stormwater infrastructure network.
    g. Development minimises the whole of life cycle cost of stormwater infrastructure.

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
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.		
PO1 Development provides a stormwater management system which achieves the integrated management of stormwater to: 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. Editor's note—The stormwater management system to be developed to address PO1 is not intended to require management of stormwater quality.	**AO1** Development provides a stormwater management system designed in compliance with the Infrastructure design planning scheme policy.	**Complies with A01** As the building extension was approved in 2011 and then built, stormwater design was approved and built than. There is a local Council system along the rear boundary of 1252 Waterworks Road, that connects to the stormwater system in Bogunda Street. This is shown in the attached Council DBYD search.
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.	**AO2.1** Development does not result in an increase in flood level or flood hazard on up slope, down slope or adjacent premises. **AO2.2** Development provides a stormwater management system which is designed in compliance with the standards in the Infrastructure design planning scheme policy.	**Complies with A02.1** **Complies with A02.2**
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.	**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. **AO3.2** Development provides a stormwater management system which is designed in compliance with the	**Complies with A03.1, A03.2 & A03.3**

	standards in the Infrastructure design planning scheme policy.	
	AO3.3 Development obtains a lawful point of discharge in compliance with the standards in the Infrastructure design planning scheme policy.	
	AO3.4 Where on private land, all underground stormwater infrastructure is secured by a drainage easement.	**Not Applicable with A03.4**
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.	**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. **AO4.2** Development provides sufficient area to convey run-off which will comply with the standards in the Infrastructure design planning scheme policy.	**Complies with A04.1 & A04.2**
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.	**Complies with A05**
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**	**Complies with A06.1 & A06.2**

	Development providing for stormwater detention and water quality treatment devices are designed in compliance with the standards in the Infrastructure design planning scheme policy.	
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** 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.	**Complies with A07.1 & A07.2**
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.	**AO8.1** Development ensures natural waterway corridors and drainage paths are retained. **AO8.2** 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. **AO8.3** Development provides stormwater outlets into waterways, creeks, wetlands and overland flow paths with energy dissipation to minimise scour in compliance	**Complies with A08.1** **Not Applicable with A08.2** **Not Applicable with A08.3**

	with the standards in the Infrastructure design planning scheme policy.	
	AO8.4 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.	**Not Applicable with A08.4**
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.	**AO9** No acceptable outcome is prescribed.	**Complies with P09**
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.	**AO10** No acceptable outcome is prescribed.	**Complies with P010**
PO11 Development provides for the orderly development of stormwater infrastructure within a catchment, having regard to the: a. existing capacity of stormwater infrastructure within and external to the site, and any planned stormwater infrastructure upgrades; b. safe management of stormwater discharge from existing and future up-slope development; c. implication for adjacent and down-slope development.	**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. **AO11.2** Development ensures that existing stormwater infrastructure that is undersized is upgraded in compliance with the Infrastructure design planning scheme policy.	**Complies with A011.1 & A011.2**
PO12 Development provides stormwater infrastructure which:	**AO12.1** The stormwater management system is designed in compliance with the Infrastructure design planning scheme policy.	**Complies with A012.1 & A012.2**

a. remains fit for purpose for the life of the development and maintains full functionality in the design flood event; b. can be safely accessed and maintained cost effectively; c. ensures no structural damage to existing stormwater infrastructure.	**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.	
PO13 Development ensures that all reasonable and practicable measures are taken to manage the impacts of erosion, 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: a. the environmental values and water quality objectives of waters; b. waterway hydrology; c. the maintenance and serviceability of stormwater infrastructure. Note—The Infrastructure design planning scheme policy outlines the appropriate measures to be taken into account to achieve the performance outcome.	**AO13** No acceptable outcome is prescribed.	**Complies with P013**
PO14 Development ensures that: 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.	**AO14** No acceptable outcome is prescribed.	**Complies with P014**
PO15 Development does not increase: a. the concentration of total suspended solids or other contaminants in stormwater flows during site construction;	**AO15** No acceptable outcome is prescribed.	**Complies with P015**

b. run-off which causes erosion either on site or off site.		
Section B—Additional performance outcomes and acceptable outcomes which apply to high-risk development, being one or more of the following: a. a material change of use for an urban purpose which involves greater than 2,500m^2 of land that: i. will result in an impervious area greater than 25% of the net developable area; or ii. will result in 6 or more dwellings. b. reconfiguring a lot for an urban purpose that involves greater than 2,500m^2 of land and will result in 6 or more lots; c. operational work for an urban purpose which involves disturbing greater than 2,500m^2 of land.		
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 *Environmental Protection Act 1994*. Note—Compliance with the performance outcome should be demonstrated by the submission of a site-based stormwater management plan for high-risk development only.	**AO16** Development provides a stormwater management system which is designed in compliance with the standards in the Infrastructure design planning scheme policy.	**Not Applicable with A016**
PO17 Development ensures that: a. the discharge of wastewater to a waterway or external to the site is avoided; or b. if the discharge cannot practicably be avoided, the development minimises wastewater discharge through re-use, recycling, recovery and treatment. 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.	**AO17** No acceptable outcome is prescribed.	**Not Applicable with P017**
Section C—Additional performance outcomes and acceptable outcomes for assessable development for a material change of use or reconfiguring a lot		

PO18 Development protects stormwater infrastructure to ensure the following are not compromised: a. the long term infrastructure for the stormwater network in the Long term infrastructure plans; b. the existing and planned infrastructure for the stormwater network in the Local government infrastructure plan; c. the provision of long term, existing and planned infrastructure for the stormwater network which: 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. 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.	**AO18** Development protects stormwater infrastructure in compliance with the following: a. for long term infrastructure for the stormwater network, the Long term infrastructure plans; b. for existing and planned infrastructure for the stormwater network, the Local government infrastructure plan; c. the standards for stormwater drainage in the Infrastructure design planning scheme policy.	**Complies with A018**
PO19 Development provides for the payment of extra trunk infrastructure costs for the following: 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: 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	**AO19** No acceptable outcome is prescribed.	**Not Applicable with P019**

necessary by development that is not assumed future urban development; iii. other infrastructure for the stormwater network associated with development that is not assumed future urban development which is made necessary by the development. 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. Editor's note—See section 130 Imposing Development conditions (Conditions for extra trunk infrastructure costs) of the *Planning Act 2016*.		

Table 9.4.9.3.B—Categories of flood planning levels

Flooding type(1)	**Minimum design floor or pavement levels (m AHD)(2) (refer to Table 9.4.9.3.C for assignment of these categories)**				
	Category A	**Category B**	**Category C**	**Category D**	**Category E**
Waterway(A) or open channel	1% AEP flood level + 500mm	1% AEP flood level + 300mm	1% AEP flood level	1% AEP flood level	5% AEP flood level
Overland flow flooding(B)	2% AEP flood level +500mm	2% AEP flood level +300mm	2% AEP flood level	2% AEP flood level	5% AEP flood level

Notes—

(1) Where the site is subject to more than one type of flooding that is overland flow flooding, creek or waterway flooding or river flooding, the minimum flood immunity level is the highest level determined from these sources.

(2) Where flood levels are not available from Council's Floodwise Property Report such as overland flow flooding, the applicant will need to engage a suitably qualified Registered Professional Engineer Queensland with expertise in undertaking flood studies to estimate the relevant flood level.

Note (A) A waterway, including any indicated on the planning scheme maps, is defined as any element of a river, creek, stream, gully or drainage channel, including the bed and banks, typically with a catchment area greater than 30ha.

Note [B] Overland flow flooding usually occurs when the capacity of the underground piped drainage system is exceeded and/or when the overland flow path is blocked. Localised overland flow paths generally traverse along roadways, and in the older established areas, through private properties within existing low points and gullies. A localised overland flow path is not characterised by well-defined bed and banks and the contributing catchment is generally less than 30ha.

Note—A flood event with an AEP of 1% is the equivalent of a 100 year ARI flood event.

Note—A flood event with an AEP of 2% is the equivalent of a 50 year ARI flood event.

Note—A flood event with an AEP of 5% is the equivalent of a 20 year ARI flood event.

Note—The flood immunity level in some older inner-city areas is often controlled by local ponding.

Table 9.4.9.3.C—Flood planning level categories for development types

BCA building classification(1)	**Development types and design levels, assigned design floor or pavement levels**	**Category Refer to Table 8.2.11.3.L**
Class 1—4	Habitable room	Category A
	Non-habitable room including patio and courtyard	Category B
	Non-habitable part of a Class 2 or Class 3 building excluding the essential services(2) control room	Category B
	Parking located in the building undercroft of a multiple dwelling	Category C
	Carport(4), unroofed car park; vehicular manoeuvring area	Category D
	Essential electrical services(2) of a Class 2 or Class 3 building only	Category A(6)
	Basement parking entry(3)	Category C + 300mm
Class 5, Class 6, or Class 8	Building floor level	Category C
	Garage or car park located in the building undercroft(3)	Category C
	Carport(4) or unroofed car park	Category D
	Vehicular access and manoeuvring areas	Category D

	Basement parking entry(3)	Category C
	Essential electrical services(2)	Class 8 — Category C(6) Class 5 & 6 — Category A(6)
Class 7a	Refer to the relevant building class specified in this table	
Class 7b	Building floor level	Category C
	Vehicular access and manoeuvring area	Category D
	Essential electrical services(2)	Category C
Class 9	Building floor level	Category A
	Building floor level for habitable rooms in Class 9a or 9c where for a residential care facility	0.2% AEP flood
	Garage or car park located in the building undercroft(3)	Category C
	Carport(4) or unroofed car park	Category D
	Vehicular access and manoeuvring areas	Category D
	Essential electrical services(2)	Category A
Class 10a	Car parking facility	Refer to the relevant building class specified in this table
	Shed(5) or the like	Category D
Class 10b	Swimming pool	Category E
	Associated mechanical and electrical pool equipment	Category C
	Other structures	Flood immunity standard does not apply

Notes—

(1) Refer to the Building Code of Australia for definitions of building classifications.

(2) Essential services include any room used for fire control panel, telephone PABX, sensitive substation equipment including transformers, low voltage switch gear, high-voltage switch gear, battery chargers, protection control and communication equipment, low voltage cables, high-voltage cables and lift controls.

(3) Basement car parks must be suitably waterproofed and all air vents, air-conditioning ducts, pedestrian access and entry and exit ramps at the car park entrance have flood immunity in accordance with this table.

(4) A shelter for a motor vehicle, which has a roof and one or more open sides, and which can be built against the side of a building.

(5) A slight or rough structure built for shelter and storage; or a large strongly built structure, often open at the sides or end.

(6) Where essential services are proposed in a basement below the specified flood planning level, the flood immunity of all air vents, air-conditioning ducts, pedestrian access, lift shafts and entry/exit ramps at the basement entrance and any other openings into that basement must conform to Category A for Residential development, and the relevant basement entry level of all other uses. This will require a waterproof basement design to prevent floodwaters entering the basement to ensure flood immunity.

Note—A flood event with an AEP of 2% is the equivalent of a 50 year ARI flood event.

Note—A flood event with an AEP of 0.2% is the equivalent of a 500 year ARI flood event.

Note—Where a building has a combination of uses that includes a component of class 2, 3 or 9, the essential services for that building shall comply with the requirements of the building class with the greatest flood immunity requirement.

Note—Use classes for residential development also include basement storage.

Table 9.4.9.3.D—Flood planning levels for a new road

Flooding type(1)	**Minimum design levels at the crown of the road (m AHD) (2)**	
	Residential development	**Industrial or commercial development**
Waterway(A) or open channel	1% AEP flood level	2% AEP flood level
Overland flow flooding(B)	2% AEP flood level	2% AEP flood level

Notes—

(1) Where the site is subject to more than 1 type of flooding, the minimum flood planning level is the highest level determined from these sources. It should be noted that the flooding planning level in some older areas is often controlled by local ponding.

(2) Where flood levels are not available from Council's Floodwise Property Report, such as overland flow flooding, the applicant will need to engage a suitably qualified Registered Professional Engineer Queensland with expertise in undertaking flood studies to estimate the relevant flood level.

Note (A) A waterway including any indicated on the planning scheme maps is defined as any element of a river, creek, stream, gully or drainage channel, including the bed and banks typically with a catchment area greater than 30ha.

Note (B) Overland flow flooding usually occurs when the capacity of the underground piped drainage system is exceeded and/or when the overland flow path is blocked. Localised overland flow paths generally traverse along roadways, and in the older established areas, through private properties within existing low points and gullies. A localised overland flow path is not characterised by well-defined bed and banks and the contributing catchment is generally less than 30ha.

Note—A flood event with an AEP of 1% is the equivalent of a 100 year ARI flood event.

Note—A flood event with an AEP of 2% is the equivalent of a 50 year ARI flood event.

Note—A flood event with an AEP of 5% is the equivalent of a 20 year ARI flood event.

Table 9.4.9.3.E—Flood planning levels for essential community infrastructure

Type of essential community infrastructure	Minimum design levels
Emergency services	0.2% AEP flood
Emergency services, where for an emergency shelter	0.5% AEP flood
Emergency services, where for police facilities	0.5% AEP flood
Hospital and health care service, where associated with a hospital	0.2% AEP flood
Community facility where involving storage of valuable records or items of historic or cultural significance (e.g. galleries and libraries)	0.5% AEP flood
State-controlled roads Major or minor electricity infrastructure not otherwise listed in this table Utility installation where for rail transport services Air service Telecommunications facility	No specific recommended level but development proponents should ensure that the infrastructure is optimally located and designed to achieve suitable levels of service, having regard to the processes and policies of the administering government agency.
Power stations (as defined in the *Electricity Act 1994*) or renewable energy facility.	0.2% AEP flood
Major electricity infrastructure where a major switch yard	0.2% AEP flood
Substations	0.5% AEP flood
Utility installation where for a sewage treatment plant	DFE
Utility installation where for a water treatment plant	0.5% AEP flood

Note—A flood event with an AEP of 0.2% is the equivalent of a 500 year ARI flood event.

Note—A flood event with an AEP of 0.5% is the equivalent of a 200 year ARI flood event.

Table 9.4.9.3.F—Flood planning levels for reconfiguring a lot

Flooding type[1]	Minimum lot levels (m AHD)[2]

	Residential	**Other than residential**
Waterway(A) or open channel	1% AEP flood level + 300mm	1% AEP flood level
Overland flow flooding(B)	1% AEP flood level + 300mm	2% AEP flood level

Notes—

(1) Where the site is subject to more than one type of flooding, the minimum flood immunity level is the highest level determined from these sources.

(2) Where flood levels are not available from Council's Floodwise Property Report such as overland flow flooding, the applicant will need to engage a suitably qualified Registered Professional Engineer Queensland with expertise in undertaking flood studies to estimate the relevant flood level.

Note (A) A waterway including any indicated on the planning scheme maps is defined as any element of a river, creek, stream, gully or drainage channel, including the bed and banks typically with a catchment area greater than 30ha.

Note (B) Overland flow flooding usually occurs when the capacity of the underground piped drainage system is exceeded or when the overland flow path is blocked. Localised overland flow paths generally traverse along roadways, and in the older established areas, through private properties within existing low points and gullies. A localised overland flow path is not characterised by well-defined bed and banks and the contributing catchment is generally less than 30ha.

Note—A flood event with an AEP of 1% is the equivalent of a 100 year ARI flood event.

Note—A flood event with an AEP of 2% is the equivalent of a 50 year ARI flood event.

9.4.11 Transport, access, parking and servicing code

9.4.11.1 Application

1. This code applies to assessing:
    a. operational work which is assessable development if this code is identified as a prescribed secondary code in the assessment benchmarks column of a table of assessment for operational work (section 5.8); or
    b. a material change of use or reconfiguring a lot if:
        i. assessable development where this code is identified as a prescribed secondary code in the assessment benchmarks column of a table of assessment for a material change of use (section 5.5) reconfiguring a lot (section 5.6), or an overlay (section 5.10); or
        ii. impact assessable development, to the extent relevant.
2. When using this code, reference should be made to section 1.5 and section 5.3.3.

Note—The following purpose, overall outcomes, performance outcomes and acceptable outcomes comprise the assessment benchmarks of this code.

Note—Where this code contains performance outcomes or acceptable outcomes that relate to:

- crime prevention through environmental design principles, guidance is included in the Crime prevention through environmental design planning scheme policy;
- design for the reduction of graffiti, guidance is provided and the Graffiti prevention planning scheme policy;
- infrastructure design and construction works, guidance is provided in the Infrastructure design planning scheme policy;
- refuse and recycling, guidance is provided in the Refuse planning scheme policy;
- transport, access, parking and servicing standards and guidelines are contained in the Transport, access, parking and servicing planning scheme policy and the Infrastructure design planning scheme policy.

Note—If involving a standard format lot with common property such as requiring a community management scheme under the *Body Corporate and Community Management Act 1997*, the development contains a reconfiguring a lot aspect of development and the Subdivision code will apply.

9.4.11.2 Purpose

1. The purpose of the Transport, access, parking and servicing code is to assess the suitability of the transport, access, parking and servicing aspects of development.
2. The purpose of the code will be achieved through the following overall outcomes:
    a. Development provides for access, circulation, parking and vehicle-based services for all relevant transport modes, including walking, cycling and public transport relevant to the nature of the proposed development and its location in relation to the transport network and surrounding existing and future land uses.
    b. Development enhances the potential for trip making other than by private vehicle.
    c. Development provides safe access for all transport modes that does not impact adversely on the efficiency and safety of the transport network or diminish the amenity of nearby land uses.
    d. Development ensures that impacts on amenity caused by traffic generation is consistent with the community's reasonable expectations for the intended use.

e. Development provides site access arrangements to ensure that any adverse impacts on other development, the transport network and those who use it, are minimised to maintain amenity of the area and the safety and efficiency of the transport system.
f. Development ensures that access, parking and servicing arrangements and impacts such as noise, are consistent with the community's reasonable expectations and avoid risk of damage to people, property and vehicles.
g. Development maximises safety in the use of the transport network, particularly for the most vulnerable users (children, pedestrians, persons with disabilities and cyclists) so that all transport modes are safe and convenient.
h. Development provides for walking and cycling routes and end-of-trip facilities for pedestrians and cyclists, designed and located to make walking and cycling attractive and viable transport options.
i. Development envisaged by the planning scheme, which will potentially have an adverse impact on the operation of the transport network, is designed and of a scale that maintains the safety and efficiency of the transport network.
j. Development provides for on-site parking and manoeuvring areas for cars, motorcycles, bicycles and service vehicles which:
    i. are safe and convenient to use;
    ii. if outside the City core and the City frame identified in Figure a are adequate to meet the design peak-parking demands without significant overflow to adjacent premises or the generation of excessive on-street car parking demand, taking into account the requirements of other road users.
k. Development provides for on-site servicing that is safe, convenient to use, but discrete, and adequate to meet the reasonably expected demands generated by the development, without significant adverse impacts on the external road system or adjacent premises.
l. Development accommodates future road upgrades and widenings ensuring the ongoing capacity, efficiency and safety of the transport network.

9.4.11.3 Performance outcomes and acceptable outcomes

Table 9.4.11.3—Performance outcomes and acceptable outcomes

Performance outcomes	Acceptable outcomes	Comments
PO1 Development is designed: a. to include a technically competent and accurate response to the transport and traffic elements of the development; b. in accordance with the standards in the Transport, access, parking and servicing planning scheme policy; c. to ensure the efficient operation and safety of the development and its surrounds.	**AO1** Development complies with the standards in the Transport, access, parking and servicing planning scheme policy.	**Complies with A01**

Note—The acceptable outcome and performance outcome can be demonstrated through a development application that: • is accompanied by sufficient information, including computer modelling input and output data, to allow the proposed development to be properly assessed against the requirements of this code and the standards and guidelines of the Transport, access, parking and servicing planning scheme policy; • is certified by a Registered Professional Engineer Queensland that all plans, documents and dimensioned drawings comply with the requirements of this code and the standards and guidelines of the Transport, access, parking and servicing planning scheme policy; • ensures that any computer modelling input and output data are accurate, reasonable and carried out in accordance with sound traffic engineering practices.		
PO2 Development of a major size incorporates on-site provision for integration with the public transport network and the management of vehicles, public transport, pedestrians and cyclists, including providing appropriate pedestrian and cyclist linkages to adjoining uses, public areas and the transport network consistent with the planning by the Queensland Government and Council.	**AO2** No acceptable outcome is prescribed.	**Not Applicable with A02**
PO3 Development provides vehicle access that is located and designed so as to have no significant impact on the safety, efficiency, function, convenience of use or capacity of the road network.	**AO3.1** Development provides site access that is located and designed in compliance with the standards in the Transport, access, parking and servicing planning scheme policy. **AO3.2** Development provides an easement for a vehicular access benefiting all adjoining landowners and the Council if the vehicular access services more than an individual development or premises.	**Complies with A03.1** **Not Applicable with A03.2**
PO4	**AO4.1**	**Not Applicable with A04.1 & A04.2 & A04.3**

Development provides walking and cycle routes through the site which: a. link to the external network and pedestrian and cyclist destinations such as schools, shopping centres, open space, public transport stations, shops and local activity centres along the safest, most direct and convenient routes; b. encourage walking and cycling; c. ensure pedestrian and cyclist safety; d. provide a direct and legible network. Note—The Infrastructure design planning scheme policy provides additional guidance on how to comply with this performance outcome.	Development provides walking and cycle routes which are constructed on the carriageway or through the site to: a. create a walking or cycle route along the full frontage of the site; b. connect to public transport and existing cycle and walking routes at the frontage or boundary of the site. **AO4.2** Development provides walking and cycle routes that are constructed in compliance with the standards in the Transport, access, parking and servicing planning scheme policy and the Infrastructure design planning scheme policy.	
	AO4.3 Development provides walking and cycle routes which do not include a potential entrapment area, blind corner or sudden change in level that restrict sightlines.	
PO5 Development provides secure and convenient bicycle parking which: a. for visitors is obvious and located close to the building's main entrance; b. for employees is conveniently located to provide secure and convenient access between the bicycle storage area, end-of-trip facilities and the main area of the building; c. is easily and safely accessible from outside the site; d. does not impact adversely on visual amenity; e. does not impede the movement of pedestrians or other vehicles;	**AO5.1** Development provides on-site bicycle parking spaces in compliance with the standards in the Transport, access, parking and servicing planning scheme policy. **AO5.2** Development provides bicycle parking spaces for employees which are co-located with end-of-trip facilities (shower cubicles and lockers) in compliance with the Transport, access, parking and servicing planning scheme policy and AS 2890.3-1993 Bicycle parking facilities.	**Not Applicable with A05.1 to A05.5**
	AO5.3 Development ensures that the location of visitor bicycle parking is discernible either by direct view or using signs from the street.	

f. is designed to comply with a recognised standard for the construction of bicycle facilities. Note—For a performance outcome relating to the number of bicycle parking spaces provided, the application must demonstrate how the needs of the intended users of the site differ from the standard rates in the Transport, access, parking and servicing planning scheme policy.	**AO5.4** Development provides visitor bicycle parking which does not impede pedestrian movement. **AO5.5** Development provides bicycle parking which is constructed in compliance with the standards in the Transport, access, parking and servicing planning scheme policy.	
PO6 Development provides shower cubicles and lockers in sufficient numbers to meet the needs and volume of predicted pedestrian and cyclist users. Note—For a performance outcome the application must demonstrate how the needs of the intended users of the site differ from the standard rates in the Transport, access, parking and servicing planning scheme policy.	**AO6** Development provides shower cubicles and lockers for pedestrians and cyclists in compliance with the standards in the Transport, access, parking and servicing planning scheme policy.	**Not Applicable with A06**
PO7 Development provides pedestrian and cyclist access to the site which is designed to provide safe movement and avoid unnecessary conflict between pedestrians, cyclists and motor vehicles.	**AO7** Development provides pedestrian and cycle access that is designed and constructed in compliance with the site access design guidelines, pedestrian facilities standards and cyclist facilities standards in the Transport, access, parking and servicing planning scheme policy.	**Not Applicable with A07**
PO8 Development provides pedestrian and cyclist access to and from the site which is located to take advantage of safe crossing points of the adjacent road system, key destinations and public transport facilities.	**AO8** No acceptable outcome is prescribed.	**Not Applicable with P08**
PO9 Development provides access driveways in the road area that are located, designed and controlled to:	**AO9.1** No acceptable outcome for access is prescribed, for a major development (as described in the Transport, access, parking and servicing planning scheme policy).	**Not Applicable with A09.1**

a. minimise adverse impacts on the safety and operation of the transport network, including the movement of pedestrians and cyclists; b. ensure the amenity of adjacent premises, from impacts such as noise and light.	**AO9.2** Development which is not a major development (as described in the Transport, access, parking and servicing planning scheme policy) provides a single site access driveway in the road area to the lowest order road to which the site has frontage.	**Complies with A09.2** As a proposed Dual Occupancy, a 2nd access is not proposed. The existing access from Waterworks Road will be retained.
	AO9.3 Development ensures that sight distances to and from all proposed access driveways in the road area and intersections are in compliance with the standards in the Transport, access, parking and servicing planning scheme policy.	**Complies with A09.3**
	AO9.4 Development provides access driveways in the road area which: a. are located, designed and controlled in compliance with the standards in the Transport, access, parking and servicing planning scheme policy; b. are not provided through a bus stop, taxi rank or pedestrian crossing or refuge.	**Complies with A09.4**
	AO9.5 Development makes provision for shared access arrangements particularly where it is necessary to limit access points to a major road.	**Not Applicable with A09.5**
PO10 Redevelopment provides for: a. the closure of all access driveways in the road area that no longer comply with the standards in the Transport, access, parking and servicing planning scheme policy; b. the reinstatement of adjacent footpaths.	**AO10** No acceptable outcome is prescribed.	**Complies with P010**

PO11 Development provides that an internal approach to an access driveway in the road area is designed and located to provide for the safety of pedestrians and cyclists using paths adjacent to the frontage of the site, and motorists.	**AO11.1** Development provides sight distances to and from all proposed access driveways in the road area and intersections which are in compliance with the standards in the Transport, access, parking and servicing planning scheme policy. **AO11.2** Development ensures that convex mirrors are only used in a site: a. as a secondary support at access driveways; b. in addition to acceptable sight splays that comply with the sight distances standards in the Transport, access, parking and servicing planning scheme policy.	**Complies with A011.1** **Not Applicable with A011.2**
PO12 Development in the City core and City frame as identified in Figure a provides car parking spaces at rates to discourage private car use and encourage walking, cycling and the use of public transport.	**AO12** Development in the City core and City frame as identified in Figure a provides maximum car-parking rates in compliance with the standards in the Transport, access, parking and servicing planning scheme policy. Note—For accepted development subject to compliance with identified requirements including an existing premises, no reduction to existing car parking is required to comply with a maximum car-parking rate in the Transport, access, parking and servicing planning scheme policy.	**Not Applicable with A012**
PO13 Development outside of the City core and City frame as identified in Figure a provides on-site car parking spaces to accommodate the design peak parking demand without any overflow of car parking to an adjacent premises or adjacent street.	**AO13** Development outside of the City core and City frame as identified in Figure a: a. provides on-site car parking spaces in compliance with the standards in the Transport, access, parking and servicing planning scheme policy; or b. for accepted development subject to compliance with identified requirements, does not result in on-street car parking if no parking standard is identified in the Transport, access, parking and servicing planning scheme policy.	**Complies with A013**

	Note—For accepted development subject to compliance with identified requirements including an existing premises, no reduction to existing car parking is required to comply with a maximum car-parking rate in the Transport, access, parking and servicing planning scheme policy.	
PO14 Development ensures that the number of car parking spaces and design of the car parking area: a. meet the combined design peak parking demand for residential, visitor and business parking; b. allow for the temporal sharing of car-parking spaces for uses with different peak parking demands. Note—In order to demonstrate that adequate car parking is provided, a traffic impact assessment prepared in compliance with the Transport, access, parking and servicing planning scheme policy is to identify the appropriate number of car parking spaces to be provided.	**AO14.1** Development provides a number of car parking spaces on site equalling the sum of the maximum design peak parking demand for the individual uses at any point in time. **AO14.2** Development involving mixed use provides a non-residential car parking area with shared parking for all the businesses in the development.	**Complies with A014.1** **Not Applicable with A014.2**
PO15 Development provides a car park layout which allows for on-site vehicle parking that: a. is clearly defined, safe and easily accessible; b. is designed to contain potential adverse impacts within the site; c. does not detract from the aesthetics or amenity of an area; d. discourages on-street parking if parking has an adverse traffic management safety or amenity impact; e. is consistent with safe and convenient pedestrian and cyclist movement.	**AO15** Development provides parking bays, queue areas and manoeuvring areas which are designed for the design service vehicle to the standards in the Transport, access, parking and servicing planning scheme policy.	**Complies with A015**
PO16 Development creates a safe environment by incorporating the key elements of crime prevention through environmental design.	**AO16** Development incorporates the key elements of crime prevention through environmental design in its layout, building and structure design and landscaping by:	**Complies with A016** The proposal is for a Dual Occupancy use. There are no public toilets or communal areas. Please refer to the proposal plans in **Appendix A.**

	a. facilitating casual surveillance opportunities and including good sightlines to publicly accessible areas such as car parks, pathways, public toilets and communal areas; b. defining different uses and ownerships through design and restricting access from non-residential uses into private residential dwellings; c. promoting safety and minimising opportunities for graffiti and vandalism through exterior building design and orientation of buildings and use of active frontages; d. ensuring publicly accessible areas such as car parks, pathways, public toilets and communal areas are well lit; e. including way-finding cues; f. minimising predictable routes and entrapment locations near public spaces such as car parks, public toilets, ATMs and communal areas. Note—For guidance in achieving the key elements of crime prevention through environmental design, refer to the Crime prevention through environmental design planning scheme policy.	
PO17 Development minimises the potential for graffiti and vandalism through access control, canvas reduction and easy maintenance selection.	**AO17** Development incorporates graffiti and vandalism prevention techniques in its layout, building and structure design and landscaping, by: a. denying access to potential canvases through access control techniques; b. reducing potential canvases through canvas reduction techniques; c. ensuring graffiti can be readily and quickly removed through easy maintenance selection techniques. Note—For guidance on graffiti and vandalism prevention techniques, refer to the Graffiti prevention planning scheme policy.	**Complies with A017**

PO18 Development is serviced by an adequate number and size of service vehicles.	**AO18** Development ensures that the number and size of design service vehicles selected for the site is in compliance with the standards in the Transport, access, parking and servicing planning scheme policy.	**Complies with A018**
PO19 Development layout provides for services which: a. are wholly within the site, other than service vehicle manoeuvring areas which may overhang the verge on a minor road where use of the footpath is not adversely affected; b. are clearly defined, safe and easily accessible; c. are designed to contain potential adverse impacts of servicing within the site; d. do not detract from the aesthetics or amenity of the surrounding area.	**AO19.1** Development ensures that a service bay provided on site: a. is provided and designed to comply with the design vehicle table and service area design standards in the Transport, access, parking and servicing planning scheme policy; b. is located away from street frontages and screened from adjoining premises. **AO19.2** Development provides on-site servicing facilities and associated on-site vehicle manoeuvring areas which are designed in compliance with the service area design standards in the Transport, access, parking and servicing planning scheme policy. **AO19.3** Development provides service areas for refuse collection in compliance with the standards in the Refuse planning scheme policy, Transport, access, parking and servicing planning scheme policy and the Infrastructure design planning scheme policy.	**Not Applicable with A019.1 & A019.2 & A019.3**
PO20 Development provides service vehicle access routes to and from the site which minimise the impact on: a. amenity and safety in residential areas; b. streets not constructed to a standard that accommodate increased heavy vehicle movements.	**AO20** Development ensures that service vehicles use the shortest and most direct route to the major road network in compliance with the heavy vehicle standards in the Transport, access, parking and servicing planning scheme policy.	**Complies with A020**

If for development which is required to be serviced by a b-double (Austroad class 10 vehicle), multi-combination vehicle, over-dimensioned vehicle or any other vehicle identified by the Queensland Government as requiring a permit to operate on the road (freight-dependent development)		
PO21 Development which is freight-dependent development ensures that the traffic generated by the development does not impact on: a. the operation of the transport network; b. the safety and amenity of a residential area; c. a road not constructed to accommodate a non-standard vehicle such as a road only constructed to accommodate a vehicle that has a legal right of access to all roads including Austroads vehicles classes 1—9.	**AO21.1** Development which is freight-dependent development is located on a site which: a. has frontage to or direct access to the freight network in the Road hierarchy overlay via roads in a zone in the Industry zones category; or b. can be serviced by a route that can act as a primary freight access route and connect to an existing primary freight route without impacting on the safe operation of the road network in compliance with the heavy vehicle standards in the Transport, access, parking and servicing planning scheme policy. **AO21.2** Development which is freight-dependent development provides any necessary upgrade to a road used as an access route in compliance with the Infrastructure design planning scheme policy.	**Not Applicable with A021.1 & A021.2**

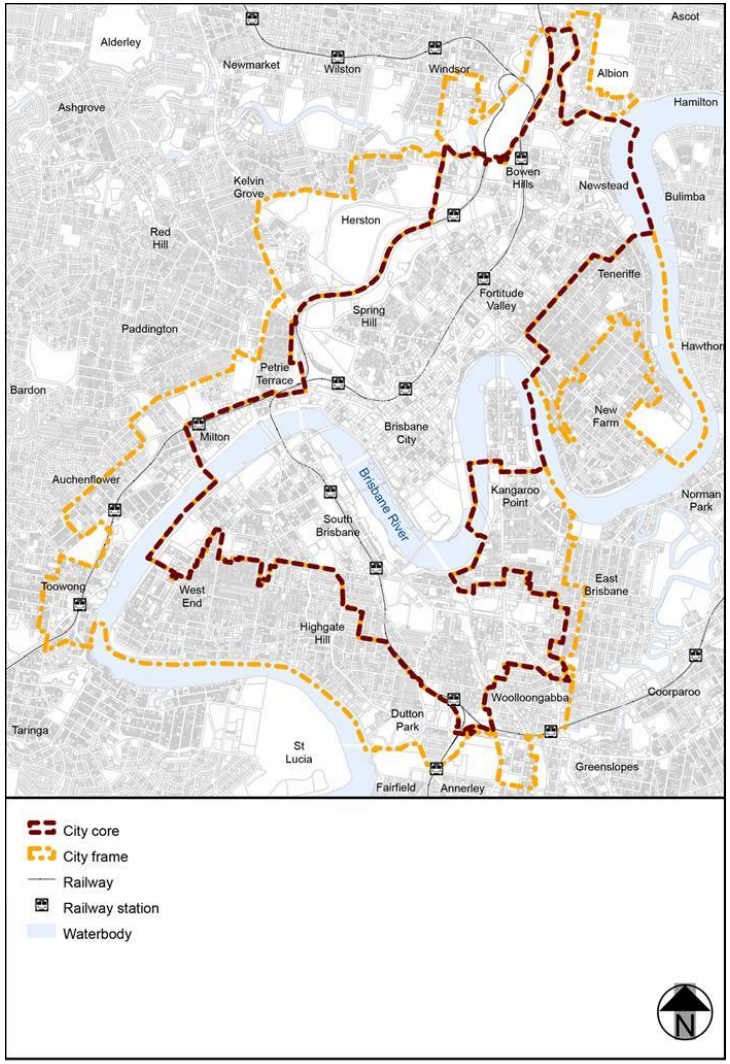

Figure a—City core and City frame

View the high resolution of Figure a-City core and City frame