Part 8 Overlays

8.1 Preliminary

(1) Overlays identify areas in the planning scheme that reflect state or local level interests and that have one or more of the following characteristics:

(a) there is a particular sensitivity to the effects of development;

(b) there is a constraint on land use or development outcomes;

(c) there is the presence of valuable resources; and

(d) there are particular opportunities for development.

(2) Overlays are mapped and included in Schedule 2.

(3) The changed category of development and assessment, if applicable, for development affected by an overlay are stated in Part 5.

(4) Some overlays may be included for information purposes only. This will not result in a change to the category of development and assessment or any additional assessment benchmarks.

(5) Assessment benchmarks for an overlay may be contained in one or more of the following:

(a) a map for an overlay;

(b) a code for an overlay;

(c) a zone code; and

(d) a development code.

Editor's note—In this planning scheme all assessment benchmarks for an overlay are contained in an overlay code.

(6) Where development is proposed on premises partly affected by an overlay, the assessment benchmarks for the overlay only relate to the part of the premises affected by the overlay.

(7) The overlays for the planning scheme are:

(a) Airport environs overlay;

(b) Bushfire hazard overlay;

(c) Coastal environment overlay;

(d) Cultural heritage overlay;

(e) Extractive resources and mining overlay;

(f) Flood hazard overlay;

(g) Landslide hazard overlay;

(h) Natural assets overlay;

(i) Water resource catchment overlay; and

(j) Major infrastructure and hazardous facilities overlay.

(8) The following overlays for the planning scheme are for information purposes only:

(a) Infrastructure noise corridors overlay.

Editor's note—The Infrastructure noise corridors identify land affected by transport noise in accordance with Chapter 8B of the *Building Act 1975*. In these areas building work will be assessable against the Queensland Development Code Part 4.4 – Buildings in a Transport Noise Corridor.

8.2 Overlay codes

8.2.1 Airport environs overlay code

8.2.1.1 Application

This code applies to development where the code is identified as applicable in the categories of development and assessment for the Airport environs overlay. When using this code, reference should be made to section 5.3.2 and where applicable, section 5.3.3 located in Part 5.

8.2.1.2 Purpose

(1) The purpose of the Airport environs overlay code is to ensure the safe and efficient operations of the airport, RAAF base and aviation facilities are protected.

(2) The purpose of the code will be achieved through the following overall outcomes:

(a) development avoids adversely affecting the safety and efficiency of an airport's operational airspace or the functioning of aviation facilities;

(b) large increases in the numbers of people adversely affected by significant aircraft noise are avoided; and

(c) development does not increase the risk to public safety near airport runways.

8.2.1.3 Assessment benchmarks

Table 8.2.1.3 - Accepted development subject to requirements and assessable development (Part)

Editor's note—This code will apply to accepted development subject to requirements as well as assessable development.

Performance outcomes	Acceptable outcomes
For accepted development subject to requirements and assessable development	
Operational airspace (overlay map OM-01.1)	
PO1 Development does not involve permanent or temporary physical obstructions that will adversely affect the airport's operational airspace area identified on overlay map OM-01.1. **Note—**If a proposed development will intrude into the operational airspace or involve high velocity gaseous plumes or the emission of airborne particulates that may impair visibility in operational airspace, it must be referred to the Townsville Airport Pty Ltd (TAPL) and/or Department of Defence (if relevant) for assessment.	**AO1.1** Development involving a permanent or temporary building, structure or landscaping does not enter operational airspace areas identified on overlay map OM-01.1. **Editor's note-**Alternative heights which enter the operational airspace areas may be possible. In particular, building heights which meet the acceptable outcomes for a particular zone or precinct under this planning scheme. However, applicants should note the requirement for assessment underPart 11A – Defence aviation areas (DAA) under the Defence Regulation 2016 for development which exceed AO1 above.
	AO1.2 Cranes and other equipment used during construction do not intrude into the airport's operational airspace. **Editor's note—**Compliance with AO1.2 can be demonstrated through a construction management plan. Construction management plans need to comply with the Defence (Aviation Areas) Regulations (DAAR) where relevant.
	AO1.3 Development on land within the area identified on overlay map OM01.1 as operational airspace areas does not involve transient intrusions within the operational airspace. **Note**: Examples of transient intrusions include hot air ballooning and hang gliding.

PO2 Emissions do not significantly affect air turbulence, visibility or aircraft engine operation in the airport's operational airspace area identified on overlay map OM-01.1.	**AO2** Development does not generate: (a) a gaseous plume with a velocity exceeding 4.3m per second; or (b) smoke, dust, ash or steam that will penetrate operational airspace areas identified on overlay map OM-01.1.

Table 8.2.1.3 - Accepted development subject to requirements and assessable development (Part)

Performance outcomes	Acceptable outcomes
For accepted development subject to requirements and assessable development	
Wildlife hazard buffer zones (overlay map OM-01.2)	
PO3 Development does not attract a significant number of flying vertebrates, such as birds and bats, into areas identified on overlay map OM-01.2.	**AO3.1** Development located within the 3km Wildlife hazard buffer zone does not involve uses listed in Column 1 of Table 1 – Land uses associated with increases in wildlife strikes and hazards.
	AO3.2 Development located within the 3km Wildlife hazard buffer zone involving a use listed in column 2 of Table 1 – Land uses associated with increases in wildlife strikes and hazards, includes measures to reduce the potential to attract birds and bats.
	AO3.3 Development located within the 3km and 8km Wildlife hazard buffer zones involving a use listed in column 1 or column 2 of Table 1 - Land uses associated with increases in wildlife strikes and hazards, includes measures to reduce the potential to attract birds and bats.
	AO3.4 Development located within the 8km and 13km Wildlife hazard buffer zones involving a use listed in column 1 or column 2 of Table 1 - Land uses associated with increases in wildlife strikes and hazards, does not increase the potential to attract birds and bats.

Table 8.2.1.3—Accepted development subject to requirements and assessable development (Part)

Performance outcomes	Acceptable outcomes
For accepted development subject to requirements and assessable development	
Public safety areas (overlay map OM-01.2)	
PO4 A significant increase in the numbers of people living, working or congregating in public safety areas identified on overlay map OM-01.2 is avoided.	**AO4** Within a public safety area identified on overlay map OM-01.2, development does not involve the following: (a) residential uses; or (b) a new building or an increase in the gross floor area of an existing building accommodating a non-residential use, other than an industrial use; or (c) any activities involving the manufacture or bulk storage of hazardous or flammable materials.

Table 8.2.1.3—Accepted development subject to requirements and assessable development (Part)

Performance outcomes	Acceptable outcomes
For accepted development subject to requirements and assessable development	
Protection of aviation facilities (overlay map OM-01.3)	
PO5 Development and associated activities located within the building restricted areas identified on Overlay map OM-01.3 do not interfere with the function of aviation facilities. **Note** – If a proposed development will intrude into the building restricted area of an aviation facility, it must be referred to Airservices Australia, the Department of Defence (if relevant) and the airport operator (if relevant) and assessed as outlined in National Airports Safeguarding Framework (NASF) Principles and Guidelines – Guideline G, Attachment 3. Note – It is recommended that advice be sought during pre-lodgement stage of the development assessment process to avoid objections from Airservices Australia or Department of Defence.	**AO5.1** Development and associated activities located within the building restricted area for an aviation facility do not create permanent or temporary: (a) physical intrusions into the 'line of sight' between transmitting and receiving devices; (b) radio frequency interference electromagnetic emissions that will interfere with signals transmitted by the facility (e.g. arc welding); (c) reflective surfaces that could deflect or interfere with signals transmitted by the facility; or (d) plume rises in the building restricted area of an aviation facility protected by the Airports (Protection of Airspace) Regulations 1996. **Note** – Written support from the relevant organisation may assist in demonstrating achievement of this measure.
	AO5.2 Development and associated activities located within the building restricted area for an aviation facility are designed and constructed to mitigate adverse impacts on the function of the facility. **Note** – Written support from the relevant organisation may assist in demonstrating achievement of this measure.

Table 8.2.1.3—Accepted development subject to requirements and assessable development (Part)

Performance outcomes	Acceptable outcomes
For accepted development subject to requirements and assessable development	
Australian noise exposure forecast contours (overlay map OM-01.4)	

PO6 Development within the area identified on overlay map OM-01.4 is compatible with forecast levels of aircraft noise unless there is an overriding need in the public interest and there is no reasonable alternative site available for the use. **Editor's note—**Where the acceptable outcomes cannot be met, an appropriately qualified acoustic practitioner may be required to be engaged in order to demonstrate compliance with this performance outcome.	**AO6.1** Above the 25 ANEF contour (as depicted on overlay map OM-01.4), development does not involve the following: (a) Care taker's accommodation; or (b) Child care centre; or (c) Community residence; or (d) Dual occupancy; or (e) Dwelling house; or (f) Dwelling unit; or (g) Educational establishment; or (h) Health care service; or (i) Home based business; or (j) Hospital; or (k) Multiple dwelling; or (l) Relocatable home park; or (m) Residential care facility; or (n) Retirement facility; or (o) Rural workers' accommodation; or (p) Tourist park; or (q) Workforce accommodation.
	AO6.2 Above the 30 ANEF contour (as depicted on overlay map OM-01.4), development does not involve the following: (a) Child care centre; or (b) Community residence; or (c) Community use; or (d) Detention facility; or (e) Educational establishment; or (f) Hotel where providing accommodation; or (g) Nature based tourism; or (h) Place of Worship; or (i) Residential care facility; or (j) Resort complex; or (k) Rooming accommodation; or (l) Short term accommodation; or (m) Tourist accommodation, or accommodation for employees, that is ancillary to a use stated in paragraphs (a) to (l) (n) Commercial use that is ancillary to a use stated in paragraphs (a) to (l)
	AO6.3 Above the 35 ANEF contour areas (as depicted on overlay map OM-01.4), development does not involve an office use.

	AO6.4 Above the 40 ANEF contour areas (as depicted on overlay map OM01.4), development does not involve Light industry.
	AO6.5 The siting and design of any building is in accordance with Australian Standard AS2021 and Australian Standard AS/NZS2107.

PO7 Development is located, designed and constructed to attenuate adverse impacts from aircraft noise. **Note**: A noise assessment report prepared by an appropriate qualified acoustic consultant may assist in demonstrating compliance with this outcome.	**AO7.1** Development for the following land uses within the respective ANEF contours are designed and constructed to attenuate aircraft noise by achieving the indoor design sound levels as specified in Table 2. (a) In the 20 – 25 ANEF contour: (i) Care taker's accommodation; or (ii) Child care centre; or (iii) Community residence; or (iv) Dual occupancy; or (v) Dwelling house; or (vi) Dwelling unit; or (vii) Educational establishment; or (viii) Health care service; or (ix) Home based business; or (x) Hospital; or (xi) Multiple dwelling; or (xii) Rrelocatable home park; or (xiii) Residential care facility; or (xiv) Retirement facility; or (xv) Rural workers' accommodation; or (xvi) Tourist park; or (xvii) Workforce accommodation. (b) In the 25 – 30 ANEF contour: (i) Nature based tourism; or (ii) Hotel where providing accommodation (iii) Resort complex; or (iv) Rooming accommodation; or (v) Short term accommodation; or (c) In the 20 – 30 ANEF contour: (i) Child care centre; or (ii) Community residence; or (iii) Community use; or (iv) Detention facility; or (v) Educational establishment; or (vi) Place or worship; or (vii) Residential care facility; or (viii) Tourist accommodation, or accommodation for employees, that is ancillary to a use stated in paragraphs (i) to (vii) (ix) Commercial use that is ancillary to a use stated in paragraphs (i) to (vii) (d) In the 25 - 35 ANEF contour: (i) Office (e) In the 30 - 40 ANEF contour:

	(i) Low impact industry

Table 8.2.1.3—Accepted development subject to requirements and assessable development (Part)

Performance outcomes	Acceptable outcomes
For accepted development subject to requirements and assessable development	
Lighting area buffer zones (overlay map OM-01.5)	
PO8 Development within the area identified on overlay map OM-01.5 does not involve external lighting or reflective surfaces that could distract or confuse pilots. **Editor's note—**The standards specified in CASA Guidelines: Lighting in the vicinity of aerodromes: Advice to lighting designers, may be used to demonstrate compliance with this performance outcome.	**AO8.1** Development within the 6km radius shown on overlay map OM-01.5 does not involve: (a) straight parallel lines of lighting 500m to 1000m long; or (b) lighting which extends more than 3 degrees above the horizon; or (c) flare plumes; or (d) buildings with reflective cladding; or (e) upward-shining lights; or (f) flashing lights; or (g) sodium lights.
	AO8.2 In zone A shown on overlay map OM-01.5, lighting does not exceed 0 candela.
	AO8.3 In zone B shown on overlay map OM-01.5, lighting does not exceed 50 candela.
	AO8.4 In zone C shown on overlay map OM-01.5, lighting does not exceed 150 candela.
	AO8.5 In zone D shown on overlay map OM-01.5, lighting does not exceed 450 candela.

Table 1 - Land uses associated with increases in wildlife strikes and hazards

High Risk	Moderate Risk
• Aquaculture (fish hatchery); • Conservation estate (wetland); • Cropping (turf farm, fruit tree farm); • High-impact industry (fish processing/ packing plant, food processing plant more than 200 tonnes per annum); • Intensive animal industry (piggery); • Low impact industry (fish processing/packing plant, food processing plant); • Major sport, recreation and entertainment facility (showground); • Medium-impact industry (fish processing/packing plant, food processing plant less than 200 tonnes per annum); • Utility installation (Food / organic waste facility, Putrescible waste facility (e.g. landfill, transfer station). • Major sport, recreation and entertainment facility (all other);	• Animal husbandry (cattle/dairy farm); • Conservation estate (all other); • Intensive animal industry (poultry farm); • Outdoor sport and recreation; • Park; • Utility installation (Sewage/wastewater treatment facility, Non-putrescible waste facility e.g. landfill, transfer station).

Table 2 - Indoor design sound levels

Land Use	Locations within development	Indoor design sound design dB(A0
Care taker's accommodation Community residence Dual occupancy Dwelling house Dwelling unit Home based business Multiple dwelling Relocatable home park Residential care facility Retirement facility Rural workers' accommodation Tourist park Workforce accommodation	Sleeping areas	50
	Other habitual	55
Hotel where providing accommodation Rooming accommodation such as hostels Short term accommodation	Sleeping areas	55
Child care centre Education establishment	Libraries, study areas, sleeping areas	50
	Teaching areas, assembly areas	55
Health care services Hospital	Wards, theatres, treatment and consulting rooms	50
	Laboratories	65
(i) Child care centre (ii) Community care centre (iii) Community residence (iv) Community use (v) Detention facility (vi) Educational establishment (vii) Place of worship (viii) Residential care facility (ix) Place of worship (x) Tourist accommodation, or accommodation for employees, that is ancillary to a use stated in paragraphs (i) to (x) (xi) Commercial use that is ancillary to a use stated in paragraphs (i) to (x)	Internal areas	50
Office	Private offices, conference rooms	55
	Open offices	65
Low impact industry	Inspection analysis, precision work	75
	Light machinery, assembly, bench work	80

Note: For further information on indoor sound levels refer to Table 3.3 Australian Standard 2021 – 2015Acoustics – Aircraft noise intrusion – Building siting and construction (AS2021) as adopted February 2015.

8.2.2 Bushfire hazard overlay code

8.2.2.1 Application

This code applies to development where the code is identified as applicable in the categories of development and assessment for the Bushfire hazard overlay. When using this code, reference should be made to section 5.3.2 and where applicable, section 5.3.3 located in Part 5.

8.2.2.2 Purpose

(1) The purpose of the Bushfire hazard overlay code is to ensure that development does not:

- (a) increase the extent or the severity of bushfire hazard; or
- (b) increase the risk to life, property, community and the environment.

(2) The purpose of the code will be achieved through the following overall outcomes:

- (a) development is compatible with the nature of the bushfire hazard except where there is an overriding need for the development in the public interest and no other site is suitable and reasonably available for the proposal;
- (b) where development is not compatible with the nature of the bushfire hazard and there is an overriding need for the development in the public interest and no other site is suitable and reasonably available for the proposal; and
- (c) wherever practicable, facilities with a role in emergency management and vulnerable community services are located and designed to function effectively during and immediately after bushfire hazard events.

8.2.2.3 Assessment benchmarks

Table 8.2.2.3 - Accepted development subject to requirements and assessable development (Part)

Performance outcomes	Acceptable outcomes
General — all development **Editor's note —** Applicants should also refer to the Mitigating bushfire hazard planning scheme policy no. SC6.8 for additional information.	
PO1 Development maintains the safety of people and property.	No acceptable outcome is nominated.
PO2 Highly vulnerable development does not occur in very high, high or medium potential bushfire intensity and potential impact buffer areas unless there is an overriding need for the development in the public interest and no other site is suitable and reasonably available for the proposal.	**AO2** The following uses are not located in a very high, high or medim potential bushfire intensity and potential impact buffer area: (a) child care centre; or (b) detention facility; or (c) educational establishment; or (d) emergency services; or (e) hospital; or (f) industry activities involving manufacture or storage of hazardous materials in bulk; or (g) multiple dwelling; or (h) residential care facility; or (i) retirement facility; or (j) relocatable home park; or (k) rooming accommodation; or (l) shopping centre; or (m) short-term accommodation; or (n) telecommunications facility; or (o) tourist park; or (p) tourist attraction; or (q) transport depot; or (r) utility installation.
PO3 Development mitigates the risk of bushfire hazard through the siting and design of the development. **Editor's note—**In demonstrating compliance with this performance outcome, applicants should be aware that setbacks and buffers for fire management purposes are in addition to any buffers or setbacks required for ecological purposes and are located outside of areas of ecological significance to the greatest extent possible.	No acceptable outcome is nominated.

PO4 Development provides for an adequate and accessible water supply for firefighting purposes.	**AO4.1.1** The development is connected to a reticulated water supply where within a water supply area. OR **AO4.1.2** Where outside a water supply area a tank water supply is provided, at least one tank is within 100m of a class 1, 2, 3 or 4 building which has fire brigade fittings. **Editor's note -** Applicant should also refer to the Development manual planning scheme policy SC6.4 - SC6.4.11.7 On-Site Water Supply for additional information.
PO5 Public safety and the environment are not adversely affected by the detrimental impacts of bushfire on hazardous materials manufactured or stored in bulk.	**AO5** Development does not involve the manufacture or storage of hazardous materials within a very high, high or medium potential bushfire intensity and potential impact buffer bushfire hazard area as identified on overlay map OM-02.
PO6 Facilities with a role in emergency management and vulnerable community services are able to function effectively during and immediately after bushfire events.	No acceptable outcome is nominated.
PO7 Additional lots are not created in bushfire hazard areas.	**AO7** Development does not involve the creation of additional lots in areas mapped as very high, high or medium potential bushfire intensity and potential impact buffer hazard on overlay map OM-02
PO8 Development is designed to allow for efficient emergency access to buildings for firefighting appliances, including by avoiding long, narrow access arrangements.	No acceptable outcome is nominated.

PO9 Development provides a fire break which also facilitates adequate access for firefighting and emergency vehicles, and safe evacuation.	**AO9.1** Lot boundaries and development sites are separated from hazardous vegetation by a distance of 20m where adjacent to very high or high potential bushfire intensity and 10m where adjacent to medium potential bushfire intensity.
	AO9.2 The separation area mentioned in AO9.1 contains a fire access trail that: (a) has a minimum cleared and formed width of 6m; (b) has vehicular access at each end; (c) provides passing bays and turning areas for fire-fighting appliances; and (d) are either located on public land, or within an access easement that is granted in favour of council and Queensland Fire Department (QFD).
	AO9.3 Roads and trails: (a) have a maximum gradient of 12.5%; and (b) do not involve a cul-de-sac. **Editor's note—**Applicants should also be aware that Part 9 of the planning scheme sets out additional requirements for the construction of roads and other operational works associated with reconfiguration.

8.2.3 Coastal environment overlay code

8.2.3.1 Application

This code applies to development where the code is identified as applicable in the categories of development and assessment for the Coastal environment overlay. When using this code, reference should be made to section 5.3.2 and where applicable, section 5.3.3 located in Part 5.

8.2.3.2 Purpose

(1) The purpose of the Coastal environment overlay code is to ensure development in the coastal zone is planned, designed, constructed and operated to:

(a) avoid risk to people and property from coastal hazards, including storm tide inundation and coastal erosion, and taking into account the predicted effects of climate change; and

(b) manage the coast to protect coastal resources and allow for the natural fluctuations of coastal processes as far as possible.

(2) The purpose of the code will be achieved through the following overall outcomes:

(a) the foreshore and foreshore ecosystems are protected and managed to maintain their protective functions and allow for natural fluctuations to continue as far as possible;

(b) the exposure of communities and development to coastal hazards is minimised;

(c) urban and rural residential development does not expand into coastal hazard areas beyond areas zoned for urban and rural residential purposes;

Editor's note—To remove any doubt areas zoned for urban purposes includes the Emerging community zone.

(d) in areas zoned for urban and rural residential purposes and located in a coastal hazard area, the risks of storm tide inundation and erosion are avoided, or are mitigated and managed;

(e) opportunities for sustainable coastal-dependent development are protected;

(f) coastal-dependent development is undertaken in a manner that minimises impacts on coastal resources;

(g) public access to the foreshore is maintained and enhanced for current and future generations; and

(h) wherever practicable, facilities with a role in emergency management and vulnerable community services are located and designed to function effectively during and immediately after coastal hazard events.

8.2.3.3 Assessment benchmarks

Table 8.2.3.3(a) -Accepted development subject to requirements and assessable development (Part)

Performance outcomes	Acceptable outcomes
For accepted development subject to requirements	
Development in coastal hazard areas	

PO1 Development is designed and located to minimise susceptibility to, and the potential impacts of, storm tide inundation and erosion. **Editor's note—**Applicants must be aware that in some areas flood hazard areas will also co-exist with storm tide hazard areas. In these instances, the floor levels and other design responses will need to be sufficient to comply with both this code and the *Building Regulation 2021*.	**AO1.1** Floor levels of all habitable rooms are above the defined storm tide event level. **Editor's note—**For Townsville the defined storm tide event level can be taken as RL 4.5m AHD, within 100m of the coastline or RL 3.9m AHD in other areas.
	AO1.2 Underground parking is designed to prevent the intrusion of storm tide waters by the incorporation of a bund above the defined storm tide event level.
	AO1.3 Buildings have open ground floors that allow for the flow through of storm tide water and buildings are not designed as slab on ground.
	AO1.4 Buildings are located outside the erosion prone area or where this would be impractical, do not extend any further seaward than existing immediately adjacent buildings.

Table 8.2.3.3(a) -Accepted development subject to requirements and assessable development (Part)

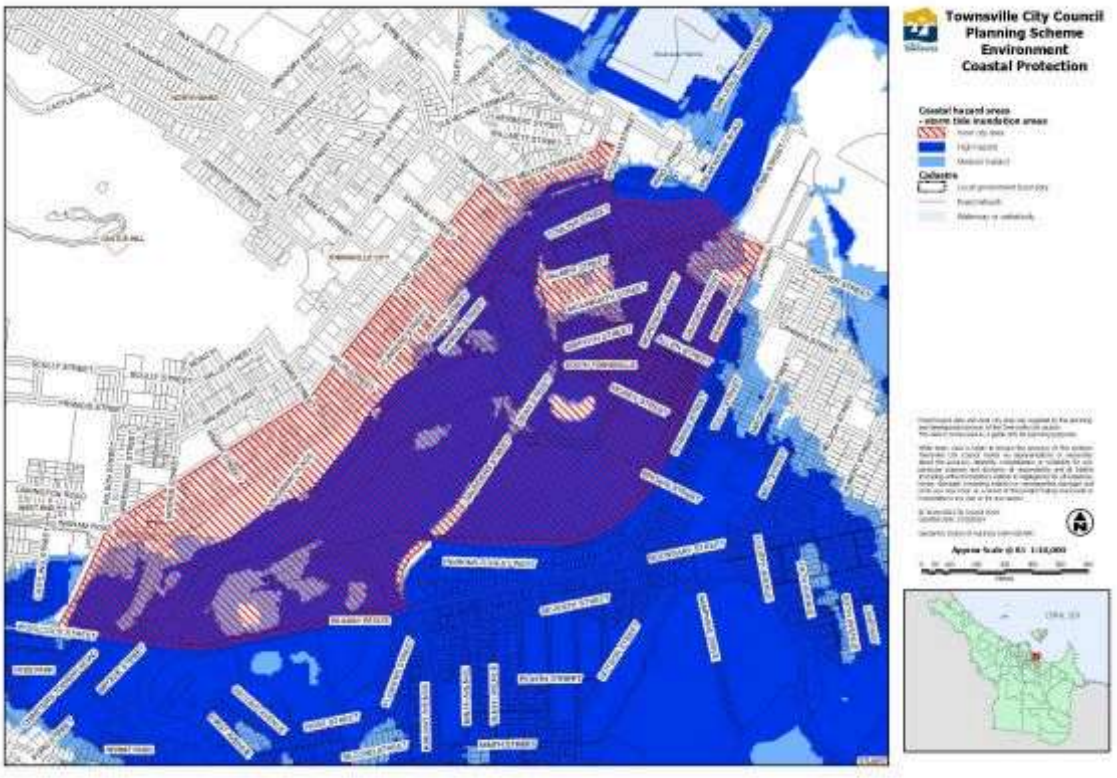
Performance outcomes	**Acceptable outcomes**
For assessable development	
Development in coastal hazard areas - erosion prone area	
PO2 Development locates outside erosion-prone areas identified on overlay map OM-03.3, apart from: (a) temporary or relocatable structures for safety and recreational purposes; or (b) development that does not intensify the extent of existing development within the erosion prone area; or (c) development that does not extend any further seaward than the existing adjacent buildings.	No acceptable outcome is nominated.
PO3 Development mitigates any increase in risk to people and property from adverse coastal-erosion impacts, avoiding the need for coastal protection works as far as practicable, having regard to: (a) minimising the footprint of the development of the part within the erosion prone area and locating the development as far landward as possible; (b) the practical design life of the development in the context of future erosion threat; (c) the ability for buildings or structures to be decommissioned, dis-assembled or relocated either on the site or to another site; and (d) use of appropriate foundations for the building or structure.	No acceptable outcome is nominated.

PO4 Where used, coastal protection works are: (a) consistent with a shoreline erosion management plan that has been prepared for the area; or (b) in response to a demonstrated need to protect existing permanent structures from an imminent threat of coastal erosion, if abandonment or relocation of the structures is not feasible, and a relevant shoreline erosion management plan has not been prepared.	No acceptable outcome is nominated.
PO5 Coastal erosion is mitigated by: (a) beach nourishment undertaken in accordance with a program of nourishment works; or (b) the construction of an erosion control structure where it is demonstrated that installing an erosion control structure is the only feasible option for protecting existing permanent structures from an imminent threat of coastal erosion at the location. **Editor's note—**Where a shoreline erosion management plan has not been prepared and coastal protection work is required to protect existing structures from coastal erosion threats, beach nourishment is favoured in preference to erosion control structures, such as seawalls and groynes. The location and materials for beach nourishment works are to ensure the natural characteristics and landform of the beach or foreshore is maintained. Applications involving erosion control structures must demonstrate the consideration of beach nourishment techniques and include a statement of why nourishment (in whole or part) has not been adopted as the preferred means of controlling the erosion risk.	No acceptable outcome is nominated.
PO6 Any development using erosion control structures to protect private property from threat of coastal erosion ensures: (a) erosion control structures are located wholly on private land; and (b) physical coastal processes outside the area subject to the coastal protection work are maintained. **Editor's note—**Applications for coastal protection work must be supported by a report certified by a registered professional engineer with coastal engineering experience that demonstrates how the engineering solution sought by the work will be achieved.	No acceptable outcome is nominated.

Table 8.2.3.3(a) - Accepted development subject to requirements and assessable development (Part)

Performance outcomes	Acceptable outcomes
For assessable development	
Development in coastal hazard areas — storm tide inundation areas	
PO7 Development is located outside high or medium storm tide inundation areas and erosion areas from sea level rise identified on overlay maps OM-03.1 and OM-03.2 unless it: (a) does not result in an increase in the intensity of development on the site; or (b) is located within the inner city area shown on Figure 8.1 — Coastal hazard areas: storm tide inundation areas and provides measures to ensure critical services remain operational up to the defined storm tide event; or (c) avoids any increase in risk to people or property from coastal hazard impacts (including impacts on the development's ongoing operation).	No acceptable outcome is nominated.
PO8 Development in storm tide inundation areas and erosion areas from sea level rise identified on overlay maps OM-03.1-OM-03.2 is located, designed, constructed and operated to: (a) ensure structures can sustain flooding from a defined storm tide event; and (b) maintain the safety of people living and working on the premises from a defined storm tide event.	**AO8.1** Development within a high or medium storm tide inundation area identified on overlay maps OM-03.1-OM-03.2 ensures: (a) habitable rooms of built structures are located above the defined storm tide event level; (b) underground parking is designed to prevent the intrusion of flood waters by the incorporation of a bund above the defined storm tide event level; and (c) where reconfiguring a lot, at least one evacuation route remains passable for emergency evacuations during a defined storm tide event. **Editor's note—**For Townsville the defined storm tide event level can be taken as RL 4.5m AHD, within 100m of the coastline or RL 3.9m AHD in other areas.
	AO8.2 Structures used for the manufacture or storage of hazardous materials in bulk are designed to prevent the intrusion of waters from a defined storm tide event.

PO9 Facilities with a role in emergency management and vulnerable community services are located, designed and constructed to ensure it is able to function during and after a storm tide inundation event.	**AO9.1** Development is either: (a) located in an area that is above the storm tide event level specified for that activity in table 8.2.3.3(b); or (b) designed to ensure any components of the infrastructure that are likely to fail to function or may result in contamination when inundated by storm tide inundation are above the storm tide event level for that activity in table 8.2.3.3(b).
	AO9.2 Emergency services and shelters, police facilities and hospitals, and associated facilities have an emergency rescue area above the storm tide event level specified for that infrastructure in table 8.2.3.3(b).



Click here to view PDF high resolution map.

Figure 8.1 - Coastal hazard areas: storm tide inundation areas

Table 8.2.3.3(a) -Accepted development subject to requirements and assessable development (Part)

Performance outcomes	Acceptable outcomes
For assessable development	
Public access	
PO10 Development maintains or enhances safe and convenient public access to the foreshore.	No acceptable outcome is nominated.

Table 8.2.3.3(a) -Accepted subject to requirements and assessable development (Part)

Performance outcomes	Acceptable outcomes
For assessable development	
Canals and artificial waterways	
PO11 Development that involves the construction of canals or artificial waterways connected to tidal water (either directly or indirectly) does not adversely affect coastal resources and their values.	No acceptable outcome is nominated.
PO12 The design, location, construction and operation of artificial tidal waterways are to maintain the tidal prism volume of the natural waterway to which it is connected.	No acceptable outcome is nominated.

Table 8.2.3.3(b)-Storm tide event levels for essential community services and facilities

Development	Level of immunity annual exceedance probability (AEP)
Development involving: (a) hospitals and associated facilities; or (b) major electricity infrastructure.	0.2% AEP event
Development involving: • emergency/evacuation shelters; or • fire and police stations; or • the storage of valuable records or items of historic or cultural significance (e.g. libraries, galleries); or • aeronautical facilities; or • telecommunication facilities; or • substations; or • water treatment plants; or • regional fuel storage; or • food storage warehouse; or • retirement facility and residential care facility.	0.5% AEP event
Development involving sewerage treatment plants requiring licensing as an environmentally relevant activity.	1% AEP event

8.2.4 Cultural heritage overlay code

8.2.4.1 Application

This code applies to development where the code is identified as applicable in the categories of development and assessment for the Cultural heritage overlay. When using this code, reference should be made to section 5.3.2 and where applicable, section 5.3.3 located in Part 5.

Editor's note—Places of cultural heritage significance are identified in Schedule 7, as well as on overlay maps OM-04.1, OM-04.2. OM-04.3 and OM-04.4.

8.2.4.2 Purpose

(1) The purpose of the Cultural heritage overlay code is to ensure:

- (a) the cultural heritage of Townsville continues to be a major contributor to the identity of the city and local communities;
- (b) the cultural heritage of Townsville is conserved for present and future communities;
- (c) development is consistent with the Burra Charter;
- (d) new development reflects and respects cultural heritage significance; and
- (e) places of cultural heritage significance are appropriately re-used.

(2) The purpose of the code will be achieved through the following overall outcomes:

- (a) places having cultural heritage significance in Townsville are conserved;
- (b) change is managed to ensure significant heritage features and values of a place are retained;
- (c) any demolition, removal or relocation of a heritage place does not have an adverse impact on the heritage significance of that place;
- (d) development on or adjoining a heritage place does not detract from the cultural heritage significance of the heritage place and its cultural heritage values;
- (e) development on or adjoining a heritage place is visually subservient to the heritage place and does not cause adverse impacts on significant views or the visual setting of the heritage place;
- (f) development on or adjoining a place of cultural heritage significance incorporates features which complement rather than replicate the heritage place;
- (g) restoration or reconstruction of known earlier states of heritage places is encouraged where practical; and
- (h) places of Aboriginal and Torres Strait Islander cultural heritage significance are conserved and managed in a culturally appropriate way.

Editor's note—Cultural heritage planning scheme policy no. SC6.3 will provide applicants with guidance in meeting the requirements of this code.

Editor's note—Council's process for adding or removing a place within Schedule 7 Places of cultural heritage value is stated in the Cultural heritage planning scheme policy SC6.3.

8.2.4.3 Assessment benchmarks

Table 8.2.4.3—Assessable development (Part)

Performance outcomes	Acceptable outcomes
Demolition or removal of, or within, a heritage place	
PO1 The removal or partial or total demolition, or relocation of a building or structure that is a heritage place only occurs if it can be demonstrated that the: (a) loss of the building or structure will not contribute to the loss of cultural heritage values; and (b) building or structure is not capable of structural repair.	No acceptable outcome is nominated. **Editor's note—**A heritage impact statement produced by a suitably qualified professional will be required to demonstrate there is no adverse impact on the cultural heritage significance of the place, and a suitably qualified professional provides a report on the building's condition, demonstrating that the place is not capable of repair. **Editor's note—** Refer to the Cultural heritage planning scheme policy no. SC6.3 for guidance on writing a Heritage Impact Statement.
PO2 When demolition or relocation of a heritage place occurs, appropriate archival recording is undertaken.	No acceptable outcome is nominated. **Editor's note—**Refer to the Cultural heritage planning scheme policy no. SC6.3 for guidance on the archival recording of heritage places, with which the action should be consistent.

Table 8.2.4.3—Assessable development (Part)

Performance outcomes	Acceptable outcomes
Development within a heritage place	
PO3 Development is sympathetic to, and consistent with the significant features and values of the heritage place, including: (a) maintaining significant views to and from the heritage place; (b) built form and setback; (c) scale; and (d) open space and landscaping features.	No acceptable outcome is nominated. **Editor's note—**A heritage impact statement produced by a suitably qualified professional will be required to demonstrate there is no adverse impact on the cultural heritage significance of the place, and any change will be effectively managed. **Editor's note—**Refer to the Cultural heritage planning scheme policy no. SC6.3 for guidance on writing a Heritage Impact Statement.
PO4 New buildings within a heritage place are visually subservient to the cultural heritage significance of the heritage place.	No acceptable outcome is nominated. **Editor's note—**A heritage impact statement produced by a suitably qualified professional may be required to demonstrate compliance with this performance outcome. Cultural heritage planning scheme policy no. SC6.3 provides guidance on how to write a heritage impact statement. It also sets out relevant parts of the Burra Charter. **Editor's note—**A proposed development should be designed by a suitably qualified architect or a building designer with demonstrated relevant experience.
PO5 Development incorporates compatible elements which complement rather than reproduce traditional building forms and details in terms of: (a) architecture; (b) scale; (c) external materials; and (d) finishes and colours.	No acceptable outcome is nominated. **Editor's note—**Refer to the Cultural heritage planning scheme policy no. SC6.3 for guidance on achieving performance outcomes.
PO6 Development does not alter, remove or conceal the significant features or values of the heritage place.	No acceptable outcome is nominated. **Editor's note—**Refer to the Cultural heritage planning scheme policy no. SC6.3 for guidance on achieving performance outcomes.

PO7 Development being a reconfiguration of a lot reflects the pattern and lot layout of the original subdivision in the locality and does not: (a) reduce public access to the place; or (b) obscure or destroy the historical context, the landscape settings or the scale and consistency of the built environment.	No acceptable outcome is nominated. **Editor's note—**Refer to the Cultural heritage planning scheme policy no. SC6.3 for guidance on writing a Heritage Impact Statement.
PO8 Any new fencing, landscaping, advertising device, access or parking arrangements are designed and sited in a manner that: (a) does not have a detrimental impact on the significant values or view of the place; (b) enhances the overall appearance of the heritage place; and (c) is sensitive to materials, colours, scale, placement and layout of the place.	No acceptable outcome is nominated. **Editor's note—**Refer to the Cultural heritage planning scheme policy no. SC6.3 for guidance on achieving performance outcomes.

Table 8.2.4.3—Assessable development (Part)

Performance outcomes	Acceptable outcomes
Signage	
PO9 Signage on Flinders Street East does not adversely affect the fabric and setting of the heritage place.	**AO9** For heritage places on Flinders Street East, signage is in accordance with the Cultural heritage planning scheme policy no. SC6.3.
PO10 If the loss of a heritage place occurs, interpretive signage is erected.	No acceptable outcome is nominated. **Editor's note—**Refer to the Cultural heritage planning scheme policy no. SC6.3 for guidance on how such signage should be established.

Table 8.2.4.3—Assessable development (Part)

Performance outcomes	Acceptable outcomes
Archaeology	
PO11 Development does not adversely impact on known or potential archaeological deposits.	No acceptable outcome is nominated. **Editor's note—**The Cultural heritage planning scheme policy no. SC6.3 provides guidance on how this may be achieved to council's satisfaction. Earthworks, including those associated with demolition, should be monitored by a suitably qualified archaeologist and archaeological deposits should be managed in accordance with the policy.

Table 8.2.4.3—Assessable development (Part)

Performance outcomes	Acceptable outcomes
Indigenous heritage significance	
PO12 There are no adverse impacts on any place that has cultural heritage significance to Aboriginal or Torres Strait Islander people.	No acceptable outcome is nominated. **Editor's note—**All proposed development on or adjacent to identified sites of indigenous cultural heritage significance is required to be carried out in accordance with the latest version of the *Aboriginal Cultural Heritage Act 2003 - Duty of Care Provisions*.

Table 8.2.4.3—Assessable development (Part)

Performance outcomes	Acceptable outcomes
Development adjoining a heritage place	
PO13 Development is sympathetic to and consistent with the features and values of the heritage place, including: (a) maintaining views to and from the heritage place where significant; (b) consistency of built form and setback; (c) potential for overshadowing; and (d) consistency with open space and landscaping features.	No acceptable outcome is nominated. **Editor's note—**Refer to the Cultural heritage planning scheme policy no. SC6.3 for guidance on achieving performance outcomes.
PO14 Reconfiguring a lot does not: (a) reduce public access to the heritage place; or (b) create the potential to adversely affect significant views to and from the heritage place; or (c) obscure, destroy or disrupt any pattern of historic subdivision, the historical context, the landscape settings or the scale and consistency of the built environment relevant to the heritage place.	No acceptable outcome is nominated.

Table 8.2.4.3—Assessable development (Part)

Performance outcomes	Acceptable outcomes
Elements in the road reserve	
PO15 Elements in the road reserve make a positive contribution to cultural heritage values of a place. Introduced features are compatible with significant features of the place.	No acceptable outcome is nominated.

8.2.5 Extractive resources and mining overlay code

8.2.5.1 Application

This code applies to development where the code is identified as applicable in the categories of development and assessment for the Extractive resources and mining overlay. When using this code, reference should be made to section 5.3.2 and where applicable, section 5.3.3 located in Part 5.

8.2.5.2 Purpose

(1) The purpose of the Extractive resources and mining overlay code is to ensure:

- (a) extractive resources are protected from development that might prevent or constrain current or future extraction or mining when the need for the resource arises;
- (b) extractive industry uses are operated in a way that minimises impacts on surrounding land uses and environmental values; and
- (c) sensitive land uses are protected from the impacts of former mining activities and related hazards.

(2) The purpose of the code will be achieved through the following overall outcomes:

- (a) development not associated with extractive industry is not located where likely to have an adverse impact upon existing and future extraction, processing and transportation of extractive resources;
- (b) development does not expose people and property to unacceptable hazards from former mining activities;
- (c) development is compatible with the existing and future mining within mining tenements granted or renewed under the *Mineral Resources Act 1989*;
- (d) development does not increase the number of people living within a separation area for a resource/processing area or transport route; and
- (e) development for the purpose of extractive industry
  - (i) protects personal health and safety;
  - (ii) minimises impacts to the amenity of surrounding land uses;
  - (iii) avoids impacts to environmental values on external premises; and
  - (iv) minimises impacts to environmental values on the premises.

8.2.5.3 Assessment benchmarks

Table 8.2.5.3—Assessable development (Part)

Performance outcomes	Acceptable outcomes
Development other than extractive industry	
PO1 Development located within a resource/processing area maintains the long-term availability and efficient winning of the extractive resource for extraction and processing, except where the following can be demonstrated: (a) there is an overriding benefit to the community; and (b) the development cannot reasonably be located elsewhere.	No acceptable outcome is nominated.

PO2 Development located in a separation area for a resource/processing area: (a) does not increase the number of people living in the separation area; and (b) minimises impacts from existing and future extractive industries on people working or congregating in the separation area; and does not compromise the function of the separation area as a buffer from incompatible uses outside the buffer area.	No acceptable outcome is nominated.
PO3 Development in a separation area for a transport route does not increase the number of people living in the separation area and is compatible with the safe and efficient operation of the transport route.	No acceptable outcome is nominated.
PO4 Development in the vicinity of mining-related leases: (a) does not compromise current or future utilisation of mineral resources; and (b) is not located where likely to be adversely impacted upon by existing and future mining activities.	No acceptable outcome is nominated.
PO5 Development with direct vehicle access to a transport route does not adversely impact the safety and efficiency of transport route.	No acceptable outcome is nominated.

Table 8.2.5.3—Assessable development (Part)

Performance outcomes	**Acceptable outcomes**
Historical mining tenements	
PO6 Development is located and designed so people and property are not exposed to unacceptable hazards from former mining activities (e.g. disused underground mines, tunnels and shafts). **Editors note**: A geotechnical assessment report prepared by a suitably qualified and experienced person will assist in demonstrating the achievement of the performance outcome.	**AO6** Buildings and infrastructure are located outside of the mining influence areas on the development site. **Editor's note**–Sites of former mining activity may be identified through the Historic Mining Permits, Resources (Mineral Occurrence and Geological Observation Data) and Abandoned Mines layers of MyMinesOnline Maps GeoResGlobe. However, proponents should be aware that the online mapping does not spatially represent all abandoned mines and their extent. Geotechnical investigation of past mining areas may reveal additional unmapped historic mine sites.

Table 8.2.5.3—Assessable development (Part)

Performance outcomes	Acceptable outcomes
Extractive industry	
PO7 Extractive industry is operated such that: (a) blasting activities do not create a public safety risk; and (b) on-site workers and the public are adequately warned of the activities and safety hazards.	No acceptable outcome is nominated.
PO8 Measures are taken to avoid or minimise adverse impacts from dust, sand, or soil on nearby properties.	No acceptable outcome is nominated.
PO9 Premises are secured to ensure that a person not involved in the operation is unable to gain entry to the premises.	No acceptable outcome is nominated.
PO10 The development maintains the extractive industry transport route to a standard commensurate with the volume, type, and nature of vehicular traffic utilising the transport route.	No acceptable outcome is nominated.
PO11 Development avoids adverse impacts on land uses, having regard to: (a) noise; (b) vibration; (c) airblast overpressure; (d) dust; (e) flyrock; (f) visual amenity; and (g) safety.	No acceptable outcome is nominated.
PO12 The extractive industry use is screened from any adjoining major road.	No acceptable outcome is nominated.
PO13 Development avoids or minimises impact on areas of ecological significance, ecological processes or biodiversity values external to the site.	No acceptable outcome is nominated.
PO14 Surface and groundwater quality external to the site is protected.	No acceptable outcome is nominated.
PO15 Development provides for the rehabilitation of the premises to restore the nature conservation values of the premises prior to the extractive industry as far as is reasonably practicable. **Editor's note—**A rehabilitation plan and expert ecological advice may be required to demonstrate achievement of this performance outcome.	No acceptable outcome is nominated.

8.2.6 Flood hazard overlay code

8.2.6.1 Application

This code applies to development where the code is identified as applicable in the categories of development and assessment for the Flood hazard overlay. When using this code, reference should be made to section 5.3.2 and where applicable, section 5.3.3 located in Part 5.

8.2.6.2 Purpose

(1) The purpose of the Flood hazard overlay code is to manage development outcomes in flood hazard areas so that risk to life, property, community, economic activity and the environment during future flood events is minimised, and to ensure that development does not increase the potential for flood damage on-site or to other property.

(2) The purpose of the code will be achieved through the following overall outcomes:

- (a) development is compatible with the nature of the flood hazard except where there is an overriding need for the development in the public interest and no other site is suitable and reasonably available for the proposal;
- (b) where development is not compatible with the nature of the flood hazard and there is an overriding need for the development in the public interest and no other site is suitable and reasonably available for the proposal:
  - (i) development minimises as far as practicable the adverse impacts from the hazard; and
  - (ii) does not result in unacceptable risk to people or property;
- (c) wherever practicable, facilities with a role in emergency management and vulnerable community services are located and designed to function effectively during and immediately after flood hazard event;
- (d) development maintains the safety of people and minimises the potential damage to property from flood events on the development site; and
- (e) development does not result in adverse impacts on people's safety, the environment or the capacity to use land within the floodplain.

8.2.6.3 Assessment benchmarks

Note—To avoid any doubt, the term medium hazard area used in this code includes areas shown on the Flood hazard overlay maps as medium hazard – further investigation areas.

Editor's note—Areas shown on the overlay maps as medium hazard — further investigation areas are based on Queensland Reconstruction Authority mapping. Limited information is available on flood characteristics in these areas. Further investigation may be required as a result. Flood hazard planning scheme policy no. SC6.7 will provide applicants with guidance in meeting the requirements of this code in these and other identified hazard areas.

Table 8.2.6.3(a)-Accepted development subject to requirements and assessable development (Part)

Performance outcomes	Acceptable outcomes
For accepted development subject to requirements and assessable development	
PO1 Development in medium and high hazard areas is designed and located to minimise susceptibility to and potential impacts of flooding. **Editor's note—**The *Building Regulation 2021* may also establish requirements with which development will need to comply. The defined flood event is identified in this planning scheme as the 1% annual exceedance probability (AEP) flood and is mapped as the combined extent of the high and medium flood hazard areas identified on overlay map OM-06.1 and 06.2. Other than in the medium hazard — further investigation area, council will be able to make available the height of the flood level for any particular location upon request. Applicants must be aware that in some areas storm tide hazard areas will also co-exist with flood hazard areas. In these instances, the floor levels and other design responses will need to be sufficient to comply with this code, the Coastal environment overlay code and the *Building Regulation 2021*.	**AO1.1** Where the development is located within an area shown on overlay map OM-06.1 or 06.2 as medium hazard — further investigation area, new buildings containing habitable rooms: (a) are sited on a part of the site which is outside the medium hazard — further investigation area; or (b) are sited on the highest part of the site. OR **AO1.2** Where development is located within another hazard area shown on overlay map OM-06.1 or 06.2: (a) floor levels of all habitable rooms are a minimum of 300mm above the defined flood level; (b) floor levels of all non-habitable rooms (other than class 10 buildings) are above the defined flood event; (c) parking spaces associated with non-residential development are located outside the high hazard areas identified on overlay map OM-06.1 or 06.2; and **Editor's note—**Class 10 buildings are identified under the Building Code of Australia and includes carports and outbuildings. (d) underground parking is designed to prevent the intrusion of flood waters by the incorporation of a bund or similar barrier with a minimum height of 300mm above the defined flood level.
PO2 Development in high hazard areas does not significantly impede the flow of flood waters through the site or worsen flood flows external to the site.	**AO2.1** Development in high hazard areas do not involve: (a) filling with a height greater than 150mm; or (b) block or solid walls or solid fences; or (c) garden beds or other structures with a height more than 150mm; or (d) the planting of dense shrub hedges.

Table 8.2.6.3(a) Accepted development subject to requirements and assessable development (Part)

Performance outcomes	Acceptable outcomes
For assessable development	
PO3 Development does not intensify use in high hazard areas, in order to avoid risks to people and property. **Editor's note—**High hazard areas are those likely to experience deep and/or fast moving water in a defined flood event.	**AO3.1** New buildings are located outside high hazard areas identified on overlay map OM-06.1 or 06.2.
	AO3.2 New lots or roads are not created within high hazard areas identified on overlay map OM-06.1 or 06.2.
	AO3.3 Sites for non-permanent accommodation such as tents, cabins or caravans (whether intended for short or long-term accommodation) are located outside the high hazard areas identified on overlay map OM-06.1 or 06.2.

PO4 Siting and layout of development maintains the safety of people and property in medium hazard areas. **Editor's note—**The *Building Regulation 2021* establishes requirements with which development will need to comply. The defined flood event is identified in this planning scheme as the 1% annual exceedance probability (AEP) flood and is mapped as the combined extent of the high and medium flood hazard areas identified on overlay map OM-06.1 and 06.2. Other than in the medium hazard — further investigation area, council will be able to make available the height of the flood level for any particular location upon request. Applicants must be aware that in some areas storm tide hazard areas will also co-exist with flood hazard areas. In these instances, the floor levels and other design responses will need to be sufficient to comply with this code, the Coastal environment overlay code and the *Building Regulation 2021*.	**On existing lots** **AO4.1** Floor levels for residential buildings are 300mm above the defined flood level. **Editor's note—**In medium hazard — further investigation area, a flood assessment in accordance with the Flood hazard planning scheme policy no. SC6.7 may be needed to establish the defined flood level.
	AO4.2 Floor levels of non-residential buildings (other than class 10 buildings) are above the defined flood level. **Editor's note—**Class 10 buildings are identified under the *Building Code of Australia* and includes carports and outbuildings.
	AO4.3 Underground parking is designed to prevent the intrusion of flood waters by the incorporation of a bund or similar barrier with a minimum height of 300mm above the defined flood level.
	AO4.4 Development for non-permanent accommodation such as tents, cabins or caravans (whether intended for short or long-term accommodation) are located outside the medium hazard areas identified on overlay map OM-06.1 or 06.2.
	Where reconfiguring a lot **AO4.5** Where reconfiguring a lot, new lots contain designated building envelopes (whether or not for residential purposes) outside the medium hazard areas identified on overlay map OM-06.1 or 06.2 and those building envelopes are of a sufficient size to accommodate buildings associated with the development.
	AO4.6 In new subdivisions, arterial, sub-arterial or major collector roads are located above the 2% AEP flood level.
	AO4.7 Reconfiguration of lots does not involve cul-de-sacs or dead end streets within medium hazard areas identified on overlay map OM-06.1 or 06.2.
PO5 Signage is provided within high and medium hazard areas to alert residents and visitors to the flood hazard.	**AO5** Signage is provided on-site (regardless of whether land will be public or private ownership) to indicate depth at key hazard points, such as at floodway crossings, entrances to low-lying reserves or parking areas.
PO6 Development within high and medium hazard areas ensures any changes to the depth, duration, velocity of flood waters are contained within the site. **Editor's note—**Impacts on a range of floods may need to be assessed and in most instances can be evaluated by analysing the minor drainage system capacity event and the defined flood event for the catchment wide critical duration, unless the site is located in an area noted in the Flood hazard planning scheme policy SC6.7.	No acceptable outcome is nominated.

PO7 Development within high and medium hazard areas does not directly, indirectly or cumulatively worsen flood characteristics outside the development site, having regard to: (a) increased scour and erosion; or (b) loss of flood storage; or (c) loss of or changes to flow paths; or (d) flow acceleration or retardation; or (e) reduction in flood warning times. **Editor's note—**To adequately assess the impacts of development on flooding regimes, applicants may need to have a hydrological and hydraulic assessment carried out by a suitably qualified and experienced hydrologist or engineer.	No acceptable outcome is nominated.
PO8 Facilities with a role in emergency management and vulnerable community services are able to function effectively during and immediately after flood events. **Editor's note—**This provision applies to high, medium and low flood hazard areas.	**AO8** The development is provided with the level of flood immunity set out in Table 8.2.6.3(b).
PO9 Public safety and the environment are not adversely affected by the detrimental impacts of flooding on hazardous materials manufactured or stored in bulk.	**AO9.1** Development does not involve the manufacture or storage of hazardous materials within a high flood hazard area identified on overlay map OM-06.1 or 06.2.
	AO9.2 Within the low or medium flood hazard area identified on overlay map OM-06.1 or 06.2, structures used for the manufacture or storage of hazardous materials in bulk are designed to prevent the intrusion of flood waters up to at least a 0.2% AEP flood event.

Table 8.2.6.3(b)-Flood immunity for community services and facilities

Development	**Level of flood immunity annual exceedance probability (AEP)**
Development involving: (a) emergency services; (b) hospitals and associated facilities; (c) emergency / evacuation shelters; (d) major electricity infrastructure.	0.2% AEP flood event
Development involving: (a) emergency/evacuation shelters; (b) the storage of valuable records or items of historic/cultural significance (e.g. libraries, galleries); (c) aeronautical facilities; (d) telecommunication facilities; (e) substations; (f) water treatment plants; (g) regional fuel storage; (h) food storage warehouse; (i) retirement facility and residential care facility.	0.5% AEP flood event
Sewerage treatment plants (requiring licensing as an environmentally relevant activity).	1% AEP flood event

8.2.7 Landslide hazard overlay code

8.2.7.1 Application

This code applies to development where the code is identified as applicable in the categories of development and assessment for the Landslide hazard overlay. When using this code, reference should be made to section 5.3.2 and where applicable, section 5.3.3 located in Part 5.

8.2.7.2 Purpose

(1) The purpose of the Landslide hazard overlay code is to manage development so that there is no increase to the extent or the severity of a landslide hazard and risk to life, property, community and the environment during landslide events is avoided.

(2) The purpose of the code will be achieved through the following overall outcomes:

(a) development is compatible with the nature of the landslide hazard except where there is an overriding need for the development in the public interest and no other site is suitable and reasonably available for the proposal;

(b) where development is not compatible with the nature of the landslide hazard and there is an overriding need for the development in the public interest and no other site is suitable and reasonably available for the proposal:

(i) development minimises as far as practicable the adverse impacts from landslide hazards; and

(ii) does not result in unacceptable risk to people or property.

(c) wherever practicable, facilities with a role in emergency management and vulnerable community services are located and designed to function effectively during and immediately after landslide hazard events.

8.2.7.3 Assessment benchmarks

Table 8.2.7.3-Assessable development

Editor's note—The Development manual planning scheme policy no. SC6.4 - SC6.4.15 Steep Land Development design guidelines will provide applicants with guidance in meeting requirements of this code.

Performance outcomes	Acceptable outcomes
PO1 Development is not subject to potential debris flow hazard.	**AO1** Development does not occur within the potential debris flow areas identified on OM-07.1.
PO2 People and property within the development site are protected from landslide hazard originating from inside or external to the site.	No acceptable outcome is nominated. **Editor's note—**The Development manual planning scheme policy no. SC6.4 - SC6.4.16 Geotechnical Investigations will provide applicants with guidance in meeting requirements of this code.
PO3 Development does not increase the risk of landslide to adjoining properties.	No acceptable outcome is nominated. **Editor's note—**The Development manual planning scheme policy no. SC6.4 - SC6.4.16 Geotechnical Investigations will provide applicants with guidance in meeting requirements of this code.
PO4 The development ensures the long-term stability of the development site.	No acceptable outcome is nominated. **Editor's note—**The Development manual planning scheme policy no. SC6.4 - SC6.4.16 Geotechnical Investigations will provide applicants with guidance in meeting requirements of this code.
PO5 Site access is not at risk from being permanently impeded by a landslide event.	No acceptable outcome is nominated. **Editor's note—**The Development manual planning scheme policy no. SC6.4 - SC6.4.16 Geotechnical Investigations will provide applicants with guidance in meeting requirements of this code.

PO6 The siting, design and construction works of development minimises the impacts on the natural landform and do not have a detrimental impact on slope stability or erosion potential.	No acceptable outcome is nominated. **Editor's note—**The Development manual planning scheme policy no. SC6.4 - SC6.4.16 Geotechnical Investigations will provide applicants with guidance in meeting requirements of this code.
PO7 Development maintains the safety of hazardous materials manufactured or stored in bulk. **Editor's note—** The term "hazardous material" is defined in the State Planning Policy.	**AO7** The manufacture or storage of hazardous materials in bulk does not occur: (a) within the medium, high or potential debris flow areas identified on overlay map OM-07.1; or (b) on land with a slope angle >23 degrees identified on overlay map OM-07.2.
PO8 Facilities with a role in emergency management and vulnerable community services are able to function effectively during and immediately after landslide events.	**AO8.1** Facilities with a role in emergency management and vulnerable community services are not located on land: (a) within the medium, high or potential debris flow areas identified on overlay map OM-07.1; or (b) on land with a slope angle >23 degrees identified on overlay map OM-07.2. OR **AO8.2** The development does not: (a) result in any new building work other than an addition to an existing building; (b) involve vegetation clearing; or (c) alter site levels or stormwater conditions.

8.2.8 Natural assets overlay code

8.2.8.1 Application

This code applies to development where the code is identified as applicable in the categories of development and assessment for the Natural assets overlay. When using this code, reference should be made to section 5.3.2 and where applicable, section 5.3.3 located in Part 5.

8.2.8.2 Purpose

(1) The purpose of the Natural assets overlay code is to:

- (a) protect areas of environmental significance, and the ecological processes and biodiversity values of terrestrial and aquatic ecosystems;
- (b) maintain ecosystem services and other functions performed by Townsville's natural areas; and
- (c) protect water quality, ecosystem health and the natural hydrological functioning of waterways, wetlands and their riparian areas.

(2) The purpose of the code will be achieved through the following overall outcomes:

- (a) development avoids or minimises direct and indirect impacts on areas of environmental significance and their associated ecological functions and biophysical processes;
- (b) development provides for the protection or enhancement of a linked network of habitat areas, including maximising opportunities for rehabilitation and restoration of degraded ecosystems, ecological communities, remnant vegetation and connecting corridors wherever possible;
- (c) development, including infrastructure, is located and designed to maintain or enhance ecological functions including facilitation of wildlife movement for native terrestrial and aquatic species and native and migratory avian species;
- (d) the water quality values and ecological functions of wetlands, waterways and their riparian areas and buffers are protected or enhanced;
- (e) development maintains, protects or enhances the natural hydrological regime and functioning of waterways and wetlands, including surface and ground waters and their interaction;
- (f) fragmentation of remnant vegetation and habitat areas is avoided to maintain ecological function and biodiversity values, and to maintain or increase the resilience of natural assets to threatening processes, including climate change; and
- (g) development incorporates appropriate buffering and mitigation strategies to avoid or minimise potential damage to natural areas and other environmental assets.

Editor's note—Natural assets planning scheme policy no. SC6.9 will provide applicants with guidance in meeting the requirements of this code.

8.2.8.3 Assessment benchmarks

Table 8.2.8.3—Assessable development (Part)

Performance outcomes	Acceptable outcomes
Protection of biodiversity values and ecological processes	
PO1 In areas identified as having high or very high environmental importance, significant values are protected and associated ecological functions and biophysical processes are maintained to ensure long term viability. **Editor's note—**Applicants should also refer to other state and federal legislation which may also require applicants to obtain additional approvals.	No acceptable outcome is nominated. **Editor's note—**Natural assets planning scheme policy no. SC6.9 provides information on the primary attributes included in very high, high and medium environmental importance areas. The overlay map has been produced using local government area wide data. Site-specific investigation will be required to confirm the extent and nature of values indicated on the overlay map or otherwise identify site-specific natural assets and ecological functions.
PO2 In areas identified as having medium environmental importance, development is located, designed and operated to: (a) retain and protect significant values; and (b) maintain the underlying ecological functions and biophysical processes. **Editor's note—**Applicants should also refer to other state and federal legislation which may also require applicants to obtain additional approvals.	No acceptable outcome is nominated. **Editor's note—**This category of environmental importance will also require a high level of investigation as part of any development application, to determine on the ground values and priority for protection. A detailed environmental assessment is to be undertaken by applicants in accordance with the guidance provided in the Natural assets planning scheme policy no. SC6.9.
PO3 Degraded areas with significant ecological and environmental values or important to the maintenance of underlying ecological functions and biophysical processes required to maintain biodiversity and ecosystem services are rehabilitated as near as is practical to the naturally occurring suite of native plant species and ecological communities.	No acceptable outcome is nominated. **Editor's note—**A rehabilitation plan supported by expert ecological advice prepared in accordance with Natural assets planning scheme policy no. SC6.9 will assist in demonstrating achievement of this performance outcome.

Table 8.2.8.3—Assessable development (Part)

Performance outcomes	Acceptable outcomes
Significant species and ecological communities	
PO4 Development avoids direct and indirect impacts on significant ecological communities and significant species and their habitats, including disturbance from the presence of vehicles, pedestrian use, increased exposure to domestic animals and noise and lighting impacts. **Editor's note—**Significant species and ecological communities include those identified in the Natural assets planning scheme policy no. SC6.9.	No acceptable outcome is nominated. **Editor's note—**Applications for development should identify any significant species or communities that may be affected by the proposal. A detailed environmental assessment is to be undertaken by applicants in accordance with the guidance provided in the Natural assets planning scheme policy no. SC6.9.
PO5 Areas of habitat that support a critical life cycle stage such as feeding, breeding or roosting or ecological function for threatened species, ecological communities or migratory species are not impacted by development.	No acceptable outcome is nominated.

Table 8.2.8.3—Assessable development (Part)

Performance outcomes	Acceptable outcomes
Buffering and edge impacts	
PO6 Development provides a vegetated buffer to an area of significant ecological or environmental value, in order to: (a) protect core habitat areas from threatening processes; (b) maintain connectivity or support linkages; (c) reduce threats to the environmental values from non-native or pest fauna or flora; and (d) avoid undesirable microclimate effects. Any setbacks or other areas required for bushfire management, safety, recreation, maintenance or any other purpose, are provided in addition to a vegetated buffer provided for ecological and environmental protection purposes.	**AO6** A buffer extending from the outside edge of a declared fish habitat area (measured from highest astronomical tide (HAT)) has a minimum width of 100m. For other areas, no acceptable outcome is nominated. **Editor's note—**Areas which are expected to constitute core habitat as well as declared fish habitat areas are identified on maps contained in the Natural assets planning scheme policy no. SC6.9. Declared fish habitat areas may also be obtained from the relevant state agency. Buffers for significant species and ecological communities, including areas of habitat for listed threatened and migratory species, should be based on best practice and current scientific knowledge of individual species requirements and supported by an environmental assessment prepared in accordance with the Natural assets planning scheme policy no. SC6.9. Other legislation, including the *Nature Conservation Act* and *Environment Protection and Biodiversity Conservation Act* may establish other requirements with which applicants must comply.
PO7 Buffering, rehabilitation or restoration: (a) uses site appropriate or endemic native vegetation; (b) replicates as far as practicable, the species composition and structural components of healthy remnant native vegetation and associated habitats, including understorey vegetation; and (c) excludes declared plants, environmental weeds and other non-native plants likely to displace native flora species or degrade habitat.	No acceptable outcome is nominated. **Editor's note—**A site-based management and rehabilitation plan prepared in accordance with the Natural assets planning scheme policy no. SC6.9 will assist in demonstrating achievement of this performance outcome.
PO8 Pest species are prevented from encroaching into ecologically significant areas.	No acceptable outcome is nominated. **Editor's note—**A site-based management and rehabilitation plan prepared in accordance with the Natural assets planning scheme policy no. SC6.9 will assist in demonstrating achievement of this performance outcome.
PO9 During construction and operation of development, measures are implemented to prevent light, noise, visual and other disturbances.	No acceptable outcome is nominated. **Editor's note—**A site-based management and rehabilitation plan prepared in accordance with the Natural assets planning scheme policy no. SC6.9 will assist in demonstrating achievement of this performance outcome.

Table 8.2.8.3—Assessable development (Part)

Performance outcomes	Acceptable outcomes
Ecological corridors and habitat connectivity	
PO10 Significant ecological corridors and habitat linkages are protected and have dimensions and characteristics to support: (a) ecological processes and functions that enable the natural change in distributions of species and provide connectivity between populations of species over long periods of time; (b) ecological responses to climate change; (c) connectivity between large tracts and patches of remnant vegetation and habitat areas; and (d) effective and unhindered day-to-day and seasonal movement of avian, terrestrial and aquatic fauna.	No acceptable outcome is nominated where in an urban residential zone or centre zone. In all other zones (including the Emerging community zone, Rural residential zone or industry zones): **AO10** Major ecological corridors identified on Figure SC6.9.3 in the Natural assets planning scheme policy no. SC6.9 are maintained and restored to achieve a minimum width of 350m, consisting of: (a) a 250m wide core corridor to support avian species and most arboreal mammals; and (b) a 50m wide vegetated buffer extending from the outside edges on both sides of the core corridor. No acceptable outcome is nominated for the great eastern ranges conservation corridor identified on Figure SC6.9.3 in the Natural assets planning scheme policy no SC6.9.
PO11 Corridors and linkages are provided to supplement and create additional ecological corridors and habitat linkages along waterways, drainage lines, ridgelines, coastlines and other areas where possible.	No acceptable outcome is nominated.
PO12 Development facilitates unimpeded use and movement of terrestrial and aquatic fauna that are associated with or are likely to use an ecological corridor as part of their normal life cycle by: (a) ensuring development, including roads, pedestrian access and in-stream structures, does not create barriers to the movement of fauna along or within ecological corridors; (b) providing effective wildlife management infrastructure to direct fauna to locations where wildlife movement infrastructure has been provided to enable fauna to safely negotiate a development area; and (c) separating fauna from potential hazards through the use of appropriate barriers and buffers.	No acceptable outcome is nominated.

Table 8.2.8.3—Assessable development (Part)

Performance outcomes	Acceptable outcomes
Riparian and buffer area management for wetlands and waterways	
PO13 Development locates outside of, and does not impact on wetlands, to ensure long-term ecological function.	**AO13** Development, including any associated filling or excavation (other than restorative works) is located outside of any mapped, defined or identified boundary of a wetland and its associated buffer. **Editor's Note—**Natural assets planning scheme policy no. SC6.9 contains Figure SC6.9.2 which identifies wetland areas. This information may also be obtained from the relevant state agency.
PO14 Development provides a buffer to a wetland area to: (a) protect or enhance habitat values, connectivity and other ecological functions and values; (b) protect water quality and aquatic conditions; (c) maintain natural micro-climatic conditions; (d) maintain natural hydrological processes; (e) prevent mass movement, gully erosion, rill erosion, sheet erosion, tunnel erosion, stream bank erosion, wind erosion, or scalding; and (f) avoid loss or modification of chemical, physical or biological properties or functions of soil. Any setbacks or other areas required for bushfire management, safety, recreation, maintenance or any other purpose, are provided in addition to a vegetated buffer provided for ecological purposes.	**AO14** A development-free buffer is provided and maintained with a minimum width of: (a) for wetlands designated as high ecological significance (HES) by the Queensland Government: (i) 50m from the outermost part of the wetland where located in an urban area; or (ii) 200m from the outermost part of the wetland where located in a non-urban area; or (b) for other wetlands: 50m from the outermost part of the wetland in either urban or non-urban areas. **Editor's note—**Natural assets planning scheme policy no. SC6.9 contains Figure SC6.9.2 which identifies wetland areas. This information may also be obtained from the relevant state agency. **Editor's note—**To avoid conflict, where a development requires multiple buffers to be established by this code to protect watercourses, corridors, wetlands or core habitat, the greatest distances required by this code will prevail to the extent of any inconsistency.

PO15 Development (including operation) and construction maintains or enhances the natural hydrological regime of wetlands, including surface and ground waters. **Editor's note—**The hydrological regime of surface waters includes: (i) peak flows; (ii) volume of flows; (iii) duration of flows; (iv) frequency of flows; (v) seasonability of flows; (vi) water depth (seasonal average); and (vii) wetting and drying cycle.	**AO15.1** Development does not change the existing surface hydrological regime of a wetland including through channelisation, redirection or interruption of flows.
	AO15.2 There is no change to the reference duration high-flow and low-flow duration frequency curves, low-flow spells frequency curve and mean annual flow to and from the wetland.
	AO15.3 Any relevant stream flows into the wetland comply with relevant environmental flow objectives.
	AO15.4 The water table and hydrostatic pressure in the wetland is either: (a) returned to its natural state; or (b) not lowered or raised outside the bounds of variability under existing pre-development conditions.
	AO15.5 Development does not result in the ingress of saline water into freshwater aquifers.
PO16 Development provides a buffer to a waterway, in order to: (a) protect or enhance habitat values, connectivity and other ecological processes and values; (b) protect water quality and aquatic conditions; (c) maintain natural micro-climatic conditions; (d) maintain natural hydrological processes; (e) prevent mass movement, gully erosion, rill erosion, sheet erosion, tunnel erosion, stream bank erosion, wind erosion, or scalding; and (f) prevent loss or modification of chemical, physical or biological properties or functions of soil. Any setbacks or other areas required for bushfire management, safety, recreation, maintenance or any other purpose, are provided in addition to a vegetated buffer provided for ecological purposes.	No acceptable outcome is nominated where in an urban residential zone or centre zone. Elsewhere (including the Emerging community zone, Rural residential zone or industry zones): **AO16** Other than where cropping for forestry for wood production, a development-free buffer is provided and maintained, extending from top of the bank of a waterway and with a minimum width of: (a) where in the Wet Tropics bioregion: (i) stream order 1 to 4: 25m; or (ii) stream order 5 and above: 50m; OR (b) in all other regions (Brigalow Belt North Bioregion or the Einasleigh Uplands Bioregion): (i) stream order 1 or 2: 25m; or (ii) stream order 3 or 4: 50m; or (iii) stream order 5 and above: 100m; **Editor's note—**Natural assets planning scheme policy no. SC6.9 contains Figure SC6.9.1 which identifies stream orders and bioregions. This information may also be obtained from the relevant state agency. **Editor's note—** Where a development requires multiple buffers to be established by this code to protect watercourses, corridors, wetlands or core habitat, the greatest distances required by this code will prevail to the extent of any inconsistency.

Table 8.2.8.3—Assessable development (Part)

Performance outcomes	Acceptable outcomes

Ongoing management, construction and operation	
PO17 During construction and operation of development, ongoing management, monitoring and maintenance is undertaken to ensure impacts on significant ecological areas, underlying ecological functions and biophysical processes and environmental values are avoided or minimised.	No acceptable outcome is nominated. **Editor's note**–Applicants will be asked to prepare an site based management plan to guide construction and operation.
PO18 Management arrangements facilitate the effective conservation and protection of significant ecological areas and underlying ecological functions and biophysical processes.	**AO18** Significant ecological areas are: (a) transferred into public ownership where the land is required for public access or for some other public purpose consistent with its values; or (b) incorporated within private open space and included within a voluntary statutory covenant by registration under the *Land Title Act 1994.*

8.2.9 Water resource catchment overlay code

8.2.9.1 Application

This code applies to development where the code is identified as applicable in the categories of development and assessment for the Water resource catchment overlay. When using this code, reference should be made to section 5.3.2 and where applicable, section 5.3.3 located in Part 5.

8.2.9.2 Purpose

(1) The purpose of the Water resource catchment overlay code is to ensure:

- (a) the quality of surface and ground waters and the ecological values and hydrological processes of water resource catchments are protected;
- (b) natural environment values and the ecological processes of terrestrial and aquatic ecosystems within the catchment area are protected;
- (c) the water resource catchment area is maintained predominantly in a natural state and is protected from development and activities that would have unacceptable impacts on water quality, either directly or indirectly.

(2) The purpose of the code will be achieved through the following overall outcomes:

- (a) the establishment, expansion or intensification of development is avoided in a water resource catchment area;
- (b) rural residential development is contained within the zoned Oak Valley community and development densities minimise the potential for impact on the catchment;

Editor's note—Applicants should refer to the Rural residential zone code.

- (c) the ecological values, hydrological processes and water quality values of ground and surface waters in water resource catchment areas are protected from direct and indirect development impacts;
- (d) development does not adversely affect the physical integrity of waterways, wetlands, lakes, springs, riparian areas and natural ecosystems that support water quality; and
- (e) vegetated buffers to the full supply level of a water storage area are provided and maintained.

8.2.9.3 Assessment benchmarks

For accepted development subject to requirements

Table 8.2.9.3-Accepted development subject to requirements and assessable development (Part)

Performance outcomes	Acceptable outcomes
For accepted development subject to requirements and assessable development	
PO1 Development is set back from features contributing to catchment waters and incorporates a buffer to protect and enhance water quality values of ground and surface waters for ecosystem health and human consumption.	**AO1** Development, including all buildings and supporting infrastructure, is set back from the top of the bank of a waterway as shown on Figure 8.2 – Waterways within the Ross Dam Catchment with a minimum width of: (a) for stream order 3 or 4: 50m; or (b) for stream order 5 and above: 100m.

Table 8.2.9.3-Accepted development subject to requirements and assessable development (Part)

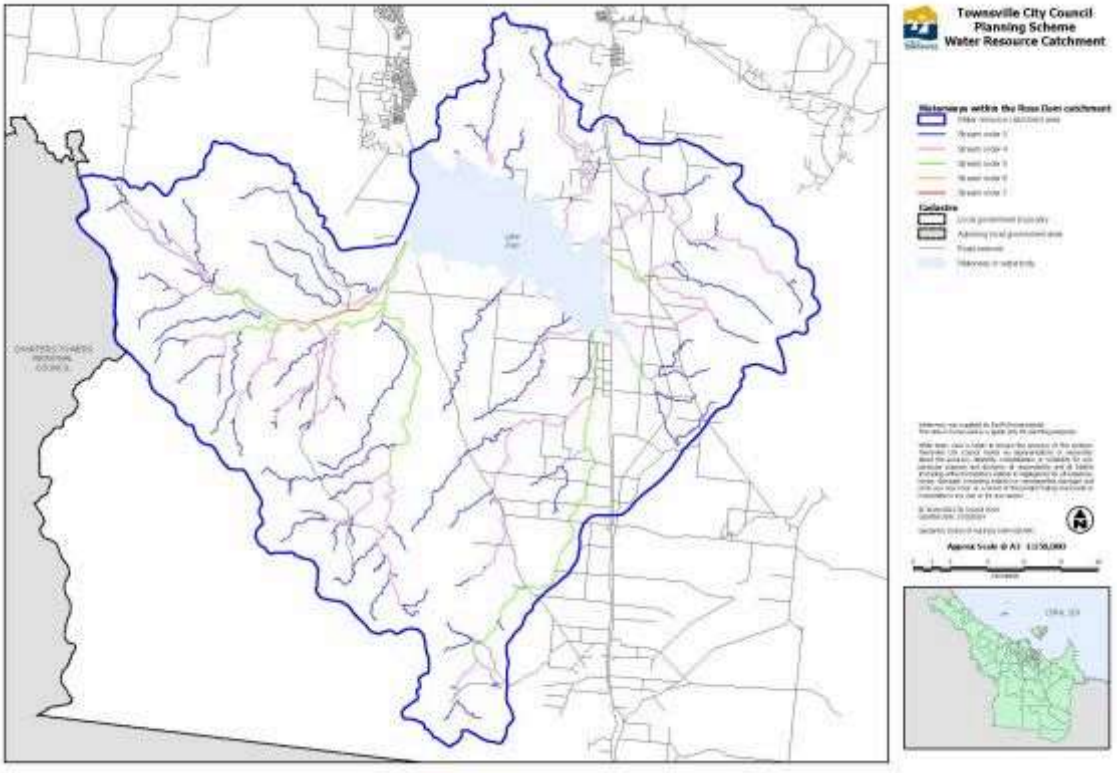
Performance outcomes	Acceptable outcomes
For assessable development	
Nature of development	
PO2 The intensification of activities within catchments is avoided, including any: (a) development, land use and management practices with the potential to degrade or contribute to the degradation of water quality in the water resource catchment area; and (b) development, use or activity that adversely affects the physical integrity of waterways, lakes, springs, riparian areas, wetlands and natural ecosystems.	No acceptable outcome is nominated.
PO3 Reconfiguration of lots does not increase the number of lots within the catchment, other than within the zoned Oak Valley rural residential area.	No acceptable outcome is nominated.
PO4 Within Oak Valley, the creation of additional lots is minimised.	**AO4** The minimum lot size in the rural residential zone within the catchment is 4ha.
PO5 Development in a water resource catchment area minimises land disturbance through appropriate siting, design and construction of buildings, structures, roadways and other work, and does not result in land degradation.	**AO5.1** Development does not involve earthworks.
	AO5.2 Development locates on slopes that do not exceed a 6% gradient.
PO6 Development in a water resource catchment area is managed in a way that maintains the structure and function of remnant vegetation and including erosion and associated loss to the soil fertility.	**AO6** Development does not involve vegetation clearing.
PO7 Development protects the water quality, ecological values, hydrological processes and other environmental values of any surface water or groundwater.	No acceptable outcome is nominated. **Editor's note –** Applicants should also have regard to Part 9.3.2 Healthy waters code for guidance on how to demonstrate compliance with this performance outcome. To demonstrate compliance with this performance outcome, council may request that a ground and surface water resource assessment be undertaken by a qualified person.

3.8.2 PIA Map 001 to PIA Map 020

(1) The PIA, overlaid with land use zonings and cadastral boundaries, is shown in the ensuing maps: PIA Map 001 to PIA Map 020.

Table 8.2.9.3-Accepted development subject to requirements and assessable development (Part)

Performance outcomes	Acceptable outcomes
For assessable development	
Buffers	
PO8 Development adjoining the water storage area identified on overlay map OM-09 protects and restores a vegetated buffer to avoid sediment, nutrients and pollutants from entering a waterway, wetland, lake, spring, riparian area or water storage area.	**AO8.1** Development including buildings, infrastructure, structures, enclosures and ancillary activities are not carried out within 500m of the water storage area identified on overlay map OM-09 and all existing vegetation is retained within the buffer.
	AO8.2 A vegetated buffer having a minimum width of 100m is established and maintained from the water storage area identified on overlay map OM-09.
PO9 Riparian vegetation within the water resource catchment area is protected.	**AO9** Development does not result in the clearing of any native riparian vegetation.
PO10 Development is set back from features contributing to catchment waters and incorporates a buffer to protect and enhance water quality values of ground and surface waters for ecosystem health and human consumption.	**AO10** Development, including all buildings and supporting infrastructure, is set back from the top of the bank of a waterway as shown on Figure 8.2 – Waterways within the Ross Dam Catchment with a minimum width of: (a) for stream order 3 or 4: 50m; or (b) for stream order 5 and above: 100m.



Click here to view PDF high resolution map.

Figure 8.2 - Waterways within the Ross Dam Catchment

8.2.10.Major infrastructure and hazardous facilities overlay code

8.2.10.1 Application

This code applies to development where the code is identified as applicable in the table of assessment for the Major infrastructure and hazardous facilities overlay code. When using this code, reference should be made to section 5.3.2 and where applicable, section 5.3.3 located in Part 5.

Editor's note—Explosive facilities are licenced under the Explosive Act 1999. Applicants are advised to contact Resources, Safety and Health Queensland – Explosives Inspectorate for information on obtaining a licence.

Editor's note—Development affected by the Major infrastructure and hazardous facilities overlay may be referred to Resources, Safety and Health Queensland – Explosives Inspectorate and / or the Department of Defence and / or the Office of Industrial Relations, Major Hazard Facilities Unit, as a third-party advice agency.

Editor's note—Australian Standard AS2187 Explosives – Storage, transport and use and / or the eDEOP 101 Department of Defence Explosive Regulation may assist in demonstrating compliance with the requirements of this code.

Editor's note—Uses other than residential uses within the Defence Explosive Ordnance Depots buffer area require approval from the Department of Defence.

Editor's note—Schedule 6 of the Planning Regulation 2017 prohibits a local categorising instrument from stating a Dwelling house is assessable development where it is located in a residential zone (other than a Medium density or High density residential zone) and no relevant overlay applies to the premises. The major infrastructure and hazardous facilities overlay code is not a relevant overlay as defined in the Planning Regulation 2017.

8.2.10.2 Purpose

(1) The purpose of the Major infrastructure and hazardous facilities overlay code is to ensure that development is compatible with, and does not adversely affect the viability, integrity, operation and maintenance of, the following existing and planned major infrastructure and hazardous facilities within the Townsville region:

- (a) Explosive reserves
- (b) high-pressure gas pipeline;
- (c) hazardous chemical facility;
- (d) major electricity infrastructure;
- (e) shooting ranges.
- (f) water supply pipelines;
- (g) water treatment facilities;
- (h) wastewater treatment facilities;
- (i) waste management facilities; and
- (j) stock route network.

(2) The purpose of the code is to manage the risk that the operation of a hazardous chemical facility or explosive reserve may pose to people and property to an acceptable level.

(3) The purpose of the code will be achieved through the following overall outcomes:

- (a) existing and planned major infrastructure facilities, networks and corridors, and hazardous chemical facilities are protected from incompatible development;
- (b) development proximate to existing and planned major infrastructure facilities, networks and corridors, and hazardous chemical facilities are appropriately located, designed, constructed and operated to:
  - (i) avoid compromising the integrity, operational efficiency and maintenance of infrastructure and facilities; and
  - (ii) protect the amenity, health and safety of people and property.
- (c) existing and planned noise emission facilities are protected from incompatible development;
- (d) development proximate to existing and planned noise emission facilities, are appropriately located, designed, constructed and operated to:
  - (i) avoid compromising the operational efficiency of noise emission infrastructure; and
  - (ii) protect the amenity, health and safety of people and property.
- (e) development proximate to the stock route network does not conflict with the ongoing efficient and safe use of the stock route network by travelling stock while ensuring the principles of the Stock Route

Management Act 2002 are upheld.

(f) development does not increase the number of lots created, or people living or working in proximity to hazardous chemical facility or explosive reserve, other than for special industry uses directly related to explosives, their distribution, disposal, storage or manufacture.

(g) development involving the use, storage and disposal of hazardous material and prescribed hazardous chemicals, dangerous goods, and flammable or combustible substances are located and managed to minimize the health and safety risks to communities and individuals.

(h) Hazardous chemicals are appropriately stored to reduce the risk of contamination on the environment.

(i) development is located to avoid any adverse impacts of environmental emissions, or health and safety risks, and where impacts cannot be practicably avoided, development is designed to mitigate impacts on the following existing and approved land uses or areas:

- (i) Medium-impact, high-impact and special industries
- (ii) Extractive industries
- (iii) Hazardous chemical facilities
- (iv) Explosives facilities and explosives reserves
- (v) High pressure gas pipelines
- (vi) Waste management facilities
- (vii) Sewage treatment plants.
- (viii) Industrial land in a state development area, or an enterprise opportunity area or employment opportunity area identified in a regional plan.
- (ix) Major sport, recreation and entertainment facilities.
- (x) Shooting facilities.
- (xi) Motor sport facilities.

Table 8.2.10.3 Assessable development (Part)

Performance outcomes	Acceptable outcomes
Protection of community health and safety	
PO1 Development for the purposes of a sensitive or vulnerable land use: (a) achieves indoor noise levels consistent with the objectives set out in the Environmental Protection (Noise) Policy 2019; and (b) achieves air quality levels consistent with the objectives set out in the Environmental Protection (Air) Policy 2019 and the relevant national standard. **Editor's Note** - A noise/odour/air impact assessment report will assist in demonstrating achievement of the performance outcome.	No acceptable outcome is nominated.

Table 8.2.10.3 Assessable development (Part)

Performance outcomes	Acceptable outcomes
Using design to protect Major infrastructure and hazardous chemical facilities from encroachment, and to mitigate adverse impacts	

PO2 Development is designed to minimise the impacts on the following existing and approved land uses or areas: (a) Explosive reserves (b) high-pressure gas pipeline; (c) hazardous chemical facilities; (d) major electricity infrastructure (including associated substations); (e) shooting ranges. (f) water supply pipelines; (g) water treatment facilities; (h) wastewater treatment facilities; and (i) waste management facilities. **Editor's Note**: A noise/odour/air impact assessment report will assist in demonstrating the achievement of this performance outcome for the high-pressure gas pipeline, major electricity infrastructure, shooting ranges, water supply pipelines, water treatment facilities, wastewater management facilities, and waste management facilities. **Editor's Note**: Risk assessment tools within Australian Standard AS 2187 Part 1 - storage of explosives and Australian Standard AS 2187 Part 2 - use of explosives, will assist in demonstrating the achievement of this performance outcome for the Explosive reserves and hazardous chemical facilities. **Editor's Note**: Development within a Hazardous chemical facility buffer area will be referred to the Office of Industrial Relations, Major Hazard Facilities Unit for third-party advice.	No acceptable outcome is nominated.

Explosive reserve buffer area

Table 8.2.10.3 Assessable development (Part)

Performance outcomes	Acceptable outcomes
Explosive reserve buffer area	
PO3 Development that is vulnerable to the effects of blast, radiant heat and projectiles is not established or intensified on land that is affected by the adverse impacts of an explosive facility. **Editor's note –** Written endorsement from Resource, Safety and Health Queensland – Explosives Inspectorate or the Department of Defence, stating they have no objection to the proposed development may assist in demonstrating compliance.	**AO3** Development does not involve the establishment or intensification of a vulnerable land use. **Editor's note –** Vulnerable land use is defined in Table SC1.2.2 Administrative definitions.
PO4 Reconfiguring a lot does not result in a material increase in the number of lots created or the number of people living or working in the Explosive reserve buffer area. disposal, storage or manufacture.	No acceptable outcome is nominated.

PO5 Buildings within the Explosive reserve buffer area are designed and constructed to be protected against potential hazards arising from proximity to explosives manufacture, storage, testing, disposal and distribution. **Editor's note** – Applicants are required to obtain written endorsement from Resource, Safety and Health Queensland – Explosives Inspectorate and the Department of Defence stating they have no objection to the proposed development.	No acceptable outcome is nominated

High-pressure gas pipeline and buffers

Performance outcomes	Acceptable outcomes
High-pressure gas pipeline and buffers	
PO6 Development within the buffer area surrounding a high-pressure gas pipeline does not create a risk to life or property and does not compromise the safe operation of the high-pressure gas pipeline.	**AO6.1** Development does not compromise the safe operation of the high-pressure gas pipeline in accordance with the written confirmation of the operator.
	AO6.2 Development is for a boundary realignment only and does not increase the number of persons likely to reside or work on the site.
PO7 Development, including uses and works constructed and operated, to avoid: (a) compromising the viability of the high-pressure gas pipeline corridor; or (b) damaging or adversely affecting the existing or future operation of the high-pressure gas pipeline and the supply of gas.	No acceptable outcome nominated. **Editor's note**- It is recommended that an applicant consult with the relevant gas pipeline manager prior to the lodgement of a development application in the vicinity of a high-pressure gas pipeline corridor.

Performance outcomes	Acceptable outcomes
Hazardous Chemical Facilities buffer area	
PO8 Development involving the use, storage and handling of prescribed hazardous chemicals is located, designed and constructed to minimise risks to human health and property, proportionate to the sensitivity of the surrounding land uses or zones. **Editor's note** - Development applications involving a 'hazardous chemical facility' require referral to the State Assessment Referral Agency (SARA) as a concurrence agency, with technical advice obtained from the Office of Industrial Relations, Major Hazard Facilities Unit. **Editor's note**- A hazard assessment report will assist in demonstrating achievement of the performance outcome.	No acceptable outcome is nominated.

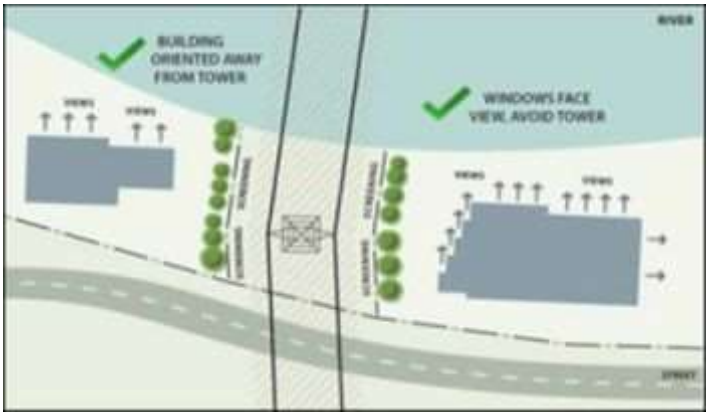
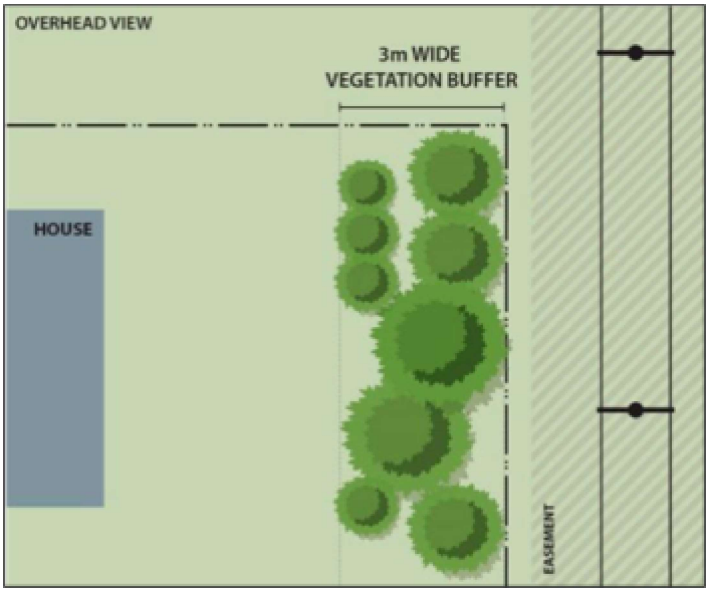
PO09 Development involving prescribed hazardous chemicals stored in a flood hazard area (where exceeding the hazardous chemicals flood hazard threshold) is located and designed in a manner that minimises the likelihood of inundation of flood waters from creeks, rivers, lakes, or estuaries.	No acceptable outcome is nominated.
PO10 Development is designed and sited to mitigate the risks from hazard scenarios occurring at existing hazardous chemical facilities. **Editor's note**- Applicants are required to obtain written endorsement from the Office of Industrial Relations, Major Hazards Facilities unit stating they have no objection to the proposed development within the Hazardous Chemical Facilities buffer area.	**AO10** No acceptable outcome is nominated.
PO11 Sensitive and vulnerable land uses are not established within the Hazardous Chemical Facilities buffer area.	**AO11** No acceptable outcome is nominated.

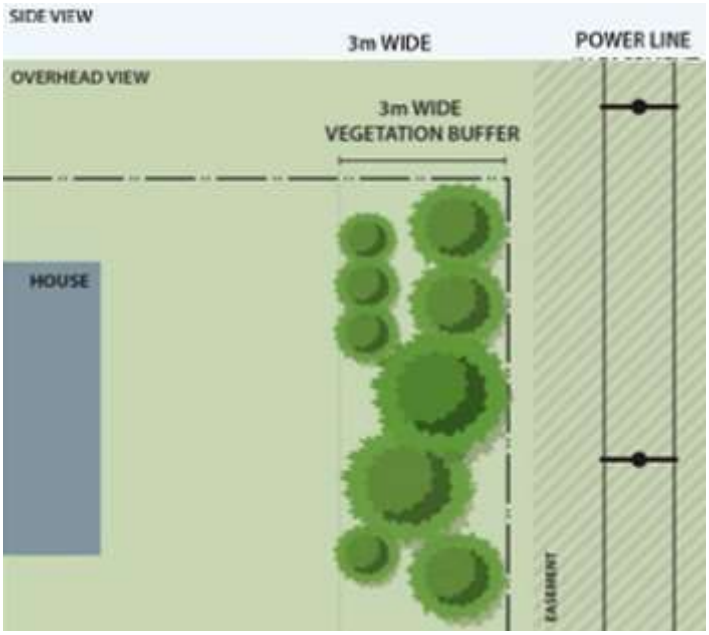
Table 8.2.10.3 Assessable development (Part)

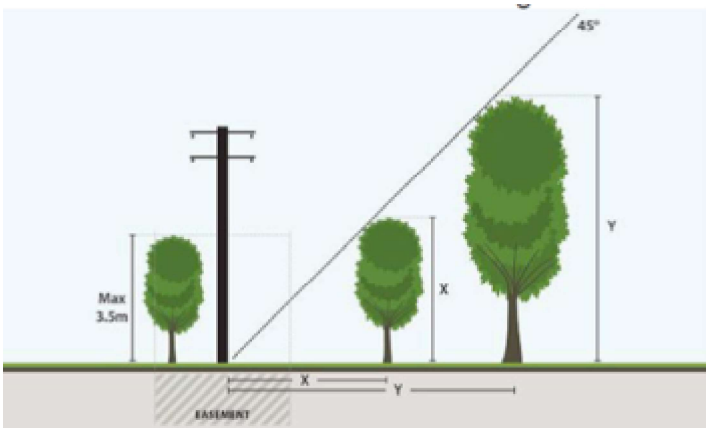
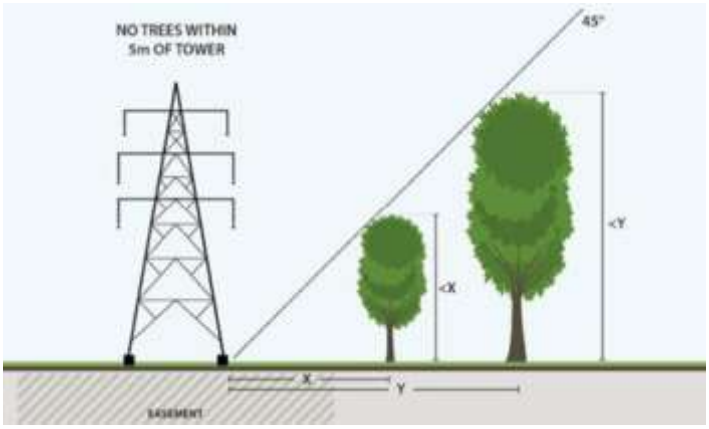
Performance outcomes	**Acceptable outcomes**
Major electricity infrastructure and substations	
PO12 Development of a sensitive land use (other than a Class 10 building or structure) is set back from the major electricity infrastructure to: (a) avoid safety risks to people and property; (b) minimise noise and visual impacts to people and property; and (c) ensure the physical integrity and operation, maintenance and expansion of the infrastructure are not compromised.	**AO12.1** Sensitive land uses (other than Class 10 buildings or structures) are not located within an easement for major electricity infrastructure.
	AO12.2 Sensitive land uses (other than Class 10 buildings or structures) maintain a setback of at least: (a) 10 metres from any distribution substation. (b) 50 metres from a transmission substation. (c) 30 metres from a transmission line easement.

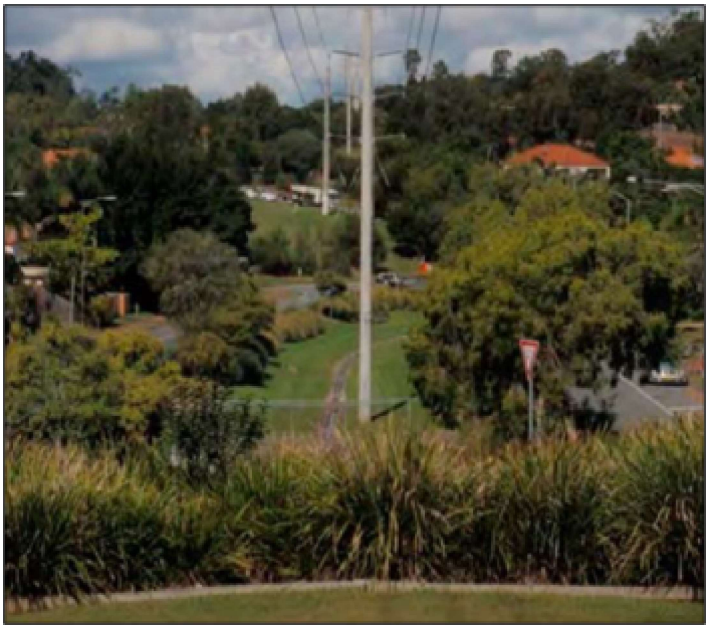
PO13 Development of a Class 10 building or structure is set back from the major electricity infrastructure to: (a) avoid safety risks to people and property; and (b) ensure the physical integrity and operation, maintenance and expansion of the infrastructure is not compromised.	**AO13.1** Class 10 buildings or structures: (a) are not located within an easement for a distribution line, or (b) are only located within an easement for a distribution line where: (i) development is not a swimming pool; (ii) development maintains a safe clearance from the powerlines in accordance with Electrical Safety Regulation 2013; or (iii) development is not located in a vacant easement for a future powerline or in a vacant section of a double width easement. **Editor's note**-Applicants should contact the relevant transmission or distribution entity for further information on whether an easement is either a vacant easement for a future powerline or a double width easement with a vacant section.
	AO13.2 Class 10a buildings or structures and Class 10b structures (excluding swimming pools) maintain a setback from the fencing of any substation of at least 4 metres.
	AO13.3 Class 10b structures that are swimming pools maintain a setback from any substation of a distance of at least 30 metres.
PO14 Development of hazardous chemical facilities, extractive industries, explosives storage facilities or development involving explosive blasting is setback from the major electricity infrastructure to: (a) avoid safety risks to people and property; (b) minimise noise and visual impacts to people and property; and (c) ensure the physical integrity and operation, maintenance and expansion of the infrastructure are not compromised.	No acceptable outcome is nominated.

PO15 Development other than: (a) a sensitive land use; (b) a class 10 building or structure; (c) major hazard facilities; (d) extractive industries; (e) development involving explosive blasting; or (f) explosives storage facilities. Is set back from the major electricity infrastructure to: (a) avoid safety risks to people and property; (b) minimise noise and visual impacts to people and property; and (c) ensure the physical integrity and operation, maintenance and expansion of the infrastructure are not compromised.	**AO15.1** Development is not located within an easement for major electricity infrastructure. **AO15.2** Development maintains a setback of at least 10 metres from any distribution substation and 50 metres from any transmission substation.

PO16 Residential buildings, other than where they are separated from the infrastructure by a road, are oriented to avoid direct overlooking of major electricity infrastructure.	**AO16.1** Windows and balconies of residential buildings do not face easements and infrastructure sites.  
	AO16.2 Views from residential buildings to infrastructure are screened by devices attached to the building. **Editor's note**- The figure below provides an illustration of buildings oriented away from infrastructure.
PO17 Development maintains a safe clearance from all powerlines.	**AO17** Development maintains the clearances required under Schedules 4 and 5 of the Electrical Safety Regulations 2013 or the current relevant standards.

PO18 Development (other than reconfiguring a lot) includes landscaping which substantively assists in screening major electricity infrastructure to minimise its visual impact to other uses, particularly residential uses and sensitive land uses.	**AO18.1** A minimum 3 metre wide densely planted landscaped buffer is provided along the boundary of a lot adjoining a lot or easement containing major electricity infrastructure (other than a substation), including provisions for advanced trees and shrubs that will grow to a minimum height of 10 metres.
	AO18.2 A minimum 2 metre wide densely planted landscaping buffer is provided along the boundary of a lot adjoining a lot or easement containing a substation, including provision for advanced trees and shrubs that will grow to a height which blocks direct views from habitable rooms to a substation and won't encroach into statutory electrical clearance distances. **Editor's note-**The figures below provide an example but are not drawn to scale. Applicants may find guidance in Powerlink's Screening your home from powerlines: A guide to planning trees and shrubs outside easements to screen powerlines. Applicants should also note that vegetation will need to maintain statutory clearances (for further guidance, refer to Ergon's Standard for Vegetation Management and Standard for Vegetation Clearance Profile). 
PO19 Development (other than reconfiguring a lot) that includes landscaping does not limit access to the major electricity infrastructure with the landscaping treatments.	No acceptable outcome is nominated.
PO20 Development that involves reconfiguring a lot results in a lot of sufficient size to provide adequate landscaped buffers along the lot boundaries to screen and soften the visual impact of major electricity infrastructure.	**AO20** The future development of a reconfigured site must be capable of providing a minimum 5 metre wide densely planted landscaped buffer, which is able to sustain advanced trees and shrubs capable of growing to a minimum height of 10 metres.

PO21 Vegetation planted near major electricity infrastructure does not pose any risk to the physical integrity and operation of the infrastructure.	**AO21.1** Where vegetation is planted within an easement of an overhead powerline or, where there is no easement, it should not be planted: (a) within 5 metres either side of the area directly below the conductors; (b) within 20 metres of a powerline structure, pole or stay; or (c) if it has a mature height of more than 3.5 metres.
	AO21.2 Vegetation planted within an underground powerline easement does not have a mature root system greater than 150 mm in depth and is not located within 1 metre of the area directly above the powerline cable.
	AO21.3 Vegetation adjoining easements complies with the clearance dimensions illustrated in the figures below.  
	AO21.4 Planting complies with (as relevant to the infrastructure concerned) either: (a) Energex's Safe Tree Guidelines; (b) Ergon's Plant Smart brochures; or (c) Powerlink's Screening your home from powerlines information

PO22 Where major electricity infrastructure is located within public open space, the dimensions and characteristics of the open space area are sufficient to accommodate the electricity easement on site, in combination with compatible recreational facilities and landscaping that ensure: (a) it has an open and expansive character, with landscaping design that helps break up the linear and vertical dominance of the infrastructure; (b) landscaping is located outside the easement area and screens and softens the appearance of poles, towers or other structures; (c) recreational facilities and landscaping are compatible with the electricity infrastructure, having regard to safety, height, the conductivity of materials and access to the electricity infrastructure by the transmission or distribution entity; and (d) the design is such that the function of the open space for recreation purposes is maintained.	No acceptable outcome is nominated. **Editor's note—**The figures below provide examples of a well-integrated transmission corridor.  

PO23

Any earthworks are undertaken in a way that:

(a) (a) ensures stability of the land on or adjoining major electricity infrastructure;

(b) (b) does not otherwise impact on the safety and reliability of the major electricity infrastructure; and

(c) (c) does not restrict the placement or use of the electricity provider's equipment.

AO23.1

No earthworks are undertaken within:

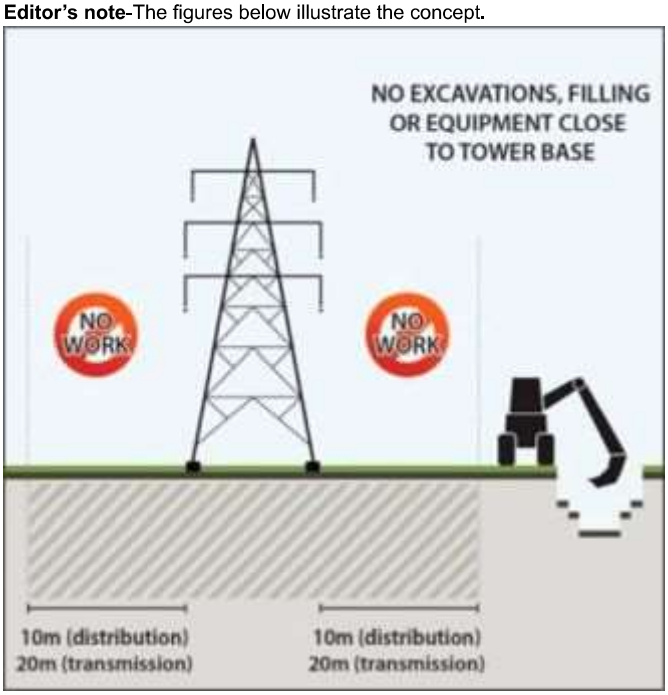
(a) 20 metres of a transmission tower, pole or stay for overhead transmission infrastructure;

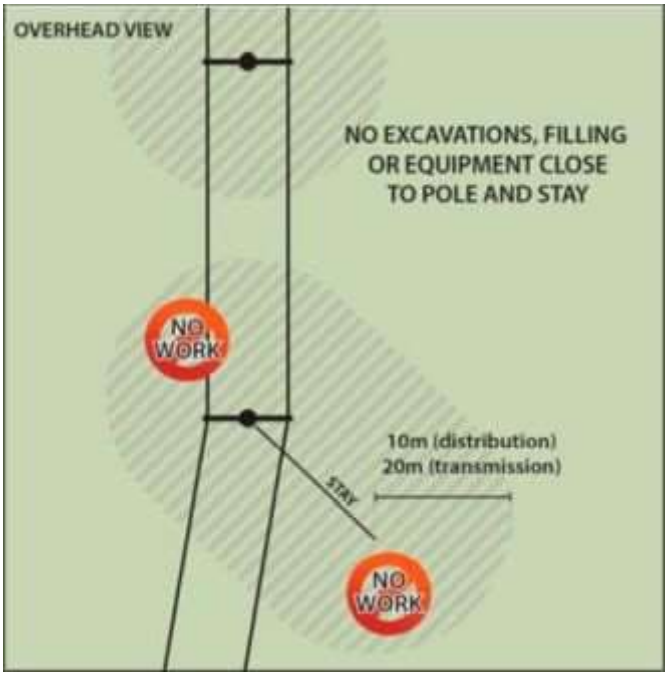
(b) 10 metres of a tower, pole or stay for overhead distribution infrastructure;

(c) 50 metres of a property boundary shared with a substation site for transmission substations; or

(d) 10 metres of a property boundary shared with a substation site for distribution substations.

Editor's note-The figures below illustrate the concept.





AO23.2

No earthworks are undertaken, or other loading or displacement of earth caused, within the easement of an underground powerline.

	AO23.3 Earthworks that alter levels along boundaries of, or within, existing or proposed easements do not alter the levels by more than 100mm.
PO24 Other services and infrastructure works (which may include stormwater, sewerage or water) do not impact on the safety and reliability of major electricity infrastructure.	**AO24.1** Underground services are not located within: (a) 20 metres of a tower, pole or stay for transmission infrastructure; (b) 10 metres of a tower, pole or stay for distribution infrastructure; (c) a vacant major electricity infrastructure easement; or (d) 10 metres of a substation property boundary.
	AO24.2 No valve pits occur within 60 metres of a tower, pole or stay for transmission infrastructure, or 10 metres of a tower, pole or stay for distribution infrastructure.
	AO24.3 Pipelines with cathodic protection systems comply with part 13 of Electrical Safety Regulation 2013 or the current relevant standard.
	AO24.4 Underground services traversing an easement cross at angles between 60 and 90 degrees to the overhead or underground lines.
	AO24.5 Trenches for services are backfilled to be compacted in 150 mm layers to at least 95% modified dry density compaction ratio.
	AO24.6 Trenches under construction are not left open overnight.

Performance outcomes	**Acceptable outcomes**
Shooting range impact areas	
PO25 Development is compatible with the risks and noise impacts generated by the Hervey Range rifle ranges, Alligator Creek rifle range or the Townsville Pistol Club.	No acceptable outcome is nominated. **Editor's note**-To demonstrate compliance with PO25, it is recommended that specific attenuation elements be incorporated into building design and siting, such as ensuring openings are appropriately glazed and orienting development away from the pistol club/rifle range site. There may also be a requirement for proponents to undertake a noise impact assessment in accordance with Environmental Protection (Noise) Policy 2019.

Performance outcomes	**Acceptable outcomes**
Water supply pipelines	

PO26 Development within a water supply pipeline and buffer are: (a) located, designed and constructed to protect the integrity of the water supply pipeline; and (b) maintain adequate access for any required maintenance or upgrading work to the water supply pipeline.	**AO26** Buildings and structures are setback a minimum of 20 metres from a water supply pipeline as shown on overlay map OM-10.3. **Editor's note**- Should a lesser setback be proposed, it is recommended that an applicant consult with the relevant water entity, to determine how compliance with the performance outcome can be achieved.

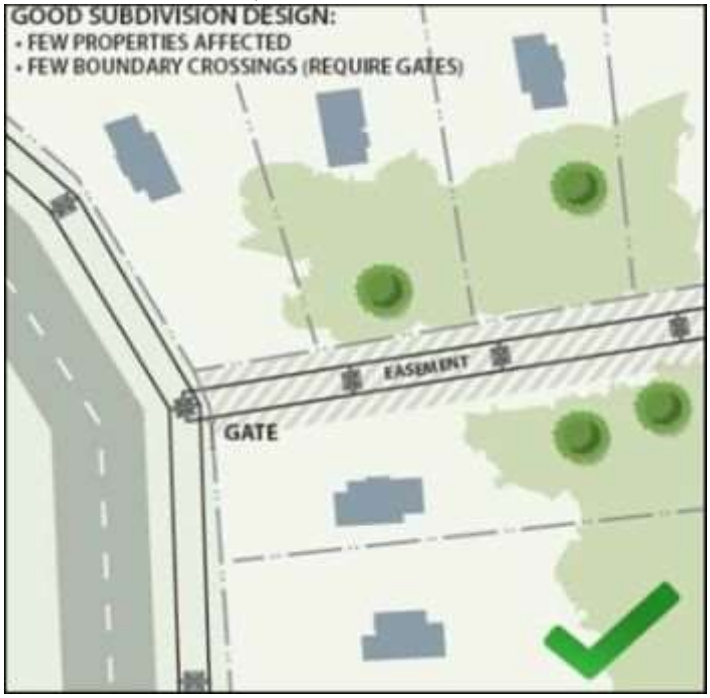
Performance outcomes	Acceptable outcomes
Water treatment facilities	
PO27 Development that is incompatible with existing and approved water treatment facilities avoids associated adverse impacts.	**AO27.1** A sensitive land use involving a residential activity is not located or intensified within a water treatment facilities buffer as shown on overlay map OM-10.3.
	AO27.2 A sensitive land use (other than a residential activity) located within a water treatment facilities buffer as shown on overlay map OM-10.3 demonstrates that occupants and users will not be adversely affected by odour and or noise emissions from activities associated with the water treatment facilities.

Performance outcomes	Acceptable outcomes
Wastewater treatment facilities	
PO28 Development that is incompatible with the impacts associated with existing and approved waste management facilities is not supported.	**AO28.1** A sensitive land use involving a residential activity is not located or intensified within a wastewater treatment facilities buffer as shown on overlay map OM-10.3.
	AO28.2 A sensitive land use (other than a residential activity) located within a wastewater treatment facilities buffer as shown on overlay map OM-10.3 demonstrates that occupants and users will not be adversely affected by odour and or noise emissions from activities associated with the wastewater treatment facilities.

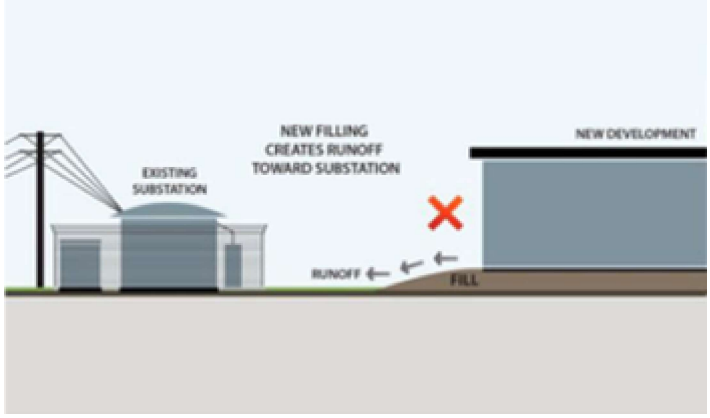
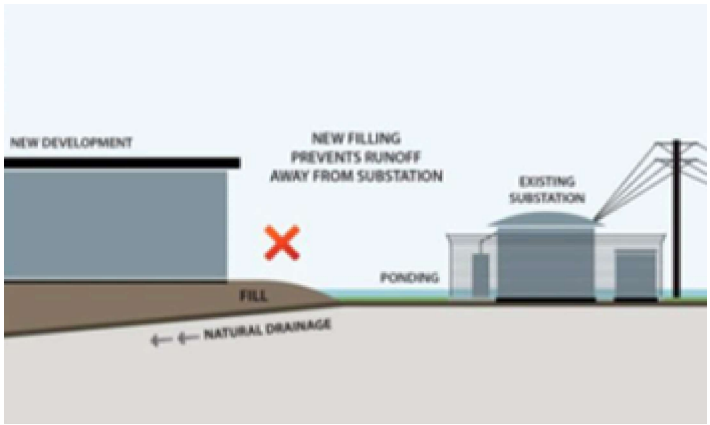
Performance outcomes	Acceptable outcomes
Waste management facilities	
PO29 Residential activities and other sensitive land uses are not adversely affected by noise and or odour emissions from existing or planned waste management facilities.	**AO29.1** A sensitive land use involving a residential activity is not located or intensified within a waste management facility buffer as shown on overlay map OM-10.2.

	AO29.2 A sensitive land use (other than a residential activity) and other incompatible development located within a waste management facility buffer as shown on overlay map OM-10.2 demonstrates that occupants and users will not be: (a) adversely affected by emissions from activities associated with the waste management facility; and (b) incorporates appropriate measures to minimize identified impacts.

Performance outcomes	**Acceptable outcomes**
Access to major electricity infrastructure and bulk water supply infrastructure	
PO30 Development does not create a barrier to existing access points to major infrastructure.	**AO30** Development does not limit access with: (a) fences constructed along the boundaries of, or traversing, existing or proposed infrastructure easements (other than as required to limit public access from the development to the infrastructure for public safety); (b) storage of equipment or materials within or along the boundaries of existing or proposed infrastructure easements; and (c) construction of buildings within or along the boundaries of existing or proposed infrastructure easements.
PO31 Major electricity infrastructure or bulk water supply infrastructure that is linear infrastructure (e.g. powerlines or pipelines) within private land is protected by easements in favour of the responsible utility provider.	**AO31** Existing easements are maintained and where none currently exist, new easements are created that are sufficient for the provider's requirements.

PO32 When reconfiguring a lot occupied by major electricity or bulk water supply infrastructure, the operational reliability and integrity of the infrastructure is protected by: (a) maintaining the level of access via existing easements; or (b) creating a new easement.	No acceptable outcome is nominated. **Editor's Note**- The images below provide one example on how to maintain access to an existing easement by ensuring that additional lots are not created within the easement. When creating an easement, utility providers must be consulted to ensure their requirements are satisfied.  
PO33 When reconfiguring a lot occupied by major electricity infrastructure or bulk water supply infrastructure, the reconfiguration does not intensify development within an easement in a way that would impede access to the infrastructure by the responsible utility provider.	**AO33** The number of lots within an easement associated with major electricity infrastructure or bulk water supply infrastructure is not increased.

Performance outcomes	**Acceptable outcomes**
Design and landscaping	

PO34 Reconfiguration for a new development area integrates major electricity and bulk water supply infrastructure within the overall layout. In particular, the layout: (a) ensures land of sufficient size and suitability to accommodate the existing and future infrastructure network; (b) minimises the visual impact of infrastructure; and (c) provides for an interface or relationship with surrounding land uses that minimises the potential for nuisance (including noise), health and safety concerns.	No acceptable outcome is nominated **Editor's Note**- Applicants should consult with the relevant transmission or distribution entity early in the master planning process to determine major electricity infrastructure requirements.
PO35 Development within a major electricity or bulk water supply infrastructure corridor incorporates the corridor into a useable public open space network wherever possible.	No acceptable outcome is nominated.
PO36 Development does not increase flooding, drainage or erosion conditions that would impact on the major electricity or bulk water supply infrastructure. **Editor's Note**- The figures below illustrate the concept.   	No acceptable outcome is nominated.

Performance outcomes	**Acceptable outcomes**
Stock route network	
PO37 Development does not conflict with the function and values associated with the stock route network.	No acceptable outcome is nominated.

PO38 Development does not result in encroachment by sensitive land uses and other incompatible uses along the stock route network and uses are setback and buffered from the stock route network to mitigate impacts.	No acceptable outcome is nominated.
PO39 Development does not result in a loss of additional values associated with the stock route network including recreational, environmental and heritage values.	No acceptable outcome is nominated.