1.0 PLANNING SCHEME POLICY 1 - ENVIRONMENTAL SIGNIFICANCE

1.1 RELATIONSHIP WITH THE PLANNING SCHEME

(1) This part sets out:

(i) particular standards called up as acceptable outcomes in 8.2.4 Environmental Significance Overlay Code. These are contained in the following subsections:
1.4 Environmental offsets

(ii) information council may request to demonstrate compliance with the performance outcomes of the code. These are contained in the following subsections:
1.3.1.1 Ecological report
1.4.2.1 Land based offsets management plan

(iii) guidance for applicants which is contained in the following subsections:
1.2.1 Compensatory planting
1.3.2 Minimising and mitigating impacts associated with development
1.4.3 Environmental offsets
1.5.1 Clearing thresholds
1.6.1 Mapping and data sources
1.7.1 Other approvals that may be required

1.2 COMPENSATORY PLANTING

(1) This section sets out guidance for applicants on how to achieve compliance with AO1.1 for self-assessable development in the Environmental Significance Overlay Code.

1.2.1 Guidance for applicants

(1) Where self-assessable clearing is undertaken in accordance with Table 5.10.1, compensatory planting should be provided for clearing between 500m^2 and 2500m^2 to the nearest equivalent square metre.

(2) Table 1 provides a list of tree and shrub species which are locally occurring in most regional ecosystems in the rural part of Redland City and can be utilised for replanting cleared areas.

Table 1: Replanting species

	Scientific name	Common name
Trees	*Corymbia intermedia*	Pink bloodwood
	Eucalyptus tereticornis	Queensland Blue Gum
	*Lophostemon confertus**	Brush Box
Shrubs	*Leptospermum polygalifolium*	Wild May
	*Jacksonia scoparia**	Dogwood

*Low flammability species (Table 8.2.2.3.2 of the planning scheme) recommended for use in areas identified in the bushfire hazard overlay, where planting within 10m of a building or structure.

(3) The above trees and shrubs should be planted at the following densities based on the area of compensatory planting required:
(a) 1 tree per 10m^2 of replanting area; and,
(b) 1 shrub per 2.5m^2 of replanting area.

(4) Applicants should refer to the Bushfire hazard overlay map to determine if there is a level of risk of bushfire hazard on the property. Replanting should be outside of any areas identified as being at risk of bushfire hazard, and be undertaken at least 10m from a building or structure. If bushfire hazard areas cannot be avoided, use low flammability species as indicated in the table above.

1.2.1.1 Additional information for replanting

(1) When undertaking compensatory planting, the species being removed should ideally be the species that is replaced. Species that will have the best chance of survival are locally occurring native species which are determined by the underlying Regional Ecosystem.

(2) In addition to the trees and shrubs listed in Table 1, locally occurring native species can be determined using Regional Ecosystem maps, available on Council's Red-E-Map, and Council's Regional Ecosystem Database.

(3) Compensatory planting should incorporate both tree and shrub species. Locally native groundcover (low-growing or spreading plants which might include grass or sedge species or herbaceous plants) could also be incorporated to enhance biodiversity value. Where locally native groundcover is included, it is suggested that the area be replanted using the proportions:
(a) 20% trees;
(b) 40% shrubs; and,
(c) 40% groundcovers.

(4) Plant spacing should be at a density that will result in rapid canopy closure as this is effective and minimising weed growth. The South East Queensland Ecological Restoration Framework advises allowing for planting of trees and shrubs placed at 1.5m centres.

1.3 MINIMISING AND MITIGATING IMPACTS ASSOCIATED WITH DEVELOPMENT

(1) This section identifies the preferred approach to undertaking assessments, which may be required to demonstrate compliance with the performance outcomes in the Environmental Significance Overlay Code.

1.3.1 Information that Council may request

1.3.1.1 Ecological Report

(1) An Ecological Assessment Report must be prepared by an ecologist with suitable experience[1] and provided to address the provisions of the Environmental Significance Overlay Code. For consistency and context it should also include any assessment required under Federal or State legislation (refer to section 1.7 of this planning scheme policy) or another relevant code of the City Plan.

(2) The Ecological Assessment Report should identify and describe the site's natural environmental features, and it's context in the surrounding and adjacent areas including:
(a) vegetation (including any weed infestations or potential for weed seed to be present in soil);
(b) fauna and habitat for fauna; and,
(c) any waterways or wetlands, including drainage lines (artificial or natural), where relevant.

(3) The level of detail in investigating these may vary, relative to the site and the development being proposed:

[1] Means a qualified ecologist with appropriate training and demonstrated experience in preparing ecological assessment reports within the South East Queensland region.

(a) For applications for vegetation clearing, it is necessary to provide details of the vegetation proposed to be cleared. It is recommended that this be provided in the form of an arborist report (refer to Planning Scheme Policy 2 – Section 4 for further information about Arborist reports).
(b) For applications that will affect fauna or habitat for fauna, this should include fauna surveys[2]
(c) For applications for small-scale development or operational works with limited capacity to adversely impact on environmental values or processes (at the site and adjoining area), it is sufficient to provide a basic assessment to complete the ecological assessment report (site visit and desktop assessment).
(d) For more complex applications or applications for large-scale development with potential for significant adverse impacts on environmental values or where development is located in particularly significant or sensitive areas, a more detailed ecological assessment, including flora and fauna surveys, is required.

(4) This assessment should also consider the broader context of the proposal, including but not limited to:
(a) safe fauna movement for all native fauna (throughout the proposed development, and with adjacent or nearby habitat); and,
(b) upstream and downstream water quality.

(5) The Ecological Assessment Report should then provide an assessment and justification of the proposed development, including an assessment of how the development will avoid, minimise and mitigate impacts on the identified environmental values. Guidance on development design is provided in section 1.3.2. Incorporating these suggestions is one way that an applicant might demonstrate compliance with some of the performance outcomes in the overlay code.

(6) A vegetation management plan and wildlife habitat management plan may be required to support the ecological assessment along with any other relevant site surveys and management plans (e.g. traffic), as determined by the values identified in the report.

1.3.1.2 Vegetation Management Plan

(1) A vegetation management plan must clearly identify the vegetation to be retained on site and vegetation that is proposed to be cleared and should include:
(a) a tree management plan that demonstrates how retained trees are to be protected during construction (in accordance with Australian Standard 4970-2009 Protection of trees on development sites);
(b) details of the proposed landscaping and revegetation areas, including proposed species palettes and relevant ecosystem services that landscaping and revegetation is to provide (for example stormwater management or enhancing safe fauna movement); and,
(c) details of how weeds are to be managed on the site, by identifying any existing weed infestations and proposed actions to prevent weed incursion during construction, including consideration of any weed seed likely to be present in soil.

1.3.1.3 Wildlife Habitat Management Plan

(1) A wildlife habitat management plan must be prepared by an ecologist with suitable experience[3] and should address the survival and ongoing access to habitat during construction and operation of the development. This plan should indicate the broad range of fauna expected on the site, the proposed site preparation and construction

[2] The Queensland Department of Environment and Science provides guidelines for undertaking terrestrial vertebrate fauna surveys. There are also targeted species survey guidelines. The guidelines include advice on how to address temporal variation in species abundance or presence/absence (i.e. day versus night and seasonal changes as well as between rainy years and drought years) to ensure robust data is collected. Refer to https://www.qld.gov.au/environment/plants-animals/biodiversity/vertebrate-survey
[3] Means a qualified ecologist with appropriate training and demonstrated experience in developing wildlife habitat management plans within the South East Queensland region.

methods (e.g. how the vegetation is to be cleared), as well as a summary of future on-site operations and any expected constraints. The plan must:

(a) identify habitat trees, including standing trees with hollows, ground logs and bush rocks, to be retained wherever possible;
(b) clearly identify vegetation to be removed to ensure minimal disturbance to the existing native vegetation, including any significant understorey species identified in the ecological assessment report, or otherwise identified, for translocation prior to clearing operations commencing; and,
(c) details on how fauna will be managed during construction (for example, engaging an accredited spotter and ensuring clearing is undertaken sequentially).

1.3.2 Guidance for applicants

(1) This section provides additional guidance for applicants, summarising development design considerations to assist in meeting the performance outcomes of the Environmental Significance Overlay Code. The additional guidance in this section can also be used to inform the ecological assessment report, as outlined in the previous section.

(2) **Values to be protected:** The site's existing values and constraints should be identified and considered during development design (refer to previous section). The development design should then demonstrate how this design achieves the performance outcomes of the Environmental significance code.

(3) These values and constraints should be taken into consideration in determining the 'development footprint'. The development footprint is the extent of the development and the location of works, including any proposed services and facilities that are incidental to the development. This development footprint should:

(a) avoid the need to clear vegetation, in particular habitat for priority species, mature trees, vegetation that is part of a corridor, or that is part of a larger contiguous patch of vegetation, including vegetation mapped as MLES wildlife core and corridor habitat;
(b) avoid the need for excavation or fill works and,
(c) provide an appropriately sized buffer between development and areas of environmental significance. Further guidance on buffers is below in part 4(h).

(4) **Minimising and mitigating impacts:** Depending on the development being proposed, and the values and constraints that have been identified for protection, consideration should then be given to minimising and mitigating any impacts that may result from the development. These include:

(a) enhancement and landscaping planting should be directed to areas of environmental value or sensitivity, including riparian areas, to strengthen existing corridors or habitat (refer to section (5) below);
(b) pests[4] and weeds should be removed, and future incursions prevented;
(c) stormwater quality and volume should be managed, in accordance with the Healthy Waters Code;
(d) the location of new potential noise sources should be determined as part of the Ecological Assessment report, and noise abatement measures applied to ensure that noise is not directed into habitat areas or where fauna movement is provided for;
(e) artificial light should not be directed into habitat areas. Particular consideration should be given to flying fox roost sites migratory shorebird roost sites and turtle nesting areas:
    (i) Within 50m of flying fox roost sites (identified through the Ecological Assessment Report) artificial light should be limited, and mitigation measures (e.g. shielding) should be implemented.
    (ii) North Stradbroke Island - where development is in proximity to turtle

[4] Mainland suburbs of the Redland City local government area are mapped within the Fire Ant Biosecurity Zones. Fire-ant safe practices must be followed when working with organic materials, in accordance with the *Biosecurity Regulation 2016*. The fire ant biosecurity zone map is published by the Department of Agriculture and Fisheries on the Queensland Government's publications portal.

nesting sites on beaches in and around Point Lookout:

- within 1.5km - maintain a 'darkness zone' with no artificial light. This can be done by using 'low pressure sodium' (LPS) lights, using natural topography, vegetation and structures to shield the beach form light at turtle eye level, and by using directional lighting to directly light downwards and away from the beach;
- between 1.5km and 5km - measures should be taken to limit the amount of artificial light used, by confining lighting to essential purposes only, and using LPS lighting, avoiding decorative or ultraviolet lights, and designing directed and shielded lights;

(iii) (iii) Within 150m of migratory shorebirds roost site (identified through the Ecological Assessment Report) artificial light is to be limited, and mitigation measures (e.g. direct light downwards and away from roost, vegetation or artificial light screening) are to be implemented where development is within proximity to migratory shorebird roost sites.

(f) safe fauna movement should be provided for. This might include road treatments, exclusion fencing, funnelling fences and structures, underpass structures, lighting, speed limits and street signage. Refer to 'Fauna Sensitive Road Design; volume 1 and 2' (DTMR) for more specific guidance. Where fauna underpasses are proposed, they must be designed, constructed and furnished to facilitate the movement of target species (identified through the Ecological Assessment Report);

(g) for Koalas, the Koala-sensitive Design Guideline from the Queensland Department of Environment and Science (DES) provides guidance on appropriate measures to avoid and minimise impacts of development on koala movement;

(h) buffers may be used for a number of different reasons, for example to allow for fauna movement, to protect an existing habitat area, to protect a waterway or to protect adjacent land uses from impacts as a result of noise, light, vibration or other reason. The size of the buffer area will vary, depending on the type and scale of the development proposed, surrounding land uses and the existing natural features. The following should be used to guide the use of buffers:

(i) buffers around waterways should provide an appropriate distance to allow for a diversity of flora species and provide for wildlife corridors, as well as accounting for any natural variation to the waterway over time (refer to Waterways and Wetlands Overlay Code);

(ii) habitat areas being buffered should also include areas like grassland (e.g. coastal saltmarsh, claypans etc.) and foreshore areas;

(iii) buffers should be sufficient to direct native animals away from those parts of development that potentially pose a threat and provide an effective separation between the source of the threat and habitat and movement networks;

(iv) an effective width to minimise the edge effects[1] of weed infestation, pedestrian and vehicle access, fires, etc;

(v) separate habitat areas from sensitive land uses. For example, sensitive land uses (e.g. childcare centres, vet clinics and retirement villages) should be located at least 300m from flying fox roost sites;

(vi) measures should also be taken to protect identified areas of significance during the construction stage of any development, for example by ensuring safe fauna access to retained habitat in accordance with a wildlife habitat management plan (refer to section 1.3.1.3);

(5) **Corridors and enhancement planting:** Planting as part of a development could be undertaken as part of the site's landscaping, to enhance existing vegetation and habitat, or to replace habitat that was removed as part of the development. Applicants should consider at a minimum the following:

(a) Connections to other habitat areas is considered, either by enhancing identified MLES - wildlife core and corridor habitat areas[5] or by establishing other

[5] a commonly used term in ecology and related research and literature. In this context it is used to describe the impact of urban development adjoining habitat areas, and impacts that include things like physical disturbance to soil and

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ecological corridors.

(b) ensure weed management is also undertaken;

(c) If the assessment process has found the existing soil is suitable, this can include active management to encourage regrowth of native plants from the seedbank and rootstock that exist in the soil. This can be done by stockpiling topsoil on site and later spreading it in cleared, degraded or bare areas in accordance with the ecological assessment report, or as determined through site assessment, to encourage regeneration of native plants. Topsoil contains important seed bank and plant regeneration material that may be used for regeneration at low cost following its removal from construction areas. This method requires weed treatment as if the area is infested with weeds, then the topsoil will have a high presence of weed species in the seed bank. Any imported topsoil must be certified to be free of weeds, fire ants and phytophthora. Imported soil should also be tested for acidity and treated, if necessary, before delivery to the site;

(d) undertake replanting, by planting seedlings or tubestock and undertaking active management to nurture them through the first twelve months (unless otherwise specified through a condition on the development approval) until they are well established;

(e) use native plants identified in the Redland City Council Regional Ecosystem (RE) Species Database as being suitable to the location of the planting; and,

(f) The South East Queensland Ecological Restoration Framework provides additional guidance for restoration planting and regeneration works in its 'Guideline' section.

1.4 ENVIRONMENTAL OFFSETS FOR MLES

(1) This section sets out the standards called up in ~~AO17.1~~ AO18.1 in the Environmental Significance Overlay Code. These standards represent the acceptable outcome which meets the performance outcomes set out in the code.

1.4.1 Standards called up as acceptable outcomes

1.4.1.1 ~~Relationship between~~ Offsets may be required for MLES and MSES

(1) In accordance with the *Queensland Environmental Offsets Act 2014* (the Offsets Act), offsets may be required for identified matters of state environmental significance (MSES) and for matters of local environmental significance (MLES).[6] Additional ~~G~~guidance on satisfying offset requirements for MSES can be found on the State government's offsets website.

(2) For the purposes of the Environmental Significance overlay, the matters mapped as MLES are outlined in section 1.6.

1.4.1.2 Types of offsets

(1) Offsets may be provided in accordance with the Offsets Act as either:

(a) financial settlement (calculator provided on the Queensland Government's offsets website); or

(b) proponent-driven offset (comprising a land-based offset; and/or actions in a Direct Benefit Management Plan (DBMP))[7]

vegetation, increased weed and exotic species, reduced fauna diversity and increased vulnerability of fauna to predation, and the impacts from things like light and noise

[6] s14(2)(b) of the Environmental Offsets Act 2014 does not allow for an offset condition to be imposed on a prescribed environmental matter that is "the same, or substantially the same". Therefore, Redland City Council as the local authority cannot impose an offset where the MLES being impacted is the same prescribed environmental matter as the MSES listed in the State Planning Policy.

[7] the Offsets Policy provides that a DBMP cannot be used to offset a significant residual impact on koala habitat.

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(2) Offsets can be delivered as a combination of these, and offsets can also be provided as a 'staged offset' where the offset conditions specify this option. Staged offsets may be appropriate where a development that has a series of parts, or 'stages', and it is appropriate to deliver offsets at each stage of the development. The Queensland Environmental Offsets Policy (Version 1.13) (the Offsets Policy) provides more detail on delivering staged offsets.

~~(3) Offsets for MLES are to be calculated on the basis of 1:3 (1 tree removed: 3 trees planted). The Queensland Government's offsets website has information on how this metric is to be calculated.~~

(3) The Offsets Policy allows for multipliers to be attributed, for example, through the local government planning instrument or via the offset condition. Local government has discretion to seek a financial settlement offset that is less than what is determined by the Financial Settlement Offset Calculation Methodology or web-based Financial Settlement Offset Calculator.

(4) Generally, offsets for MLES are to be calculated on the basis of 1:4 (e.g. 1 tree removed: 4 trees planted). The Queensland Government's offsets website has information on how this metric is to be calculated.

(5) Land based offsets are to be provided as close as practicably possible to the development site, within the Redland City local government area.

(6) Offset restoration works are to establish a restored ecosystem which:
a. incorporates assemblages of species replicating those in ecosystems being offset (as set out in Redland City Council's regional ecosystems species database and Appendix 1 of this policy), and taking into consideration local conditions to ensure survivability;
b. has the potential to recruit further species by natural means;
c. supports the same structure and function as ecosystems being offset; and
d. do not include exotic and invasive species.

1.4.1.3 Determining significant residual impact for MLES

(1) The State government's offsets policy (section 1.3) establishes a number of offsets principles and requires environmental impacts be avoided and then minimised before offsets can be considered for any remaining impact.

(2) Offsets are not always suitable. An application must comply with all of the performance outcomes in the environmental significance overlay code in order to comply. There may be instances where an offset is not sufficient to warrant approval.

(3) The ecological report (section 1.3.1.1 of this policy) should be used to demonstrate where environmental impacts have been avoided and minimised. It should also include details on the significant residual impact proposed to be offset.

(4) For the purposes on MLES – wildlife core and corridor habitat, development has a significant residual impact where it results in the clearing of any native vegetation.

(5) The following outlines the criteria to determine significant residual impact for other MLES. This reflects the State guidelines used to assess significant residual impacts on MSES, adapted to apply to MLES.

(6) An action will have a significant residual impact on MLES if the action is likely to:
(a) reduce the extent of the occurrence of a locally significant species;
(b) lead to a decrease in the size of the local population of a locally significant species;
(c) fragment an existing population for a locally significant species;
(d) result in genetically distinct populations forming as a result of habitat isolation;
(e) result in invasive species that are harmful to an endangered or vulnerable

species (locally significant) becoming established in the endangered or vulnerable species (locally significant) habitat ;
(f) introduce disease that may cause a locally significant species population to decline;
(g) interfere with the recovery of a locally significant species; or
(h) cause disruption to ecologically significant locations (breeding, feeding, nesting, migration or resting sites) of a locally significant species.

(7) On-site mitigation is not considered an offset under the Environmental Offsets Act 2014.

1.4.2 Information the Council may request

1.4.2.1 Land based offsets management plan

(1) Where land based proponent driven offsets are proposed (either on private land or public land), a management plan is to be prepared which includes details (including costing) specifying:
(a) written agreement with the landowner (if relevant);
(b) how weeds and pests will be removed and prevented from re-infestation
(c) management actions to reduce risk from hazards (e.g. fire and flood);
(d) proposed maintenance periods;
(e) regular auditing and reporting to be undertaken by the undertaken by an ecologist with suitable experience[8] on behalf of the proponent;
(f) ongoing management arrangements once the offset is established and the site/land has been legally secured;
(g) time frames within which the offset is to reach the desired ecosystem species diversity and community structure; and
(h) the conservation outcome to be achieved and how the outcome will be determined or measured and by whom (should be an ecologist with suitable experience[9]).

[8] Means a qualified ecologist with appropriate training and demonstrated experience in developing land based offset management plans within the South East Queensland region.

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1.4.3 Guidance for applicants

1.4.3.1 General

(1) Details of proposed offsets must be included with a development application. The State government provides a series of forms that can also be used for MLES offsets to assist applicants to work through and enter into an agreement with Redland City Council, including how to deliver offsets.

1.4.3.2 How to find a receiving site

(1) Once it has been determined by the applicant that there is a need for an offset, Council can assist in determining if a suitable receiving site is available. If an offset is not suitable or an offset site is not available, the proposal will need to be revised to reduce the level and/or area of impact or an alternative offset type provided.

(2) A Notice of Election will need to be prepared by the applicant which outlines how the offset is to be delivered and includes supporting information such as:
- (i) financial settlement details, and/or
- (ii) offset delivery plan
- (iii) offset area details (including how the offsets area is proposed to be secured in perpetuity)
- (iv) habitat quality details; and,
- (v) staged offset details (if relevant).

(3) The South East Queensland Ecological Restoration Framework provides further guidance relevant to the establishment of offset areas.

1.4.3.3 More information

(1) The State government has already drafted a number of supporting documents to guide applicants in determining what offsets they might be required to provide, and how those offsets are to be provided. Below is a summary of this offset framework:

Document	Summary
Environmental Offsets Act	Provides the framework for what an offset is and how it is to be delivered. Identifies the legal security mechanisms that may be used for offsets including the new 'environmental offset protection area' designation Establishes a head of power for the supporting regulation and offset policy
Environmental Offsets Regulation	Lists prescribed activities and prescribed environmental matters that may be subject to offset assessment requirements Provides further detail on other Act provisions.
Environmental Offsets Policy (Version 1.13)	Provides requirements for impacts on prescribed environmental matters Impacts on protected areas Advanced offsets Strategic offset investment corridors Outlines the types of offset delivery Describes direct benefit management plans

General guide for the Queensland Environmental Offsets Framework	Provides general assistance in interpreting and implementing the offsets framework. Includes an explanation of each step in the process and guidance on how to deliver an environmental offset.
Queensland Environmental Offsets Policy Significant Residual Impact Guideline	Provides criteria for determining 'significant impact' sorted by prescribed environmental matters.
Guide to determining terrestrial habitat quality	Provides a step-by-step methodology explaining how to measure habitat quality for land-based offsets.

1.5 CLEARING

The tables of assessment in Section 5.10 'Environmental Significance overlay' make clearing assessable in certain circumstances. In some circumstances, a threshold is provided, and clearing below that threshold is not assessable development.

1.5.1 Guidance for applicants

(1) To calculate whether or not the application will trigger assessment against the Environmental Significance Overlay code, an applicant will need to calculate the area of vegetation being cleared. The area of vegetation being cleared may be a contiguous patch of vegetation, or a number of scattered trees, or a combination of both.

(2) If the development is over two or more property boundaries, the clearing thresholds apply to the whole development site, rather than applying to each individual property.

(3) The method to be used to calculate the clearing thresholds is the canopy cover method.

(4) The canopy cover method is based on measuring the canopy cover on an aerial photo using an appropriately calibrated GIS measuring tool and marking the canopy cover accurately on the ground.

(5) For clearing areas which approach the assessable clearing thresholds a licensed surveyor is to be engaged to accurately plot the area to be cleared.

(6) The area to be cleared relates to the extent of native vegetation. The planning scheme is concerned with the full canopy cover of the native vegetation whether or not exotic vegetation may co-exist within that area.

1.6 OVERLAY MAPPING AND DATA SOURCES

1.6.1 Guidance for applicants

(1) The Environmental Significance Overlay mapping in City Plan has been developed in accordance with the State Planning Policy 2017 (SPP).

1.6.2 Mapping Matters of State environmental significance (MSES)

(1) MSES was mapped in accordance with the State Government's Method for mapping

MSES for the SPP 2017 (2020, v6.01), using the latest available mapping layers Queensland Spatial Catalogue.

(2) Below is a summary of the SPP definition of MSES from the Method for mapping MSES for the SPP 2017 and the corresponding MSES layer/s used to create the MSES mapping in City Plan.

SPP definition	MSES layers
Conservation Areas	
Protected areas (including all classes of protected area except coordinated areas) under the *Nature Conservation Act 1992*.	Protected areas: a. Protected areas (estate). b. Protected area (nature refuges). c. Protected area (special wildlife reserves). *Nature Conservation Act 1992*
'Marine national park', conservation park', scientific research', preservation' or 'buffer' zones under the *Marine Parks Act 2004*.	Marine park (highly protected). *Marine Parks Act 2004*
Areas within declared fish habitat areas that are management A areas or management B areas under the Fisheries Regulation 2008.	Declared fish habitat area (A and B areas). *Fisheries Act 1994*
A designated precinct, in a strategic environmental area under the Regional Planning Interests Regulation 2014, schedule 2, part , s15(3).	Strategic environmental area (designated precinct). *Regional Planning Interests Act 2014.*
Wetlands	
Wetlands in a wetland protection area or wetlands of high ecological significance shown on the Map of Queensland Wetland Environmental Values under the Environmental Protection (Water and Wetland Biodiversity) Policy 2019.	High Ecological Significance wetlands. *Environmental Protection Act 1994*
Wetlands and watercourses in high ecological value waters identified in the Environmental Protection (Water and Wetland Biodiversity) Policy 2019, schedule 1.	Declared High ecological value waters: a. High ecological value waters (wetland). b. High ecological value waters (watercourse). *Environmental Protection Act 1994*
Wildlife habitat	
Threatened wildlife under the *Nature Conservation Act 1992* and selected special least concern animals under the Nature Conservation (Wildlife) Regulation 2006.	Wildlife habitat: a. Endangered or vulnerable wildlife. b. Special least concern animal. c. SEQ koala habitat area i. Core. ii. locally refined. *Nature Conservation Act 1992*
Regulation vegetation	
Category B areas on the regulated vegetation management map, that are 'endangered' and 'of concern' regional ecosystems.	Regulated vegetation: Category B endangered and of concern.
Category C areas on the regulated vegetation management map that are 'endangered' and 'of concern' regional ecosystems.	Regulated vegetation: Category C endangered or of concern.
Category R areas on the regulated vegetation management map.	Regulated vegetation: Category R (GBR riverine)
Areas of essential habitat on the essential habitat map for an animal that is 'endangered wildlife' or 'vulnerable wildlife'	Regulated vegetation: Essential habitat.

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SPP definition	MSES layers
or a plant that is 'endangered wildlife' or 'vulnerable wildlife' wildlife prescribed as 'endangered wildlife' or 'vulnerable wildlife' under the *Nature Conservation Act 1992*	
Category A,B,C or R areas on the regulated vegetation map that are located within a defined distance from the defining banks of a relevant watercourse identified on the vegetation management watercourse and drainage feature map.	Regulated vegetation: Defined watercourse.
Category A,B,C,R areas that are located within 100 metres from the defining bank of a wetland identified on the vegetation management wetlands map.	Regulated vegetation: Wetland.
Offsets	
Offset areas legally secured under a covenant, conservation agreement or development approval condition.	Legally secured offsets a. Legally secured offset area (offset register). b. Legally secured offset area (regulated vegetation offsets) *Environmental Offsets Act 2014*

1.6.3 Mapping Matters of Local environmental significance (MLES)

(1) MLES mapping is based on the following specialist ecological studies:
- (a) Natural Environment Decision Support (NEDS) System: spatially identifies areas of conservation value across the City;
- (b) Wildlife Connections Plan 2018-2028: spatially identifies a network of core wildlife habitat and connecting wildlife corridor habitat across the City.

(2) MLES mapping has been split into the following two categories:
- (a) MLES – Wildlife Core and Corridor Habitat: includes native vegetation located in a core wildlife habitat or a wildlife corridor as mapped in the Wildlife Connections Plan in the urban footprint of the SEQ Regional Plan 2017.
- (b) MLES – Other: includes areas of mapped conservation value across the city that include:
  - (i) areas that form part of regional biodiversity corridors;
  - (ii) areas of biodiversity value, including:
    - intact areas with high ecological integrity containing may ecosystem functions that contribute to the City's ongoing biodiversity;
    - native vegetation that support ecological connections and interaction between intact areas of environmental significance;
    - areas that support a broad range of the City's flora and fauna species;
    - areas that support a broad representation of the City's ecosystems, all with their own different set of functions that contribute to the City's overall biodiversity;
    - areas that support ecological resilience, the capacity of an ecosystem to recover from or withstand disturbance from threatening processes (including climate change);
    - aquatic areas that are connected with other wetlands
  - (iii) areas of habitat for locally significant species (refer to 'locally significant species; in Appendix 1).

(3) Both MLES and MSES are dealt with in the same way in the Environmental Significance Code. However, offsetting requirements may differ (refer to section 1.4 of this planning scheme policy).

(4) Within urban areas[3] vegetation on lots less than 1000m^2 have not been mapped as

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a MLES in the overlay, other than where the land is zoned for recreation and open space, conservation or environmental management.

(5) MLES – Wildlife Core and Corridor Habitat is mapped in the overlay where native vegetation is located in the core wildlife habitat and wildlife corridor habitat mapping of the Wildlife Connections Plan 2018-2028 and located in the urban footprint of the SEQ Regional Plan, excluding the following.
- (a) the Priority Development Areas at Toondah Harbour and Wienam Creek;
- (b) the Southern Moreton Bay Islands;
- (c) the local planning areas of Kinross Road, South East Thornlands, South West Victoria Point and Southern Redland Bay (Shoreline);
- (d) transport corridors (road and rail);
- (e) private land less than 1000m^2;
- (f) land included in the centre and industry zones of City Plan (except for the Waterfront and marine industry zone).

1.7 Other approvals to be considered

1.7.1 Guidance for applicants

(1) There are additional statutory approvals that may be required in order for a development to proceed. It is the applicants responsibility to determine what approvals are required.

1.4.3.4 Nature Conservation Act 1992 (QLD)

(1) Native wildlife in Queensland is also protected under the *Nature Conservation Act 1992* (NCA).

(2) Approvals that might be required depend on:
- (a) The nature and purpose of the proposed activity
- (b) The tenure of the property
- (c) The species of wildlife that is concerned.
- (d) One of the key permits or approvals that may be required under the NCA, relevant to development activities is the 'Species management program' – which must be obtained before tampering with an animal breeding place (e.g. birds nests or tree hollows).

1.4.3.5 Environmental Protection and Biodiversity Conservation Act 1999 (Cth)

(1) *The Environmental Protection and Biodiversity Conservation Act 1999* (EPBC) protects Matters of National Environmental Significance. One of these MNES values are "listed threatened species and ecological communities". An action will require approval if the action has, will have, or is likely to have a significant impact on a species listed in any of the following categories:
- (a) extinct in the wild
- (b) critically endangered
- (c) endangered, or
- (d) vulnerable.

(2) The koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) was listed as endangered on 12 February 2022.

(3) An action is likely to have a significant impact on a critically endangered or endangered species if there is a real chance or possibility that it will:
- (a) lead to a long-term decrease in the size of a population
- (b) reduce the area of occupancy of the species
- (c) fragment an existing population into two or more populations

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(d) adversely affect habitat critical to the survival of a species

(e) disrupt the breeding cycle of a population

(f) modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline

(g) result in invasive species that are harmful to a critically endangered or endangered species becoming established in the endangered or critically endangered species' habitat

(h) introduce disease that may cause the species to decline, or

(i) interfere with the recovery of the species.

(4) Also note that the EPBC refers to 'population'. A 'population of a species' is defined under the EPBC Act as an occurrence of the species in a particular area. In relation to critically endangered, endangered or vulnerable threatened species, occurrences include but are not limited to:

(5) a geographically distinct regional population, or collection of local populations, or

(6) a population, or collection of local populations, that occurs within a particular bioregion.

(7) The listing of koala as 'endangered' has implications for development in areas that contain koala populations. The federal guidelines *Matters of National Environmental Significance Significant impact guidelines 1.1* include specific sections on 'urban development', and advise that:

(a) Proposed urban development for a housing subdivision or an industrial estate on an area which contains nationally listed threatened species (i.e. koala) is likely to be significant under the EPBC Act and should be referred to the minister.

(b) A proposed new road that would require clearing of native vegetation that contains nationally listed threatened species is likely to be significant under the EPBC Act and should be referred to the minister.

(c) Routine vegetation management to maintain existing roads would not normally be expected to have a significant impact on a matter of national environmental significance.

[3] Refer to the, section 1.7.3 of the planning scheme for a definition of the urban area.

Appendix 1 - Locally significant species

Species ID	Species Number	Kingdom	Family	Scientific_ Name	Common Name	Type	Status				RE habitat description	Non-RE habitat description	Non RE	Regional Ecosystems
							EPBC Act	NC Act	Back On Track	Endemic				
484	SP001	Plant	Mimosaceae	*Acacia baueri subsp. baueri*	Tiny Wattle	flora		V	H		Low Dry to Moist Wallum Heath			12.2.5,12.2.9,12.2.12,12.2.13,12.3.13,12.5.9
8	SP002	Animal	Accipitridae	*Accipiter novaehollandiae*	Grey/White Goshawk	fauna		NT			Wooded habitats, sparse in region - concentrated on Mt Cotton - Sheldon			12.11.10,12.11.3,12.3.1,12.11.23,12.5.2,12.2.5,12.11.5k,12.11.5e,12.3.3d,12.2.6,12.9-10.19a,12.11.3,12.11.5j,12.9-10.17d,12.2.8,12.3.11,12.5.3,12.11.3a,12.11.5a,12.11.23,12.9-10.4,12.3.11a,12.5.6c,12.9-10.17c
12	SP003	Animal	Lycaenidae	*Acrodipsas illidgei*	Illidge's ant-blue butterfly	fauna		V	C		*Casuarina glauca* and adjacent mangrove areas			12.1.1,12.2.5,12.2.6,12.2.7,12.2.8,12.2.9,12.2.10,12.3.1,12.3.5,12.3.6,12.3.11,12.5.2,12.5.3,12.9-10.4,12.11.3,12.11.23,12.12.14
13	SP004	Animal	Limnodynastidae	*Adelotus brevis*	Tusked Frog	fauna		V			Waterways and temporary and permanent pools		waterbody	12.1.1,12.2.1,12.2.2,12.2.5,12.2.6,12.2.7,12.2.8,12.2.9,12.2.10,12.2.12,12.2.13,12.3.1,12.3.5,12.3.6,12.3.11,12.3.13,12.5.2,12.5.3,12.9-10.4,12.11.3,12.11.10,12.11.23,12.12.14
611	SP005	Plant	Blandfordiaceae	*Blandfordia grandiflora*	Large Christmas Bell	flora		E	H		Moist to Wet Wallum Heath			12.2.12,12.3.13
66	SP006	Animal	Cacatuidae	*Calyptorhynchus lathami*	Glossy Black Cockatoo	fauna	E	V			*Allocasuarina spp.* and *C. glauca*			12.1.1,12.2.5,12.2.6,12.2.7,12.2.8,12.2.10,12.3.1,12.3.5,12.3.6,12.3.11,12.5.2,12.5.3,12.9-10.4,12.11.3,12.11.23,12.12.14
2081	SP007	Animal	Charopidae	*Charopid BR38*	A Land Snail	fauna				X	Eucalypt forest to Woodland containing *Eucalyptus racemosa* on Coastal Sands			12.2.10,12.2.6,12.2.8,12.2.1
723	SP008	Plant	Sparrmanniaceae	*Corchorus cunninghamii*	Native jute or Cunninghams jute	flora	E	E			Margins of Rainforest and Tall Eucalypt Forest			12.11.10,12.11.3,12.11.5,12.11.2
120	SP009	Animal	Myobatrachidae	*Crinia tinnula*	Wallum Froglet	fauna		V	H		Acid swamps and depressions			12.2.5,12.2.7,12.2.9,12.2.10,12.2.12,12.2.15,12.3.5,12.3.6,12.5.10
846	SP010	Plant	Rubiaceae	*Durringtonia paludosa*	Durringtonia	flora		N	C		Wet Wallum Heath and on Margins of Swamp Sclerophyll Forest E. robusta			12.2.5,12.2.7,12.2.12,12.2.15,12.3.4
861	SP011	Plant	Cyperaceae	*Eleocharis difformis*	Submerged Spikerush	flora		E		X	Submerged aquatic plant in Perched and Window Lakes restricted to Lacustrene wetlands 12.2.15a and 12.2.15f			12.2.15,12.2.15a,12.2.15f
470	SP012	Animal	Ciconiidae	*Ephippiorhynchus asiaticus*	Black-necked Stork	fauna		NT			Wetlands, rare visitor			12.1.1,12.1.2,12.1.3,12.2.12,12.2.15,12.2.15f,12.2.5,12.2.5a,12.2.7,12.3.11,12.3.13,12.3.5,12.3.6,12.3.8,12.5.9
51	SP013	Animal	Burhinidae	*Esacus magnirostris*	Beach Stone Curlew	fauna		V	H		Dunes, beaches		beach	12.2.14,12.2.16,12.2.9,12.2.10,12.2.13,12.2.7
955	SP014	Plant	Orchidaceae	*Genoplesium sp. (Raby Bay J.Elsol AQ462423)*	Raby Bay Midge Orchid	flora				X	Eucalypt forest to Woodland containing *Eucalyptus racemosa*			12.5.3,12.9-10.4,12.11.5j,12.12.14
2082	SP015	Animal	Charopidae	*Gyrocochlea myora*	Myora Springs Snail	fauna				X	Moist Coastal Forests including Littoral Rainforest			12.2.6

Species ID	Species Number	Kingdom	Family	Scientific_ Name	Common_ Name	Type	Status				RE habitat description	Non-RE habitat description	Non RE	Regional Ecosystems
							EPBC Act	NC Act	Back On Track	Endemic				
203	SP016	Animal	Haematopodidae	*Haematopus fuliginosus*	Sooty Oystercathcer	fauna		NT			Rocky coasts, coarse beaches		beach	12.2.14,12.12.19
393	SP017	Animal	Rallidae	*Lewinia pectoralis*	Lewin's Rail	fauna		NT			Riparian - with cover			12.1.1,12.1.2,12.1.3,12.2.12,12.2.15,12.2.15f,12.2.5,12.2.5a,12.2.7,12.3.11,12.3.13,12.3.5,12.3.6,12.3.8,12.5.9,12.3.1,12.3.11a
2083	SP018	Animal	Hylidae	*Litoria cooloolensis*	Cooloola Sedgefrog	fauna		NT			Sandy coastal freshwater lakes and stream - North Stradbroke Island			12.2.1,12.2.7,12.2.15
2084	SP019	Animal	Hylidae	*Litoria freycineti*	Freycinet's Frog	fauna		V			Open, vegetated coastal swamps and depressions			12.2.2,12.2.5,12.2.7,12.2.12,12.2.13,12.2.15,12.3.5,12.3.6,12.3.13,12.5.9,12.9-10.22
2085	SP020	Animal	Hylidae	*Litoria olongburensis*	Wallum Sedge Frog	fauna	V	V			Wallum sedgelands subject to inundation			12.2.5,12.2.7,12.2.12,12.2.15
1861	SP021	Animal	Accipitridae	*Lophoictinia isura*	Square-tailed Kite	fauna		NT			Eucalypt woodland and open forest, rare and breeding in area			12.1.1,12.2.1,12.2.2,12.2.5,12.2.6,12.2.7,12.2.8,12.2.10,12.3.1,12.3.5,12.3.6,12.3.11,12.5.2,12.5.3,12.9-10.4,12.11.3,12.11.10,12.11.23,12.12.14
1135	SP022	Plant	Proteaceae	*Macadamia integrifolia*	Macadamia	flora	V	V			Dry Rainforests and Riparian Forests			12.3.1,12.11.3,12.11.10
1136	SP023	Plant	Proteaceae	*Macadamia tetraphylla*	Rough Shelled Macadamia	flora	V	V			Rainforests and Riparian Forests			12.11.10,12.3.1
2086	SP024	Plant	Apocynaceae	*Marsdenia coronata*	Slender Milk Vine	flora	V	V			Eucalypt Forests to Woodlands and Rainforest Margins Particularly associated with *Lophostemon confertus* in Whipstick Growth Habit			12.3.11,12.11.3,12.11.10,12.11.5e
2087	SP025	Plant	Apocynaceae	*Marsdenia longiloba*	Clear Milk Vine	flora	V	V			Moist Tall Open Forest and rainforest margins			12.11.10,12.11.3,12.11.23,12.3.8,12.3.2
2088	SP026	Plant	Juncaginaceae	*Maundia triglochinoides*	Maundia	flora		V			Wetlands including Paperbark Swamps Found at Karawatha and Woodford	Wetland Mapping including Non Rem but only good quality so not used in waterbody designation		12.2.5a,12.2.7,12.3.5,12.3.5a,12.3.6
1557	SP027	Plant	Myrtaceae	*Melaleuca irbyana*	Swamp Tea-tree	flora		E	H		Woodland to Open forests on plains to riparian areas particularly on sedimentary soils LZ 10			12.3.3,12.3.6,12.9-10.19a,12.9-10.17c

Species ID	Species Number	Kingdom	Family	Scientific_ Name	Common_ Name	Type	Status				RE habitat description	Non-RE habitat description	Non RE	Regional Ecosystems
							EPBC Act	NC Act	Back On Track	Endemic				
2089	SP028	Animal	Meliphagidae	*Melithreptus gularis*	Black-chinned Honeyeater	fauna		NT			Eucalypt woodland and open forest, occasional visitor			12.2.5,12.2.6,12.2.8,12.3.3d,12.3.11,12.3.11a,12.5.2,12.5.3,12.5.6c,12.9-10.4,12.9-10.17c,12.9-10.17d,12.9-10.19,12.11.3,12.11.5a,12.11.5e,12.11.5h,12.11.5k,12.11.23,12.12.14
2090	SP029	Animal	Percichthyidae	*Nannoperca oxleyana*	Oxleyan Pygmy Perch	fauna	E	V	C		Pristine watercourses in wallum			12.1.1,12.1.2,12.1.3,12.2.12,12.2.15,12.2.15f,12.2.5,12.2.5a,12.2.7,12.3.11,12.3.13,12.3.5,12.3.6,12.3.8,12.5.9,12.3.1,12.3.11a
2091	SP030	Animal	Anatidae	*Nettapus coromandelianus*	Cotton Pigmy Goose	fauna		NT			Wetlands, occasional			12.1.1,12.1.2,12.1.3,12.2.12,12.2.15,12.2.15f,12.2.5,12.2.5a,12.2.7,12.3.11,12.3.13,12.3.5,12.3.6,12.3.8,12.5.9
1551	SP031	Animal	Strigidae	*Ninox strenua*	Powerful Owl	fauna		V			Larger bushland areas containing patches of moderately dense cover			12.1.1,12.2.1,12.2.2,12.2.5,12.2.7,12.2.8,12.3.1,12.3.5,12.3.11,12.5.3,12.9-10.4,12.11.3,12.11.10,12.11.23
300	SP032	Animal	Scolopacidae	*Numenius madagascariensis*	Eastern Curlew	fauna		NT			Mudflats		intertidal_ flat	12.1.2,12.1.3
1198	SP033	Plant	Asteraceae	*Olearia hygrophila*	Swamp Daisy	flora	E	E		X	Wet Wallum Heath and on Margins of Swamp Sclerophyll Forest *E. robusta*			12.2.7,12.3.4
2092	SP034	Animal	Papilionidae	*Ornithoptera richmondia*	Richmond Birdwing Butterfly	fauna		V	H		Rainforest associated with *Pararistolochia praevenosa*			12.11.10,12.3.1
2022	SP035	Plant	Polygonaceae	*Persicaria elatior*	Glandular Knotweed	flora	V	V			Wetlands and Swamp Forests	Wetland Mapping including Non Rem		12.2.15,12.3.4,12.3.5,12.3.6,12.3.8
1260	SP036	Plant	Orchidaceae	*Phaius australis*	Southern Swamp Orchid	flora	E	E	C		Swamp Forests especially those with rainforest elements in understorey where fires are less intense			12.2.5,12.2.7
1261	SP037	Plant	Orchidaceae	*Phaius bernaysii*	Yellow Swamp Orchid	flora	E	E	C	X	Swamp Forests especially those with rainforest elements in understorey where fires are less intense			12.2.7,12.3.4,12.3.5
2033	SP039	Plant	Orchidaceae	*Prasophyllum exilis*	Thin Leek Orchid	flora		NT			Wallum Heath			12.2.12,12.3.13,12.2.9,12.2.10,12.2.6
403	SP040	Animal	Rostratulidae	*Rostratula australis*	Australian Painted Snipe	fauna	V	V			Wetland edges, edge vegetation			12.1.1,12.1.2,12.1.3,12.2.12,12.2.15,12.2.15f,12.2.5,12.2.5a,12.2.7,12.3.11,12.3.13,12.3.5,12.3.6,12.3.8,12.5.9
1397	SP041	Plant	Cyperaceae	*Schoenus scabripes*	Rough Bog Sedge	flora		NT			Wallum Heath to Woodland and Wet Wallum			12.2.12,12.2.15,12.3.5,12.3.13
418	SP042	Animal	Laridae	*Sternula albifrons*	Little Tern	fauna		E	H		None	Sand banks	sandbank	
425	SP043	Animal	Anatidae	*Stictonetta naevosa*	Freckled Duck	fauna		NT			Wetlands, rare visitor			12.1.1,12.1.2,12.1.3,12.2.12,12.2.15,12.2.15f,12.2.5,12.2.5a,12.2.7,12.3.11,12.3.13,12.3.5,12.3.6,12.3.8,12.5.9

Species ID	Species Number	Kingdom	Family	Scientific_ Name	Common_ Name	Type	Status				RE habitat description	Non-RE habitat description	Non RE	Regional Ecosystems
							EPBC Act	NC Act	Back On Track	Endemic				
1465	SP044	Plant	Thelypteridaceae	*Thelypteris confluens*	Marsh Fern	flora		V			Swamps and Wetlands in Coastal Dunes			12.2.15
2094	SP045	Plant	Santalaceae	*Thesium australe*	Austral Toadflax	flora	V	V			Grasslands Woodlands and Forests associated with Themeda triandra as it parasitises the roots of this grass			12.12.19,12.3.11,12.5.2
462	SP046	Animal	Tytonidae	*Tyto tenebricosa*	Greater Sooty Owl	fauna		NT			Closed forests			12.2.1,12.2.2,12.3.1,12.11.10
471	SP047	Animal	Muridae	*Xeromys myoides*	False water rat	fauna	V	V	C		Tidal areas away from human habitation			12.1.1,12.1.2,12.1.3,12.2.5,12.2.6,12.2.7,12.2.8,12.2.9,12.2.10,12.2.12,12.2.13,12.2.15,12.3.1,12.3.5,12.3.6,12.3.8,12.3.11,12.3.13,12.5.2,12.5.3,12.5.9,12.9-10.4,12.11.3,12.11.23,12.12.14,12.12.19
2095	SP048	Plant	Orchidaceae	*Pterostylis chaetophora*	Bug Lipped Greenhood Orchid	flora		E			Grassy and shrubby areas in open forest and woodland known from Cedar Ck Falls Near Mt Tamborine and Coochiemudlo Is			12.5.3

APPENDIX 2

Planning Scheme Policy 1 Environmental Significance Terms and Definitions

1.7 TERMS AND DEFINITIONS

(1) This part provides a list of terms, including definitions and guidance on how to interpret and apply these terms, that relate to the natural environment and are used in the City Plan generally, and more specifically in the:
   a. Environmental significance overlay code
   b. Waterway corridors and wetlands overlay code, and
   c. Healthy waters code

(2) The following hierarchy has been applied in providing definitions for terms (including scientific and technical terms) used in these codes:
   a. Where a statutory definition exists, as set out by current State legislation, this is the definition that is applied. If no State statutory definition exists; then
   b. Where a Commonwealth statutory definition exists (i.e. *Environmental Protection and Biodiversity Conservation Act 1999)*, that definition is applied; or
   c. If there is no statutory definition, the definition is based on either the ordinary meaning of the term, or a definition supported by relevant academic research and application.

(3) In accordance with legal principle,[5] terms used in planning schemes are taken to have their natural and ordinary meaning, in the context of development occurring subject to the relevant zone and any applicable overlays.

1.1 Table 1. Terms and definitions

Term	Definition
Aquatic habitat	The biophysical medium or media within the waterway or wetland that: (a) is occupied (continuously, periodically or occasionally) by an organism or group of organisms; or (b) was once occupied (continuously, periodically or occasionally) by an organism, or group of organisms, and into which organisms of that kind have the potential to be reintroduced. This encompasses the banks, snags, rocks, channels, substrates, riffles, macrophytes and riparian vegetation.
Bank and bed stabilisation measures	*Bed and banks* of a waterway, means the land that is normally covered by the waterway, whether permanently or intermittently, regardless of frequency, but does not include adjoining land from time to time covered in flood events. *Stabilisation measures* encompass activities within and adjacent to a waterway for rehabilitation or the mitigation of impacts. Activities include such works as: • Excavation and filling • Removing debris • Revegetation • Removing or redistributing sediment.
Bank erosion	The accelerated wearing away of a stream bank, caused by factors such as the destruction of riparian vegetation, clearing within the catchment, extractive activities, stream straightening or redirection of streams around infrastructure, changes to drainage, and weather events. Note: waterways are dynamic systems and natural bank erosion will occur. The generally accepted standard for determining whether erosion is a natural process is if it occurs slowly and imperceptibly.

[5] *Boral Resources (QLD) Pty Ltd v Gold Coast City Council* [2017] QPEC 023.

Term	Definition
Bank slumping	The mass failure of the bank material because: • the waterway bed deepened at the toe of the bank, resulting in the bank becoming unstable and slumping into the waterway under its own weight (or under some surcharge weight on the top of the bank) • high pore water pressure in the bank material was not balanced by adjacent hydrostatic pressures, causing the structure of the bank material to weaken and slump into the waterway. Slumping is often caused by high velocity stream flows made worse by land and vegetation clearing within the catchment, rapid draw down, and the removal of riparian vegetation.
Biodiversity	Means 'biological diversity', which is the natural diversity of native wildlife, together with the environmental conditions necessary for their survival, and includes— (a) regional diversity, that is, the diversity of the landscape components of a region and the functional relationships that affect environmental conditions within ecosystems; and (b) ecosystem diversity, that is, the diversity of the different types of communities formed by living organisms and the relations between them; and (c) species diversity, that is, the diversity of species; and (d) genetic diversity, that is, the diversity of genes within each species.
Connections or Connectivity	The characteristic of, or suitability for, being connected.
Continuous ecological corridor	Unbroken and diversely structured habitat which facilitates wildlife movement.
Degradation	The state of being degraded; a state of degeneration.
Disturbance	The act of disturbing or state of being disturbed.
Drainage channels	A linear, generally sinuous open depression, comprising of a bed and banks which is in parts eroded, excavated, or built up by channelled stream flow, through which runoff drains to receiving waters.
Drainage patterns	System by which water moves across and through the land, influenced by topography and geology.
Ecological integrity	The ability of the natural ecosystem to support and maintain ecological structure and function.
Ecological processes	Processes including, but not limited to, the following: • Hydrological processes • Soil development • Nutrient cycling • Decomposition and cycling of organic matter • Pollination and seed production • Seed dispersal • Predator-prey relationships • Germination and recruitment of species • The carbon cycle and stability of atmospheric carbon • Habitats for flora and fauna (such as particular regional ecosystems, logs, rocks, debris, leaf litter, nectar, hollow bearing trees, food and shelter).

Term	Definition
Edge effects	The negative effects on wildlife and natural environments, caused by urbanisation and due to edge contrast, which is defined as being the compositional or structural difference between adjacent ecosystems at either side of the boundary. High contrast, and higher risk edges are often formed with urban development such as roads, residential areas, and commercial or industrial developments.
~~Endemic native species~~	~~Flora or fauna native to a locality.~~
Environmental values	A quality or physical characteristic of the environment that is conducive to ecological health or public amenity or safety; or another quality of the environment identified and declared to be an environmental value under an environmental protection policy or regulation, for example, under the *Environmental Protection (Water) Policy 2009*.
Erosion	The process of eroding or being eroded by wind, water or other natural agents.
Existing channel	A channel, including the bed and banks of a river, stream, creek or gully, occurring in a specified location and/or under specific conditions.
Flow regime	The natural variability in timing, frequency, duration, extent and depth of a waterway.
Geomorphological processes	Processes that influence and induce landforms including, for example, erosion, flooding, tides, wind.
Groundwater	Water that occurs naturally in, or is introduced artificially into, an aquifer.
Groundwater recharge	The vertical transfer of water from the water table to the groundwater table.
~~Habitat~~	~~The native environment or kind of place where a given animal or plant naturally lives or grows, including areas not presently occupied by a given animal or plant.~~
Habitat condition	The state of health of the habitat.
Habitat fragmentation	The act or process of fragmenting (a part broken off or detached) of habitat.
Habitat or wildlife resilience	The capacity of an organism, habitat and/or system (an ecological value) to recover from, or adapt to, natural and anthropogenic impacts.
Healthy water temperature	This should be determined, for the subject waterway, in accordance with the Queensland Water Quality Guidelines and the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (Australian and New Zealand Environment and Conservation Council – ANZECC, 2000).
Hydrological processes	Hydrological processes include: • surface water flows off the catchment into wetland pools and estuaries • groundwater-surface water exchange • high tides, storm surge, floods, run-off events connecting wetland pools to estuaries • crab burrows altering water flows • evapotranspiration from vegetation • evaporation from waterbodies • precipitation • tides – including spring and neap • freshwater and marine water exchange in estuaries.

Term	Definition
Key species	A species or essential habitat listed under the: • *Nature Conservation Act 1992* • *Vegetation Management Act 1999* • *Environment Protection and Biodiversity Conservation Act 1999* • International Union for the Conservation of Nature (IUCN) Red List of Threatened Species.
Large woody debris	Trees, branches, logs and sticks that fall into wetlands/waterways. Large woody debris provides habitat, inputs nutrients into waterways, provides cover and acts as a substrate for diatoms and algae.
Movement	The act or process or result of moving. For the purposes of City Plan, this does not include wildlife movement that is regulated to ensure appropriate protections and measures are implemented and enforced when native and exotic wildlife is required to be moved.
Native species	Means a species: (a) that is indigenous to Australia or an external Territory; or (b) that is indigenous to the seabed of the coastal sea of Australia or an external Territory; or (c) that is indigenous to the continental shelf; or (d) that is indigenous to the exclusive economic zone; or (e) members of which periodically or occasionally visit: i. Australia or an external Territory; or ii. the exclusive economic zone; or (f) that was present in Australia or an external Territory before 1400.
Natural filtration	The removal of sediments and other pollutants from water. Natural filtration of sediments in overland flow is performed by 'soft' surfaces (soil, grass) and various types of vegetation, for example, riparian vegetation, vegetation buffers, mangroves. 'Natural filtration' is achieved by retaining or reinstating natural sediment and erosion control measures, such as riparian vegetation, vegetation buffers, and natural ground surfaces (soil, grass).
Natural landform	A natural geographical feature or shape that appears on the Earth's surface, including plains, rises, low hills, plateaus, mountains, ranges, streams, lakes, swamps, wetlands, valleys and dunes.
Natural lateral and longitudinal movement	The natural meanders of a waterway, including its side channels (longitudinal connectivity) and flood plains and wetlands (lateral connectivity). Natural movement includes changes to the stream, its channels, floodplains and wetlands through erosion and sedimentation. Changes in the natural meanders of waterways can be accelerated by practices such as dredging, vegetation clearing, snagging and straightening, and by development in the vicinity of the waterway, which increases hard surfaces.
Normal gene flow	The regular, usual, and natural transfer of genes from one population to another of the same species, as by migration, seed dispersal, seasonal interbreeding, etc.
Off-site	External to the site the subject of the development application.
On-site	Located or done at the site the subject of the development application.

Term	Definition
Overland flow	Means water, including floodwater, that is urban stormwater or is other water flowing over land, otherwise than in a watercourse or lake— (a) after having fallen as rain or in any other way; or (b) after rising to the surface naturally from underground. Overland flow water does not include— (a) water that has naturally infiltrated the soil in normal farming operations, including infiltration that has occurred in farming activity such as clearing, replanting and broadacre ploughing; or (b) tailwater from irrigation if the tailwater recycling meets best practice requirements; or (c) water collected from roofs for rainwater tanks.
Recharge	The entry into the saturated zone of water made available at the water table surface, together with the associated flow away from the water table within the saturated zone.
Recreational function	Primary recreational function: activity using full body contact with the water, for example, swimming, diving, surfing, water skiing, windsurfing. Secondary recreational function: activity in which there is contact other than full body contact with the water, for example, boating, fishing. Visual recreational function: viewing the water without contact with it.
Refuges	Retained habitat that is a place of shelter, protection or safety.
Riparian	Relating to or situated on the banks of a waterway.
Riparian buffer	The area of riparian vegetation on each side of a waterway, which: • slows the velocity of overland flow • facilitates infiltration • filters overland flow • provides organic matter • provides shade • stabilises land and the banks of waterways • provides habitat.
Riparian vegetation	Vegetation that lines a waterway and is the interface between land and the body of water.
Risk	The chance of injury or loss
Runoff	That part of water which is not lost to infiltration, evaporation, transpiration or depression storage.
Sediment concentration	Also known as sediment load - the volume of a pollutant in water.
Sediment treatment train	A succession of devices/systems for the removal of mineral or organic matter in runoff.
Sedimentation	The deposition or accumulation of sediment.
Stable geomorphological conditions	To reinstate stable geomorphological conditions means to reinstate the original landform.
Stable hydrological conditions	The maintenance or resistance to change of the distribution and dynamics of water and water quality.

Term	Definition
Stepping stone patches	Corridors of isolated patches of habitat that, while not physically connected, are functionally connected, allowing movement between larger patches. Stepping stones of suitable habitat enhance connectivity in developed landscapes for species able to make short movements through disturbed environments. Stepping stones may be natural patches, such as wetlands or patches of rainforest within drier forests or they may be small remnant patches of vegetation in a developed landscape. Scattered trees or patches of habitat are the most recognised form of stepping stones and are important to native fauna for movement, shelter, foraging habitat and nesting resources, especially in urban areas.
Stormwater devices	Includes any device referred to in the Queensland Urban Drainage Manual (QUDM) and current Water by Design resources and Guidelines, and any device approved by Council for use in a proposed development.
Stream condition	The overall state of health of a waterway, based on an assessment of hydrology, water quality, its streamside zone, physical form and aquatic life.
Stream integrity	The ability of the natural ecosystem to support and maintain ecological structure and function.
Turbidity	The cloudiness of water caused by the presence of fine suspended matter.
Waterway	A waterway that is identified in the City Plan Waterway corridors and wetlands mapping (stream orders 3 or greater).
Waterway	Includes a river, creek, stream, watercourse or inlet of the sea
Wetland	Areas of permanent or periodic/intermittent inundation, whether natural or artificial, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres. To be a wetland the area must have one or more of the following attributes: • At least periodically the land supports plants or animals that are adapted to and dependent on living in wet conditions for at least part of their life cycle • The substratum is predominantly undrained soils that are saturated, flooded or ponded long enough to develop anaerobic conditions in the upper layers • The substratum is not soil and is saturated with water, or covered by water at some time. Examples of what constitutes a wetland may be found at: https://wetlandinfo.ehp.qld.gov.au/wetlands/what-are-wetlands/definitions-classification/wetland-definition.html
Wildlife	Any taxon or species of an animal, plant, protista, procaryote or virus.
Wildlife corridor	A wildlife corridor that is identified in the Wildlife Connections Plan 2018-2028 that includes the following five wildlife corridor categories: • Established corridors; • Regional Riparian corridors; • Coastal Foreshore corridors; • Enhancement corridors; • Stepping Stone corridors.
Wildlife dispersal	The gradual spread of a species and subsequent adaptations to a new environment.

1.2 Table 2. Guidance on interpreting qualitative terms

Term	Expected interpretation
Adversely impact	*Adversely* - antagonistic in purpose or effect; against the interests of *Impact* - The influence or effect of an action. Impact is not confined to direct physical impacts; it includes effects for which it can be readily said that they are a consequence of the action.
Avoid	To keep away from; keep clear of; evade
Avoid worsening	*Worsening* - to make or become worse
Effectively stabilised	*Stabilise* - is to make something stable. *Effectively* - adds the condition that the stabilisation measure produces the intended or expected result.
Enhance	To raise to a higher degree; intensify; magnify
Functionality	The purpose designed to be fulfilled by a device, tool, machine, etc
Incorporates opportunities	*Incorporate* - to put into a body or mass as an integral part or parts *Opportunities* - an appropriate or favourable time or occasion
Maintain or maintained	To keep in existence; preserve; retain; to keep in a specified state
Maximises opportunities	*Maximise* - to increase to the greatest possible amount or degree *Opportunities* - an appropriate or favourable time or occasion
Minimise	To reduce to the smallest possible amount or degree
Minimise impact	To reduce an impact to the smallest possible amount or degree. Where a mitigation measure is proposed that does not reduce an impact to the greatest extent possible, that measure is unacceptable.
Not inhibited or made less safe	Development does not constrain the movement of flora and fauna, and provides for the safe and natural distribution of species between habitat areas and populations
Protect	To defend or guard, cover or shield from injury or danger
Reduce the utility	The state or character of being useful. For the purposes of PO 7 of the Healthy Waters Code, it means that stormwater devices must not displace recreational or ecological uses within that space.
Reduction	The state of being reduced; the amount by which something is reduced or diminished
Reinstate	To put back or establish again, in a former position or state
Replicate or complement the composition [of the habitat]	*Replicate* - to be or make a replica of; to repeat *Complement* - that which completes or makes perfect
Restore	Bring back to a former, original, normal or unimpaired condition
Significant	Important, notable or of consequence, having regard to its context and intensity
Substantial fragmentation	The act or process of fragmenting (a part broken off or detached) that is material, or of an ample or considerable amount, quantity or size.

Term	Expected interpretation
Support	To maintain by supplying with things necessary to existence; provide for
Undertaken in a manner	In the context of PO ~~17~~18 of the Environmental Significance Overlay Code, where clearing occurs, it is sequenced and executed to enable fauna to vacate affected land.