State development assessment provisions

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The Department of State Development, Infrastructure and Planning leads a coordinated Queensland Government approach to planning, infrastructure and development across the state.

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Contents

Part A: Introduction and policy context **5**

Part B: Application and operation **8**

Part C: State codes and other matters **21**

Module 1: Community amenity 1-1
Module 2: Regional plans 2-1
Module 3: Aquaculture 3-1
Module 4: Environmentally relevant activities 4-1
Module 5: Fisheries resources 5-1
Module 6: Strategic cropping land 6-1
Module 7: Water resources 7-1
Module 8: Native vegetation clearing 8-1
Module 9: Queensland heritage 9-1
Module 10: Coastal protection 10-1
Module 11: Wetland protection and wild river areas 11-1
Module 12: Contaminated land 12-1
Module 13: Major hazard facilities 13-1
Module 14: Maritime safety 14-1
Module 15: Airports 15-1
Module 16: Particular dams 16-1
Module 17: Public and active transport 17-1
Module 18: State transport infrastructure protection 18-1
Module 19: State transport network functionality 19-1

Part A:
Introduction and policy context

Introduction

The State Development Assessment Provisions (SDAP) set out the matters of interest to the state for development assessment, where the chief executive administering the *Sustainable Planning Act 2009* (the Act) is responsible for assessing or deciding development applications.

The SDAP is prescribed in the Sustainable Planning Regulation 2009 (the Regulation), and contains the matters the chief executive administering the Act (the chief executive) may have regard to when assessing a development application as either an assessment manager or a referral agency. The chief executive may give these matters the weight the chief executive is satisfied is appropriate.

Schedule 3 of the Regulation prescribes development that is assessable development. Schedule 5 of the Regulation prescribes the matters that the chief executive may have regard to when assessing an application for particular development. Schedules 6 and 7 of the Regulation prescribe when the chief executive is an assessment manager or a referral agency for certain development applications.

The SDAP is a statutory instrument made under the Act, and has effect throughout the state for development applications where the chief executive is the assessment manager or a referral agency.

Statement of objectives

The SDAP is an outcome of the introduction of the State Assessment and Referral Agency (SARA) on 1 July 2013, which is a key element of the reform of Queensland's planning system. While land use planning in Queensland is primarily the responsibility of local government, matters of interest to the state are assessed by the state at a site level for certain aspects.

By expressing the matters of interest to the state in development assessment in a complete and comprehensive manner, it will be easier for applicants to address these matters 'up-front' with the lodgement of their development application, rather than have to provide additional information to the state through a response to an information request. The SDAP contains the criteria for assessment by the chief executive as either an assessment manager or a referral agency, and provides applicants with:

(1) increased transparency and clarity on how development can comply with the matters of interest to the state
(2) clarity on when the state is to be involved in the assessment of a development application.

Together with other elements of planning reform, such as the *State Planning Policy* and the rollout of new regional plans, SARA and the SDAP will lead to greater certainty, fewer unnecessary delays, and better planning outcomes for Queensland communities.

Supporting best practice development assessment and processes — guiding principles

An effective land use planning system must enable and facilitate the delivery of development that advances the social, economic and environmental needs of all Queenslanders. It must do this while protecting out wellbeing and

enhancing our natural environment, places, heritage and culture. It must always strive to make better places for people to live, work and enjoy. It must enhance, not degrade, our living environment and create the right conditions for appropriate change and growth.

Planning and development decisions and processes in Queensland will be underpinned by the following interdependent principles. These principles, together with the state interests expressed in the *State Planning Policy*, will deliver the planning system Queensland needs for the future.

For matters where the state has an interest in development assessment, it is essential that the state outlines completely and comprehensively those aspects that an applicant is to address to support consideration of the development application by the state. This will provide the applicant with the opportunity to more effectively demonstrate to the state the merits of a particular proposal, and lead to a faster assessment of the development application by the state.

Table A.1 details the guiding principles which support and guide the preparation of the state codes.

The principles apply to and underpin all the matters regulated by the state and the state codes in the SDAP.

These principles will be applied by the chief executive in the assessment of development applications, and in balancing the matters of interest to the state to deliver more efficient and reasonable planning decisions. These types of decisions will help to create the most robust, relevant and responsive planning system in Australia.

Table A.1: Guiding principles

Outcome focussed	
Clearly focus on the delivery of **outcomes**	• Queensland's economic development is supported through decision-making which integrates and balances the economic, environmental and social needs of current and future generations. • Innovative approaches to design and development are supported where consistent with a planning scheme's strategic intent. • Stated objectives, needs and aspirations of the community, at the state, regional and local level, are supported by development.
Integrated	
Reinforce the role of local planning schemes as the **integrated**, comprehensive statement of land use policy and development intentions for a local area	• Plans are coordinated and integrated expressions of land use policy intent for a local area, considering state, regional and local matters. • Plans integrate land use, resource management and infrastructure needs and considerations. • Plans include performance-based assessment of development against a clear hierarchy of planning policies demonstrably linked to the achievement of ambitious and long-term strategic planning.
Efficient	
Support the **efficient** determination of appropriate development	• Ensuring that development requirements are focused to satisfy the purpose of the relevant state code and the purpose of the Act, and are proportionate to risk • Assessment is responsive, flexible and performance-based. • Development regulation and restriction is only where necessary and if so, is proportionate to the potential impacts of the development being regulated. • Strategically consistent development is facilitated and supported through targeted plans.

Positive	
Enable **positive** responses to change, challenges and opportunities	• Contemporary information, challenges and community needs and aspirations are reflected through up-to-date plans. • Evidence and objectively assessed needs form a basis for planning which uses the best available knowledge. • Community resilience and adaptability to change are enhanced.
Accountable	
Promote confidence in the planning system through plans and decisions which are transparent and **accountable**	• Plans reflect balanced community views and aspirations with a clear focus on increasing the community's role in plan making. • Defensible, logical and fair development decisions are supported through clear and transparent planning schemes. • Access to planning information is simple and clear, capitalising on opportunities presented by technology.

Managing competing matters of interest

The process of resolving potential conflicts and tensions must be undertaken in an efficient and transparent manner, with consideration to a resolution that best achieves and advances the purpose of the Act.

The SDAP consists of a number of state codes — in some circumstances these state codes will compete or even conflict. Therefore, specific regional and local circumstances must be considered when determining how to resolve these at a site level.

When applying the SDAP, the chief executive will consider the following three objectives when making a decision on a development application where there is a conflict. These objectives are a guide to managing competing interests and priorities, including any conflict arising between matters of interest to the state.

(1) Applying the guiding principles in Table A.1

The guiding principles outlined in Table A.1 are central to the interpretation of the state codes. These principles carry equal weight, and are to be considered by the chief executive when integrating and balancing outcomes.

(2) Consider the matters of interest to the state in their entirety

The SDAP contains a number of codes outlining how the state regulates a range of discrete matters of interest. Where an application involves more than one matter of interest to the state, any areas of conflict will be resolved by the chief executive and SARA officers. This will be done by considering the matter of interest in its entirety, and the purpose of the Act.

(3) Addressing the regional and local context

The SDAP does not give weight to any particular state code over another, recognising that regional and local context must always be considered when integrating matters of interest to the state at the regional and local level.

The relationship between the State Planning Policy and the SDAP

The State Planning Policy (SPP) is a key component of Queensland's land use planning system, which enables development, protects our natural environment and allows communities to grow and prosper.

The SPP defines the Queensland Government's policies about matters of state interest in land use planning and development.

When the chief executive is an assessment manager or a referral agency for a development application the SPA provides that the chief executive must, to the extent relevant and within the limits of the jurisdiction, assess the development application against the SPP, to the extent the SPP is not appropriately reflected in the local government's planning scheme.

Figure A.1 illustrates the relationship between the state interests expressed in the SPP and the modules of the SDAP — showing where there is an intersect with a matter of interest to the state in the SDAP.

Further information about the SPP and copies of the SPP can be accessed at *www.dsdip.qld.gov.au/spp*.

Figure A.1 The relationship between the SPP and the SDAP

	The SPP state interests				
The SDAP Modules	Liveable communities and housing	Economic growth	Environment and heritage	Hazards and safety	Infrastructure
Module 1. Community amenity	✓				✓
Module 2. Regional plans	✓	✓	✓		✓
Module 3. Aquaculture		✓	✓		
Module 4. Environmentally relevant activities			✓	✓	
Module 5. Fisheries resources		✓	✓		
Module 6. Strategic cropping land		✓	✓		
Module 7. Water resources		✓	✓		
Module 8. Native vegetation clearing	✓		✓		
Module 9. Queensland heritage	✓		✓		
Module 10. Coastal protection	✓	✓	✓		
Module 11. Wetland protection and wild river areas			✓		
Module 12. Contaminated land				✓	
Module 13. Major hazard facilities				✓	
Module 14. Maritime safety				✓	✓
Module 15. Airports	✓				✓
Module 16. Particular dams				✓	✓
Module 17. Public and active transport	✓				✓
Module 18. State transport infrastructure protection					✓
Module 19. State transport network functionality					✓

Part B:
Application and operation

Application

The SDAP applies to the assessment of a development application by the chief executive:

(1) as assessment manager
(2) as a referral agency.

The SDAP is not applied by local government in the assessment of development applications.

In assessing and deciding a development application, the chief executive is bound by the decision-making rules outlined in the Act.

Operation

Material that is, and is not, part of the SDAP

Parts A and B

All information included in *Part A: Introduction and policy context* and *Part B: Application and operation* of the SDAP form statutory components of the document, except information identified as an editor's note.

Part C: State codes and other matters

Part C includes the state codes for each matter of interest that are applicable where the chief executive is the assessment manager or referral agency for a development application. For user readability, and to ensure that sufficient context and background is provided within Part C, the codes are included in 19 modules (see page 4 for an overview).

Editor's note: Some modules contain only a single code, others contain up to three codes.

All information relating to a particular matter of interest to the state for development assessment, as contained within a state code, is provided within the module covering that particular state code.

All information in the module is statutory, other than editor's notes and lists of reference documents, which are intended to assist applicants in preparing a development application.

The document overview on page 4 provides a quick reference guide to the specific state codes contained within each module. Each code contains the following information:

(1) **Purpose** — outlines the intent of the code
(2) **Criteria for assessment** — contains tables with performance outcomes and acceptable outcomes to be met by the proposed development
(3) **Reference tables** — information required to apply the code (applies to *Module 7: Water resources* and *Module 8: Native vegetation clearing* only).

Each module also contains the following, which is applicable to all state codes contained within the module:

(1) **Reference documents** — state codes outline relevant reference documents that may support the interpretation and assessment of a proposal against a particular matter; however, as stated above, the information listed under the reference documents heading is non-statutory information. A hyperlink to the reference documents is contained only in the reference documents section within each module and is indicated as *hyperlink*

(2) **Glossary of terms** — an individual glossary is included within each module and defines terms specific to that module. Words that are underlined are words that are defined within the glossary contained in each module. The glossary for each module is relevant only to that module.

(3) **Abbreviations** — where applicable, an individual list is included within each module of abbreviations specific to that module.

Glossary

The terms used in the SDAP have the meaning assigned to that term by:

(1) the glossary of the applicable state code, or
(2) the Act, or
(3) the Regulation, or
(4) the *Acts Interpretation Act 1954*, section 36, or
(5) the ordinary meaning, if the term is not otherwise defined in one of the instruments mentioned above.

In the event a term has been defined in more than one of the instruments mentioned in paragraphs (1) to (4) above, the meaning contained in the instrument highest on the list will prevail.

Where a term is defined in an act or a regulation it is stated in the glossary of terms section of the module and the definition for that term is provided in an editor's note for ease of reference. The definition is taken to be the definition from the current version of the source legislation or statutory instrument.

Numbered and bulleted lists

Numbered and bulleted lists throughout this document are to be interpreted as 'and' statements unless the word 'or' is specifically included.

Figures, notes and editor's notes

Figures provide information to support the outcomes and are statutory information.

Notes are identified by the title 'Note' and are statutory information.

Editor's notes are extrinsic material, as per the *Acts Interpretation Act 1954*, and are identified by the title 'Editor's note'. They are non-statutory.

Note: This is an example of a note.

Editor's note: This is an example of an editor's note.

Hyperlinks

Where a hyperlink is available, the text appears in the following style: *hyperlink*. This shows an embedded link to a document, website or mapping system. Hyperlinks to documents are only provided in the reference documents section of each module.

Reference documents

Where relevant, reference documents are listed to provide further guidance about a matter contained within a state code.

Mapping

Where relevant, hyperlinks are provided to the SARA interactive mapping system (as amended from time to time) *www.dsdip.qld.gov.au/sara-mapping-online*.

The SARA interactive mapping system provides a repository for all available mapping layers that are kept, prepared or sourced by the state that relate to relevant matters of interest to the state in development assessment. This system also provides hyperlinks to registers maintained by relevant state agencies and used to identify matters of interest, such as the Queensland Heritage Register.

While some of the mapping layers are newly developed, the majority of information shown on the SARA mapping online system is already in the public domain, but located on various state agency websites or available for download from the Queensland Government Information Service. The SARA mapping online system aims to provide a more complete visual representation of the mapping layers relating to the matters of interest where the chief executive is an assessment manager or referral agency.

Not all matters of interest to the state have associated mapping, but for those that do, the purpose of the maps can vary greatly. It is therefore important that each mapping layer is viewed and interpreted as explained within the mapping layer in the context of that particular matter of interest.

The mapping on the DSDIP website is available for viewing by the general public.

Schedule 3 of the Regulation prescribes certain development as assessable development. Schedule 6 of the Regulation specifies when the chief executive will be the assessment manager for an application, and Schedule 7 specifies when the chief executive will be a referral agency for an application. For the purposes of this document, the SARA online mapping system is intended to provide guidance to applicants and the chief executive about whether an application potentially involves a matter of interest to the state, and therefore whether it may require assessment by the chief executive.

Table B.1 is structured in the following way:

(1) column 1 identifies the matters of interest addressed in each module (the modules are shown as a coloured row)
(2) column 2 identifies if there is a supporting mapping layer available for the matter of interest that is viewable within the SARA mapping online system
(3) column 3 identifies if there is a state agency register available for the matter of interest (where there is a relevant register a hyperlink is provided to the register from the SARA mapping online system)
(4) column 4 provides guidance to the user about the mapping layer.

Table B.1: SARA mapping online system

Matter of interest	Mapping layers available	State agency register	Guidance note
Liveable communities and housing			
Community amenity	Yes	No	
Regional plans	Yes	No	For applications within South East Queensland only
Economic growth			
Aquaculture	No	No	
Environmentally relevant activities	No	Yes	
Fish habitat areas	Yes	No	
Strategic cropping land	Yes	Yes	
Water resources	Yes	No	
Environment and heritage			
Coastal protection	Yes	No	
Koala conservation	Yes	No	This layer is for information purposes only
Native vegetation clearing	Yes	No	
Queensland heritage	No	Yes	
Wetland protection areas	Yes	No	
Wild river areas	Yes	No	
Hazards and safety			
Contaminated land	No	Yes	
Major hazard facilities	No	No	
Infrastructure			
Airport land	Yes	No	This layer only relates to the Cairns and Mackay airports
Public passenger transport	Yes	No	
Rail	Yes	No	
Strategic ports	Yes	No	This layer is for information purposes only
State-controlled roads	Yes	No	
State-controlled transport tunnels	Yes	No	

The state codes

When the state codes apply

If the chief executive is the assessment manager for a development application under the provisions of the Regulation mentioned in Table B.2, column 3, the application must comply with the state codes mentioned in table B.2, column 4.

If the chief executive is a referral agency for a development application under the provisions of the Regulation mentioned in Table B.3, column 3, the application must comply with the state codes mentioned in Table B.3, column 4.

How the state codes are complied with

The relevant criteria in the state codes include the purpose statement, performance outcomes and acceptable outcomes.

Acceptable outcomes are provided for most performance outcomes, and represent ways in which the relevant performance outcomes can be met. An application that complies with the applicable acceptable outcomes will satisfy the relevant performance outcome. If an application does not comply with all applicable acceptable outcomes, an alternative solution is proposed, or no acceptable outcome has been provided in the state code, the proposed development must comply with the relevant performance outcome in order to comply with the purpose of the code. If an application does not comply with the performance outcomes then the proposed development must comply with the purpose of the code.

Where multiple acceptable outcomes are provided as a means for achieving compliance with a performance outcome they are to be read in the following way:

(1) if there is an 'AND' provided between each acceptable outcome, this means all of the acceptable outcomes apply if they are relevant to the application

(2) if there is an 'OR' between each acceptable outcome and there are only two acceptable outcomes, this means one or the other apply if they are relevant to the application

(3) if there are three or more acceptable outcomes provided and there is an 'AND' provided between the first two or more acceptable outcomes, then an 'OR' provided between the last two acceptable outcomes, this means that all of the acceptable outcomes apply and one-or-the-other of the last two acceptable outcomes apply (for example, the code lists AO7.1 AND AO7.2 AND AO7.3 OR AO7.4 — this means either AO7.1, AO7.2 and AO7.3 apply OR AO7.1, AO7.2 and AO7.4 apply)

(4) if there are three or more acceptable outcomes provided and the following statement is provided between the first two acceptable outcomes — 'OR all of the following acceptable outcomes apply' OR 'OR both of the following acceptable outcomes apply'; this means that either the first acceptable outcome applies OR all other acceptable solutions apply from the second acceptable outcome onwards (for example, the code lists AO2.1, OR both of the following acceptable outcomes apply, AO2.2 AND AO2.3 — this means either AO2.1 applies, OR AO2.2 AND AO2.3 apply).

State assessment criteria – Assessment manager

Table B.2: Assessment manager role

Matter of interest	Development type	Relevant provisions of the Regulation*	Relevant module and codes
Aquaculture	Material change of use	Schedule 6, Table 3, Item 10	**Module 3: Aquaculture** 3.1 Aquaculture state code
Environmentally relevant activities	Material change of use	Schedule 6, Table 3, Item 1	**Module 4: Environmentally relevant activities** 4.1 Concurrence environmentally relevant activity state code
Fisheries development other than aquaculture	Building work or operational work	Schedule 6, Table 3, Item 11	**Module 5: Fisheries resources** 5.1 Development in or adjacent to a declared fish habitat area state code OR 5.2 Constructing or raising waterway barrier works in fish habitats state code OR 5.3 Removal, destruction or damage of marine plants state code
Native vegetation clearing	Operational work	Schedule 6, Table 3, Item 2	**Module 8: Native vegetation clearing** 8.1 Queensland vegetation management state code
Queensland heritage	Various aspects of development	Schedule 6, Table 3, Item 7	**Module 9: Queensland heritage** 9.1 Queensland heritage place state code
Tidal works or development in a coastal management district	Operational work	Schedule 6, Table 3, Item 6	**Module 10: Coastal protection** 10.1 Tidal works, or development in a coastal management district state code
Water — taking or interfering with	Operational work	Schedule 6, Table 3, Item 3	**Module 7: Water resources** 7.1 Sustainable management of water resources state code
Watercourse or lake — removal of quarry material	Various aspects of development	Schedule 6, Table 3, Item 5	**Module 7: Water resources** 7.2 Removal of quarry material state code
Wetland protection area	Operational work	Schedule 6, Table 3, Item 13	**Module 11: Wetland protection and wild river areas** 11.1 Wetland protection area state code
Wild river area — certain agricultural or animal husbandry activities	Material change of use and operational work	Schedule 6, Table 3, Item 12	**Module 11: Wetland protection and wild river areas** 11.2 Agricultural or animal husbandry activities in a wild river area state code 11.3 Residential, commercial and industrial development in a wild river area
Contaminated land	Material change of use	Schedule 6, Table 3, Item 9	**Module 12: Contaminated land** 12.1 Contaminated land state code
Major hazard facilities	Material change of use	Schedule 6, Table 3, Item 4	**Module 13: Major hazard facilities** 13.1 Major hazard facilities state code
Airport land	Various aspects of development	Schedule 6, Table 2, Item 2	**Module 15: Airports** 15.1 Airport land use plans
Particular dams	Operational work	Schedule 6, Table 3, Item 3A	**Module 16: Particular dams** 16.1 Referable dams state code

Note: If the relevant provision of the Regulation is Schedule 6, Table 4, Item 1 — applications involving multiple jurisdictions, the relevant module and codes that apply to the application are to be determined through:

- aligning the relevant aspect mentioned in Schedule 6, Table 4, Item (1)(a) of the Regulation to the corresponding provision mentioned in Table B.2 column 3, and applying the module and codes mentioned in Table B.2 column 4.

State assessment criteria – Referral agency

Table B.3: Referral agency role

Matter of interest	Development type	Relevant provisions of the Regulation	Relevant module and codes
Regional plans	Material change of use	Schedule 7, Table 3, Item 12	**Module 2: Regional plans** 2.1 South East Queensland Regional Plan
	Reconfiguring a lot	Schedule 7, Table 2, Item 39	
Aquaculture	Material change of use	Schedule 7, Table 2, Item 28	**Module 3: Aquaculture** 3.1 Aquaculture state code
Strategic cropping land	Material change of use	Schedule 7, Table 3, Item 27	**Module 6: Strategic cropping land** 6.1 Particular development on strategic cropping land state code
	Reconfiguring a lot	Schedule 7, Table 3, Item 28	**Module 6: Strategic cropping land** 6.1 Particular development on strategic cropping land state code
Environmentally relevant activities	Material change of use	Schedule 7, Table 2, Item 1	**Module 4: Environmentally relevant activities** 4.1 Concurrence environmentally relevant activity state code
Wild river area — certain agricultural or animal husbandry activities	Operational work	Schedule 7, Table 2, Item 42	**Module 4: Environmentally relevant activities** 4.1 Concurrence environmentally relevant activity state code
	Material change of use	Schedule 7, Table 2, Item 41	
Fish habitat area — works or other development in or adjoining	Building work	Schedule 7, Table 2, Item 25	**Module 5: Fisheries resources** 5.1 Development in or adjacent to a declared fish habitat area state code
	Operational work	Schedule 7, Table 2, Item 26	
	All development	Schedule 7, Table 2, Item 27	
Marine plants — removal, destruction or damage	Operational work	Schedule 7, Table 2, Item 30	**Module 5: Fisheries resources** 5.3 Removal, destruction or damage of marine plants state code
	Reconfiguring a lot	Schedule 7, Table 2, Item 31	
	Material change of use	Schedule 7, Table 2, Item 32	
		Schedule 7, Table 3, Item 25	
Native vegetation clearing	Reconfiguring a lot	Schedule 7, Table 2, Item 4	**Module 8: Native vegetation clearing** 8.1 Queensland vegetation management state code
	Operational work	Schedule 7, Table 2, Item 5	
	Material change of use	Schedule 7, Table 3, Item 10	

Matter of interest	Development type	Relevant provisions of the Regulation	Relevant module and codes
Queensland heritage	Building work	Schedule 7, Table 1, Item 12	**Module 9: Queensland heritage** 9.1 Queensland heritage place state code
	Various aspects of development	Schedule 7, Table 2, Item 19	
Tidal works or development in a coastal management district	Operational work	Schedule 7, Table 2, Item 13	**Module 10: Coastal protection** 10.1 Tidal works, or development in a coastal management district state code
		Schedule 7, Table 2, Item 15	**Module 14: Maritime safety** 14.1 Marine safety state code
	Reconfiguring a lot	Schedule 7, Table 2, Item 14	**Module 10: Coastal protection** 10.1 Tidal works or development in a coastal management district state code
	Material change of use	Schedule 7, Table 3, Item 5	
	Building work	Schedule 7, Table 1, Item 11	
Water — taking or interfering with	Operational work	Schedule 7, Table 2, Item 9	**Module 7: Water resources** 7.1 Sustainable management of water resources state code
		Schedule 7, Table 2, Item 10	
Watercourse or lake — removal of quarry material	All aspects of development	Schedule 7, Table 2, Item 12	**Module 7: Water resources** 7.2 Removal of quarry material state code
Waterway barrier works — constructing or raising	Operational work	Schedule 7, Table 2, Item 29	**Module 5: Fisheries resources** 5.2 Constructing or raising waterway barrier works in fish habitats state code
Wetland — land in or near	Reconfiguring a lot	Schedule 7, Table 2, Item 43A	**Module 11: Wetland protection and wild river areas** 11.1 Wetland protection area state code
	Material change of use	Schedule 7, Table 3, Item 21A	
	Operational work	Schedule 7, Table 2, Item 43B	
Contaminated land	Reconfiguring a lot	Schedule 7, Table 2, Item 22	**Module 12: Contaminated land** 12.1 Contaminated land state code
	Material change of use	Schedule 7, Table 2, Item 23	
		Schedule 7, Table 3, Item 11	
Major hazard facilities	Material change of use	Schedule 7, Table 2, Item 8	**Module 13: Major hazard facilities** 13.1 Major hazard facilities state code
Particular dams	Operational work	Schedule 7, Table 2, Item 11	**Module 16: Particular dams** 16.1 Referable dams state code
Public passenger transport	Building work	Schedule 7, Table 1, Item 14	**Module 18: State transport infrastructure protection** 18.1 Buildings and structures state code
	Reconfiguring a lot	Schedule 7, Table 2, Item 33	**Module 1: Community amenity** 1.1 Managing noise and vibration impacts from transport corridors state code 1.2 Managing air and lighting impacts from transport corridors state code **Module 17: Public and active transport**

Matter of interest	Development type	Relevant provisions of the Regulation	Relevant module and codes
			17.2 Active transport state code **Module 18: State transport infrastructure protection** 18.1 Buildings and structures state code 18.2 Filling and excavation state code 18.3 Stormwater and drainage impacts on state transport infrastructure state code **Module 19: State transport network functionality** 19.2 Development adjacent to railway or busway state code 19.3 Transport infrastructure and network design state code
	Material change of use or operational work	Schedule 7, Table 3, Item 14	**Module 1: Community amenity** 1.1 Managing noise and vibration impacts from transport corridors state code 1.2 Managing air and lighting impacts from transport corridors state code **Module 17: Public and active transport** 17.2 Active transport state code **Module 18: State transport infrastructure protection** 18.1 Buildings and structures state code 18.2 Filling and excavation state code 18.3 Stormwater and drainage impacts on state transport infrastructure state code **Module 19: State transport network functionality** 19.2 Development adjacent to railway, busway and light rail state code 19.3 Transport infrastructure and network design state code
Railways	Building work	Schedule 7, Table 1, Item 16	**Module 1: Community amenity** 1.1 Managing noise and vibration impacts from transport corridors state code 1.2 Managing air and lighting impacts from transport corridors state code **Module 18: State transport infrastructure protection** 18.1 Buildings and structures state code 18.2 Filling and excavation state code 18.3 Stormwater and drainage impacts on state transport infrastructure state code **Module 19: State transport network functionality** 19.2 Development adjacent to railway, busway and light rail state code
	Material change of use	Schedule 7, Table 3, Item 15A	**Module 1: Community amenity** 1.1 Managing noise and vibration impacts from transport corridors state code 1.2 Managing air and lighting impacts from transport corridors state code **Module 17: Public and active transport** 17.2 Active transport state code

Matter of interest	Development type	Relevant provisions of the Regulation	Relevant module and codes
			Module 18: State transport infrastructure protection 18.1 Buildings and structures state code 18.2 Filling and excavation state code 18.3 Stormwater and drainage impacts on state transport infrastructure state code **Module 19: State transport network functionality** 19.2 Development adjacent to railway or busway state code 19.3 Transport infrastructure and network design state code
	Operational work	Schedule 7, Table 3, Item 15B	**Module 18: State transport infrastructure protection** 18.1 Buildings and structures state code 18.2 Filling and excavation state code 18.3 Stormwater and drainage impacts on state transport infrastructure state code **Module 19: State transport network functionality** 19.2 Development adjacent to railway, busway and light rail state code
	Reconfiguring a lot	Schedule 7, Table 2, Item 34	**Module 1: Community amenity** 1.1 Managing noise and vibration impacts from transport corridors state code 1.2 Managing air and lighting impacts from transport corridors state code **Module 17: Public and active transport** 17.2 Active transport state code **Module 18: State transport infrastructure protection** 18.1 Buildings and structures state code 18.2 Filling and excavation state code 18.3 Stormwater and drainage impacts on state transport infrastructure state code **Module 19: State transport network functionality** 19.2 Development adjacent to railway, busway and light rail state code 19.3 Transport infrastructure and network design state code
State-controlled road	Building work	Schedule 7, Table 1, Item 8	**Module 18: State transport infrastructure protection** 18.1 Buildings and structures state code 18.2 Filling and excavation state code 18.3 Stormwater and drainage impacts on state transport infrastructure state code
	Reconfiguring a lot	Schedule 7, Table 2, Item 2	**Module 1: Community amenity** 1.1 Managing noise and vibration impacts from transport corridors state code 1.2 Managing air and lighting impacts from transport corridors state code **Module 18: State transport infrastructure protection** 18.1 Buildings and structures state code

Matter of interest	Development type	Relevant provisions of the Regulation	Relevant module and codes
			18.2 Filling and excavation state code 18.3 Stormwater and drainage impacts on state transport infrastructure state code **Module 19: State transport network functionality** 19.1 Access to state-controlled road state code 19.3 Transport infrastructure and network design state code
	Operational work	Schedule 7, Table 2, Item 3 Schedule 7, Table 3, Item 1A	**Module 18: State transport infrastructure protection** 18.1 Buildings and structures state code 18.2 Filling and excavation state code 18.3 Stormwater and drainage impacts on state transport infrastructure state code **Module 19: State transport network functionality** 19.1 Access to state-controlled road state code
	Material change of use	Schedule 7, Table 3, Item 1	**Module 1: Community amenity** 1.1 Managing noise and vibration impacts from transport corridors state code 1.2 Managing air and lighting impacts from transport corridors state code **Module 18: State transport infrastructure protection** 18.1 Buildings and structures state code 18.2 Filling and excavation state code 18.3 Stormwater and drainage impacts on state transport infrastructure state code **Module 19: State transport network functionality** 19.1 Access to state-controlled road state code 19.3 Transport infrastructure and network design state code
State transport infrastructure (thresholds)	Various aspects of development	Schedule 7, Table 3, Item 2	**Module 17: Public and active transport** 17.1 Public passenger transport state code 17.2 Active transport state code **Module 18: State transport infrastructure protection** 18.1 Buildings and structures state code 18.2 Filling and excavation state code 18.3 Stormwater and drainage impacts on state transport infrastructure state code **Module 19: State transport network functionality** 19.2 Development adjacent to railway, busway and light rail state code 19.3 Transport infrastructure and network design state code
State-controlled transport tunnels	Reconfiguring a lot	Schedule 7, Table 2, Item 34A	**Module 1: Community amenity** 1.1 Managing noise and vibration impacts from transport corridors state code 1.2 Managing air and lighting impacts from transport corridors state code **Module 18: State transport infrastructure protection**

Matter of interest	Development type	Relevant provisions of the Regulation	Relevant module and codes
			18.1 Buildings and structures state code 18.2 Filling and excavation state code 18.3 Stormwater and drainage impacts on state transport infrastructure state code **Module 19: State transport network functionality** 19.2 Development adjacent to railway, busway or light rail state code 19.3 Transport infrastructure and network design state code
	Material change of use or operational work	Schedule 7, Table 3, Item 15C	**Module 1: Community amenity** 1.1 Managing noise and vibration impacts from transport corridors state code 1.2 Managing air and lighting impacts from transport corridors state code **Module 18: State transport infrastructure protection** 18.1 Buildings and structures state code 18.2 Filling and excavation state code 18.3 Stormwater and drainage impacts on state transport infrastructure state code **Module 19: State transport network functionality** 19.2 Development adjacent to railway, busway and light rail state code 19.3 Transport infrastructure and network design state code

Part C:
State codes and other matters

Module 1: Community amenity
- 1.1 Managing noise and vibration impacts from transport corridors state code
- 1.2 Managing air and lighting impacts from transport corridors state code

Module 2: Regional plans
- 2.1 South East Queensland Regional Plan

Module 3: Aquaculture
- 3.1 Aquaculture state code

Module 4: Environmentally relevant activities
- 4.1 Concurrence environmentally relevant activities state code

Module 5: Fisheries resources
- 5.1 Development in or adjacent to a declared fish habitat area state code
- 5.2 Constructing or raising waterway barrier works in fish habitats state code
- 5.3 Removal, destruction or damage of marine plants state code

Module 6: Strategic cropping land
- 6.1 Particular development on strategic cropping land state code

Module 7: Water resources
- 7.1 Sustainable management of water resources state code
- 7.2 Removal of quarry material state code

Module 8: Native vegetation clearing
- 8.1 Queensland vegetation management state code

Module 9: Queensland heritage
- 9.1 Queensland heritage place state code

Module 10: Coastal protection
- 10.1 Tidal works, or development in a coastal management district state code

Module 11: Wetland protection and wild river areas
- 11.1 Wetland protection area state code
- 11.2 Agricultural or animal husbandry activities in a wild river area state code
- 11.3 Residential, commercial and industrial development in a wild river area

Module 12: Contaminated land
- 12.1 Contaminated land state code

Module 13: Major hazard facilities
- 13.1 Major hazard facilities state code

Module 14: Maritime safety
- 14.1 Maritime safety state code

Module 15: Airports
- 15.1 Airport land use plans

Module 16: Particular dams
- 16.1 Referrable dams state code

Module 17: Public and active transport
- 17.1 Public passenger transport state code
- 17.2 Active transport state code

Module 18: State transport infrastructure protection
- 18.1 Buildings and structures state code
- 18.2 Filling and excavation state code
- 18.3 Stormwater and drainage impacts on state transport infrastructure state code

Module 19: State transport network functionality
- 19.1 Access to state-controlled road state code
- 19.2 Development adjacent to railway, busway and light rail state code
- 19.3 Transport infrastructure and network design state code

Module 1. Community amenity

1.1 Managing noise and vibration impacts from transport corridors state code

1.1.1 Purpose

The purpose of the code is to:

(1) ensure that state transport operations and infrastructure are protected from development on nearby land that may lead to operational constraints on the state's transport system

(2) protect the community from significantly adverse impacts on health, wellbeing and quality of life resulting from environmental emissions (noise and vibration) generated by existing and future state transport operations and infrastructure.

This will be achieved through ensuring that land affected by environmental emissions (noise and vibration) from state-controlled transport operations and infrastructure is developed in a way that reduces the community's exposure to such emissions.

Note: This code applies to all development applications for a sensitive development.

Editor's note: Guidance for achieving the performance outcomes and acceptable outcomes for this state code is available in the *State Development Assessment Provisions Supporting Information – Community Amenity (noise)*, Department of Transport and Main Roads, 2013.

1.1.2 Criteria for assessment

Development mentioned in column 1 below must be assessed against the assessment criteria in the table mentioned in column 2.

Column 1	Column 2
Building work	Table 1.1.1
Material change of use	Table 1.1.1
Reconfiguring a lot	Table 1.1.1

Table 1.1.1: Building work, material change of use and reconfiguring a lot

Performance outcomes	Acceptable outcomes
Residential buildings near a state-controlled road or type 1 multi modal corridor	
PO1 Development involving an accommodation activity that is a residential building achieves acceptable noise levels for residents and visitors by mitigating adverse impacts on the development from noise generated by a state-controlled road or type 1 multi-modal corridor.	**AO1.1** All facades of a residential building exposed to noise from a state-controlled road or type 1 multi-modal corridor meet the following external noise criteria^#: (1) ≤60 dB(A) L_{10} (18 hour) facade corrected (measured L_{90} (8 hour) free field between 10 pm and 6 am ≤40 dB(A)) (2) ≤63 dB(A) L_{10} (18 hour) facade corrected (measured L_{90} (8 hour) free field between 10 pm and 6 am >40 dB(A)). AND **AO1.2** Private open space* in residential land uses exposed to noise from a state-controlled road or type 1 multi-modal corridor meet the following external noise criteria^#: (1) ≤57 dB(A) L_{10} (18 hour) free field (measured L_{90} (18 hour) free field between 6 am and 12 midnight ≤45 dB(A)) (2) ≤60 dB(A) L_{10} (18 hour) free field (measured L_{90} (18 hour) free field between 6 am and 12 midnight >45 dB(A)). AND **AO1.3** Every passive recreation area* exposed to noise from a state-controlled

Performance outcomes	Acceptable outcomes
	road or type 1 multi-modal corridor meets the following external noise criteria^#: (1) 63 dB(A) L_{10} (12 hour) free field (between 6 am and 6 pm). AND **AO1.4** For a residential building, not located in a transport noise corridor, every habitable room is designed, sited and constructed to meet the following internal noise criteria^#: (1) ≤35 dB(A) L_{eq} (1 hour) (maximum hour over 24 hours). AND **AO1.5** A residential building not located in a transport noise corridor, is designed, sited and constructed to incorporate noise attenuation treatments in accordance with *AS3671–1989 Acoustics – Road traffic noise intrusion – building siting and construction.* Note: Noise levels from a state-controlled road or type 1 multi-modal corridor are to be measured in accordance with *AS1055.1–1997 Acoustics – Description and measurement of environmental noise*. Editor's note: Habitable rooms of residential buildings located within a transport noise corridor must comply with t*he Queensland Development Code MP4.4 Buildings in a transport noise corridor*, Queensland Government, 2010. Transport noise corridors are mapped on the Department of Housing and Public Works website.
Residential buildings near a railway with more than 15 passing trains per day or a type 2 multi modal corridor	
PO2 Development involving an accommodation activity that is a residential building achieves acceptable noise levels for residents and visitors by mitigating adverse impacts on the development from noise generated by a railway with more than 15 passing trains per day or a type 2 multi-modal corridor.	**AO2.1** All facades of a residential building exposed to noise from a railway with more than 15 passing trains per day or a type 2 multi-modal corridor meet the following external noise criteria^#: (1) ≤65 dB(A) L_{eq} (24 hour) facade corrected (2) ≤87 dB(A) (single event maximum sound pressure level) facade corrected. AND **AO2.2** Every private open space and passive recreation area* exposed to noise from a railway with more than 15 passing trains per day or type 2 multi-modal corridor meet the following external noise criteria^#: (1) ≤62 dB(A) L_{eq} (24 hour) free field (2) ≤84 dB(A) (single event maximum sound pressure level) free field. AND **AO2.3** For a residential building, not located in a transport noise corridor, every habitable room is designed, sited and constructed to meet the following internal noise criteria^#: (1) ≤45 dB(A) single event maximum sound pressure level (railway). Note: Noise levels from railways or type 2 multi-modal corridors are to be measured in accordance with *AS1055.1–1997 Acoustics – Description and measurement of environmental noise.* Editor's note: Habitable rooms of residential buildings located within a transport noise corridor must comply with t*he Queensland development code MP4.4 Buildings in a transport noise corridor*, Queensland Government, 2010. Transport noise corridors are mapped on the Department of Housing and Public Works website.
Accommodation activities or residential care facilities near a state-controlled road or type 1 multi modal corridor	
PO3 Development involving an accommodation activity or residential care facility achieves acceptable noise levels for residents and visitors by mitigating adverse impacts on the	**AO3.1** All facades of an accommodation activity and residential care facility (other than a residential building) exposed to noise from a state-controlled road or type 1 multi-modal corridor meet the following external noise criteria^#:

Performance outcomes	Acceptable outcomes
development from noise generated by a state-controlled road or type 1 multi-modal corridor.	(1) ≤60 dB(A) L_{10} (18 hour) facade corrected (measured L_{90} (8 hour) free field between 10 pm and 6 am ≤40 dB(A)) (2) ≤63 dB(A) L_{10} (18 hour) facade corrected (measured L_{90} (8 hour) free field between 10 pm and 6 am >40 dB(A)). AND **AO3.2** Every private open space* in an accommodation activity or residential care facility (other than a residential building) exposed to noise from a state-controlled road or type 1 multi-modal corridor meet the following external noise criteria^#: (1) ≤57 dB(A) L_{10} (18 hour) free field (measured L_{90} (18 hour) free field between 6 am and 12 midnight ≤45 dB(A)) (2) ≤60 dB(A) L_{10} (18 hour) free field (measured L_{90} (18 hour) free field between 6 am and 12 midnight >45 dB(A)). AND **AO3.3** Every passive recreation area* in an accommodation activity or residential care facility (other than a residential building) exposed to noise from a state-controlled road or type 1 multi-modal corridor meet the following external noise criteria^#: (1) 63 dB(A) L_{10} (12 hour) free field (between 6 am and 6 pm). AND **AO3.4** Every habitable room in an accommodation activity or residential care facility (other than a residential building) exposed to noise from a state-controlled road or type 1 multi-modal corridor meet the following internal noise criteria^#: (1) ≤35 dB(A) L_{eq} (1 hour) (maximum hour over 24 hours). Note: Noise levels from state-controlled roads or type 1 multi-modal corridors are to be measured in accordance with *AS1055.1–1997 Acoustics – Description and measurement of environmental noise.*
Accommodation activities or residential care facilities near a railway with more than 15 passing trains per day or a type 2 multi modal corridor	
PO4 Development involving an accommodation activity or residential care facility achieves acceptable noise levels for residents and visitors by mitigating adverse impacts on the development from noise generated by railways with more than 15 passing trains per day or type 2 multi-modal corridors.	**AO4.1** All facades of an accommodation activity or residential care facility (other than a residential building) exposed to noise from a railway with more than 15 passing trains per day or a type 2 multi-modal corridor meet the following external noise criteria^#: (1) ≤65 dB(A) L_{eq} (24 hour) facade corrected (2) ≤87 dB(A) (single event maximum sound pressure level) facade corrected. AND **AO4.2** Every private open space and passive recreation area* in an accommodation activity or residential care facility (other than a residential building) exposed to noise from a railway with more than 15 passing trains per day or a type 2 multi-modal corridor meet the following external noise criteria^#: (1) ≤62 dB(A) L_{eq} (24 hour) free field (2) ≤84 dB(A) (single event maximum sound pressure level) free field. AND **AO4.3** Every habitable room in an accommodation activity or a residential care facility (other than a residential building) exposed to noise from a railway with more than 15 passing trains per day or a type 2 multi-modal corridor meet the following internal noise criteria^#: (1) ≤45 dB(A) single event maximum sound pressure level (railway).

Performance outcomes	Acceptable outcomes
	Note: Noise levels from railways or type 2 multi-modal corridors are to be measured in accordance with *AS1055.1–1997 Acoustics – Description and measurement of environmental noise.*
Accommodation activities or residential care facilities near a busway or light rail	
PO5 Development involving an accommodation activity or residential care facility achieves acceptable noise levels for residents and visitors by mitigating adverse impacts on the development from noise generated by a busway or light rail.	**AO5.1** All facades of an accommodation activity or residential care facility (other than a residential building) exposed to noise from a busway or light rail meet the following external noise criteria^#: (1) ≤55 dB(A) L_{eq} (1 hour) facade corrected (maximum hour between 6 am and 10 pm) (2) ≤50 dB(A) L_{eq} (1 hour) facade corrected (maximum hour between 10 pm and 6 am) (3) ≤64 dB(A) L_{max} facade corrected (between 10 pm and 6 am). AND **AO5.2** Every private open space and passive recreation area* in an accommodation activity or residential care facility (other than a residential building) exposed to noise from a busway or light rail meet the following external noise criteria^#: (1) ≤52 dB(A) L_{eq} (1 hour) free field (maximum hour between 6 am and 10 pm) (2) ≤66 dB(A) L_{max} free field. AND **AO5.3** Every habitable room of an accommodation activity or residential care facility (other than a residential building) exposed to noise from a busway or light rail meet the following internal noise criteria^#: (1) ≤35 dB(A) L_{eq} (1 hour) (maximum hour over 24 hours). Note: Noise levels from a busway or light rail are to be measured in accordance with *AS1055.1–1997 Acoustics – Description and measurement of environmental noise*.
Particular development near a state-controlled road or type 1 multi modal corridor	
PO6 Development involving a: (1) child care centre, or (2) community use, or (3) educational establishment, or (4) health care service, or (5) hospital, or (6) office, or (7) place of worship achieves acceptable noise levels for workers and patrons by mitigating adverse impacts on the development from noise generated by a state-controlled road or type 1 multi-modal corridor.	**AO6.1** All facades of buildings for the particular development exposed to noise from state-controlled roads or type 1 multi-modal corridors meet the following external noise criteria^#: (1) ≤58 dB(A) L_{10} (1 hour) facade corrected (maximum hour during normal opening hours). AND **AO6.2** Every outdoor education area and passive recreation area* for the particular development exposed to noise from a state-controlled road or type 1 multi-modal corridor meet the following external noise criteria^#: (1) ≤63 dB(A) L_{10} (12 hours) free field (between 6 am and 6 pm). AND **AO6.3** A childcare centre, health care service, hospital, educational establishment, library and place of worship exposed to noise from a state-controlled road or type 1 multi-modal corridor meet the following internal noise criteria^#: (1) ≤35 dB(A) L_{eq} (1 hour) (maximum hour during opening hours). AND **AO6.4** A community use (except for a library) and office exposed to noise from a state-controlled road or type 1 multi-modal corridor meet the following internal noise criteria^#: (1) ≤45 dB(A) L_{eq} (1 hour) (maximum hour during opening hours).

Performance outcomes	Acceptable outcomes
	Note: Noise levels from state-controlled roads or type 1 multi-modal corridors are to be measured in accordance with *AS1055.1–1997 Acoustics – Description and measurement of environmental noise.*
Particular development near a railway (with more than 15 passing trains per day) or a type 2 multi modal corridor	
PO7 Development involving a: (1) child care centre, or (2) community use, or (3) educational establishment, or (4) health care service, or (5) hospital, or (6) office, or (7) place of worship achieves acceptable noise levels for workers and patrons by mitigating adverse impacts on the development from noise generated by a railway with more than 15 passing trains per day or a type 2 multi-modal corridor.	**AO7.1** All facades of buildings for the particular development exposed to noise from a railway with more than 15 passing trains per day or a type 2 multi-modal corridor meet the following external noise criteria^#: (1) ≤65 dB(A) L_{eq} (1 hour) facade corrected (maximum hour during normal opening hours) (2) ≤87 dB(A) (single event maximum sound pressure level) facade corrected. AND **AO7.2** Every outdoor education area and passive recreation area* exposed to noise from a railway with more than 15 passing trains per day or a type 2 multi-modal corridor meet the following external noise criteria^#: (1) ≤62 dB(A) L_{eq} (12 hour) free field (between 6 am and 6 pm) (2) ≤84 dB(A) (single event maximum sound pressure level) free field. AND **AO7.3** Sleeping areas in a child care centre, health care service or hospital exposed to noise from a railway with more than 15 passing trains per day or a type 2 multi-modal corridor meet the following internal noise criteria^#: (1) ≤45 dB(A) single event maximum sound pressure level. AND **AO7.4** Other rooms in a child care centre, health care service or hospital exposed to noise from a railway with more than 15 passing trains per day or a type 2 multi-modal corridor meet the following internal noise criteria^#: (1) ≤50 dB(A) single event maximum sound pressure level. AND **AO7.5** An educational establishment, library or place of worship exposed to noise from a railway with more than 15 passing trains per day or a type 2 multi-modal corridor meet the following internal noise criteria^#: (1) ≤50 dB(A) single event maximum sound pressure level. AND **AO7.6** A community use (except library) or office exposed to noise from a railway with more than 15 passing trains per day or a type 2 multi-modal corridor meet the following internal noise criteria^#: (1) ≤55 dB(A) single event maximum sound pressure level. Note: Noise levels from railways or type 2 multi-modal corridors are measured in accordance with *AS1055.1–1997 Acoustics – Description and measurement of environmental noise.*
Particular development near a busway or light rail	
PO8 Development involving a: (1) child care centre, or (2) community use, or (3) educational establishment, or (4) health care service, or (5) hospital, or (6) office, or (7) place of worship	**AO8.1** All facades of buildings for the particular development exposed to noise from a busway or light rail meet the following external noise criteria^#: (1) ≤55 dB(A) L_{eq} (1 hour) facade corrected (maximum hour during normal opening hours). AND **AO8.2** Every outdoor education area and passive recreation area* exposed to noise from a busway or light rail meet the following external noise criteria^#: (1) ≤52 dB(A) L_{eq} (1 hour) free field (maximum hour during normal opening hours)

Performance outcomes	Acceptable outcomes
achieves acceptable noise levels for workers and patrons by mitigating adverse impacts on the development from noise generated by a busway and light rail.	(2) ≤66 dB(A) L_{max} free field (during normal opening hours). AND **AO8.3** Every childcare centre, health care service, hospital, educational establishment, library and place of worship exposed to noise from a busway or light rail meet the following internal noise criteria^#: (1) ≤35 dB(A) L_{eq} (1 hour) (maximum hour during opening hours). AND **AO8.4** A community use (except library) or office exposed to noise from a busway or light rail meet the following internal noise criteria^#: (1) ≤45 dB(A) L_{eq} (1 hour) (maximum hour during opening hours). Note: Areas exposed to noise from a busway or light rail are measured in accordance with *AS1055.1–1997 Acoustics – Description and measurement of environmental noise.*
Noise barriers	
PO9 Noise barriers or earth mounds erected to mitigate noise from transport operations and infrastructure are designed, sited and constructed to ensure: (1) adequate clearances to state transport infrastructure to incorporate safety requirements and facilitate maintenance requirements (2) privacy, security and amenity of surrounding properties are not significantly impacted (3) appropriate colour schemes, textures and landscaping are used in barrier design (4) design of noise barriers complements existing terrain (5) fauna movement is maintained along appropriate corridors (6) noise barriers are durable and fit for purpose.	**AO9.1** Where adjacent to a state-controlled road or type 1 multi-modal corridor, noise barriers and earth mounds are designed, sited and constructed in accordance with Chapter 5 Integrated Noise Barrier Design of the *Road traffic noise management: Code of practice*, Department of Transport and Main Roads, 2007. OR **AO9.2** Where adjacent to a railway or type 2 multi-modal corridor, noise barriers and earth mounds are designed, sited and constructed in accordance with *Queensland Rail Systems and Capability Technical Requirement – MCE-SR-014 Design of noise barriers adjacent to railways*, Queensland Rail, 2010 and Part B.7 (d) of the *Guide for development in a railway environment,* Department of Infrastructure and Planning, 2010. Editor's note: The *Guide for development in a railway environment* is part of the *Transit oriented development guide: guide for practitioners in Queensland*, Department of Infrastructure and Planning, 2010.
Vibration	
PO10 Development mitigates adverse impacts on the development from vibration generated by transport operations and infrastructure.	No acceptable outcome is prescribed.

* Note: The noise criteria for private open space, outdoor education area or passive recreation area only apply where these types of open space are included in a development proposal. Provision of private open space, outdoor education areas or passive recreation areas must comply with the relevant requirements under the local government planning scheme.

^ Editor's note: The noise criteria for development types are stated in the *Policy for development on land affected by environmental emissions from transport and transport infrastructure*, Department of Transport and Main Roads, 2013.

Editor's note: To demonstrate compliance with this acceptable outcome, it is recommended that a noise assessment report be prepared.

1.2 Managing air and lighting impacts from transport corridors state code

1.2.1 Purpose

The purpose of the code is to:

(1) ensure that state transport operations and infrastructure are protected from development on nearby land that may lead to operational constraints on the state's transport system

(2) protect the community from significantly adverse impacts on health, community wellbeing and quality of life resulting from environmental emissions (air particles and light) generated by existing and future state-controlled transport operations and infrastructure.

This will be achieved through ensuring that land is developed in a way that reduces the effect of exposure to environmental emissions (air particles and light) on the community, and the potential impact on the operation of state-controlled transport operations.

Note: This code applies to all development applications for a sensitive development.

Editor's note: Guidance for achieving the performance outcomes and acceptable outcomes for this state code is available in the *State Development Assessment Provisions Supporting Information – Community Amenity (noise)*, Department of Transport and Main Roads, 2013.

1.2.2 Criteria for assessment

Development mentioned in column 1 below must be assessed against the assessment criteria in the table mentioned in column 2.

Column 1	Column 2
Building work	Table 1.2.1
Material change of use	Table 1.2.1
Reconfiguring a lot	Table 1.2.1

Table 1.2.1: Building work, material change of use and reconfiguring a lot

Performance outcomes	Acceptable outcomes
Air quality	
PO1 Development involving sensitive development achieves acceptable levels of air quality for occupiers or users of the development by mitigating adverse impacts on the development from air emissions generated by state transport infrastructure.	**AO1.1** Every private open space and passive recreation area of an accommodation activity or residential care facility (other than a residential building) meet the air quality objectives in the *Environmental Protection (Air) Policy 2008* for the following indicators: (1) carbon monoxide (2) nitrogen dioxide (3) sulphur dioxide (4) photochemical oxidants (5) respirable particulate matter (PM10) (6) fine particulate matter (PM2.5) (7) lead (8) toluene (9) formaldehyde (10) xylenes. AND **AO1.2** Every outdoor education area and passive recreation area of an educational establishment, childcare centre, health care service, hospital, community use, place of worship and office meet the air quality objectives in the *Environmental Protection (Air) Policy 2008* for the following indicators: (1) carbon monoxide (2) nitrogen dioxide (3) sulphur dioxide

Performance outcomes	Acceptable outcomes
	(4) photochemical oxidants (5) respirable particulate matter (PM10) (6) fine particulate matter (PM2.5) (7) lead (8) toluene (9) formaldehyde (10) xylenes.
Lighting impacts	
PO2 Development involving an accommodation activity, residential care facility, health care service or hospital achieves acceptable levels of amenity for residents and patients by mitigating lighting impacts from state transport infrastructure.	**AO2.1** Buildings for an accommodation activity, residential care facility (other than a residential building), health care service and hospital are designed, sited and constructed to incorporate treatments to attenuate ingress of artificial lighting from state transport infrastructure during the hours of 10 pm – 6 am.

1.3 Reference documents

Department of Transport and Main Roads 2013 *Policy for development on land affected by environmental emissions from transport and transport infrastructure (The Environmental Emissions Policy)*

Department of Transport and Main Roads 2013 *Road traffic noise management: Code of practice*

Department of Transport and Main Roads 2013 *State Development Assessment Provisions Supporting Information - Community Amenity (noise)*

Queensland Government 2008 *Environmental Protection (Air) Policy*

Queensland Government 2008 *Environmental Protection (Noise) Policy*

Department of Infrastructure and Planning 2010 *Transit oriented development guide* (including the *Guide to development in a railway environment)*

Queensland Rail 2010 *MCE_SR_014 Design of noise barriers adjacent to railways, Systems and Capability Technical Requirement*

Standards Australia 1997 *AS1055.1–1997 Acoustics - Description and measurement of environmental noise*

Standards Australia 1989 *AS3671 Acoustics - Road traffic noise intrusions - Building siting and construction*

Queensland Government Queensland development code, *MP4.4 Buildings in a transport noise corridor*

Department of State Development, Infrastructure and Planning 2013 *Queensland Planning Provisions version 3.0*

Building code of Australia

Department of Housing and Public Works *Transport noise corridor search tool*

1.4 Glossary of terms

Accommodation activity means accommodation activities (including caretaker's accommodation, community residence, dual occupancy, dwelling house, dwelling unit, hostel, multiple dwelling, relocatable home park, retirement facility, short-term accommodation and tourist parks).

Busway see the *Transport Infrastructure Act 1994*, schedule 6.

Editor's note: Busway means a route especially designed and constructed for, and dedicated to, the priority movement of buses for passenger transport purposes; places for the taking on and letting off of bus passengers using the route.

Child care centre see the standard planning scheme provisions.

Editor's note: Child care centre means the premises used for minding or care, but not residence, of children.

Community use see the standard planning scheme provisions.

Editor's note: Community use means premises used for providing artistic, social or cultural facilities and community support services to the public, and may include the ancillary preparation and provision of food and drink.

Educational establishment see the standard planning scheme provisions.

Editor's note: Educational establishment means premises used for training and instruction designed to impart knowledge and develop skills. The use may include after school care for students or on-site student accommodation.

Habitable Room see the *Building Code of Australia*.

Editor's note: Habitable room means a room used for normal domestic activities, and includes a bedroom, living room, lounge room, music room, television room, kitchen, dining room, sewing room, study, playroom, family room, home theatre and sunroom but excludes a bathroom, laundry, water closet, pantry, walk-in wardrobe, corridor, hallway, lobby, photographic darkroom, clothes-drying room, and other spaces of a specialised nature occupied neither frequently nor for extended periods.

Health care service see the standard planning scheme provisions.

Editor's note: Health care services means premises for medical, paramedical, alternative therapies and general health care and treatment of persons that involves no overnight accommodation.

Hospital see the standard planning scheme provisions.

Editor's note: Hospital means premises used for medical or surgical care or treatment of patients, whether or not residing on the premises. The use may include ancillary accommodation for employees and ancillary activities directly serving the needs of patients and visitors.

Light rail see the *Transport infrastructure Act 1994*, schedule 6.

Editor's note: Light rail means a route wholly or partly dedicated to the priority movement of light rail vehicles for passenger transport purposes, whether or not the route was designed and constructed for those purposes as well as other purposes; places for the taking on and letting off of light rail vehicle passengers using the route.

Office see the standard planning scheme provisions.

Editor's note: Office means premises used for an administrative, secretarial or management service or the practice of a profession, where no goods or materials are made, sold or hired, and where the principal activity provides for the following:

(1) business or professional advice
(2) service of goods that are not physically on the premises
(3) office-based administrative functions of an organisation.

Outdoor education area means outdoor areas intended for use for the training or teaching of persons. This term does not include playgrounds or outdoor sport and recreational areas.

Editor's note: This definition has been sourced from the *Policy for Development on Land Affected by Environmental Emissions from Transport and Transport Infrastructure (Version 2)*. Department of Transport and Main Roads, 2013

Passive recreation area means an area used for passive recreation such as a park, playground or walking track. This term does not include drainage reserves or channels, landscape buffer strips, environmental areas or corridors, or conservation areas or corridors.

Editor's note: This definition has been sourced from the *Policy for Development on Land Affected by Environmental Emissions from Transport and Transport Infrastructure*, Department of Transport and Main Roads, 2013.

Private open space means an outdoor space for the exclusive use of occupants of a building.

Place of worship see the standard planning scheme provisions.

Editor's note: Place of worship means a premises used by an organised group for worship and religious activities. The use may include ancillary facilities for social and educational activities.

Railway see the Sustainable Planning Regulation 2009.

Editor's note: Railway means land on which railway transport infrastructure or other rail infrastructure is situated.

Residential building means a class 1, class 2, class 3 or class 4 building as defined in the *Building Code of Australia*.

Residential care facility see the standard planning scheme provisions.

Editor's note: Residential care facility means a residential use of premises for supervised accommodation, where the use includes medical and other support facilities for residents who cannot live independently and require regular nursing or personal care.

Sensitive development means:
(1) an accommodation activity, or
(2) a residential care facility, or
(3) an educational establishment, or
(4) a child care centre, or
(5) a health care service, or
(6) a hospital, or
(7) a community use, or
(8) a place of worship, or
(9) an office, or
(10) a development with a combination of uses (1) to (9).

State-controlled road see the *Transport Infrastructure Act 1994*, schedule 6.

Editor's note: State-controlled road means a road or land, or part of a road or land, declared under section 24 of the *Transport Infrastructure Act 1994* to be a state-controlled road.

State transport infrastructure means any of the following:
(1) a state-controlled road
(2) busway transport infrastructure under the *Transport Infrastructure Act 1994*
(3) light rail transport infrastructure under the *Transport Infrastructure Act 1994*
(4) rail transport infrastructure under the *Transport Infrastructure Act 1994*
(5) other rail infrastructure under the *Transport Infrastructure Act 1994*
(6) active transport infrastructure under the *Transport Planning and Coordination Act 1994*.

Transport noise corridor see the *Building Act 1975*, chapter 8B

Editor's note: Transport noise corridor means land designated under chapter 8B of the *Building Act 1975* as a transport noise corridor.

Type 1 multi-modal corridor means a transport corridor that includes a state-controlled road and at least one of the following:
(1) a busway
(2) light rail
(3) a railway with 15 or less passing trains per day.

Type 2 multi-modal corridor means a transport corridor that includes a railway with more than 15 passing trains per day and at least one of the following:
(1) a state-controlled road
(2) a busway
(3) light rail.

1.5 Abbreviations

dB(A) – decibels measured on the 'A' frequency weighting network

Module 2. Regional plans

2.1 South East Queensland Regional Plan

2.1.1 Background

The *South East Queensland Regional Plan 2009–2031*, Department of Infrastructure and Planning, 2009 (SEQ Regional Plan) is a statutory instrument made under the Act. The purpose of the SEQ Regional Plan is to manage regional growth and change in the most sustainable way to protect and enhance quality of life if the SEQ region. State planning regulatory provisions (*South East Queensland Regional Plan 2009-2013 State planning regulatory provisions*, Department of Infrastructure and Planning, 2009) (regulatory provisions) support the SEQ Regional Plan and are to be read in conjunction with it.

If the chief executive is a referral agency for a development application under the provisions of the Regulation mentioned in Part B, Table B.3, column 3, the application must comply with the regulatory provisions.

Division 2 of the regulatory provisions generally apply to a material change of use in the Regional Landscape and Rural Production Area, the Rural Living Area or a Development Area, however there are exemptions prescribed in the regulatory provisions.

Division 3 of the regulatory provisions generally apply to reconfiguring a lot in the Regional Landscape and Rural Production Area or a Development Area, however there are exemptions prescribed in the regulatory provisions.

The Regional Landscape and Rural Production Area under the SEQ Regional Plan identifies land with regional landscape, rural production or other non-urban values. The regulatory provisions protect this land from inappropriate development, particularly urban or rural residential development.

For the Regional Landscape and Rural Production Area, the regulatory restrict:

(1) further fragmentation of land holdings
(2) urban development, except within established villages
(3) the expansion of rural residential development outside areas already allocated in local government planning schemes.

The regulatory provisions support diversification of rural economies by allowing a range of developments, including:

(1) small to medium-scale tourist activities
(2) small-scale industry and business activities
(3) sport and recreation facilities.

The Rural Living Area under the SEQ Regional Plan comprises locations designated for rural residential development in local government planning schemes, and where further rural residential development through infill and consolidation is permitted under the SEQ Regional Plan. The regulatory provisions allow the development of land in the Rural Living Area for rural residential purposes.

Development Areas provide additional land supply in areas within the Urban Footprint adjacent or proximate to existing infrastructure networks. Development Areas are areas planned to accommodate regional dwelling and employment targets. They require comprehensive planning to coordinate future development with infrastructure delivery. The regulatory provisions ensure that development does not adversely affect the future development intent of these areas.

2.1.2 Criteria for assessment

Please refer to the *South East Queensland Regional Plan 2009-2013 State planning regulatory provisions*, Department of Infrastructure and Planning, 2009.

2.2 Reference documents

Department of Infrastructure and Planning, 2009 *South East Queensland Regional Plan 2009–2031 – Part F: South East Queensland Regional Plan 2009–2031 State planning regulatory provisions.*

2.3 Glossary of terms

Please refer to the *South East Queensland Regional Plan 2009–2031*, Department of Infrastructure and Planning, 2009.

Module 3. Aquaculture

3.1 Aquaculture state code

3.1.1 Purpose

The purpose of this code is to ensure aquaculture industry development and practices are ecologically sustainable in a way that also supports economic growth. The aquaculture area state code ensures:

(1) fisheries and aquaculture fisheries resources (proposed brood stock and culture species) for which aquaculture may be appropriately carried out
(2) the prevention, control and eradication of disease in fish
(3) the containment of aquaculture fisheries resources to prevent escape or accidental release
(4) the ability to prevent the entry of fisheries resources into the development area
(5) the ability to meet food and other relevant supply chain standards
(6) the standards will be met by features of the development, such as the location of ponds and the aquaculture furniture that will be used
(7) any proposed disturbance or impact to fisheries resources, or displacement of commercial, recreational or Indigenous fishing is managed
(8) monitoring where required
(9) rehabilitation of the development area if the development is abandoned or ends.

Editor's note: Ensuring biosecurity issues are considered in the ongoing operation of aquaculture facilities is critical to protect fisheries resources and to ensure the long-term economic viability of the fishing industry in Queensland. Where development for an aquaculture facility is approved, certain conditions must be adhered to as part of the ongoing operation of the facility. Applicants can contact the Department of Agriculture, Fisheries and Forestry for more detailed information on operating an aquaculture facility.

3.1.2 Criteria for assessment

Development mentioned in column 1 below must be assessed against the assessment criteria in the table mentioned in column 2.

Column 1	Column 2
Material change of use	Table 3.1.1

Table 3.1.1: Material change of use

Performance outcomes	Acceptable outcomes
Location	
PO1 The aquaculture activity is suitably located for the type and scale of aquaculture activity proposed. Editor's note: Further information on site selection, and the environmental, operational and commercial factors that should influence site selection, is available on the Department of Agriculture, Fisheries and Forestry website (www.daff.qld.gov.au). Editor's note: To assist in demonstrating sound site selection, an applicant should provide details of how issues have been addressed, including sign off by a Registered Professional Engineer of Queensland (RPEQ).	**AO1.1** The site meets the recommendations detailed in the guideline *Site identification for aquaculture: Assessment of chemical contamination in site selection*, Department of Primary Industries and Fisheries, 2005.

Performance outcomes	Acceptable outcomes
PO2 Development on or in Queensland waters or unallocated tidal State land is undertaken for prescribed aquaculture only. Editor's note: A resource allocation authority is required under the *Fisheries Act 1994* before certain development can proceed. See also section 216 of the Fisheries Regulation 2008.	No acceptable outcome is prescribed.
PO3 If the development is located in a marine park, it is within a zone appropriate for the aquaculture development. Note: Refer to the relevant marine park zoning plan: (1) Marine parks (Great Barrier Reef Coast) zoning plan 2004 (2) Marine parks (Great Sandy) zoning plan 2006 (3) Marine parks (Moreton Bay Marine) zoning plan 2008.	No acceptable outcome is prescribed.
PO4 Aquaculture development is located to avoid or minimise impacts on the natural environment. Editor's note: (1) All necessary approvals that regulate impacts to the natural environment must be obtained prior to the commencement of any construction activities. (2) Separate approvals may be required under other state or federal legislation. (3) Bilateral agreements may apply.	No acceptable outcome is prescribed.
Development and construction of an aquaculture facility	
PO5 Development maintains or enhances community access to fisheries resources and fish habitats.	**AO5.1** The development does not impact existing infrastructure or access arrangements to fisheries resources and fish habitats. OR **AO5.2** The development provides community fishing access through linkages between the commercial and recreational fisheries, and infrastructure, services and facilities.
PO6 Development that has the potential to impact the operations and productivity of Queensland commercial or recreational fisheries (due to adjustment of fisheries) mitigates any adverse impacts due to adjustment of fisheries.	**AO6.1** If the development: (1) restricts access to an area, or (2) restricts fishing activities, or (3) diminishes access to fisheries resources in some other way, then – (a) affected commercial fishers are adequately compensated (b) any adverse impacts of development on commercial fisheries or recreational fishing is appropriately offset.
PO7 The development will not increase the risk of mortality, disease or injury to, or compromise the health and productivity of fisheries resources. Editor's note: Refer to relevant *Fish salvage guidelines*, Department of Primary Industries and Fisheries, 2004.	**AO7.1** Suitable habitat conditions, such as including but not limited to water and sediment quality, will be maintained to sustain the health and condition of fisheries resources and fish habitats affected by the development. AND **AO7.2** Herbicides are not used on, or where they may drift on, to fisheries resources or fish habitats. AND **AO7.3** Fish will not become trapped or stranded as a result of the development. OR **AO7.4** Risks of fish stranding occurring have been identified and are demonstrably manageable. Editor's note: This can be demonstrated through preparing a fish salvage plan. Further guidance is available in the *Fish salvage guidelines*, Department of Primary Industries and Fisheries, 2004.

Performance outcomes	Acceptable outcomes
PO8 Development resulting in drainage or disturbance of acid sulphate soil is managed to prevent impacts on fisheries resources and fish habitats.	**AO8.1** Run-off and leachate from disturbed or oxidised acid sulphate soils is contained and treated, and not released to a waterway or other fish habitat. Editor's note: Management of acid sulphate soils should to comply with the *Queensland acid sulfate soils technical manual: Soil management guidelines*, Department of Natural Resources and Mines, 2002.
PO9 The aquaculture facility is designed, constructed, and can be managed and maintained appropriately for the aquaculture fisheries resource. Editor's note: Further guidance is available in the aquaculture policy *Management arrangements for translocation of live aquatic organisms (transport between bioregions) for aquaculture FAMOP015*, Department of Employment, Economic Development and Innovation, 2011	**AO9.1** The location and design of the aquaculture facility is appropriate for the proposed species. AND **AO9.2** Noxious fish are not to be held or produced in the aquaculture facility. AND **AO9.3** Exotic fish, and fish that are non-endemic to the location, are not to be held or produced in the aquaculture facility. OR **AO9.4** All hazards and risks associated with any proposed culture of exotic fish or fish that are non-endemic to the location are addressed.
PO10 The aquaculture facility is designed to maintain integrity of the aquaculture product.	**AO10.1** The aquaculture facility design will allow the integrity of the aquaculture product to be maintained and lawful methods of harvesting of the aquaculture product are proposed. AND **AO10.2** The aquaculture facility design will allow food safety and ethical standards to be met.
PO11 The aquaculture facility is designed and constructed to mitigate risks of impact on the natural environment.	**AO11.1** The design and construction of the aquaculture facility minimises the risk of impact on waterways by: (1) being located away from important natural features such as waterways and wetlands (2) constructing every pond above the highest astronomical tide (3) not allowing discharge from ponds and tanks to enter waterways (4) including all reasonable and practicable measures to ensure that all waters are secured in such a way as to prevent the escape of any aquaculture fisheries resources into Queensland waters. AND **AO11.2** The design of the aquaculture facility allows control over the release of water from all ponds, tanks and drainage systems within the approved aquaculture area. OR **AO11.3** The design of the aquaculture facility ensures there is no release or discharge to waterways by: (1) not allowing release of discharge from ponds and tanks to enter waterways, or (2) not allowing exotic fish in open or flow-through systems that allow release or discharge into waterways.
PO12 The aquaculture facility is designed to allow for management of disease. Note: Further information can be found in the *Health management technical guidelines for aquaculture: Technical guidelines for health management for aquaculture, including aquaculture undertaken under the self-assessable code*, Department of Agriculture, Fisheries and Forestry, 2008.	**AO12.1** The aquaculture facility is designed such that any fish mortalities and processing wastes (including filter residues) are treated and disposed of in accordance with the Australian Government Department of Agriculture, Fisheries and Forestry *AQUAVETPLAN* (as updated from time to time) available on the Australian Government Department of Agriculture, Fisheries and Forestry website.
Land-based aquaculture	

Performance outcomes	Acceptable outcomes
PO13 Ponds are designed, constructed, managed and maintained to avoid leakage, ensure immunity from flooding, and minimise biosecurity and disease risks. Editor's note: Risk assessment considerations can be found in the *Guidelines for constructing and maintaining aquaculture containment structures: Guidelines for best practice in-ground pond construction for aquaculture*, Department of Agriculture, Fisheries and Forestry, 2007.	**AO13.1** Appropriate risk assessment has been undertaken with regards to site and design options, and the outcomes of the risk assessment are applied to the development proposed. AND **AO13.2** The development is not located on flood prone land. AND **AO13.3** Ponds are constructed above the highest astronomical tide. AND **AO13.4** Containers used to cultivate aquaculture fisheries resources are constructed with the lowest point of the top of wall at least the height of the Q100 flood level, or no lower than the highest known or recorded flood level if Q100 is unavailable. AND **AO13.5** Containers used for treatment and settlement are constructed so that the lowest point on the top of wall is at least the height of the Q50 flood level. AND **AO13.6** An appropriate size and number of overflow outlets are constructed 0.5 metres from the lowest point on the top of wall. AND **AO13.7** All in-ground structures, including any structure or impoundment used for the collection or treatment of wastewater, are constructed so as to adequately prevent the ingress of stormwater run-off, for example, by constructing a bund or levee wall around the structure or impoundment. AND **AO13.8** Control over the release of water from all ponds, tanks and drainage systems within the premises is able to be maintained at all times. AND **AO13.9** All reasonable and practicable measures to ensure that all waters (for example, ponds, tanks, aquaria) on the premises are screened to prevent the escape of any aquaculture fisheries resources (eggs, juveniles or adults) into Queensland waters. AND **AO13.10** Where water is to be introduced for aquaculture, the water is screened to prevent the movement of any juvenile or adult wild fauna (excepting zooplankton) into the premises. Editor's note: *Management arrangements for potentially high-risk activities in the context of ecologically sustainable development (ESD) for aquaculture facilities FAMOP001,* Department of Primary Industries and Fisheries, 2004 provides guidance on how to meet the acceptable outcomes.
PO14 Land based aquaculture facilities that hold fish capable of overland escape are designed to prevent overland escape.	**AO14.1** The aquaculture area is secured to prevent the overland escape of aquaculture product by maintaining a perimeter barrier that is impervious to all size classes of the aquaculture fisheries resources.
PO15 Land-based bioremediation practices for the purpose of aquaculture are designed, constructed, managed and maintained to minimise impacts on fisheries resources.	**AO15.1** Where fish are used for bioremediation purposes, only approved fish species are to be used.
Tidal aquaculture	

Performance outcomes	Acceptable outcomes
P**O16** Aquaculture furniture or other structures associated with any aquaculture on tidal land are designed and maintained to avoid or minimise impacts on native fauna.	**AO16.1** Development prevents stranding or entanglement of native fauna, including, but not limited to: (1) fisheries resources (2) marine mammals (3) reptiles.
PO17 Animals selected for aquaculture in tidal waters must minimise risks to and avoid impacts on wild fisheries resources and other indigenous flora and fauna specific to that area. Editor's note: Aquaculture fisheries resources must be carefully placed within an authorised area to avoid release or escape of the aquaculture fisheries resource from the approved area. Animals must not to be stocked outside the approved aquaculture area. If any aquaculture fisheries resource stocked within the approved aquaculture area subsequently moves outside of the approved area the authority holder will no-longer have entitlement to access or harvest this resource. If spawning or reproduction of any aquaculture fisheries resource occurs within the approved aquaculture area the authority holder does not have any entitlement to access or harvest the progeny (eggs, larvae, juveniles or adults) that become distributed outside of the approved aquaculture area. The authority holder remains responsible for any harm, impact or damage caused by the release or escape of such organisms that were required to be contained.	**AO17.1** Animals must not be released to or placed in Queensland waters unless they are of the same species and same genetic stock as the resident population of that area. AND **AO17.2** Tidal aquaculture is only of native Queensland fish species that are endemic to the location of the development. AND **AO17.3** The aquaculture fisheries resource can and will be produced from sufficient broodstock sourced from the area to ensure appropriate genetic diversity to minimise risks to the environment. AND **AO17.4** Structures that will hold aquaculture fisheries resources are designed, constructed, operated and maintained at all times to prevent the escape or release of aquaculture fisheries resources. AND **AO17.5** Structures associated with the aquaculture activity are designed, constructed, correctly deployed, operated and maintained at all times to prevent movement from the intended point of placement, anchoring or mooring.
PO18 Aquaculture infrastructure is designed, constructed, managed and maintained to avoid impacts to fisheries resources.	**AO18.1** Materials proposed to be on the approved aquaculture area are not hazardous or can and will be handled in a manner that will not endanger or be likely to endanger a person, a person's property, or the environment. AND **AO18.2** Aquaculture furniture used in oyster areas does not interfere with natural ecosystems, such as seagrass communities. AND **AO18.3** Aquaculture furniture is temporary and does not include fixed structures on the substrate (except for the supporting posts). AND **AO18.4** All materials used in the construction of aquaculture furniture or placed within the premises, are of an inert and non-hazardous nature. AND **AO18.5** Other structure, including break walls, fences, boat ramps and jetties, are not constructed on areas allocated for prescribed aquaculture. AND **AO18.6** Development that involves oyster farming within Moreton Bay Marine Park is consistent with the *Oyster Industry Management Plan for Moreton Bay Marine Park*, Department of Primary Industries and Fisheries, 2008. Editor's note: Further information can be found in *Oyster Industry Management Plan for Moreton Bay Marine Park*, Department of Primary Industries and Fisheries, 2008.

Performance outcomes	Acceptable outcomes
PO19 Facilities for the aquaculture of pearl oysters are designed, constructed, maintained and managed to meet pearl oyster quarantine management requirements for Queensland. Editor's note: Further pearl oyster quarantine information can be found on the Department of Agriculture, Fisheries and Forestry website (www.daff.qld.gov.au)	No acceptable outcome is prescribed.
Aquaculture of barramundi for inland catchments	
PO20 The development does not compromise the ecological integrity of fauna in inland catchments (west of the Great Dividing Range). Editor's note: Aquacultured barramundi west of the Great Dividing Range (in inland catchments shared with other states) are not to be used for non-food purposes, including stocking Queensland waters or dams. Further information is available in *Health protocol for the importation and movement of live barramundi (FAMPR002)*, Department of Agriculture, Fisheries and Forestry, 2011	**AO20.1** The development is designed to prevent the spread of disease or the introduction of barramundi into catchments where it does not naturally occur, through: (1) ensuring that containers used for the aquaculture of barramundi are constructed on land that is situated above the Q100 flood level (2) ensuring container design includes filters so that all waters leaving containers used for aquaculture of barramundi are screened to prevent the escape of eggs, juveniles or adults.
Exotic fish	
PO21 No water or organisms originating from the aquaculture of exotic fish reaches Queensland waters.	**AO21.1** Culture of exotic fish does not occur in open or flow-through systems that discharge into waterways. AND **AO21.2** All containers used to aquaculture exotic fish are screened to exclude vertebrate predators (for example birds) without causing injury to such predators. AND **AO21.3** Containers used for the aquaculture of exotic fish are constructed on land that is situated above the Q100 flood level. AND **AO21.4** Filters with screens are installed so that any water leaving containers used for the aquaculture of exotic fish are treated to prevent the escape of eggs, juveniles or adults.
PO22 Commonwealth quarantine protocols have successfully been completed for any fish proposed for production.	No acceptable outcome is prescribed.
Aquaculture of rare, threatened and endangered species recognised in international, Commonwealth and state legislation	
PO23 Aquaculture of any rare, threatened or endangered fish that are recognised under state or commonwealth legislation (for example the *Environment Protection and Biodiversity Conservation Act 1999* list of threatened fauna (under any category) or the *Queensland Nature Conservation Act 1992):* (1) provides a net benefit to management of the species in question (2) avoids or acceptably minimises biosecurity risks (3) acceptably manages any risks to the rare, threatened or endangered fish. Editor's note: For example, considering the risks of	No acceptable outcome is prescribed.

Performance outcomes	Acceptable outcomes
obtaining broodstock, maintaining the genetic integrity of restricted populations, translocation and disease. Editor's note: Examples of such species include Queensland lungfish, Mary and Murray River cods, silver perch, honey blue-eye and Oxleyan pygmy perch.	
For aquaculture in the Great Sandy Strait Marine Park	
PO24 Development in the Great Sandy Strait Marine Park complies with relevant information, protocols and monitoring programs. Editor's note: Further information for applicants can be found in the *Implementation guide for Great Sandy Regional Marine Aquaculture Plan*, Department of Employment, Economic Development and Innovation (Fisheries Queensland), 2011.	No acceptable outcome is prescribed.
Additional requirements for development within a wild river area (other than a HPA)	
PO25 Riparian areas and wildlife corridors along nominated waterways are preserved.	**AO25.1** The development is set back from a nominated waterway by at least the distance detailed in schedule 3 of the relevant *wild river declaration*, available from the Department of Environment and Heritage Protection website.
PO26 The development will not result in the increased delivery of sediment to adjacent waterways.	**AO26.1** The slope of the land on which the development occurs is less than the value detailed in schedule 3 of the relevant *wild river declaration*, available from the Department of Environment and Heritage Protection website.
PO27 Waste water and stormwater does not degrade the quality of any receiving waters.	**AO27.1** Measures are adopted to contain or prevent leakage from ponds or tanks and overflow from ponds or tanks due to rainfall or floodwaters.

3.2 Reference documents

Aquaculture policies and guidelines

Queensland Primary Industries and Fisheries 2004 *FAMOP001 – Management arrangements for potentially high-risk activities in the context of ecologically sustainable development for aquaculture facilities*

Editor's note: This includes the following:
(1) flood prone land,
(2) exotic freshwater fish species
(3) barramundi in inland catchments
(4) use of aquacultured product for bait.

Queensland Primary Industries and Fisheries December 2003 *FAMOP005 – Policy relating to the relaying of oysters within Queensland waters*

Queensland Primary Industries and Fisheries December 2003 *FAMOP006 – Policy relating to the transshipment of oysters into Queensland waters*

Department of Employment, Economic Development and Innovation *2011* *FAMOP015 – Management arrangements for translocation of live aquatic organisms (transport between bioregions) for aquaculture*

Queensland Primary Industries and Fisheries May 2008 *Policy for maximising rock oyster production: management of non-productive oyster areas*

Queensland Primary Industries and Fisheries August 2008 *Oyster Industry Management Plan for Moreton Bay Marine Park*

Queensland Primary Industries and Fisheries 2007 *Guidelines for constructing and maintaining aquaculture containment structures*

Queensland Primary Industries and Fisheries September 2005 *Site identification for aquaculture: Assessment of chemical contamination in site selection*

Department of Primary Industries and Fisheries February *2008 Health management technical guidelines for aquaculture*

Department of Employment, Economic Development and Innovation (Fisheries Queensland) 2010 *Great Sandy Regional Marine Aquaculture Plan (GSRMAP)*

Conservation Agreement between Minister for Sustainability, Environment, Water, Population and Communities on behalf of the Commonwealth of Australia and The Minister for Agriculture, Food and Regional Economies and The Minister for Environment on behalf of the State of Queensland dated 7 September 2011 - Agreement in relation to aquaculture operations in the Great Sandy Marine Park as described in the Great Sandy regional marine aquaculture plan (Queensland Government, approved October 2010) and made under the Environment Protection and Biodiversity Conservation Act 1999 (Cth)

Department of Employment, Economic Development and Innovation 2011 *Implementation guide for the Great Sandy Regional Marine Aquaculture Plan authorities*

Translocation and biosecurity

Department of Agriculture, Fisheries and Forestry June 2011 *FAMPR001 – Health protocol for the importation of selected live penaeid species from outside Queensland's East Coast waters* (i.e. Gulf of Carpentaria, Torres Strait, Northern Territory and Western Australia)

Department of Agriculture, Fisheries and Forestry June 2011 *FAMPR002 – Health protocol for the importation and movement of live barramundi*

Department of Agriculture, Fisheries and Forestry June 2011 *FAMPR003 – Health protocol for the translocation and movement of live bivalve molluscs*

Department of Employment, Economic Development and Innovation June 2011 *FAMPR004 – Health protocol for the movement of live marine crustaceans including crabs, lobsters and bugs*

Department of Employment, Economic Development and Innovation June 2011 *FAMPR005 – Health protocol for the movement of live eels*

Department of Employment, Economic Development and Innovation June 2011 *FAMPR006 – Health protocol for the movement of live freshwater crayfish and prawns*

Department of Employment, Economic Development and Innovation June 2011 *FAMPR007 – Health protocol for the movement of live freshwater native finfish (other than barramundi and eels)*

Department of Agriculture, Fisheries and Forestry 2013 *Identifying and reporting disease in aquaculture*

Editor's note: This website contains information on aquaculture health, pests and diseases

Department of Agriculture, Fisheries and Forestry 2011 *Protecting our aquaculture:*

Editor's note: This website contains information on the different measures in place to protect Queensland aquaculture from disease outbreaks

Department of Agriculture, Fisheries and Forestry 2011 *Controls over chemical use*

Editor's note: This website contains information regarding controls over use of agricultural and veterinary chemicals in the aquaculture industry

Department of Agriculture, Fisheries and Forestry 2013 *Pearl oyster quarantine*

Editor's note: This website contains information on pearl oyster quarantine in preventing disease introduction to a farm and its spread within the farm

Guidelines

Department of Primary Industries and Fisheries 2004 *Fish salvage guidelines*

Policies

Department of Agriculture, Fisheries and Forestry *FHMOP 005.2 - Marine fish habitat offset policy*

Self assessable codes

Department of Agriculture, Fisheries and Forestry 2013 *AQUA01-Code for self-assessable development - Low impact aquaculture*

Other references

Department of Environment and Heritage Protection *Wild river declarations*

Australian Government Department of Agriculture, Fisheries and Forestry *AQUAVETPLAN*

Editor's note: This website contains information on the Australian Aquatic Veterinary Emergency Plan.

Australian Government - Ministerial Council on Forestry, Fisheries and Aquaculture 1999 *National policy for the translocation of live aquatic organisms – Issues, principles and guidelines for implementation*

Department of Natural Resources and Mines 2002 *Queensland Acid Sulfate Soil Technical Manual: Soil Management Guidelines*

International Erosion Control Association 2008 *Best Practice Erosion and Sediment Control Guidelines*

Queensland Government 2008 *Queensland Government Environmental Offsets Policy*

Editor's note: This document is available from the Department of Environment and Heritage Protection *library catalogue*

3.3 Glossary of terms

Aquaculture see *Fisheries Act 1994*, schedule.

Editor's note: Aquaculture means the cultivation of live fisheries resources for sale other than in circumstances prescribed under a regulation.

Aquaculture fisheries resources see *Fisheries Act 1994*, schedule.

Editor's note: Aquaculture fisheries resources means live fish and other marine plants cultivated in aquaculture.

Aquaculture furniture see *Fisheries Act 1994*, schedule.

Editor's note: Aquaculture furniture means a cage, rack, tank, tray or anything else used, or capable of being used, in aquaculture or to assist in aquaculture.

AQUAVETPLAN means the Australian Aquatic Veterinary Emergency Plan.

Editor's note: AQUAVETPLAN is a series of manuals that outline Australia's approach to national disease preparedness and propose the technical response and control strategies to be activated in a national aquatic animal disease emergency. The manuals also provide guidance based on sound analysis, linking policy, strategies, implementation, coordination and emergency management plans.

Bioremediation means the branch of biotechnology that uses biological processes to overcome environmental problems.

Editor's note: For example, the culture of fisheries resources for the purpose of improving the quality of discharge water from treatment and settlement ponds.

Biosecurity means protection from the risks posed by organisms to the economy, environment and people's health.

Container see *Fisheries Act 1994*, schedule.

Editor's note: Container includes a basket, case and tray.

Discharge means the release of wastewater into natural waterways.

Disease see *Fisheries Act 1994*, section 94.

Editor's note: Disease means –

(1) a disease, parasite, pest, plant or other thing (the disease) that has, or may have, the effect (directly or indirectly) of killing or causing illness in fisheries resources, or in humans or animals that eat fisheries resources infected with or containing the disease; or
(2) a chemical or antibiotic residue; or
(3) a species of a fish or plant that may compete against fisheries resources or other fisheries resources to the detriment of the fisheries resources or other fisheries resources.

Exotic fish means fish originating from anywhere outside Queensland.

Fish see *Fisheries Act 1994*, section 5.

Editor's note: Fish –

(1) means an animal (whether living or dead) of a species that throughout its life cycle usually lives:
    (a) in water (whether freshwater or saltwater)
    (b) in or on foreshores or
    (c) in or on land under water
(2) includes:
    (a) prawns, crayfish, rock lobsters, crabs and other crustaceans
    (b) scallops, oysters, pearl oysters and other molluscs
    (c) sponges, annelid worms, bêche-de-mer and other holothurians
    (d) trochus and green snails
(3) however, does not include:
    (a) crocodiles
    (b) protected animals under the *Nature Conservation Act 1992*
    (c) pests under the *Pest Management Act 2001*; or
    (d) animals prescribed under a regulation not to be fish
(4) also includes:
    (a) the spat, spawn and eggs of fish
    (b) any part of fish or of spat, spawn or eggs of fish
    (c) treated fish, including treated spat, spawn and eggs of fish
    (d) coral, coral limestone, shell grit or star sand
    (e) freshwater or saltwater products declared under a regulation to be fish.

Fisheries resources see *Fisheries Act 1994*, schedule.

Editor's note: Fisheries resources includes fish and marine plants.

Fishing see *Fisheries Act 1994*, schedule.

Editor's note: Fishing includes –

(1) searching for, or taking, fish
(2) attempting to search for, or take, fish
(3) engaging in other activities that can reasonably be expected to result in the locating, or taking, of fish
(4) landing fish (from a boat or another way), bringing fish ashore or transhipping fish.

Highest astronomical tide means the highest level of the tides that can be predicted to occur under average meteorological conditions and under any combination of astronomical conditions.

Land see *Fisheries Act 1994*, schedule.

Editor's note: Land includes foreshores and tidal and non-tidal land.

Marine Park means a marine park under the *Marine Parks Act 2004*.

Editor's note: Marine park means a marine park declared, or taken to be declared, under the *Marine Parks Act 2004*.

Pond means an earthen in-ground container.

Prescribed aquaculture means aquaculture for which a resource allocation has been obtained.

Resource allocation authority see the *Fisheries Act 1994*, schedule.

Editor's note: Resource allocation authority means a resource allocation authority issued, and in force, under the *Fisheries Act 1994* part 5, division 3, subdivision 2A.

Tank means an above-ground container used for intensive aquaculture within an enclosed facility.

Tidal land see *Fisheries Act 1994*, schedule.

Editor's note: Tidal land includes reefs, shoals and other land permanently or periodically submerged by waters subject to tidal influence.

Translocation means the movement of live aquatic organisms (including all stages of the organism's life cycle and any derived viable genetic material):

(1) beyond its accepted distribution; or
(2) to areas which contain genetically distinct populations; or
(3) to areas with superior parasite or disease status.

Waterway see the *Fisheries Act 1994*, schedule.

Editor's note: Waterway includes a river, creek, stream, watercourse or inlet of the sea.

Abbreviations

HPA – High preservation area

RPEQ – Registered Professional Engineer Queensland

Module 4. Environmentally relevant activities

4.1 Concurrence environmentally relevant activities state code

4.1.1 Purpose

The purpose of this code is to protect Queensland's environment while allowing for development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends (ecologically sustainable development).

Note: In deciding whether all reasonable and practical measures have been taken to minimise adverse effects of the activity, the chief executive may consider the following matters:

(1) the nature of the environmental harm or potential environmental harm
(2) the sensitivity of the receiving environment
(3) the current state of technical knowledge for the activity
(4) the likelihood of successful application of the different measures that might be taken to minimise the adverse effects
(5) the financial implications of the different measures as they would relate to the type of activity
(6) if the adverse effect is caused by the location of the activity being carried out, whether it is feasible to carry out the activity at another location.

4.1.2 Criteria for assessment

(1) Subject to subsection (2), development mentioned in column 1 below must be assessed against the assessment criteria in the table mentioned in column 2.

Column 1	Column 2
Material change of use	Table 4.1.1

(2) A material change of use for an environmentally relevant activity mentioned in column 1 of Table 4.1.1 must comply with the relevant provisions of Table 4.1.2, Table 4.1.3 and Table 4.1.4 mentioned in column 2 of Table 4.1.1.

Table 4.1.1: Environmentally relevant activity applicable criteria for activity

Environmentally relevant activity	Relevant provisions of code
All environmentally relevant activities (ERA)	**Table 4.1.2**—PO1–PO5
ERA in a wild river area other than ERA 16 (extractive and screening activities) under the Environmental Protection Regulation 2008, schedule 2, section 16	**Table 4.1.2**—PO1–PO5 **Table 4.1.3**—PO1–PO3
ERA 63 (sewage treatment) under the Environmental Protection Regulation 2008, schedule 2, section 63 and ERA 64 (water treatment) under the Environmental Protection Regulation 2008, schedule 2, section 64 in a wild river high-preservation area	**Table 4.1.2**—PO1–PO5 **Table 4.1.3**—PO4
ERA 16 (extractive and screening activities) other than riverine quarry extraction under the Environmental Protection Regulation 2008, schedule 2, section 16 in a wild river area	**Table 4.1.2**—PO1–PO5 **Table 4.1.3**—PO5–PO6
ERA 16 (extractive and screening activities) under the Environmental Protection Regulation 2008, schedule 2, section 16 that is riverine quarry extraction in a wild river area.	**Table 4.1.2**—PO1–PO5 **Table 4.1.3**—PO7–PO10

Environmentally relevant activity	Relevant provisions of code
Intensive animal industry	**Table 4.1.2**—PO1–PO5 **Table 4.1.4**—PO1–PO6
ERA 1 (Aquaculture) in a wild river protection area	**Table 4.1.3**—PO12–PO14

Table 4.1.2: All environmentally relevant activities

Performance outcomes	Acceptable outcomes
Site suitability	
PO1 The choice of the site at which the activity is to be carried out minimises serious environmental harm on areas of high conservation value and special significance, and sensitive land uses at adjacent places.	**AO1.1** Both of the following apply: (1) areas of high conservation value and special significance likely to be affected by the activity are identified and evaluated, and any adverse effects on these areas are minimised, including any edge effects on the areas (2) the activity does not have an adverse effect beyond the site. OR **AO1.2** Both of the following apply: (1) Areas of high conservation value and special significance likely to be affected by the proposal are identified and evaluated and any adverse effects on the areas are minimised, including any edge effects on the areas (2) critical design requirements will prevent emissions having an irreversible or widespread impact on adjacent areas.
Location of activity on the site	
PO2 The location for the activity on the site protects all environmental values relevant to adjacent sensitive land uses.	**AO2.1** The location of the activity means there will be no adverse effect on any environmental values. OR **AO2.2** Both of the following apply: (1) The activity and components of the activity are located on the site in a way that prevents or minimises adverse effects on the use of adjacent land and allows for effective management of the environmental impacts of the activity. (2) Areas used for storing environmentally hazardous materials in bulk are located to take into consideration the likelihood of flooding.
PO3 The activity avoids adverse impacts on matters of state environmental significance or, where this is not reasonably possible, impacts are minimised and, where this is not reasonably possible, residual impacts are offset.	**AO3.1** Matters of state environmental significance likely to be affected by the activity are identified and evaluated, and any adverse effects on the matters of state environmental significance are avoided or, where this cannot be reasonably achieved, impacts are minimised, and where this cannot be reasonably achieved, and any residual impacts are offset.
Critical design requirements	
PO4 The design of the facility at which the activity is to be carried out permits the activity to be carried out in accordance with best practice environmental management.	**AO4.1** The activity does not involve the storage, production, treatment or release of hazardous contaminants, or involve a regulated structure. OR **AO4.2** Development ensures that— (1) All storage provided for hazardous contaminants includes secondary containment to prevent or minimise releases to the environment from spillage or leaks. (2) Regulated structures must comply with the *Manual for assessing hazard categories and hydraulic performance of dams,* Department of Environment and Heritage Protection, 2012. (3) Containers are provided for the storage of hazardous contaminants and are secured to prevent the removal of the containers from the site by a flood event. (4) The design of the facility—

Performance outcomes	Acceptable outcomes
	(a) prevents or minimises the production of hazardous contaminants and waste, or (b) contains and treats hazardous contaminants, rather than releasing them.

Table 4.1.3: Environmentally relevant activities in a wild river area

Performance outcomes	Acceptable outcomes
Concurrence ERAs (other than ERA 16 (extractive and screening activities)) **Riparian and wildlife corridor functions and water quality**	
PO1 Riparian areas and wildlife corridors along streams in a wild river high-preservation area, or along nominated waterways in the wild river area, are preserved, and pollutants from the activity have a low probability of affecting water quality in adjacent waterways.	**AO1.1** The activity is set back from a nominated waterway in the wild river area in accordance with the minimum distance prescribed in Schedule 3 of the relevant *wild river declaration,* available from the Department of Environment and Heritage Protection website. OR **AO1.2** If the activity is in a high-preservation area, the activity is set back from the outer bank of a stream in accordance with the minimum distance prescribed in Schedule 3 of the relevant *wild river declaration*, available from the Department of Environment and Heritage Protection website.
PO2 Contaminated wastewater and stormwater does not degrade the quality of any receiving waters (both watercourse and groundwater). Note: There will be no degradation of the quality of the receiving waters if water quality downstream of the activity is consistent with water quality upstream of the activity.	**AO2.1** Contaminated wastewater or stormwater is treated to the quality of the receiving waters prior to discharge. OR **AO2.2** Contaminated wastewater or stormwater is retained or stored on site.
Concurrence ERAs (other than ERA 16 (extractive and screening activities)) **Geomorphic processes**	
PO3 The activity will not result in the increased delivery of sediment to adjacent waterways.	**AO3.1** Activities are not located on slopes of a greater value than prescribed in Schedule 3 of the relevant *wild river declaration*, available from the Department of Environment and Heritage Protection website.
Concurrence ERA 63 (sewage treatment) and ERA 64 (water treatment) in a wild river high-preservation area **Riparian and wildlife corridor functions and water quality**	
PO4 Water quality in watercourses and lakes is not adversely affected. Note: Water quality will not be adversely affected if water quality immediately downstream of the activity is consistent with water quality immediately upstream of the activity.	**AO4.1** Wastewater is treated to the quality of the receiving waters prior to discharge. OR **AO4.2** Water is reclaimed or re-used.
Concurrence ERA 16 (extractive and screening activities)—other than riverine quarry extraction **Riparian and wildlife corridor functions and water quality**	
PO5 Riparian areas and wildlife corridors along streams in a wild river high-preservation area, or along nominated waterways in the wild river area, are preserved.	**AO5.1** Provision must be made for fish passage during works during the carrying out of the activity. AND **AO5.2** Clearing of riparian vegetation is limited to the minimum area required for the activity to be carried out.
Concurrence ERA 16 (extractive and screening activities)—other than riverine quarry extraction **Geomorphic processes**	
PO6 Bed and bank stability is preserved.	**AO6.1** Excavation in the bed of a stream is limited to scour depth. AND

Performance outcomes	Acceptable outcomes
	AO6.2 Excavation in the bed of a stream is less than one-third of the bed width. AND **AO6.3** Clearing of in-stream vegetation is limited to the minimum area required for the activity to be carried out. AND **AO6.4** The final stream profile does not direct flow into a bank.
Concurrence ERA 16 (extractive and screening activities)—riverine quarry material extraction **Geomorphic and hydrological processes**	
PO7 Extraction must occur from areas of active deposition including: (1) aggrading bars, or (2) sand slugs, or (3) benches and islands, or (4) sediment pockets in bedrock channels.	No acceptable outcome is prescribed.
PO8 Excavation must not occur below the current bed level of a watercourse or waters.	No acceptable outcome is prescribed.
PO9 Bed and bank stability is preserved during the operation or the carrying out of the activity.	**AO9.1** Vehicle access tracks and crossings associated with the activity have scour protection on the bed immediately downstream of the crossing. AND **AO9.2** Access ramps and tracks are kept to a minimum and constructed to minimise erosion and turbulence problems at times of high flow. AND **AO9.3** Ramps cut into the bank for vehicle access are orientated downstream. AND **AO9.4** Vehicle crossings are orientated perpendicular to the stream channel ±10°. AND **AO9.5** Where vehicle crossings are required, these will be at stream-bed level; OR if it can be demonstrated that stream-bed level crossings are inappropriate, any culverts for vehicle crossing are aligned with the direction of natural stream flow, when that flow is of a depth equal to the culvert height. AND **AO9.6** The activity includes measures to prevent stormwater erosion in drains and cuttings on the bank. AND **AO9.7** Stream-bed controls are located upstream and downstream of the site. AND **AO9.8** Excavation in the stream-bed is less than one-third of the bed width. AND **AO9.9** Clearing of in-stream vegetation is limited to the minimum area required for the activity to occur.
PO10 Bed and bank stability is preserved.	**AO10.1** The stream is rehabilitated as near as possible to its natural state after the activity has been conducted. AND

Performance outcomes	Acceptable outcomes
	AO10.2 Exposed bank areas are prepared to facilitate natural regeneration of native plant species. AND **AO10.3** Stream-bed and bank controls are retained upstream and downstream of the site of the activity.
Concurrence ERA 16 (extractive and screening activities)—riverine quarry material extraction **Riparian and wildlife corridor functions**	
PO11 Riparian areas and wildlife corridors along watercourses are preserved.	**AO11.1** Provision is made for fish passage during the carrying out of the activity. AND **AO11.2** The width of the vegetation clearing in the riparian zone is limited to that required for the activity plus 2 metres each side. AND **AO11.3** Areas of riparian zone cleared of vegetation and not required for the final stage of the activity will be prepared to facilitate natural regeneration of native plant species.
Concurrence ERA 1 (aquaculture) in a wild river preservation area	
PO12 Riparian and wildlife corridors along nominated waterways are preserved.	**AO12.1** The development is set back from a nominated waterway by at least the distance detailed in schedule 3 of the relevant *wild river declaration* available from the Department of Environment and Heritage Protection website.
PO13 The development will not result in the increased delivery of sediment to adjacent waterways.	**AO13.1** The slope of the land on which the development occurs is less than the value detailed in schedule 3 of the relevant *wild river declaration* available from the Department of Environment and Heritage Protection website.
PO14 Waste water and stormwater does not degrade the quality of any receiving waters.	**AO14.1** Measures are adopted to contain or prevent leakage from ponds or tanks and overflow from ponds or tanks due to rainfall or floodwaters.

Table 4.1.4: Intensive animal industries

Performance outcomes	Acceptable outcomes
Surface water	
PO1 The structures containing and controlling run-off from the activity and waste re-use areas minimise adverse effects on surface waters external to the activity. Editor's note: To meet the requirements of this performance outcome, it is recommended that the applicant develop a management system for the activity, detailing: (1) environmental hazards (2) risk assessment processes (3) an auditable, risk-based management system for the operation of the activity (4) procedures for annual review (5) proposed maintenance operations (6) stock numbers (7) monitoring of pens, sheds, ponds, drainage and any obvious dust, noise and odour impacts. Note: Development should have regard to the following industry guideline for surface water for the applicable ERA. (1) **Cattle:** *National guidelines for beef cattle feedlots in Australia, 3rd Edition*, Meat & Livestock	No acceptable outcome is prescribed.

Performance outcomes	Acceptable outcomes
Australia, 2012 (2) **Cattle and sheep:** *National beef cattle feedlot environmental code of practice, 2nd Edition*, Meat & Livestock Australia, 1997 (3) **Pig keeping:** *National environmental guidelines for piggeries, 2nd Edition (Revised)*, Tucker, RW, McGahan, EJ, Galloway, JL and O'Keefe for Australian Pork Limited, 2010 (4) **Poultry farming:** *Queensland guidelines for meat chicken farms*, Department of Agriculture, Fisheries and Forestry, 2012	
Groundwater	
PO2 The activity is designed and managed to prevent or minimise adverse effects on groundwater or any associated surface ecological systems. Editor's note: Development should have regard to the following industry guideline for groundwater for the applicable ERA. (1) **Cattle:** *National guidelines for beef cattle feedlots in Australia, 3rd Edition*, Meat & Livestock Australia, 2012 (2) **Cattle and sheep:** *National beef cattle feedlot environmental code of practice, 2nd Edition*, Meat & Livestock Australia, 1997 (3) **Pig keeping:** *National environmental guidelines for piggeries, 2nd Edition (Revised)*, Tucker, RW, McGahan, EJ, Galloway, JL and O'Keefe for Australian Pork Limited, 2010 (4) **Poultry farming:** *Queensland guidelines for meat chicken farms*, Department of Agriculture, Fisheries and Forestry, 2012	No acceptable outcome is prescribed.
Amenity	
PO3 The activity is designed and managed to minimise adverse effects on the amenity of the surrounding community.	No acceptable outcome is prescribed.
Native flora and fauna	
PO4 The activity is designed and managed to minimise adverse effects on ecological communities. Editor's note: Development should have regard to the following industry guideline for native flora and fauna for the applicable ERA. (1) **Cattle:** *National guidelines for beef cattle feedlots in Australia, 3rd Edition*, Meat & Livestock Australia, 2012 (2) **Cattle and sheep:** *National beef cattle feedlot environmental code of practice, 2nd Edition*, Meat & Livestock Australia, 1997 (3) **Pig keeping:** *National environmental guidelines for piggeries, 2nd Edition (Revised)*, Tucker, RW, McGahan, EJ, Galloway, JL and O'Keefe for Australian Pork Limited, 2010 (4) **Poultry farming:** *Queensland guidelines for meat chicken farms*, Department of Agriculture, Fisheries and Forestry, 2012	No acceptable outcome is prescribed.

4.2 Reference documents

Tucker, RW, McGahan, EJ, Galloway, JL and O'Keefe for Australian Pork 2010 *National environmental guidelines for piggeries, 2nd edition (revised)*

Meat & Livestock Australia et al 2012 *National guidelines for beef cattle feedlots in Australia,* 3rd Edition

Department of Agriculture, Fisheries and Forestry 2012 *Queensland guidelines: Meat chicken farms*

Department of Environment and Heritage Protection *Wild river declarations*

Department of Environment and Heritage Protection 2012 *Manual for assessing hazard categories and hydraulic performance of dams*

Department of Primary Industries 2000 *Reference manual for the establishment and operation of beef cattle feedlots in Queensland*

Note: Available for purchase from the Department of Agriculture, Fisheries and Forestry

Meat & Livestock Australia et al 1997 *National beef cattle feedlot environmental code of practice,* 2nd Edition

4.3 Glossary of terms

Area of high conservation value or special significance see the *Environmental Protection Act 1994*, section 17

Best practice environmental management, for an activity, see the *Environmental Protection Act 1994*, section 21.

Editor's note: In deciding best practice environmental management of an activity is the management of the activity to achieve an ongoing minimisation of the activity's environmental harm through cost-effective measures assessed against the measures currently used nationally and internationally for the activity.

In deciding the best practice environmental management of an activity, regard must be had to the following measures:

(1) strategic planning by the person carrying out, or proposing to carry out, the activity
(2) administrative systems put into effect by the person, including staff training and monitoring and review of the systems
(3) public consultation carried out by the person
(4) product and process design
(5) waste prevention, treatment and disposal.

The above matters do not limit the measures to which regard may be had in deciding the best practice environmental management of an activity.

Environment includes:

(1) ecosystems and their constituent parts, including people and communities
(2) all natural and physical resources
(3) the qualities and characteristics of locations, places and areas, however large or small, that contribute to their biological diversity and integrity, intrinsic or attributed scientific value or interest, amenity, harmony and sense of community
(4) the social, economic, aesthetic and cultural conditions that affect, or are affected by, things mentioned in paragraphs (1) to (3).

Environmental value see the *Environmental Protection Act 1994*, section 9

Editor's note: Environmental value means—

(1) a quality or physical characteristic of the environment that is conducive to ecological health or public amenity or safety
(2) another quality of the environment identified and declared to be an environmental value under an environmental protection policy or regulation.

Hazardous contaminant see the *Environmental Protection Act 1994*, schedule 4

Editor's note: Hazardous contaminant means a contaminant, other than an item of explosive ordnance that, if improperly treated, stored, disposed of or otherwise managed, is likely to cause serious or material environmental harm because of:

(1) its quantity, concentration, acute or chronic toxic effects, carcinogenicity, teratogenicity, mutagenicity, corrosiveness, explosiveness, radioactivity or flammability, or
(2) its physical, chemical or infectious characteristics.

High preservation area means the part of a wild river area described as the high preservation area in the wild river declaration for the area.

Matters of state environmental significance see the *State Planning Policy*

Editor's note: Matters of state environmental significance means the following natural values and areas:

(1) protected area (including all classes of protected area except nature refuges and coordinated conservation areas) under the *Nature Conservation Act 1992*
(2) marine parks and land within a 'marine national park', 'conservation park', 'scientific research', 'preservation' or 'buffer' zone under the *Marine Parks Act 2004*
(3) areas within declared fish habitat areas that are management A areas or management B areas under the Fisheries Regulation 2008
(4) threatened wildlife under the *Nature Conservation Act 1992* and special least concern animal under the Nature Conservation (Wildlife) Regulation 2006
(5) regulated vegetation under the *Vegetation Management Act 2009* that is:
  (i) Category B areas on the regulated vegetation management map, that are 'endangered' or 'of concern' regional ecosystems
  (ii) Category C areas on the regulated vegetation management map that are 'endangered' or 'of concern' regional ecosystems
  (iii) Category R areas on the regulated vegetation management map
  (iv) areas of essential habitat on the essential habitat map for wildlife prescribed as 'endangered wildlife' or 'vulnerable wildlife' under the *Nature Conservation Act 1992*
  (v) regional ecosystems that intersect with watercourses identified on the vegetation management watercourse map
  (vi) regional ecosystems that intersect with wetlands identified on the wildlife management wetlands map
(6) high preservation areas of wild river areas under the *Wild Rivers Act 2005*
(7) wetlands in a wetland protection area or wetlands of high ecological significance shown on the Map of Referable Wetlands under the Environment Protection (Water) Policy 2009, schedule 2
(8) legally secured offset areas.

Regulated structure means a structure that is assessed as being a regulated structure under the *Manual for Assessing Hazard Categories and Hydraulic Performance of Dams* February 2012 published by the Department of Environment and Heritage Protection.

Sensitive land uses mean any of the following as defined in the standard planning scheme provisions:
(1) child care centre
(2) community care centre
(3) community residence
(4) dual occupancy
(5) dwelling house
(6) educational establishment
(7) health care services
(8) hospital
(9) multiple dwelling
(10) office
(11) relocatable home park
(12) residential care facility
(13) retirement facility
(14) rooming accommodation
(15) short-term accommodation
(16) tourist park.

Serious environmental harm see the *Environmental Protection Act 1994*, section 17

Editor's note: Serious environmental harm is environmental harm (other than environmental nuisance):
(1) that is irreversible, of a high impact or widespread
(2) caused to an area of high conservation value or special significance
(3) that causes actual or potential loss or damage to property of an amount of, or amounts totalling, more than the threshold amount or
(4) that results in costs of more than the threshold amount being incurred in taking appropriate action to:
  (a) prevent or minimise the harm
  (b) rehabilitate or restore the environment to its condition before the harm.

Waste see the *Environmental Protection Act 1994*, section 13

Editor's note: Waste includes anything, other than a resource approved under the *Waste Reduction and Recycling Act 2011*, Chapter 8, that is:
(1) left over, or an unwanted by-product, from an industrial, commercial, domestic or other activity, or
(2) surplus to the industrial, commercial, domestic or other activity generating the waste.

4.4 Abbreviations

ERA – Environmentally relevant activity

Module 5. Fisheries resources

5.1 Development in or adjacent to a declared fish habitat area state code

5.1.1 Purpose

Declared fish habitat areas protect, manage and link fish habitat types within an individual location, and create a comprehensive, adequate and representative network of protected fish habitats along the Queensland coast.

The purpose of this code is to ensure development in and adjacent to declared fish habitat areas is managed to support the fish stocks on which Queensland's fishing and seafood industry sectors rely. The code is designed to ensure that development:

(1) is managed to support fish stocks

(2) maintains the integrity, structure and fish habitat values of all fish habitat areas, and ensuring these areas are given significant protection from physical disturbance.

5.1.2 Criteria for assessment

Development mentioned in column 1 below must be assessed against the assessment criteria in the table mentioned in column 2.

Column 1	Column 2
All development within or adjoining a declared fish habitat area	Table 5.1.1
All development within a declared fish habitat area	Table 5.1.2

Table 5.1.1: All development within or adjoining a declared fish habitat area

Performance outcomes	Acceptable outcomes
PO1 There is a demonstrated right to propose development in or adjoining the declared fish habitat area. Editor's note: Further guidance on rights in the context of fisheries resources and fish habitats is provided in the policy provisions of *Management of declared fish habitat areas (FHMOP 002)* Department of Primary Industries and Fisheries, 2008.	**AO1.1** Development is for public infrastructure that has no alternative viable route that does not require works on tidal land or fish habitats. OR **AO1.2** Works are for a legitimate public health or safety issue and the applicant is an entity or acting on behalf of an entity. OR **AO1.3** The following can be demonstrated: (1) tenure is held for the land directly abutting the declared fish habitat area (2) tenure has been granted over the area of work or a resource entitlement or resource allocation has been granted for the resource being developed.
PO2 Development adjoining a declared fish habitat area has regard to the habitat values of each declared fish habitat area.	**AO2.1** Adjoining development is located, designed and constructed to minimise impacts on the habitat values of the declared fish habitat area. Editor's note: The listed habitat values for each declared fish habitat area can be found in the relevant *Fish habitat area summary* available from the Department of National Parks, Recreation, Sport and Racing website. AND **AO2.2** Adjoining development is located, designed, constructed and timed to minimise impacts on community use of the declared fish habitat area and adjoining fish habitats, particularly for fishing. AND

Performance outcomes	Acceptable outcomes
	AO2.3 A buffer between the adjoining development and the declared fish habitat area is provided and has a minimum width of 100 metres from the boundary of the declared fish habitat area. Editor's note: Guidelines to assist with determining the appropriate buffer widths: (1) *Fisheries guidelines for fish habitat buffer zones (FHG 003)*, Queensland Fisheries Service, 2000 (2) *Queensland wetland buffer planning guideline*, Department of Environment and Resource Management, 2011. OR **AO2.4** Development is undertaken for one of the following purposes: (1) restoring the fish habitat or natural processes (2) managing fisheries resources or fish habitat (3) researching, including monitoring or educating (4) ensuring public health or safety (5) providing public infrastructure to facilitate fishing (6) providing subterranean public infrastructure if the surface of the area can be restored, after the completion of the works or activity, to its condition before the performance of the works or activity (7) constructing a temporary structure (8) maintaining a structure that was constructed before the area was declared to be a fish habitat area (9) maintaining a structure, other than a structure mentioned in paragraph (8), that has been lawfully constructed (10) if the land is in a management B area — constructing a permanent structure on tidal land or within the management area, or depositing material for beach replenishment in the management area. Editor's note: A resource allocation authority is required under the *Fisheries Act 1994* before development can proceed.

Table 5.1.2: All development within a declared fish habitat area

Performance outcomes	Acceptable outcomes
PO1 Development for a prescribed purpose in a declared fish habitat area, does not significantly impact on the natural condition of fish habitat and natural processes of the area.	**AO1.1** Development is undertaken in accordance with *Management of declared fish habitat areas (FHMOP 002)*, Department of Primary Industries and Fisheries, 2008.
PO2 The development will not increase the risk of mortality, disease or injury, or compromise the health and productivity of fisheries resources.	**AO2.1** Suitable habitat conditions, including but not limited to water and sediment quality, will be maintained to sustain the health and condition of fisheries resources within all fish habitats. AND **AO2.2** Herbicides are not used on, and will not drift onto, tidal land or wetlands or into waterways. AND **AO2.3** Fish will not become trapped or stranded as a result of development. OR **AO2.4** Risks of fish stranding occurring have been identified and are demonstrably manageable. Editor's note: Refer to relevant *Fish salvage guidelines*, Department of Primary Industries and Fisheries, 2004 for guidance on how to meet this acceptable outcome.
PO3 Development maintains or enhances community access to fisheries resources and fish habitats, such as through fishing access and linkages between the commercial fishery and infrastructure, services and facilities.	**AO3.1** The development does not impact on existing infrastructure or existing community access arrangements for declared fish habitat areas.

Performance outcomes	Acceptable outcomes
PO4 Development that has the potential to impact the operations and productivity of Queensland commercial or recreational fisheries mitigates any adverse impacts due to adjustment of fisheries.	**AO4.1** Affected fisheries, and the impacts on those fisheries, are identified. AND **AO4.2** Fair and reasonable compensation to commercial fishers is determined. AND **AO4.3** The impact of the development on commercial fisheries and recreational fishers is offset.
Restoring the fish habitat or natural processes	
PO5 Development that is restoring the fish habitat or natural processes minimises impacts on the declared fish habitat area. Editor's note: Development to restore fish habitat areas includes: (1) reinstating tidal profiles for allowing restoration of marine plant communities (2) restoring tidal flows and inundation patterns. Editor's note: The vast majority of restoration works are likely to be authorised self-assessable works under the self-assessable code *MP06 – Minor impact works in a declared fish habitat area or involving the removal, destruction or damage of marine plants*, Department of Employment, Economic Development and Innovation, 2011, with an endorsed restoration plan (no development application required).	**AO5.1** Restoration work will not result in the substitution of fish habitats. AND **AO5.2** Prior to restoration works, the area of disturbance does not show evidence of adequate natural recovery. AND **AO5.3** Restoration works are specifically for the benefit of fish habitats, fisheries productivity and natural ecological processes within the declared fish habitat area. AND **AO5.4** Restoration works have a disturbance area proposed for restoration in a degraded condition where restoration results in increased fisheries productivity. AND **AO5.5** Proposed restoration works are feasible, are likely to be successful, and the benefits of the restoration works outweigh the impacts of conducting the work. AND **AO5.6** Any restoration in a declared fish habitat area is undertaken in accordance with a post-works monitoring and maintenance program appropriate for the scale of the restoration works.
PO6 Excess sediment from restoration or marine plants that are required for a restoration project are obtained and managed to avoid further disturbance within the declared fish habitat area.	**AO6.1** Excess sediment from restoration is disposed of properly outside of the boundaries of a declared fish habitat area. AND **AO6.2** Marine plants for revegetation purposes are obtained from within a declared fish habitat area only if: (1) no alternative source of marine plants from outside the declared fish habitat area is feasible (2) the removal of marine plants is assessed to have minimal impact on the declared fish habitat area (3) the marine plants are to satisfy local provenance. Editor's note: Vegetation to be used within a restoration project should comply with any relevant provisions of the *National policy for the translocation of live aquatic organisms*. See *Management and protection of marine plants and other tidal fish habitats (FHMOP 001)*, Department of Primary Industries and Fisheries, 2007 for specific guidance on marine plant translocation.
PO7 Benthic disturbance, as a result of development in a fish habitat area enables the area to be restored to the condition and profile that existed before the disturbance from development. Editor's note: Such disturbances include but are not limited to those associated with provision of	**AO7.1** Surface sediment type is restored to match the surrounding or pre-works sediment profile to aid recolonisation by flora and fauna. AND **AO7.2** Any disturbance to waterway banks is suitably protected from erosion. AND

Performance outcomes	Acceptable outcomes
subterranean infrastructure, or temporary structures.	**AO7.3** The substrate surface total disturbance is minimised (for example, corridor width trench and any adjacent temporary spoil stockpile).
PO8 Development resulting in drainage or disturbance of acid sulfate soil prevents adverse impacts on fisheries resources and fish habitats.	**AO8.1** Run-off and leachate from disturbed or oxidised acid sulfate soils is contained, treated and not released to a waterway or other fish habitat. AND **AO8.2** Management of acid sulfate soil is consistent with the current version of the *Queensland acid sulfate soils technical manual: Soil management guidelines*, Department of Natural Resources and Mines, 2002. Editor's note: *Queensland acid sulfate soil technical manual: Soil management guidelines*, Department of Natural Resources and Mines, 2002 provides further guidance on the management of acid sulfate soils.
Managing fisheries resources or fish habitats	
PO9 Management of fisheries resources or fish habitats in a declared fish habitat minimises impacts on the declared fish habitat area.	**AO9.1** There is a demonstrated overriding need for development that involves managing fisheries resources or fish habitat within the declared fish habitat area. AND **AO9.2** Management of fisheries resources or fish habitat in a declared fish habitat area is undertaken by the state or community groups for public benefit.
Researching, including monitoring or educating	
PO10 Development to support research, including monitoring or educating, within the declared fish habitat area minimises impacts on the declared fish habitat area.	**AO10.1** Development for education or research is directly related to education or research about one or more of the following, and is necessary to achieve the desired educational or research outcome: (1) fish or fisheries (2) fish habitat (3) general biological or ecosystem values or processes within the area (4) survey works for existing property boundary definition and investigation of impacts of development on the declared fish habitat area. AND **AO10.2** For permanent educational structures (for example, educational signs or boardwalks) within a declared fish habitat area, the: (1) structure is publicly owned and for public benefit (2) educational benefits justify the impacts, or (3) the structure is strategically located to achieve a high level of community use, benefit or awareness. OR **AO10.3** Works for education or research: (1) are limited in nature, frequency and extent (2) are temporary (3) allow for the fish habitat to quickly recover through natural processes without any requirement for restoration works (4) allow for the fish habitat to be restored, if relevant, at the completion of the project.
Ensuring public health or safety	
PO11 Development that is ensuring public health or safety (other than works for mosquito control) within the declared fish habitat minimises impacts on the declared fish habitat area.	**AO11.1** Works for a public health issue are: (1) formally endorsed by Queensland Health or the relevant local government (2) necessary, as all alternative options that do not require works in a

Performance outcomes	Acceptable outcomes
	declared fish habitat area have been considered and are not viable or not achievable in the available timeframes for an urgent response to the public health issue. AND **AO11.2** Works for a public safety purpose have no viable alternative options and are only for: (1) signage or aids to navigation to warn the public of a safety hazard (for example, within a waterway to warn of submerged rocks, crocodiles, marine stingers) (2) preventing an impending public safety issue (for example, beach cleaning to remove dangerous items such as syringes) (3) removal of a hazard to public safety that has resulted from a specific unforseen event (for example, a fallen tree that is a danger to safe navigation, sediment deposited by a flood that is a danger to safe access to a public boat ramp; cleanup of an oil spill) (4) construction of a public marine stinger net to enable safe community use of the declared fish habitat area (5) placement of a cyclone mooring identified under a cyclone contingency plan by the harbour master or controlling port authority or corporation, and located in accordance with a cyclone mooring plan.
Public infrastructure to facilitate fishing	
PO12 Development that is public infrastructure to facilitate fishing minimises impacts on the declared fish habitat area.	**AO12.1** There is a demonstrated overriding need for public infrastructure to facilitate fishing, the development has a direct link to the activity of fishing and: (1) is a public jetty, pontoon, boat ramp or fishing platform (2) the proposed location has been identified as the most suitable through a strategic planning document (3) associated infrastructure that does not have a physical requirement to be within a declared fish habitat area is not located in the declared fish habitat area (for example, boat trailer parks, car parks, rest rooms). AND **AO12.2** The structure does not require dredging within the declared fish habitat area for access.
Providing subterranean public infrastructure	
PO13 Development that is providing subterranean public infrastructure to transect the declared fish habitat area minimises impacts on the declared fish habitat area.	**AO13.1** Works for the construction of subterranean public infrastructure will: (1) be placed below the existing substrate surface level (2) have no viable alternative route that does not require works within a declared fish habitat area (3) allow satisfactory restoration of the substrate surface.
Constructing a temporary structure	
PO14 Development for a temporary structure minimises impacts on the declared fish habitat area.	**AO14.1** A temporary structure is located in part of the declared fish habitat area for which the applicant can demonstrate a level of 'rights' or interests. AND **AO14.2** A temporary structure has a documented and measurably lesser impact on the declared fish habitat area than all other reasonable options. AND **AO14.3** The temporary structure is for a public benefit project. AND **AO14.4** A temporary structure is in place for no more than six weeks. OR

Performance outcomes	Acceptable outcomes
	AO14.5 Structures with a demonstrated negligible impact (for example, a temporary pipeline placed on the substrate surface of a declared fish habitat area where there is no damage through access or any outflow from the pipe into the area) may be left in place for up to six months. AND **AO14.6** A temporary structure is appropriately designed such that all of its components are contained within the approved area and can be completely removed from the declared fish habitat area within six weeks of completion of works. AND **AO14.7** To minimise impacts on the declared fish habitat area, a temporary structure is in place only at a time that avoids or minimises conflict with known fish migration periods (if relevant to the structure type and design proposed). AND **AO14.8** A temporary waterway barrier that prevents tidal flow is not be left in place for longer than 30 business days. AND **AO14.9** Once the structure is removed, the tidal profile is restored to allow natural recolonisation by marine plants and fauna.
Maintenance of structures	
PO15 Maintenance of a structure in or partially in a declared fish habitat area minimises impacts on the declared fish habitat area. Editor's note: The relevant structure being maintained may be a structure that was constructed before the area was declared to be a declared fish habitat area.	**AO15.1** Maintenance works includes: (1) the trimming of marine plants, immediately adjacent to the relevant structure, that impinge on the safe use of that structure, or (2) temporary disturbance of the declared fish habitat area for the purpose of accessing the structure (for example, an access track), provided the disturbance is necessary and minimised the disturbed area will be satisfactorily restored within 14 days of conclusion of maintenance works, or (3) relocation or exchange of the structure, if there is a clear net benefit to the declared fish habitat area.
Certain permanent structures within the declared fish habitat area management B area only	
PO16 Development that is constructing a permanent structure within a declared fish habitat area (management B area) only minimises impacts on the declared fish habitat area.	**AO16.1** A permanent structure: (1) is proposed in a part of the declared fish habitat area where the applicant can demonstrate a legal right or interest over that part of the declared fish habitat area that is greater than the legal right or interest of another member of the community (2) has the minimum size necessary to serve the overriding functional requirement that has been demonstrated (3) has a measurably lower level of predicted impact on the declared fish habitat area than all other reasonable options.
PO17 Development that is depositing material for beach replenishment in a declared fish habitat area (management B area only) minimises impacts on the declared fish habitat area.	**AO17.1** Beach replenishment in a declared fish habitat area: (1) is carried out in the management B area and the applicant can demonstrate a level of rights for the area (2) is for the control of existing or imminent erosion (3) is carried out on a high-energy, sandy sediment shoreline with biological communities adapted to mobile sediments (4) does not create terrestrial land for the placement of structures (for example, park infrastructure), unless for a sacrificial dune or beach where this forms an integral part of erosion control design and will minimise the frequency and impact of ongoing erosion control activities on the declared fish habitat area and all other reasonable

Performance outcomes	Acceptable outcomes
	options would have a greater impact on the management B area. AND **AO17.2** The beach replenishment: (1) sources suitable replenishment material from a distance of greater than 100 metres* outside a declared fish habitat area or from works within a declared fish habitat area that have been authorised for another purpose (2) identifies a source of replenishment material for future maintenance (3) does not involve dredging or use of other techniques such as 'beach scraping or sand pushing' to obtain replenishment material within a declared fish habitat area (4) will not require maintenance more often than every two years. *Editor's note: Excluding where sediment is sourced from a navigation channel.
Boardwalks	
PO18 Development that is for a boardwalk in a declared fish habitat area minimises impacts on the declared fish habitat area.	**AO18.1** The benefits of the boardwalk will outweigh any adverse impacts to the declared fish habitat area. AND **AO18.2** The boardwalk will be: (1) publicly owned and for public benefit (2) strategically located to achieve a high level of community use or benefit or awareness of the fish habit area (3) for education or for providing public access to prevent uncontrolled disturbance of the declared fish habitat area. AND **AO18.3** The boardwalk will: (1) have pedestrian decking surfaces that allow a minimum of 40 per cent light penetration to the substrate (2) maintain existing tidal hydrology. Editor's note: Guidance on how to meet the acceptable outcomes is included in *Fisheries guidelines for fish-friendly structures (FHG 006)*, Department of Primary Industries and Fisheries, 2006.
Bridges	
PO19 For a development for a bridge in a declared fish habitat area (management B area only): (1) the development minimises impacts on the declared fish habitat area (2) there is an overriding need for the bridge to be located in the management B area.	**AO19.1** Bridges in a declared fish habitat area are located in the management B area of the declared fish habitat area. AND **AO19.2** The bridge is located on or between lands for which the applicant can demonstrate rights. AND **AO19.3** The bridge: (1) abutments are outside the management B area (2) is supported on piles only (not culverts, pipes or causeways) and the number of bridge piles within the management B area is minimised (3) is designed to direct all water run-off from the surface of the bridge for treatment outside the declared fish habitat area (4) has minimal impacts on vessel access upstream from the declared fish habitat area.
Dredging or extracting sediment (for restoring fish habitats or natural processes)	
PO20 Dredging or extracting in a declared fish habitat area restores fish habitats or natural processes.	**AO20.1** Dredging or extracting sediment from a declared fish habitat area is only for the purpose of restoring fish habitats or natural processes.

Performance outcomes	Acceptable outcomes
Editor's note: Applicants should review *MP06 – Minor impact works in a declared fish habitat are or involving the removal, destruction or damage of marine plants*—a self-assessable code may be applicable and not require a development application. See also prescribed development purpose—Restoring the fish habitat or natural processes.	
Fishing platforms	
PO21 Development that is for a public fishing platform in a declared fish habitat area minimise impacts on the declared fish habitat area.	**AO21.1** The proposed location for a public fishing platform in a declared fish habitat area: (1) has been assessed to the most the most suitable location through a strategic planning approach (2) reflects an existing community requirement for the structure, which has been demonstrated and documented (3) is supported by an incorporated recreational fishing group for the area. AND **AO21.2** Public fishing platforms in a declared fish habitat area: (1) do not require dredging (2) have pedestrian decking surfaces that allow a minimum of 40 per cent light penetration.
PO22 Development that is for a private fish platform in a declared fish habitat area minimises impacts on the declared fish habitat area.	**AO22.1** Private fishing platforms in a declared fish habitat area are located within management B areas of the declared fish habitat areas only. AND **AO22.2** Private fishing platforms: (1) originate from a lot adjoining the declared fish habitat area for which the applicant can demonstrate rights (2) do not extend from a lot that already has a jetty, pontoon or boat ramp. AND **AO22.3** Private fishing platforms: (1) do not require dredging (2) do not adversely affect navigation for community access to the declared fish habitat area (3) have a total permanent footprint of less than 40 square metres (4) do not extend through a marine plant fringe of more than 15 metres in width (measured perpendicular to the shore) (5) have pedestrian decking surfaces that allow a minimum of 40 per cent light penetration.
Industrial water inlets or outlets	
PO23 Industrial water inlet or outlet structures are compatible with the management B area, and minimise impacts on management B areas.	**AO23.1** Industrial water inlet or outlet structures may be located in a management B area if: (1) the structures, including intake or discharge pipes and necessary associated pipes and transfer pipes, originate from adjoining land for which the applicant can demonstrate rights (2) fish health and productivity and the potential use of exposed fish for food or aquaculture purposes are not reasonably expected to be compromised by the proposed use of the structure (3) alternatives for reuse and or disposal outside the declared fish habitat area are impractical. AND **AO23.2** Industrial water inlet or outlet structures: (1) use only buried pipelines, surface laid pipeline systems or elephant

Performance outcomes	Acceptable outcomes
	trunk systems (2) do not require intake channels or dredging unless the excavation is necessary to install a buried pipeline and the substratum surface of the declared fish habitat area is satisfactorily restored (3) have an intake or outlet volume of water that has minimal impact on natural hydrology within the declared fish habitat area.
Jetties, pontoons and boat ramps (public) — management A and B areas	
PO24 Development that is for a public jetty, pontoon or boat ramp in a declared fish habitat area minimises impacts on the declared fish habitat area.	**AO24.1** Public jetties, pontoons and boat ramps have: (1) a direct link to the activity of fishing (2) a proposed location that has been identified as the most suitable through a strategic planning approach (3) a demonstrated existing community requirement for the structure. AND **AO24.2** Public jetties, pontoons and boat ramps: (1) do not require additional dredging within the declared fish habitat area for access (2) do not include associated infrastructure that does not have a physical requirement to be within a declared fish habitat area (3) have vessel staging areas that are appropriate for the size of the boat ramp (4) have pedestrian decking surfaces that allow a minimum of 40 per cent light penetration.
PO25 Development that is for a private jetty, pontoon or boat ramp in a declared fish habitat area minimises impacts on the declared fish habitat area.	**AO25.1** Private jetties, pontoons and boat ramps are located within management B areas of declared fish habitat areas only. AND **AO25.2** Private jetties, pontoons and boat ramps: (1) originate from an adjoining lot for which the applicant can demonstrate rights (2) do not extend from a lot that already has a jetty, pontoon, boat ramp or adjacent mooring unless the new structure is replacing an existing structure. AND **AO25.3** Private jetties, pontoons and boat ramps: (1) do not require dredging to use the structure (2) have a total permanent footprint of less than 40 square metres (3) extend through a marine plant fringe less than 15 metres wide measured perpendicular to the shore (jetties and pontoons) and the jetty or pontoon access walkway is less than 2 metres wide (4) for boat ramps – extend through a mangrove fringe less than 3 metres wide measured perpendicular to the shore, and the total area of marine plant disturbance required for construction is less than 45 square metres (5) have pedestrian decking surfaces that allow a minimum of 40 per cent light penetration (6) do not adversely affect navigation.
Marina and port facilities — management A and B areas	
PO26 Development is not a marina or port.	No acceptable outcome is prescribed.
Moorings (public or cyclone)	
PO27 Development that is for public vessel or cyclone moorings in a declared fish habitat area minimises impacts on the declared fish habitat	**AO27.1** Vessel moorings located in the declared fish habitat area demonstrate an overriding community need.

Performance outcomes	Acceptable outcomes
area. Note: Moorings for restoration purposes are likely to be authorised under *MP06 – Minor impact works in a declared fish habitat are or involving the removal, destruction or damage of marine plants*, Department of Fisheries and Forestry, 2013 as an endorsed rehabilitation plan.	AND **AO27.2** Cyclone mooring are: (1) specifically identified under the relevant port cyclone contingency plan by the controlling authority (for example, a port authority) (2) located in accordance with any cyclone mooring plan (identifying current and future demand) prepared by the controlling authority (3) only used during a cyclone event or other genuine emergency situation (4) available for use by other vessels when authorised by the relevant regional harbour master in the event of a cyclone. OR **AO27.3** Moorings for restoring the fish habitat or natural processes of the declared fish habitat area: (1) are a component of a project aimed at restoring a particular habitat type within the declared fish habitat area (such as a coral habitat) that has been degraded through vessel anchor damage (2) are public moorings (3) comply with the criteria under *Restoration of fish habitats: Fisheries guidelines for marine areas (FHG 002),* Department of Primary Industries, 1998.
PO28 Development that is for private vessel moorings in a declared fish habitat area minimises impacts on the declared fish habitat area. Editor's note: Where appropriate, designated moorings areas (DMAs) are in place to accommodate private and individual moorings. Editor's note: Environmentally friendly moorings (EFM) in a DMA within a management B area are authorised under self-assessable code *Minor impact works in a declared fish habitat area or involving the removal, destruction or damage of marine plants (MP06)* Department of Fisheries and Forestry, 2013 (no development approval required).	**AO28.1** Private vessel moorings are only located in management B areas of declared fish habitat areas. AND **AO28.2** A private vessel mooring in a management B area: (1) is located directly adjacent to a lot for which the applicant can demonstrate rights (2) is not located adjacent to a lot that already has a jetty, pontoon, boat ramp or adjacent mooring, unless the mooring is replacing these structures (3) is entirely within an extension of the side boundaries of the applicant's property and on the same side of the waterway as the premises (4) will not interfere with foreshore access. AND **AO28.3** A private vessel mooring: (1) has an EFM design (2) does not require dredging to use the mooring.
Mosquito control – management A and B areas	
PO29 Development that is works for mosquito control in a declared fish habitat area minimises impacts on the declared fish habitat area. Note: *MP06 – Minor impact works in a declared fish habitat area or involving the removal, destruction or damage of marine plants*, Department of Fisheries and Forestry, 2013 authorises, and includes particular requirements for, self-assessable works for mosquito control for public health purposes. Editor's note: An approval is not required for pest management using pesticides or biological control of mosquitoes undertaken in accordance with *The lawful use of physical, pesticide and biological controls in a declared fish habitat area (FHACoP01)*, Department of Primary Industries and Fisheries, 2005.	**AO29.1** For works for mosquito control in a declared fish habitat area, there is an overriding need for the works. AND **AO29.2** Works for mosquito control: (1) do not include works for the control of other nuisance pest insect species (for example, midges) (2) are identified as required to be carried out in the declared fish habitat area under a mosquito management plan developed in accordance with the *Mosquito management code of practice for Queensland*, Local Government Association of Queensland, 2012. Note: Guidance on how to meet the acceptable outcomes is available in the *Mosquito management code of practice for Queensland*, Local Government Association of Queensland, 2012. AND

Performance outcomes	Acceptable outcomes
	AO29.3 Runnelling works will comply with the policy guidelines in *Departmental procedures for permit applications assessment and approvals for insect pest control in coastal wetlands (FHMOP 003)*, Department of Primary Industries, 1996. A runnel must include: (a) increase tidal flushing (b) follow lines of natural water flow (c) be no deeper than 30 centimetres (d) have a 3:1 width:depth ratio (e) a spoon shape with gently sloping concave sides (f) be designed to appropriately manage and dispose of acid sulfate soils.
Aids to navigation	
PO30 Development that is for constructing an aid to navigation in a declared fish habitat area minimises impacts on the declared fish habitat area.	**AO30.1** The location of the aid to navigation is: (1) endorsed in writing by Maritime Safety Queensland (2) necessary, as all alternative options that do not require works in a declared fish habitat area have been considered, and are not viable or do not achieve timeframes for an urgent response to a public safety hazard.
Overhead electricity and communication cables	
PO31 Development that is for overhead electricity and communication cables in a declared fish habitat area minimises impacts on the declared fish habitat area.	**AO31.1** Overhead electricity and communication cables: (1) Span the declared fish habitat area, or (2) If it is not possible to scan the declared fish habitat area – are located in the management B area AND **AO31.2** For overhead electricity and communication cables: (1) rights over the works area can be demonstrated (for example, a power infrastructure easement) (2) future maintenance of the cables and their support infrastructure will not involve major adverse impacts on the declared fish habitat area. AND **AO31.3** The development: (1) minimises impacts through measures, such as using the maximum cable span length and minimising disturbance required for access (2) involves no permanent filling (for example, the construction of permanent raised pads for the support structures or access causeways) (3) ensure that any associated warning signs do not require marine plant disturbance, unless this would compromise the purpose of the warning sign.
Reclamation — management B areas only	
PO32 Filling of tidal land is only to occur as a result of beach replenishment in management B areas.	**AO32.1** Filling of tidal land as a result of beach replenishment may occur in a management B area if: (1) all other reasonable options would have greater measurable impact on the management B area (2) the filled land is not for the placement of structures or infrastructure (3) the filled land is to be a sacrificial dune or beach that is an integral part of erosion control design, and will minimise the frequency or impact of ongoing replenishment or other erosion control activities on the management B area.
Revetments, groynes and gabions (managing fisheries resources or fish habitat)	
PO33 Revetments, groynes and gabions for the purpose of managing fisheries resources or fish habitat in a declared fish habitat area are	**AO33.1** Revetments, groynes and gabions for the purpose of managing fisheries resources or fish habitat: (1) are constructed as part of a government agency or community group

Performance outcomes	Acceptable outcomes
designed and located to minimise impacts on the declared fish habitat area.	project to manage fisheries resources or fish habitats, or (2) are for a fisheries or fish habitat management purpose, or (3) are undertaken by a government agency or community groups for public benefit, or (4) ensure feasible and measurable benefits outweigh the associated impacts. AND **AO33.2** Erosion control structures in management B areas: (1) result in no further permanent loss of fish habitats beyond the footprint of the structure (2) include rehabilitation of disturbed fish habitats to the greatest extent possible.
Revetments, groynes and gabions (erosion control)	
PO34 Revetments, groynes and gabions built for erosion control in a declared fish habitat minimise impacts on the declared fish habitat area. Editor's note: From a fish habitat perspective, erosion protection structures (for example, gabions) that also serve to maintain or establish bank vegetation (for example, mangroves) may have greater benefit than structures focused at only achieving erosion protection. In addition, filled geotextile fabric may have benefits over harder materials in some circumstances, including easier removal where required. Editor's note: (1) Further detail on fish-friendly structures is provided in *Fisheries guidelines for fish-friendly structures (FHG 006)*, Department of Primary Industries and Fisheries, 2006 for a discussion of the benefits of geotextile fabric. (2) Further detail on erosion control and regularisation is provided in *Tidal fish habitats, erosion control and beach replenishment (FHMOP 010)*, Department of Primary Industries and Fisheries, 2007.	**AO34.1** Revetments, groynes and gabions built for erosion control are located in management B areas of declared fish habitat areas. AND **AO34.2** Erosion control structures are: (1) located in a part of the management B area for which the applicant can demonstrate a level of rights or interests (for example, adjoining property) (2) located where there is evidence of significant erosion, or there is an immediate threat of significant erosion, which would result in the loss of one or more of the following— (a) the opportunity preserve the ability to use the land for its existing or approved purpose (b) infrastructure, structures or buildings that are not expendable or not able to be relocated (3) located where there is an inadequate erosion buffer zone and managed retreat is not possible (4) the best available erosion management solution from both the erosion management and fish habitat management perspectives. AND **AO34.3** Erosion control structures: (1) include minimal regularisation of the foreshore boundary required to maintain a consistent alignment with adjacent properties as part of an erosion control strategy for the location (2) result in no further permanent loss of fish habitats beyond the footprint of the structure (3) include rehabilitation of disturbed fish habitats to the greatest extent possible.
Signs	
PO35 Signs in a declared fish habitat minimise impacts on the declared fish habitat area.	**AO35.1** For signs in a declared fish habitat area, there is an overriding community benefit involved in locating the sign in the declared fish habitat area if they are for: (1) warning the public of a hazard or danger, or (2) research or education: (a) where the educational benefits outweigh any impacts (b) where strategically located to achieve a high level of community use or benefit or awareness. AND **AO35.2** Signs do not involve disturbance of marine plants unless this would compromise the purpose of a warning sign (for example, the viewing arc).

Performance outcomes	Acceptable outcomes
Stormwater outlets	
PO36 Stormwater outlets built in a declared fish habitat area are designed and located to minimise impacts on the declared fish habitat area.	**AO36.1** Stormwater outlets are located in management B areas of declared fish habitat areas. AND **AO36.2** Stormwater outlet structures: (1) originate from adjoining land for which the applicant can demonstrate rights (2) are only used if stormwater storage, re-use and disposal on terrestrial land outside the declared fish habitat area is impractical. AND **AO36.3** The stormwater outlets: (1) incorporate current best practice water quality treatment techniques or apparatus (2) incorporate measures (for example, retention basins) upstream of the declared fish habitat area to reduce water velocities and discharge volumes (for example, retention basins).
Tidal aquaculture — management A and B areas	
PO37 Development that is tidal aquaculture is not supported in declared fish habitat areas.	**AO37.1** Placing of structures that constitute tidal works within licensed oyster areas in management B areas complies with the *Oyster industry management plan for Moreton Bay Marine Park*, Department of Primary Industries and Fisheries, 2008.
Water impoundment structures (permanent) — management A and B areas	
PO38 Development is not for a permanent dam, weir, bund or other water impoundment structure in a declared fish habitat area.	No acceptable outcome prescribed.
All development – offsets	
PO39 Impacts of development on declared fish habitat areas that cannot be avoided or mitigated are offset.	**AO39.1** Marine fish habitat offsets to counterbalance unavoidable impacts of development on fish habitats or fisheries resources include, but are not limited to: (1) works or activities to enhance or rehabilitate a fish habitat (2) the exchange of another fish habitat for a fish habitat affected by the development, or (3) a financial contribution to fish habitat research. Editor's note: For more information about offsets, see the *Marine fish habitat offset policy (FHMOP 005.2),* Department of Agriculture, Fisheries and Forestry, and the *Queensland Government environmental offsets policy*, Environmental Protection Agency, 2008. OR **AO39.2** Offsets are not required for private development works that impact less than 17 square metres, or public works impacting less than 25 square metres of fish habitat.
Additional requirements for development within a wild river area other than a HPA	
PO40 Development minimises clearing of native marine plants.	**AO40.1** Clearing of marine plants can only occur to the extent of the works – plus the prescribed area around the development to allow for maintenance.
PO41 Fish passage is not impacted.	No acceptable outcome is prescribed.
PO42 There is nil net loss in marine plants beyond the extent of the works.	**AO42.1** Any marine plant damaged during construction is replaced at the completion of the development with the same species of plant in the disturbed area outside of the footprint of the development.

Performance outcomes	Acceptable outcomes
PO43 Development in a wild river area does not impact on fish habitat values.	**AO43.1** Development in tidal waters in a wild river area are designed and constructed using materials, and located, to ensure that the activities do not impact on fish habitat values and function.
PO44 Development does not impound on natural drainage lines or flow paths, both during construction and operation.	No acceptable outcome is prescribed.
PO45 Excavation and filling for prescribed tidal work is carried out only to the extent necessary.	No acceptable outcome is prescribed.
PO46 Works in a tidal area are designed and constructed in a way to ensure they do not adversely affect the stability of the bed and banks of any waterway.	**AO46.1** Where it is necessary to remove a marine plant, the root system must be left in the substrate to minimise disturbance to bed and banks. AND **AO46.2** When the works are completed, any tidal lands disturbed by the activities beyond the footprint of the works are restored to pre-disturbance condition to promote natural restoration of marine plants and fish habitats.
PO47 No pollutants are released from the activity.	No acceptable outcome is prescribed.

5.2 Constructing or raising waterway barrier works in fish habitats state code

5.2.1 Purpose

The purpose of this code is to ensure that development of waterway barrier works; such as bridges, culvert crossings, causeways, bunds, levees, weir and dams, is designed and located to protect fish habitats and the connectivity between fish habitats, thus sustaining fisheries access and productivity. This code is designed to ensure that:

(1) access for fish along waters and into key fish habitats is maintained and restored
(2) the ability for fish to move through the waterway network and access alternative habitats is maintained and restored (longitudinal connectivity)
(3) connectivity between main waterway channels and other aquatic habitats (for example, inundated floodplains) is maintained and restored (lateral connectivity).

5.2.2 Criteria for assessment

Development mentioned in column 1 below must be assessed against the assessment criteria in the table mentioned in column 2.

Column 1	Column 2
Operational work	Table 5.2.1

Table 5.2.1: Operational work

Performance outcomes	Acceptable outcomes
All assessable waterway barrier works	
PO1 The development will not increase the risk of mortality, disease or injury or compromise the health and productivity of fisheries resources.	**AO1.1** The development ensures that one or more of the following is achieved: (1) the waterway barrier works includes a fish way that adequately provides for the movement of fish across the barrier works, or (2) the movement of fish across the waterway barrier works is, adequately provided for in another way, or (3) the height of the waterway barrier works allows enough water to flow across the barrier works to adequately provide for the movement of fish across the barrier works, or (4) the waterway barrier works is intended to exist only for a temporary period, and the level of disruption to fish movement in the area is acceptable, or

Performance outcomes	Acceptable outcomes
	(5) it is not necessary or desirable, for the best management, use, development or protection of fisheries resources or fish habitats, for the waterway barrier works to provide for the movement of fish across the barrier works. AND **AO1.2** Suitable habitat conditions, such as water and sediment quality, will be maintained to sustain the health and condition of fisheries resources within all fish habitats. AND **AO1.3** Cumulative effects of waterway barrier works do not impede fish movements, and will not affect reproductive success, health or mortality by depleting fish energy reserves. AND **AO1.4** Fish will not become trapped or stranded as a result of development. OR **AO1.5** Risks of fish stranding occurring have been identified and are demonstrably manageable. Editor's note: For guidance on how meeting this acceptable outcome see the *Fish salvage guidelines*, Department of Primary Industries and Fisheries, 2004.
PO2 Development maintains or enhances the community access to fisheries resources and fish habitats, through, for example fishing access and linkages between commercial fisheries and infrastructure, services and facilities.	**AO2.1** The development does not impact on existing infrastructure or access required by commercial or recreational fishing.
PO3 Development that has the potential to impact on the operations and productivity of commercial or recreational fisheries mitigates any adverse impacts due to adjustment of fisheries.	**AO3.1** Affected fisheries, and the impacts on those fisheries are identified. AND **AO3.2** Fair and reasonable compensation to commercial fishers is determined. AND **AO3.3** The impact of the development on commercial fisheries and recreational fishers is mitigated.
PO4 When the purpose of a waterway barrier is no longer relevant, or the design life of the structure is complete and the structure is not intended to be re-lifed, the waterway barrier will be removed.	**AO4.1** At the end of the viable operation of the development, the waterway barrier (and where appropriate any fish way) will be removed from the waterway and fish habitats and fish passage will be reinstated to previous or better levels. OR **AO4.2** If the barrier remains in place, fish passage provision in accordance with the approved design and operation is maintained as long as the barrier remains.
PO5 Development demonstrates appropriate rights and an overriding public need for the development, including consideration of any impacts beyond the footprint of the constructed development. Editor's note: For example, dams and weirs affect fish habitats up and downstream from the structure by pooling and restricting water flows.	**AO5.1** The development is supported by a statutory instrument (for example, regional plans made under the Act, Shoreline Erosion Management Plan (SEMP), coordinated project approval under the *State Development and Public Works Organisation Act 1971*), and the impact on fish habitats have been properly considered. AND **AO5.2** The following can be demonstrated: (1) tenure is held for the land directly abutting the waterway where the works will be carried out and has the applicant has full riparian access rights on

Performance outcomes	Acceptable outcomes
	both sides of the barrier (2) tenure has been granted over the area of work, or (3) resource allocation or resource entitlement has been granted for the resource being developed. AND **AO5.3** Development is for public infrastructure. OR **AO5.4** Development is for public infrastructure for which there is no alternative viable route that does not require waterway barrier works. OR **AO5.5** Development is for a legitimate public health or safety issue and the applicant is an entity or acting on behalf of an entity.
PO6 Development minimises stream crossings.	**AO6.1** Where multiple waterway barrier works are demonstrated to be essential, these are located a minimum of 100 metres apart (including existing structures).
PO7 Development avoids non-essential hardening or unnatural modification of channels.	**AO7.1** The development does not involve the channelisation of meandering waterways. AND **AO7.2** Where channels need to be significantly modified, the development simulates natural watercourses by including meanders, pools, riffles, shaded and open sections, deep and shallow sections, and different types of substrata. Natural features such as rock outcrops and boulders are retained or recreated.
PO8 Impacts on water quality in declared fish habitat areas are minimised.	**AO8.1** Development involves erosion and sediment control measures. Editor's note: Erosion and sediment control should be in accordance with the *Best practice erosion and sediment control guidelines*, International Erosion Control Association Australasia, 2008.
PO9 Development resulting in drainage or disturbance of acid sulfate soil is managed to prevent impacts on fisheries resources and fish habitats.	**AO9.1** Run-off and leachate from disturbed or oxidised acid sulfate soils is contained, treated and not released to a waterway or other fish habitat in accordance with the *Queensland acid sulfate soils technical manual: Soil management guidelines*, Department of Natural Resources and Mines, 2002.
PO10 Impacts of development on fish habitat and fish passage that cannot be avoided or mitigated are offset.	**AO10.1** The development provides a fish habitat offset to counterbalance residual impacts of development on fish movement or habitats. The offset includes, but is not limited to: (1) works or activities to enhance or rehabilitate fish passage or other aspects of a fish habitat, or (2) the exchange of another fish habitat for a fish habitat affected by the development, or (3) a contribution to fish habitat research relevant to fish passage or fish habitat usage.
Incorporation of fish ways	
PO11 Where the waterway barrier works will be a barrier to fish movement, provisions are made for adequate fish movement by incorporating a fish way or fish ways for the works. Editor's note: Guidelines to assist *Waterway barrier works development approvals (FHMOP 008)*, Department of Agriculture, Fisheries and Forestry, 2012.	No acceptable outcome is prescribed.
PO12 Any fish way proposed as part of the development is demonstrated to be a feasible	**AO12.1** A person or entity that is suitably qualified and experienced in fish passage biology and fish way design and delivers demonstrates and verifies

Performance outcomes	Acceptable outcomes
and reliable solution that will provide adequate fish passage. Editor's note: Further information about the importance of fish passage and design considerations can be found in the book *From sea to source: International guidance for the restoration of fish migration highways.*	that any fish way design will provide adequate fish passage. AND **AO12.2** Development uses a fish way design that has been successfully implemented under similar conditions (such as flows and fish communities) and has been demonstrated to provide adequate fish passage through actual scientific monitoring. AND **AO12.3** Development provides for the installation of monitoring equipment, such as traps and lifting equipment, access for monitoring, and a monitoring program of sufficient rigour to: (1) demonstrate the success of the fish way and fish passage at the site (2) provide the basis for optimising operation of the works and fish way. AND **AO12.4** The fish way design maximises flexibility for future adjustments that may be needed once in place. AND **AO12.5** The owner or operator demonstrates the means and commitment to promptly rectify any faults found in the fish way during commissioning, monitoring and operation, if these lead to inadequacies in the fish movement that are provided. AND **AO12.6** Any tailwater control structures such as a gauging weir, rock bar or stream crossings are fitted with a fish way or designed to allow fish passage. AND **AO12.7** Any existing in-stream structure downstream of the proposed waterway barrier works, which increases the barrier effect to fish passage through changes in flow characteristics, is fitted with adequate fish passage facilities.
PO13 Lateral (upstream and downstream) and longitudinal fish movement is provided for.	**AO13.1** More than one fish way is provided, for example, to provide up and downstream fish passage or to provide fish passage under a range of flow regimes.
PO14 Any fish way is be capable of operating whenever there is flow in the waterway (inflow or release), the dam is above dead storage level, and the fish way will be operational for as long as the waterway barrier is in position.	**AO14.1** The operational range of a fish way is sufficient having regard to the hydrology of the site and the fish movement characteristics (in particular timing of movements in relation to seasons and hydrographs). AND **AO14.2** The lower operational range of the fish way is down to at least 0.5 metres below minimum headwater drawdown level (dead storage or minimum off-take level, whichever is lower) and to at least 0.5 metres below minimum tail water level at the site. AND **AO14.3** Upstream and downstream fish ways will be operated whenever there are inflows into the impoundment or release out of the impoundment, and during overtopping events. AND **AO14.4** All releases are directed firstly through the fish way as a priority over the outlet works, with the fish way being operated whenever a release is made through it, regardless of whether the release volume is less than the optimal minimum release for fish way operation.

Performance outcomes	Acceptable outcomes
	AND **AO14.5** The fish way is designed such that non-operation duration (for example, less than two weeks) and incidents due to maintenance issues (for example, siltation, debris, breakdowns, sourcing of parts) are minimised. AND **AO14.6** Fish ways are monitored and maintained to ensure that the fish way is operational at all times. Editor's note: For further guidance about meeting the acceptable outcomes, see *Waterway barrier works development approvals (FHMOP 008)*, Department of Agriculture, Fisheries and Forestry, 2012.
PO15 Any fish way, and all associated componentry are designed to be durable, reliable and adequately protected from damage from high flow and flood events, to prevent or minimise non-operation.	**AO15.1** Development ensures that mechanisms are in place to ensure that operational issues in fish ways are promptly rectified for the life of the fish way. AND **AO15.2** The quality of materials and components for construction of the fish way are appropriate for the intended service life of the fish way. Editor's note: For guidance on meeting the acceptable outcomes, see *Waterway barrier works development approvals (FHMOP 008)*, Department of Agriculture, Fisheries and Forestry, 2012.
PO16 Any fish way is located in a position and manner that maximise the attraction and movement of fish, while also enabling access for monitoring, maintenance and operating purposes.	**AO16.1** Modelling demonstrates, by showing the likely flow patterns and adjacent to the fish way entrance, that the location of the fish way entrance is optimal for fish attraction across the operational range of the fish way. AND **AO16.2** Outlet works are adjacent to the fish way, but are positioned and designed so as not to interfere with fish access and attraction to the fish way entrance during outlet releases. AND **AO16.3** Spillway overtopping flows initiate and terminate adjacent to the fish way or are directed parallel to the fish way entrance. AND **AO16.4** Spillway flows are transferred to fish way releases as soon as possible during a flow recession. AND **AO16.5** There is a continuous attraction flow at all times at the fish way entrance when the fish way is operating. AND **AO16.6** Attraction flow velocities are sufficient and variable to attract the whole fish community. AND **AO16.7** Appropriate light levels are maintained at fish way entrances. AND **AO16.8** Additional means of fish attraction are included in the fish way design if appropriate. AND **AO16.9** The fish way entrance is accessible under all flow conditions within its operating range.

Performance outcomes	Acceptable outcomes
	AND **AO16.10** Fish attracted to the spillway are able to access the fish way without having to swim back downstream. AND **AO16.11** Water supply for the fish ways and attraction flows are sourced from surface quality water or equivalent quality water. AND **AO16.12** There are adequate holding chamber dimensions for the fish biomass (for lock, lift, trap and transfer type fish ways). AND **AO16.13** The fish way has adequate hydraulic conditions for all fish within and throughout the fish ways.
PO17 The seasonal and flow-related biomass of the fish community at the location of the waterway barrier works has been surveyed, and has been catered for in the design of the fish way.	**AO17.1** The fish way design, operation and capacity will avoid or acceptably minimise failure to pass any members of the fish community, for example, due to size, class or swimming ability. AND **AO17.2** Future increases in fish biomass are quantified and catered for in the design of the fish way (for example, in capacity or flexibility of operation).
PO18 Fish ways and other means of fish passage at waterway barrier works cater for the whole fish community taking into account species, size classes, life stages and swimming abilities.	**AO18.1** The seasonal and flow-related composition of the fish community at the location of the waterway barrier works is well understood and catered for. AND **AO18.2** The fish way design, operation and capacity will avoid or acceptably minimise any delays in fish movement.
PO19 Development does not increase the risk of mortality, disease or injury, or compromise the health and productivity in fish. Editor's note: Refer to the *Fish salvage guidelines,* Department of Primary Industries and Fisheries, 2004 for further guidance.	**AO19.1** All pathways providing fish passage at a proposed waterway barrier works are safe for fish to pass. AND **AO19.2** Fish passage will not adversely impact on the wellbeing of fish. AND **AO19.3** The designs of all components of waterway barriers, including but not limited to spillway, stilling basin, apron and dissipation structures, are developed and implemented with safe downstream fish passage as a key design consideration. Note: A stepped spillway (including sheet pile weirs) is not an acceptable solution as high mortalities and injuries to fish have been associated with such designs. AND **AO19.4** There is adequate minimum tailwater depth at the toe of the spillway (for example, stilling basin) at commencement to spill (for example, 30 per cent of the head difference). AND **AO19.5** Intake and outlet works adjacent to the waterway barrier are screened or otherwise designed and placed to prevent fish passing through or becoming trapped in these works. AND **AO19.6** Intake screen dimensions are such that small fish are not drawn through the outlet works and velocities are low enough that fish are not impinged or entrained on the screens.

Performance outcomes	Acceptable outcomes
	AND **AO19.7** The fish way exit is located so as to avoid entrainment in any outlet work screens and avoid fish being washed back over the spillway during overtopping. AND **AO19.8** Cover is provided for fish moving from the exit. AND **AO19.9** Fish exit upstream and downstream fish ways at the water level over the full range of tailwater and headwater levels. AND **AO19.10** Trash and debris are excluded from the upstream fish way exit and downstream fish way entrance with designs that ensure that fish can access the exits and entrances, and that the fish way(s) are not blocked or damaged by trash or debris. AND **AO19.11** Adequate minimum depth is maintained through the fish way. AND **AO19.12** The risk of fish kills arising from the works are minimised (for example, through entrapment of fish upstream or between works). AND **AO19.13** Contingency plans in case of mechanical or electrical failure of fish ways are in place. AND **AO19.14** The fish way design, operation and capacity will avoid or acceptably minimise predation within and upon the fish community using the fish way.
Inherent barrier design and provision of fish passage	
PO20 Fish passage is provided for: (1) in the inherent design of the waterway barrier works (2) over the in-situ life of the barrier in that position through adequate construction and maintenance of the barrier. Editor's note: For further guidance see: *Waterway barrier works development approvals (FHMOP 008)*, Department of Agriculture, Fisheries and Forestry, 2012.	**AO20.1** Development avoids or minimises loss of, or modification to, fish habitat. AND **AO20.2** The drownout characteristics of the waterway barrier allow for adequate fish passage at the site. AND **AO20.3** At drownout, the conditions at the barrier are such that: (1) the tailwater and headwater levels across the weir are essentially equal (2) velocities are sufficiently low for fish passage (e.g. 0.3 metres/second) at or close to the edge of the spillway crest (3) the weir is fully submerged to a sufficient depth to allow for fish passage, and for the species and size classes of fish moving through the site to cross the weir (4) to the degree that provides for adequate fish passage at the site. AND **AO20.4** The frequency, timing and duration of drownout conditions are adequate for the movement requirements of the fish community moving past the barrier. AND **AO20.5** Delays to fish passage when there are flows in the system but no fish

Performance outcomes	Acceptable outcomes
	passage in the rising hydrograph are accurately defined for the design, and avoided or limited to a maximum of three days. AND **AO20.6** In assessing whether the inherent barrier design provides adequate fish passage, impacts on lateral and longitudinal fish movement are considered.
PO21 The use of floodgates is avoided or minimised.	**AO21.1** There is an overriding need for new floodgates, and other alternatives are unviable. AND **AO21.2** Hydraulic conditions through the floodgates are adequate for fish passage. AND **AO21.3** Floodgates are designed and operated as (tidally activated) automatic floodgates. AND **AO21.4** The invert of the floodgate is at bed level. AND **AO21.5** Floodgates allow for fish passage over an adequate duration of the tidal cycle. AND **AO21.6** The operation of the floodgate will not result in impacts on water quality that may impact on fish or fish habitat.
PO22 Waterway barriers that are bridges are designed, constructed and maintained to provide adequate fish passage for the site and: (1) fish passage is provided for the life of the crossing (2) hydraulic conditions (depth, velocities and turbulence) from the downstream to the upstream limit of the structure allow for fish passage of all fish attempting to move through the crossing at all flows up to the drownout of the structure.	**AO22.1** A bridge that is designed to allow adequate fish passage is preferentially installed to a culvert. AND **AO22.2** In-stream bridge structures such as piles are minimised. AND **AO22.3** Bridge support piles are not constructed within the low-flow channel or so that they constrict the edges of the low-flow channel. AND **AO22.4** Bridge abutments do not extend into the waterway beyond the toes of the banks. AND **AO22.5** Bank revetment works do not extend into the waterway beyond the toes of the banks. AND **AO22.6** Permanent access or erosion control structures within the main channel adjacent to the bridge are set at or below bed level, roughened to approximately simulate natural bed conditions, and maintained so that there are no drops in elevation at their edges or joins with the stream bed.
PO23 Waterway barriers that are culverts provide adequate fish passage for the site, and: (1) fish passage is provided for the life of the crossing (2) hydraulic conditions (depth, velocities	**AO23.1** Culverts are only installed where the site conditions do not allow for a bridge. AND **AO23.2** The combined width of the culvert cell apertures are equal to 100 per cent of the main channel width.

Performance outcomes	Acceptable outcomes
and turbulence) from the downstream to the upstream limit of the structure allow for fish passage of all fish attempting to move through the crossing at all flows up to the drownout of the structure.	AND **AO23.3** The culvert crossing and associated erosion protection structures are installed at no steeper gradient than the waterway bed gradient. AND **AO23.4** For the life of the culvert crossing, relative levels of the culvert invert, apron and scour protection and the stream bed are kept so that there are no drops in elevation at their respective joins. AND **AO23.5** The base of the culvert is: (1) buried a minimum of 300 millimetres to allow bed material to deposit and reform the natural bed on top of the culvert base, or (2) the base of the culvert is the stream bed, or (3) the base of the culvert cell is roughened throughout the culvert floor to approximately simulate natural bed conditions. AND **AO23.6** The outermost culvert cells incorporate roughening elements such as baffles on their bankside sidewalls. AND **AO23.7** Roughening elements are installed on the upstream wingwalls on both banks to the height of the upstream obvert or the full height of the wingwall. AND **AO23.8** Roughening elements provide a contiguous lower velocity zone (no greater than 0.3 metres/second) for at least 100 millimetres width from the wall through the length of the culvert and wingwalls. AND **AO23.9** In-stream scour protection structures are roughened throughout to approximately simulate natural bed conditions. AND **AO23.10** Culvert alignment to the stream flow minimises water turbulence. AND **AO23.11** There is sufficient light at the entrance to and through the culvert so that fish are not discouraged by a sudden descent into darkness. AND **AO23.12** The depth of cover above the culvert is as low as structurally possible, except where culverts have an average recurrence interval (ARI) greater than 50 years. AND **AO23.13** For culvert crossings designed with a flood immunity >ARI 50, fish passage is provided up to culvert capacity. AND **AO23.14** Adequate design (for example, culvert aperture) and maintenance measures are in place for the life of the crossing to keep crossings clear of blockages through a regular inspection program in order to retain fish passage through the crossing.

Performance outcomes	Acceptable outcomes
	AND **AO23.15** Crossings within the bed and banks do not incorporate culverts.
PO24 Waterway crossings other than bridges or culverts provide adequate fish passage for the site and: (1) fish passage is provided for the life of the crossing (2) hydraulic conditions (depth, velocities and turbulence) from the downstream to the upstream limit of the structure allow for fish passage of all fish attempting to move through the crossing at all flows up to the drownout of the structure.	**AO24.1** The crossing is built at or below bed level so that the surface of the crossing is no higher than the stream bed at the site. AND **AO24.2** For the life of the crossing, relative levels of the crossing, any bed erosion or scour protection and the stream bed are kept so that there are no drops in elevation at their respective joins. AND **AO24.3** The crossing and associated erosion protection structures are installed at no steeper gradient than the waterway bed gradient. AND **AO24.4** The crossing and associated erosion protection structures are roughened throughout to approximately simulate natural bed conditions. AND **AO24.5** The lowest point of the crossing is installed at the level of the lowest point of the natural stream bed (pre-construction), within the footprint of the proposed crossing. AND **AO24.6** There is a height difference from the lowest point of the crossing to the edges of the low flow section of the crossing to channel water into the low flow section. AND **AO24.7** The level of the remainder of the crossing is no higher than the lowest point of the natural stream bed outside of the low flow channel.
PO25 All waterway barriers are designed, constructed and maintained to provide adequate fish passage for the site and fish passage is provided for the life of the barrier.	**AO25.1** Hydraulic conditions (depth, velocities and turbulence) from the downstream to the upstream limit of the structure allow for fish passage of all fish attempting to move through the barrier at all flows up to the drownout of the structure. AND **AO25.2** Aperture size of openings (for example, at screens or trash racks) ensures adequate fish passage. AND **AO25.3** Hydraulic conditions are such that adequate fish passage is provided. AND **AO25.4** Flows across, or releases out of, the structure are such that adequate fish passage is provided in terms of timing, frequency and duration, as well as water volume and depth. AND **AO25.5** Water quality across the barrier allows for fish passage.
Temporary waterway barrier works	
PO26 The temporary waterway barrier works will exist only for a temporary period and cause a minimal and acceptable disruption to fish movement in the area, during the period	**AO26.1** Temporary waterway barrier works can be in place at a given site for no more than 12 months. AND

Performance outcomes	Acceptable outcomes
of installation. Editor's note: *Code for self assessable development Temporary waterway barrier works* (*WWBW02*), Department of Employment, Economic Development and Innovation, 2010 and the GIS data layer 'Queensland Waterways for Waterway Barrier Works' provide guidance on the acceptable length of time that a temporary barrier may be acceptable in particular streams.	**AO26.2** In tidal waters, to ensure significant impacts on upstream and downstream habitats are avoided, the temporary waterway barrier works will not completely block the waterway for more than 3 weeks, unless steps taken to ensure water exchange occurs (such as breaching of the bund or pumping water), to prevent upstream marine plants and benthos being submerged in freshwater, or the barrier is sufficiently permeable. AND **AO26.3** Delays to fish movement are avoided at times when fish are known to be undertaking upstream spawning migrations, even on very small or zero flow events or river rises. Waterway barrier works are scheduled out of this period, or other provision for fish movement is made (for example, the use of a partial barrier, periodic barrier, stream diversion or fish way). AND **AO26.4** Where there are species at the site that require downstream movement during works, provisions are made to allow those species to move downstream. AND **AO26.5** Water diversion around the site or through the barrier is implemented if the barrier is in position for more than four weeks, and there is any flow in the system for the purpose of ensuring that vegetation die-off, decomposition and associated reduction in water quality does not become an issue upstream of the barrier, in areas where there is more than 30 per cent coverage of terrestrial grasses within the ponded area. AND **AO26.6** Where there are aquatic macrophytes immediately downstream of the barrier and those macrophytes would ordinarily be submerged or partially submerged, water will need to be passed across the barrier at all times to avoid their desiccation. AND **AO26.7** On removal of a temporary barrier, full movement for fish is reinstated. AND **AO26.8** On removal of a temporary barrier, the waterway bed and banks are returned to their original profile and stability, so that long-term fish movement at the site is not compromised.
PO27 Fish movement is required past temporary waterway barrier works where the duration of the barrier is greater than that allowed for under the *Code for self assessable development Temporary waterway barrier works (WWBW02*), Department of Employment, Economic Development and Innovation, 2010. Editor's note: *Code for self assessable development Temporary waterway barrier works* (*WWBW02*), Department of Employment, Economic Development and Innovation, 2010 and the GIS data layer 'Queensland waterways for waterway barrier works' provide guidance on the acceptable length of time that a temporary barrier may remain in place in particular streams.	**AO27.1** Development provides for adequate fish movement through the incorporation of a fish way or fish ways for the works. AND **AO27.2** The barrier: (1) is a partial barrier (2) does not constrict the area or flows of a low flow channel (3) all work will be completed (and the barrier removed) during low flows when the flow will be contained wholly within a low flow channel. This would require a predictable flow regime where the likelihood of flow events during the works is very small (for example a 1 in 20 year probability). AND **AO27.3** The barrier is opened periodically every five days for at least 48 hours to allow fish movement and water exchange. AND **AO27.4** Fish movement is provided for via a stream diversion.

Performance outcomes	Acceptable outcomes
PO28 Erosion control elements of the temporary waterway barrier works do not impact on fish passage.	**AO28.1** The use of gabions is avoided to prevent fish entrapment on receding flows.
PO29 Fish passage is not necessary or desirable, for the best management, use, development or protection of fisheries resources or fish habitats, for the temporary waterway barrier works to provide for the movement of fish across the barrier works. Editor's note: 'Other barriers' referred to in the *Fisheries Act 1994* may be applied to existing natural barriers that preclude upstream fish movement. Provision of upstream fish movement at barrier works on the site of a waterfall that does not drownout is not necessary, providing that the works do not impact on climbing fish species (for example, with the installation of smooth surfaces or overhangs). Editor's note: Guidelines to assist with assessment: *Waterway barrier works development approvals (FHMOP 008)*, Department of Agriculture, Fisheries and Forestry, 2012.	**AO29.1** It is demonstrated through an appropriate level of scientifically designed and executed fish survey by a suitably qualified and experienced entity that there are no fish in the area during any flow regimes. AND **AO29.2** The conditions at the site causing fish to be absent are not able to be remediated while the proposed barrier is in place. OR **AO29.3** There are other barriers in the area where the waterway barrier works is, or is to be, located which prevent movement of fish located in the area. AND **AO29.4** Other barriers in the area of the waterway barrier works could not reasonably be expected to be modified or removed in the future to restore fish passage. AND **AO29.5** Fish passage is not provided where this would introduce fish (including non-endemic fish or noxious fish) into an area where these species were not previously found, and this would be more detrimental to the existing fish community than the effect of the barrier.
Construction	
PO30 The construction of waterway barrier works does not limit the movement or wellbeing of fish. Editor's note: For more information, see *Waterway barrier works development approvals (FHMOP 008)*, Department of Agriculture, Fisheries and Forestry, 2012.	**AO30.1** Work does not commence during times of elevated flows. AND **AO30.2** Excavation work in unbunded tidal areas is to be scheduled to occur within two hours either side of low tide. AND **AO30.3** In-stream work is scheduled for the driest time of the year. AND **AO30.4** In-stream construction is completed as quickly as possible to lessen the impact on fish and habitats, and timed to minimise conflict with fish migrations. AND **AO30.5** Routes for the developments are planned to minimise the impact on fish passage and fish habitat (for example, roads and railways minimise crossings and avoid crossings in environmentally sensitive areas).
PO31 The development does not cause, or minimises direct or indirect disturbance to the bed and banks adjacent to the approved footprint of works. Editor's note: For more information, see *Restoration of fish habitats: Fisheries guidelines for marine areas (FHG 002)*, Department of Primary Industries, 1998.	**AO31.1** Removal of stream-bank vegetation and disturbance to the natural banks and bed of the waterway is avoided or minimised. AND **AO31.2** Disturbance to the outer bank of waterway beds during work and while gaining access is minimised. AND **AO31.3** Heavy machinery is excluded from fragile areas and areas which host fisheries resources. AND **AO31.4** After completion of the in-stream works, all areas of the bed and banks of the waterway that are outside of the approved permanent footprint of the

Performance outcomes	Acceptable outcomes
	works, and which have been disturbed as a result of the construction or raising of the waterway barrier works, are returned to their original profile and stabilised to promote regeneration of natural fish habitats. AND **AO31.5** By the completion of works, the profiles of the bed and banks are reinstated to natural stream profiles and stability. AND **AO31.6** The waterway bed will be retained with natural substrate, or reconstructed with substrate comparable to the natural substrate size and consistency. AND **AO31.7** Vegetation and cover will be rapidly re-established so that the native plant community at the site can recover or be enhanced (for example, by using native species). AND **AO31.8** Fish habitats, including fisheries resource values, will be able to naturally regenerate to pre-works conditions. Editor's note: Monitoring of the success of fish habitat regeneration, within and adjacent to the work site, will be a development permit condition.
Additional requirements for development within a wild river area other than within a HPA	
PO32 Sediment and other polluting material must be captured during construction and operation of a waterway barrier.	**During construction:** **AO32.1** Environmental safety measures such as silt curtains must be used to capture sediments. AND **AO32.2** No polluting material such as debris, chemicals, or construction material to be stored in the stream bed, unless they are to be used immediately. AND **After construction:** **AO32.3** The stream bed and banks are protected to prevent erosion or slumping. AND **AO32.4** The waterway bed is lined with the original top soil retained during the construction. AND **AO32.5** All debris and other polluting material must be removed from the location and disposed of outside the wild river area. AND **AO32.6** Temporary barriers must be removed once they are not needed anymore, and the barrier material is deposited in its original location if the material is taken from the declared wild river area, or disposed of outside the wild river area.
PO33 The works do not impede fish passage particularly during critical periods, which are important for breeding, feeding, nursery and recruitment of indigenous fish species.	**AO33.1** Works (except temporary works required for less than 20 business days) that are not drowned out regularly must contain a fish way, the design of which is approved by the Department of Agriculture, Fisheries and Forestry. AND **AO33.2** Any fish way must be operational at all times except where natural flows would have prevented fish passage. AND

Performance outcomes	Acceptable outcomes
	AO33.3 In the case of drought, any fish trapped in the impoundment must be rescued according to the *Fish Salvage Guidelines*, Department of Primary Industries and Fisheries, 2004 AND **AO33.4** Vegetation and cover is retained or replaced to pre-work levels and conditions. AND **AO33.5** All works are constructed during periods when fish passage is least affected.
PO34 No pollutants will be released during construction or operation.	No acceptable outcome is prescribed.

5.3 Removal, destruction or damage of marine plants state code

5.3.1 Purpose

The purpose of this code is to ensure the protection of marine plant communities that are fisheries resources and to ensure development provides ecosystem services that support fisheries productivity.

5.3.2 Criteria for assessment

Development mentioned in column 1 below must be assessed against the assessment criteria in the table mentioned in column 2.

Column 1	Column 2
Material change of use	Table 5.3.1
Operational work	Table 5.3.1
Reconfiguring a lot	Table 5.3.1

Table 5.3.1: Operational work (including operational work as part of a material change of use or reconfiguring a lot)

Performance outcomes	Acceptable outcomes
PO1 Development avoids and protects fish habitats and fisheries resources.	**AO1.1** A buffer surrounding fish habitats is provided and has a minimum width of: (1) For tidal fish habitats— (a) 100 metres above highest astronomical tide outside an urban area, or (b) 50 metres above highest astronomical tide within an urban area (2) non-tidal fish habitats— (a) 50 metres above bankfull width outside an urban area or (b) 25 metres above bankfull width within an urban area. Editor's note: Guidelines to assist with determining the appropriate buffer widths: (1) *Fisheries guidelines for fish habitat buffer zones* (*FHG 003)*, Department of Primary Industries, 2000 (2) *Queensland wetland buffer planning guideline*, Department of Natural Resources and Mines, 2011.
PO2 There is a demonstrated right to propose development within or adjacent to the public fish habitats and fisheries resources. Editor's note: Further guidance on rights in context	**AO2.1** The development is supported by a statutory instrument (for example, regional plans made under the Act, Shoreline Erosion Management Plan (SEMP), coordinated project approval under the *State Development and Public Works Organisation Act 1971*), and the impact on fish habitats have been properly considered.

Performance outcomes	Acceptable outcomes
of fisheries resources and fish habitats is provided in the policy provisions of *Management of declared fish habitat areas (FHMOP 002)*, Department of Primary Industries and Fisheries, 2008.	OR **AO2.2** Development is for public infrastructure. OR **AO2.3** Development is for public infrastructure for which there is no alternative viable route that does not require works on tidal land or fish habitats. OR **AO2.4** Development is for a legitimate public health or safety issue, and the applicant is an entity or acting on behalf of an entity. OR **AO2.5** The following can be demonstrated: (1) tenure is held for the land directly abutting the tidal land and has full riparian access rights, or (2) tenure has been granted over the area of work, or (3) resource entitlement or resource allocation has been granted for the resource being developed, or (4) for private development work that is a jetty, pontoon or boat ramp, no other maritime access structure adjoins the property.
PO3 There is an overriding functional requirement for the development or part of the development to be located on tidal lands. Editor's note: Development components that have a functional requirement to be located over fish habitats are acceptable. For example car park areas (including for boat ramps), parklands, marina offices, spoil disposal or amenity facilities do not depend on their location to be on or over tidal lands to function, where alternatives of lesser impact exist.	**AO3.1** Development is for maritime infrastructure (for example, jetty, boat ramp, moorings). OR **AO3.2** Development is lineal or nodal infrastructure required to cross or be located within a waterway or tidal area (for example, bridge, culvert crossing, stormwater outlet, pipeline). OR **AO3.3** The access is required for the construction of the marine or lineal infrastructure.
PO4 Development maintains or enhances community access to fisheries resources and fish habitats, such as through fishing access and linkages between the commercial fishery and infrastructure, services and facilities.	**AO4.1** The development does not impact on existing infrastructure or access required by fishing sectors.
PO5 Development that has the potential to impact on the operations and productivity of Queensland commercial or recreational fisheries mitigates any adverse impacts due to adjustment of fisheries.	**AO5.1** Affected fisheries, and the impacts on those fisheries, are identified. AND **AO5.2** Fair and reasonable compensation to commercial fishers is determined. AND **AO5.3** The impact of the development on commercial fisheries and recreational fishers is offset in accordance with the *Guideline on fisheries adjustment*, Department of Fisheries and Forestry. Editor's note: The *Guideline on fisheries adjustment* provides advice for proponents on relevant fisheries adjustment processes and is available by request from the Department of Fisheries and Forestry.
PO6 The development will not increase the risk of mortality, disease or injury, or compromise the health and productivity of	**AO6.1** Fish will not become trapped or stranded as a result of development. AND

Performance outcomes	Acceptable outcomes
fisheries resources.	**AO6.2** Risks of fish stranding occurring have been identified, and are demonstrably manageable. AND **AO6.3** Suitable habitat conditions, such as water and sediment quality, will be maintained to sustain the health and condition of fisheries resources within all fish habitats. AND **AO6.4** Herbicides are not used on, and will not drift onto, tidal land or wetlands, or within waterways. Editor's note: Refer to the *Fish salvage guidelines*, Department of Primary Industries and Fisheries, 2004 for guidance on how to comply with the acceptable outcomes.
PO7 Development resulting in drainage or disturbance of acid sulfate soil is managed to prevent impacts on fisheries resources and fish habitats.	**AO7.1** Run-off and leachate from disturbed or oxidised acid sulfate soils is contained and treated, and not released to a waterway or other fish habitat. Editor's note: Management of acid sulfate soil is consistent with the current *Queensland acid sulfate soil technical manual: Soil management guidelines*, Department of Natural Resources and Mines, 2002.
PO8 Development of, or adjacent to, fish habitats avoids the unnecessary loss, degradation or fragmentation of fish habitats and their values and the loss of fish movement. Editor's note: For more information, refer to relevant fish habitat management operational policies and fish habitat guidelines: (1) *Management and protection of marine plants and other tidal fish habitats (FHMOP 001)*, Department of Primary Industries and Fisheries, 2007 (2) *Tidal fish habitats, erosion control and beach replenishment (FHMOP 010)*, Department of Primary Industries and Fisheries, 2007 (3) *Dredging, extraction and spoil disposal activities (FHMOP 004)*, Department of Primary Industries, 1998 (4) *Departmental procedures for permit applications assessment and approvals for insect pest control in wetlands (FHMOP 003)*, Department of Primary Industries, 1996 (5) *Fisheries guidelines for fish-friendly structures (FHG 006)*, Department of Primary Industries and Fisheries, 2006	**AO8.1** The development does not directly impact fish habitats and is located: (1) above the highest astronomical tide for tidal fish habitat, or (2) above bankfull width for non-tidal fish habitats (freshwater). OR **AO8.2** Where impacts on fish habitats cannot be avoided, development meets the following criteria: (1) the location, design and work methods will result in the smallest impact possible to fish habitats (2) development does not increase the risk of transfer of, or impacts from, pest fish and other relevant pest species (3) tidal and freshwater inundation and drainage patterns, extent and timing are maintained such that ecological processes continue (4) works or development will not restrict fish access to fish habitats or fisheries resources (5) tidal or freshwater fish habitats will not be substituted for another type of habitat, for example, creation of mangrove communities from other tidal fish habitats (6) works are undertaken to avoid both seagrass flowering periods and fish spawning and migration periods (7) impacts are mitigated where possible.
Public infrastructure to facilitate fishing	
PO9 Development provides public use and access to fisheries resources.	**AO9.1** Structures over tidal land are located over areas naturally devoid of marine plants, or areas that have undergone existing disturbance or degradation. AND **AO9.2** Development is public infrastructure to facilitate fishing has a direct link to the activity of fishing, and: (1) is a public jetty, pontoon, boat ramp or fishing platform (2) the proposed location has been identified as the most suitable through a strategic planning approach (3) there is an existing community requirement for the structure (4) the development will result in the smallest impact possible to fish habitats.

Performance outcomes	Acceptable outcomes
	AND **AO9.3** Avoidance of disturbance, whether that disturbance is permanent or temporary, for access paths, tracks or dredging navigable access. AND **AO9.4** If development results in fish habitat disturbance, there is an overriding requirement for the development to be located within the tidal land, wetlands or a waterway. AND **AO9.5** The long-term operability and impact of the use of the development will not require additional new development and associated impacts will not result in the need for dredge navigation access to the proposed jetty in the future.
Public infrastructure (linear and nodal)	
PO10 Development provides a public benefit.	**AO10.1** The applicant is an entity or has the authority to act on behalf of an entity.
PO11 There is an overriding requirement for the development to be located on tidal land or other fish habitats.	**AO11.1** There is no other viable alternative route that does not require works on tidal land or fish habitats. AND **AO11.2** The development has a functional requirement to be located on tidal land, within a waterway or over fish habitats.
Public infrastructure – waterway crossings	
PO12 Development maintains existing tidal inundation and drainage patterns and extent.	**AO12.1** Bridge crossings are designed with abutments above the highest astronomical tide. AND **AO12.2** Culvert crossing are designed with the size and number of culverts such that it is the entire width of the waterway, the obvert being above the highest astronomical tide and the invert being equal to natural bed level, or a maximum of 300 millimetres below natural bed level. AND **AO12.3** Development is a bed level crossing of 15 metres in width or less.
PO13 Development provides for fish passage.	No acceptable outcome is prescribed.
Public infrastructure – pipeline or subterranean infrastructure	
PO14 Public infrastructure that is a pipeline or subterranean infrastructure maintains existing tidal hydrology, including inundation and drainage patterns and extent.	**AO14.1** The public infrastructure will be placed below the existing natural substrate surface level, and natural substrate and surface levels will be reinstated. AND **AO14.2** The public infrastructure will not cause waterway bed or bank scour or waterway bed or bank erosion.
Public infrastructure – dredging or extracting sediment	
PO15 Works for public infrastructure that are dredging or extracting material are undertaken so as to avoid impacts on marine plants.	**AO15.1** Works for public infrastructure are for capital dredging, are proposed by a public entity and are for a demonstrated need. AND **AO15.2** Works are maintenance dredging consistent with a previously lawfully dredged area, or otherwise approved profiles for navigational purposes.

Performance outcomes	Acceptable outcomes
	AND **AO15.3** Works are undertaken to avoid both seagrass flowering periods and fish spawning and migration periods.
PO16 Disposal of dredge spoil is undertaken in a manner that avoids impacts on marine plants.	**AO16.1** Dredge spoil is not disposed of on tidal land. OR **AO16.2** Spoil disposal will occur at a designated, approved spoil disposal site. OR **AO16.3** Spoil disposal occurs as part of a beach replenishment program supported by a strategic planning process.
Private infrastructure – dredging or extracting sediment	
PO17 Works for dredging or extracting sediment for private infrastructure are only undertaken where there is an overriding public need exists for the work.	**AO17.1** Works for private infrastructure will provide public or community benefit. AND **AO17.2** The works are a component of private development works and there is an overriding public need for the dredging component of the development to occur. AND **AO17.3** The development is supported by a statutory instrument (for example, regional plans made under the Act, Shoreline Erosion Management Plan (SEMP), coordinated project approval under the *State Development and Public Works Organisation Act 1971*), and the impact on fish habitats have been properly considered. Editor's note: (1) For example, private marina facilities or development that is open to the general public and facilitates public access for fishing purposes and future maintenance dredging is within the approved footprint of the facility, and is the least impact option based on fisheries resources and fish habitats. (2) Dredging for access to private structures is not supported.
Public infrastructure – erosion control and beach replenishment	
PO18 Public infrastructure for erosion and beach replenishment works is provided to address existing significant and imminent erosion, maintain natural shoreline and foreshore processes and existing fish habitat values. Editor's note: Further detail on erosion control is provided in *Tidal fish habitats, erosion control and beach replenishment (FHMOP 010)*, Department of Primary Industries and Fisheries, 2007.	**AO18.1** Public infrastructure for erosion and beach control replenishment provides an erosion buffer zone and facilitates managed retreat. Editor's note: Further guidance on erosion control is provided in *Tidal fish habitats, erosion control and beach replenishment (FHMOP 010)*, Department of Primary Industries and Fisheries, 2007. AND **AO18.2** The cause of shoreline and foreshore erosion is identified and treated. AND **AO18.3** Development provides a riparian buffer zone with a minimum width of: (1) for tidal fish habitats: (a) 100 metres above the highest astronomical tide outside an urban area, or (b) 50 metres above the highest astronomical tide within an urban area (2) for non-tidal fish habitats: (a) 50 metres above bankfull width outside an urban area, or (b) 25 metres above bankfull width an urban area.

Performance outcomes	Acceptable outcomes
	AND **AO18.4** An erosion control structure is provided to address a short-term significant erosion risk that will result in the loss of buildings, structures or infrastructure that are not expendable or relocatable. AND **AO18.5** Erosion control works: (1) minimise disturbance to fish habitats and fisheries resources (2) result in no further loss of fish habitats (for example, through reclamation of tidal land) (3) maximise fish habitat enhancement or creation through fish friendly design (4) minimise disruption to community use of the area. AND **AO18.6** Erosion control structures: (1) are located where the applicant can demonstrate a level of rights or interest (2) are located parallel to the shoreline and as far landward as possible. Minor regularisation may be supported. (3) are located landward of, or adjoining, the existing land profile (4) incorporate fish-friendly design. AND **AO18.7** Development does not involve the placement of sand on soft-sediment shorelines to create an artificial beach unless the site has a demonstrable history of sand placement for public recreation purposes.
PO19 Erosion control and beach replenishment that requires filling of tidal land is avoided where possible, and impact on tidal land is minimised.	**AO19.1** Minor filling is required to regularise a shoreline or foreshore as part of erosion control activities. AND **AO19.2** Filling of tidal land is for the creation of dune or beach above highest astronomical tide and the filling: (1) is part of an erosion control strategy, or (2) does not create terrestrial land for the placement of structures or for terrestrial activities, or (3) is an integral part of the erosion control design, or (4) will minimise replenishment frequency or impact to fish habitats, or (5) will remove the need for other erosion control works that will have a greater impact on fish habitats. AND **AO19.3** Placement of sand is required for the effective functioning of an erosion control structure.
Private development work	
PO20 Maritime infrastructure providing for private access avoids impacts on marine plants and fish habitat.	**AO20.1** Structures over tidal land are located over areas that are naturally devoid of marine plants. OR **AO20.2** Development work associated with a private jetty or pontoon has a maximum marine plant disturbance area of 30 square metres. The marine plant disturbance area has a maximum width of two metres along the shoreline (highest astronomical tide height) and a maximum length of 15 metres from the shoreline (perpendicular).

Performance outcomes	Acceptable outcomes
	OR **AO20.3** Private development work that is a boat ramp has a maximum marine plant disturbance area of 45 square metres. The area below the highest astronomical tide is not to exceed 45 square metres (that is, no other fish habitats are to be disturbed or modified). AND **AO20.4** The long-term operability and impact of the use of the development will not require additional new development and associated impacts, for example, a proposed private jetty will not result in the need to dredge navigation access to the proposed jetty in the future. AND **AO20.5** Only one maritime access structure will adjoin the property.
Temporary development	
PO21 The design of the temporary development results in the smallest possible disturbance to fish habitat and fisheries resources.	**AO21.1** Temporary development: (1) will have lesser impact on the tidal lands or fish habitats than all other reasonable options (2) is designed to minimise impacts to fish habitat and fisheries productivity (3) will be in place or undertaken for the shortest possible time, having regard to the nature of the development (4) is designed to avoid filling or reclamation of tidal lands (5) can and will be completely removed from tidal land and fish habitats (6) will be carried out during a time that avoids or minimises conflict with known fish migration or spawning periods. AND **AO21.2** Disturbed land profiles will be restored to allow original inundation and drainage patterns. AND **AO21.3** The development provides for regeneration or restoration of fish habitat and fisheries resource values. AND **AO21.4** The development will not result in the permanent substitution of fish habitat. AND **AO21.5** The development provides for a post-works monitoring and maintenance program.
Public health or safety	
PO22 Development that is ensuring public health or safety is undertaken in a manner that minimises impacts on fish habitat and fisheries resources. Note: The following are not considered public health or safety issues: (1) management of 'nuisance' issues (for example, biting midge control, or the management of odours from decaying vegetation) (2) foreshore erosion, unless its control is required as a short-term emergency response to a catastrophic event that presents an immediate threat to public safety through undermining of dwellings or infrastructure. In	**AO22.1** Development for a public health issue: (1) is endorsed in writing by Queensland Health or the relevant local government (2) is necessary, as all alternative options that do not require removal or disturbance of marine plants have been considered and are not viable or achievable in the available timeframes for an adequate response to the public health issue (3) if the development is for a long-term response with permanent or ongoing impacts to fish habitats – ensures an agreed program to identify and implement measures to reduce the impacts of the response over time on the area. AND **AO22.2** Development for a public safety purpose has no viable alternative

Performance outcomes	Acceptable outcomes
such cases, the emergency provisions of the *Sustainable Planning Act 2009* may apply. Where possible, erosion management measures should be developed prior to public safety becoming an issue. (3) capital dredging for navigation.	options and is for: (1) signage or aids to warn the public of a safety hazard (for example, within a waterway to warn of submerged rocks, crocodiles, marine stingers), or (2) preventing an impending public safety issue (for example, beach cleaning to remove dangerous items such as syringes), or (3) the mitigation of a hazard to public safety that has resulted from a specific unforseen event (for example, a fallen tree that is a danger to safe navigation), or (4) placement of a cyclone mooring identified under a cyclone contingency plan by the harbour master or controlling port authority or corporation, and is located in accordance with the plan.
Restoration works	
PO23 Restoration works to reinstate fish habitats, fisheries productivity and natural ecological processes to a pre-existing natural condition are undertaken in a manner that mitigates impacts on marine plants and fish habitats. Editor's note: For further guidance refer to *Restoration of fish habitats: Fisheries guidelines for marine areas (FHG 002)*, Department of Primary Industries, 1998. Restoration works authorised through an endorsed restoration plan under the code for self- assessable development *MP06 – Minor impact works in a declared fish habitat area or involving the removal, destruction or damage of marine plants*, Department of Employment, Economic Development and Innovation, 2011 do not require a development permit.	**AO23.1** Works will not result in additional fish habitat disturbance, removal or degradation. AND **AO23.2** Land profiles are restored to original inundation and drainage patterns. AND **AO23.3** Works are undertaken to encourage fish habitats and fisheries resource values to naturally regenerate. AND **AO23.4** Fish habitat restoration work will not result in the substitution of fish habitats. AND **AO23.5** Physical restoration of fish habitats (for example, replanting) is undertaken where natural regeneration is, or is likely to be, unsuccessful. AND **AO23.6** Permanent structures (for example, boardwalk) to facilitate restoration works: (1) provide a means of managing an identified impact or degrading process (2) retain natural ecological processes (3) are the least impact alternative available. AND **AO23.7** Works include a post-works monitoring and maintenance program, appropriate for the scale of the restoration works. AND **AO23.8** Marine plants used in restoration works are collected within a 100 kilometre radius of the site to maintain the genetic integrity of the restoration site and local marine plant communities.
Works for aesthetic purposes or to provide for views	
PO24 Removal, trimming or damage to marine plants to provide views or for aesthetic purposes is undertaken in a manner that maintains the integrity of fish habitat.	**AO24.1** Works are undertaken in accordance with a mangrove management strategy endoresed by Fisheries Queensland.
Offsets	
PO25 Impacts of development on fish habitats or fisheries resources that cannot	No acceptable outcome is prescribed.

Performance outcomes	Acceptable outcomes
be avoided are offset in accordance with the *Marine fish habitat offset policy (FHMOP 005.2)*, Department of Agriculture, Fisheries and Forestry and the *Queensland Government environmental offsets policy*, Environmental Protection Agency, 2008 unless the development is private infrastructure works impacting less than 17 square metres or public infrastructure works impacting less than 25 square metres of fish habitat. Editor's note: A marine fish habitat offset to counterbalance unavoidable impacts of development on fish habitats or fisheries resources may include, for example: (1) works or activities to enhance or rehabilitate a fish habitat (2) the exchange of another fish habitat for a fish habitat affected by the development or (3) a contribution to fish habitat research.	
Additional requirements for development within a wild river area for specified works, other than within a HPA	
PO26 Development minimises clearing of native marine plants	**AO26.1** Clearing of marine plants is limited to the extent of the works plus the prescribed area around the development to allow for maintenance.
PO27 Fish passage is not impacted.	No acceptable outcome is prescribed.
PO28 There is nil net loss in marine plants as a result of development.	**AO28.1** Any marine plant damaged during construction is replaced at the completion of the development with the same species of plant in the disturbed area outside of the footprint of the development.
PO29 Development in a wild river area does not impact on fish habitat values.	**AO29.1** Development in tidal waters in a wild river area are located, and designed and constructed using materials, to ensure that the activities do not impact on fish habitat values and function.
PO30 Development does not impound on natural drainage lines or flow paths, both during construction and operation.	No acceptable outcome is prescribed.
PO31 Excavation and filling for prescribed tidal work is carried out only to the extent necessary for the development.	No acceptable outcome is prescribed.
PO32 Works in a tidal area are designed and constructed in a way to ensure they do not adversely affect the stability of the bed and banks of any waterway.	**AO32.1** Where it is necessary to remove a marine plant, the root system must be left in the substrate to minimise disturbance to bed and banks. AND **AO32.2** When the works are completed, any tidal land disturbed by activities beyond the footprint of the works are restored to pre-disturbance condition to promote natural restoration of marine plants and fish habitats.
PO33 No pollutants are released from the activity.	No acceptable outcome is prescribed.

5.4 Reference documents

Guidelines

Department of Primary Industries 1998 *Restoration of fish habitats: Fisheries guidelines for marine areas FHG 002*

Department of Primary Industries 2000 *Fisheries guidelines for fish habitat buffer zones FHG 003*

Department of Primary Industries and Fisheries 2006 *Fisheries guidelines for fish-friendly structures FHG 006*

Department of Primary Industries and Fisheries 2004 *Fish salvage guidelines*

Department of Primary Industries and Fisheries 2005 *The lawful use of physical, pesticide and biological controls in a declared fish habitat area (FHACoP01)*

Local Government Association of Queensland 2012 *Mosquito management code of practice for Queensland*.

Policies

Department of Primary Industries and Fisheries 2007 *Management and protection of marine plants and other tidal fish habitats (FHMOP 001)*

Department of Agriculture, Fisheries and Forestry *Management of declared fish habitat areas (FHMOP 002)*

Editor's note: Responsibility of Department of National Parks, Recreation, Sport and Racing

Department of Agriculture, Fisheries and Forestry 1996 *Departmental procedures for permit applications assessment and approvals for insect pest control in coastal wetlands (FHMOP 003)*

Department of Primary Industries 1998 *Dredging, extraction and spoil disposal activities: Departmental procedures for provision of fisheries comments (FHMOP 004)*

Department of Agriculture, Fisheries and Forestry *Marine fish habitat offset policy (FHMOP 005.2)*

Department of National Parks, Recreation, Sport and Racing, *Operational policy – Marine resource management: Fish habitat area selection, assessment, declaration and review*

Department of Agriculture, Fisheries and Forestry 2013 *Waterway barrier works approvals and fishway assessments: Departmental procedures (FHMOP 008)*

Department of Primary Industries 2002 *Restoration notices for fish habitats – formulation and implementation: Departmental procedures (FHMOP 009)*

Department of Primary Industries and Fisheries 2007 *Tidal fish habitats, erosion control and beach replenishment (FHMOP 010)*

Department of Primary Industries and Fisheries 2008 *Oyster industry management plan for Moreton Bay Marine Park*

Australian Government, Ministerial Council on Forestry, Fisheries and Aquaculture 1999 *National policy for the translocation of live aquatic organisms*

Self-assessable codes

Department of Primary Industries and Fisheries *2005 The lawful use of physical, pesticide and biological controls in a declared fish habitat area (FHACoP01)*

Department of Employment, Economic Development and Innovation 2011 *Removal of dead marine wood from unallocated State land for trade or commerce (MP01)*

Department of Employment, Economic Development and Innovation *2013 Maintenance works on existing lawful structures (other than powerlines and on-farm drains) in a declared fish habitat area or involving the removal, destruction or damage of marine plants (MP02)*

Department of Employment, Economic Development and Innovation 2011 *On-farm drain maintenance works involving the removal, destruction or damage of marine plants (MP03)*

Department of Agriculture, Fisheries and Forestry 2012 *Maintenance works on powerlines and associated infrastructure in a declared fish habitat area or involving the removal, destruction or damage of marine plants (MP04)*

Department of Employment, Economic Development and Innovation 2011 *Works for educational, research or monitoring purposes in a declared fish habitat area or involving removal, destruction or damage of marine plants* (*MP05)*

Department of Agriculture, Fisheries and Forestry 2013 *Minor impact works in a declared fish habitat area or involving the removal, destruction or damage of marine plants* (*MP06)*

Department of Employment, Economic Development and Innovation 2011 *Minor waterway barrier works* (WWBW01)

Department of Employment, Economic Development and Innovation 2013 *Temporary waterway barrier works* (*WWBW02)*

Department of Employment, Economic Development and Innovation 2012 *Regularly constructed temporary waterway barrier works (lower Burdekin) (WWBW03)*

Other references

Department of Employment, Economic Development and Innovation 2010, *Declared fish habitat area network strategy 2009-14: Planning for the future of Queensland's declared fish habitat area network*

Department of Agriculture, Fisheries and Forestry 2012 *Declared fish habitat area network assessment report 2012*

Department of National Parks, Recreation, Sport and Racing 2013 *Declared fish habitat area network progress report – June 2013*

Department of Natural Resources and Mines 2002 *Queensland acid sulfate soil technical manual: Soil management guidelines*

International Erosion Control Association Australasia 2008 *Best practice erosion and sediment control* document

Department of Environment and Resource Management 2011 *Queensland wetland buffer planning guideline*

Environmental Protection Agency 2008 *Queensland Government environmental offsets policy* available from the Department of Environment and Heritage Protection *library catalogue*

Fish habitat area summaries available from the Department of National Parks, Recreation, Sport and Racing website

International Ecohydraulics Symposium 2012 *From Sea to Source: International guidance for the restoration of fish migration highways*

Editor's note: The From Sea to Source document is 36mb

Department of Fisheries and Forestry 2013 *Guideline on fisheries adjustment as a result of development*

Editor's note: The Guideline on fisheries adjustment is available on request from the *Department of Fisheries and Forestry*

5.5 Glossary of terms

Aquaculture see the *Fisheries Act 1994.*

Editor's note: Means the cultivation of live fisheries resources for sale other than in circumstances prescribed under a Regulation.

Bankfull width see the Sustainable Planning Regulation 2009.

Editor's note: Bankfull width has the meaning given by the minor waterway barrier works code.

Declared fish habitat area see the *Fisheries Act 1994* Schedule.

Editor's note: Declared fish habitat area means an area that is declared under the *Fisheries Act 1994* to be a fish habitat area. Section 12 of the *Fisheries Act 1994* deals with declaration of fish habitat areas.

Disease see the *Fisheries Act 1994* Section 94.

Editor's note: Disease means:

(1) a disease, parasite, pest, plant or other thing (the disease) that has, or may have, the effect (directly or indirectly) of killing or causing illness in fisheries resources, or in humans or animals that eat fisheries resources infected with or containing the disease
(2) a chemical or antibiotic residue, or
(3) a fish or plant species that may compete against fisheries resources or other fisheries resources to the detriment of the fisheries resources or other fisheries resources.

Drownout means when the tailwater and headwater levels across a weir are essentially equal, velocities are sufficiently low at, or close to, the edge of the spillway crest and the weir is fully submerged to a sufficient depth to allow for fish passage and for the species and size-classes of fish moving through the site to cross the weir.

Entity see the *Fisheries Act 1994*, Schedule.

Editor's note: Entity includes an entity established under the law of the Commonwealth or another state.

Fish see the *Fisheries Act 1994* Section 5.

Editor's note: Fish:

(1) means an animal (whether living or dead) of a species that throughout its life cycle usually lives:
  (a) in water (whether freshwater or saltwater), or
  (b) in or on foreshores, or
  (c) in or on land under water.
(2) includes:
  (a) prawns, crayfish, rock lobsters, crabs and other crustaceans
  (b) scallops, oysters, pearl oysters and other molluscs
  (c) sponges, annelid worms, bêche-de-mer and other holothurians
  (d) trochus and green snails.
(3) does not include:
  (a) crocodiles, or
  (b) protected animals under the *Nature Conservation Act 1992*, or
  (c) pests under the *Pest Management Act 2001*, or
  (d) animals prescribed under a Regulation not to be fish.
(4) also includes:
  (a) the spat, spawn and eggs of fish
  (b) any part of fish or of spat, spawn or eggs of fish
  (c) treated fish, including treated spat, spawn and eggs of fish
  (d) coral, coral limestone, shell grit or star sand
  (e) freshwater or saltwater products declared under a Regulation to be fish.

Fish habitat see the *Fisheries Act 1994*.

Editor's note: Fish habitat includes land, waters and plants associated with the life cycle of fish, and includes land and waters not presently occupied by fisheries resources.

Fish way see the *Fisheries Act 1994*

Editor's note: Fish way means a fish ladder or another structure or device by which fish can pass through, by or over waterway barrier works.

Fisheries resources see the *Fisheries Act 1994*.

Editor's note: Fisheries resources includes fish and marine plants.

Fishery see the *Fisheries Act 1994*, section 7.

Editor's note: Fishery means activities by way of fishing, for example, activities specified by reference to all or any of the following:

(1) a species of fish
(2) a type of fish by reference to sex, size or age or another characteristic
(3) an area
(4) a way of fishing
(5) a type of boat
(6) a class of person
(7) the purpose of an activity
(8) the effect of the activity on a fish habitat, whether or not the activity involves fishing
(9) anything else prescribed under a Regulation.

Fishing see the *Fisheries Act 1994*.

Editor's note: Fishing includes:

(1) searching for, or taking, fish
(2) attempting to search for, or take, fish

(3) engaging in other activities that can reasonably be expected to result in the locating, or taking, of fish
(4) landing fish (from a boat or in another way), bringing fish ashore or transhipping fish.

Foreshore see the *Fisheries Act 1994*.

Editor's note: Foreshore means parts of the banks, bed, reefs, shoals, shore and other land between high water and low water.

Harbour master see the *Transport Operations (Marine Safety) Act 1994*.

Editor's note: Harbour master means a person who is appointed under the *Transport Operations (Marine Safety) Act 1994* as a harbour master.

Highest astronomical tide means the highest level of the tides that can be predicted to occur under average meteorological conditions and under any combination of astronomical conditions.

Land includes foreshores and tidal and non-tidal land.

Management B area see the *Fisheries Regulation 2008*.

Editor's note: A Management B area means an area within a declared fish habitat area identified by the words 'management B' on the fish habitat area plan mentioned in schedule 3 for the declared fish habitat area.

Marine plant see the *Fisheries Act 1994*, section 8.

Editor's note: Marine plant includes the following:

(1) a plant (a tidal plant) that usually grows on, or adjacent to, tidal land, whether it is living, dead, standing or fallen
(2) material of a tidal plant, or other plant material on tidal land
(3) a plant, or material of a plant, prescribed under a Regulation or management plan to be a marine plant.

A marine plant does not include a plant that is a declared pest under the *Land Protection (Pest and Stock Route Management) Act 2002.*

Non-endemic fish means fish originating from anywhere outside the catchment under consideration.

Resource allocation authority means a resource allocation authority issued, and in force, under part 5, division 3, subdivision 2A of the *Fisheries Act 1994*.

Tidal land see the *Fisheries Act 1994*.

Editor's note: Tidal land includes reefs, shoals and other land permanently or periodically submerged by waters subject to tidal influence.

Translocation means the movement of live aquatic organisms (including all stages of the organism's life cycle and any derived viable genetic material):
(1) beyond its accepted distribution
(2) to areas which contain genetically distinct populations, or
(3) to areas with superior parasite or disease status.

Waterway see the *Fisheries Act 1994*.

Editor's note: Waterway includes a river, creek, stream, watercourse or inlet of the sea.

Waterway barrier works see the *Fisheries Act 1994*, Schedule.

Editor's note: Waterway barrier works means a dam, weir or other barrier across a waterway if the barrier limits fish stock access and movement along a waterway.

5.6 Abbreviations

EFM – Environmentally friendly mooring

GIS – Geographic information system

SEMP – Shoreline Erosion Management Plan

Module 6. Strategic cropping land

6.1 Particular development on strategic cropping land state code

6.1.1 Purpose

This code forms part of the land use planning and development assessment framework for protecting strategic cropping land.

This code seeks to protect strategic cropping land from development that leads to permanent impacts or diminished productivity by ensuring that:

(1) strategic cropping land is managed to preserve the productive capacity of the land for future generations

(2) to the extent that the strategic cropping land is in a protection area and will be permanently impacted on by a development with a footprint greater than 3000 square metres, the development does not proceed except in exceptional circumstances, and where the development is an exceptional circumstance, mitigation is provided for the permanently impacted land

(3) to the extent that the strategic cropping land is in a management area and will be permanently impacted upon by a development with a footprint greater than 3000 square metres, an overriding need must be demonstrated and mitigation is provided for the impacted land.

In this code, a reference to strategic cropping land includes potential strategic cropping land under the *Strategic Cropping Land Act 2011*.

6.1.2 Criteria for assessment

Development mentioned in column 1 below must be assessed against the assessment criteria in the table mentioned in column 2.

Column 1	Column 2
Material change of use	Temporary impact—Table 6.1.1 Permanent impact—Table 6.1.2
Reconfiguring a lot	Table 6.1.3

Table 6.1.1: Material change of use with temporary impact

Performance outcomes	Acceptable outcomes
PO1 The temporary impact on strategic cropping land from the development must be: (1) avoided to the greatest extent practicable (2) minimised wherever possible.	**AO1.1** The temporary impact is: (1) not located on strategic cropping land, or (2) co-located with, or adjacent to existing infrastructure.
PO2 Strategic cropping land impacted by the development will be fully restored to its pre-development condition* and all impediments to cropping will be removed within 50 years of the development commencing. Editor's note: This performance outcome can be addressed by: (1) providing evidence of successful restoration of strategic cropping land in a similar circumstance (2) providing a report that details: (a) the pre-development condition of the strategic cropping land which is to be impacted through:	No acceptable outcome is prescribed.

Performance outcomes	Acceptable outcomes
• documenting slope, rockiness, soil depth, drainage, soil pH, electrical conductivity/chloride content and soil water storage utilising the assessment methodology contained in Schedule 1 of the *Strategic Cropping Land Act 2011* • providing a detailed description of the landform (b) how the development is proposed to be carried out (c) how the soil impacted by the development will be restored to its pre-development condition* (d) the date the development will cease and be removed (e) the time frames in which restoration will be completed (f) a monitoring regime, including monitoring sites (g) cost of restoring strategic cropping land to its pre-development condition*. *Editor's note: Security may be required as a condition of development approval to ensure that the strategic cropping land is restored to its pre-development condition.	

Table 6.1.2: Material change of use with permanent impact

Performance outcomes	Acceptable outcomes
Development includes a footprint of 3000 square metres or less and will result in a permanent impact on strategic cropping land in the management area or protection area	
PO1 The permanent impact on strategic cropping land from the development must be: (1) avoided to the greatest extent practicable (2) minimised wherever possible.	**AO1.1** The permanent impact is: (1) not located on strategic cropping land, or (2) co-located with, or adjacent to existing infrastructure.
Development includes a footprint of more than 3000 square metres and will result in a permanent impact on strategic cropping land in the management area	
PO2 The development is for an overriding need and: (1) provides a public benefit (2) no other site is suitable for the particular purpose.	No acceptable outcome is prescribed.
PO3 The permanent impact on strategic cropping land from the development must be: (1) avoided to the greatest extent practicable (2) minimised wherever possible.	**AO3.1** The permanent impact is: (1) not located on strategic cropping land, or (2) co-located with, or adjacent to, existing infrastructure.
PO4 The area of permanently impacted land is identified and a mitigation value is determined. Editor's note: Mitigation in accordance with Chapter 5 of the *Strategic Cropping Land Act 2011* must have taken place prior to the development being carried out. Editor's note: This performance outcome can be addressed by providing a plan of the permanent impact and the area (size of the permanent impact).	No acceptable outcome is prescribed.

Performance outcomes	Acceptable outcomes
Development includes a footprint of more than 3000 square metres and will result in a permanent impact on strategic cropping land in the protection area	
PO5 The development is in exceptional circumstances*: (1) prescribed by the Strategic Cropping Regulation 2011, or (2) decided in accordance with the *Strategic Cropping Land Act 2011*. * Editor's note: Exceptional circumstances is an assessment process under the *Strategic Cropping Land Act 2011*.	No acceptable outcome is prescribed.
PO6 The permanent impact on strategic cropping land in the protection area from the development must be: (1) avoided to the greatest extent practicable (2) minimised wherever possible.	**AO6.1** The permanent impact is: (1) not located on strategic cropping land, or (2) co-located with or adjacent to existing infrastructure.
PO7 The area of permanently impacted land is identified and a mitigation value is determined. Editor's note: Mitigation in accordance with Chapter 5 of the *Strategic Cropping Land Act 2011* must have taken place prior to the development being carried out. Editor's note: This performance outcome can be addressed by providing a plan of the permanent impact and the area (size of the permanent impact).	No acceptable outcome is prescribed.

Table 6.1.3: Reconfiguring a lot

Performance outcomes	Acceptable outcomes
PO1 The area available for cropping or the opportunity for cropping within that area, is maintained or enhanced.	**AO1.1** There will be no additional domestic housing activity as a result of the development, unless it is outside of an area available for cropping. AND **AO1.2** Lot boundaries are not located in an area available for cropping.

6.2 Reference documents

Department of Natural Resources and Mines 2012 *Strategic cropping land: Development exemptions under the Sustainable Planning Act 2009* fact sheet

National Committee on Soil and Terrain 2009 *Australian soil and land survey field handbook, Third Edition*

6.3 Glossary

Area available for cropping means an area of strategic cropping land that is ready for use for cropping and for which there are no legal or physical impediments to cropping.

Example of area available for cropping:
(1) an area where there is a current crop

Examples of areas that are not areas available for cropping include areas:
(1) permanently impacted by infrastructure, or

(2) containing a river, or
(3) containing a rock outcrop, or
(4) containing a dam or wetland, or
(5) temporarily impacted by infrastructure, or
(6) containing remnant or regrowth vegetation, or
(7) reasonably associated with a domestic housing activity.

Cropping see the *Strategic Cropping Land Act 2011*, schedule 2.

Editor's note: Cropping includes the following:

(1) the yield of any form of cultivated crop for any purpose, including, for example, food, fibre, fodder, or medicinal purposes
(2) the growing of trees to produce, or as a component for, food, fibre, or a medicinal product
(3) harvesting a timber plantation.

Domestic housing activity means the construction or use of a single residence on a lot and any reasonably associated building or structure.

Examples of a building or structure that could be reasonably associated with a single residence:
(1) caretakers' accommodation
(2) granny flat
(3) building or structure used for a home business.

Exceptional circumstances for development see the *Strategic Cropping Land Act 2011*, section 15.

Editor's note: Development is in exceptional circumstances if it is—

(1) of a type prescribed under section 120(1) of the *Strategic Cropping Land Act 2011*, or
(2) decided to be so under section 133(2) of the *Strategic Cropping Land Act 2011*.

Footprint for a provision about development, means the portion of the relevant lot covered by:
(1) buildings or structures measured to their outermost projection
(2) any of the following relating to the buildings or structures or the development:
  (a) asphalt, concrete or another hard built surface
  (b) a car park
  (c) a road or access track
  (d) an area used for vehicle movement or parking
  (e) an area used or that may be used for storage.

Landform as described consistent with the *Australian soil and land survey field handbook*, Third Edition, CSIRO, 2000.

Management area see the *Strategic Cropping Land Act 2011*, section 29.

Editor's note: A management area is what is left of the combined area of all zones, after taking from the combined area all protection areas. A zone is:

(1) generally—an area shown as a zone on the zone map
(2) for a provision about particular land—the zone the land is in.

The zone map is the electronic map called the strategic cropping land zone map held by the Department of Natural Resources and Mines.

Mitigation see the *Strategic Cropping Land Act 2011*, section 138.

Editor's note: Mitigation means that either of the following, or a combination of the following, has taken place for the land's mitigation value:

(1) a payment to the mitigation fund
(2) the entering into of a mitigation deed.

Mitigation value see the *Strategic Cropping Land Act 2011,* section 139.

Editor's note: The mitigation value, of identified permanently impacted land, is the amount worked out by multiplying each hectare of the land's area by the rate prescribed under a regulation.

Opportunity for cropping means an area's suitability to sustain cropping.

Editor's note: The opportunity for cropping of an area will be reduced by a permanent impact. However, the opportunity for cropping of an area may be enhanced by consolidating areas of SCL that will result in improved cropping outcomes.

Overriding need exists for the development where it provides a public benefit and no other site is suitable for the particular purpose.

Permanent impact see the *Strategic Cropping Land Act 2011*, section 14.

Editor's note: Permanent impact includes (among other things):

(1) a development that impedes (legally or physically) the land from being cropped for 50 years, or
(2) a development that, because of its carrying out, the land cannot be restored to its pre-development condition, or
(3) a development that is prescribed in the Strategic Cropping Land Regulation 2011 as an activity having a permanent impact.

Potential strategic cropping land means land in an area shown on the trigger map as being potential strategic cropping land. The trigger map is the electronic map called the trigger map for strategic cropping land in Queensland held by the Department of Natural Resources and Mines.

Pre-development condition see the *Strategic Cropping Land Act 2011* schedule 2.

Editor's note: Pre-development condition means the condition of land before the development started, or if the condition of the land cannot be worked out, a condition consistent with contiguous strategic cropping land for the land.

Protection area see the *Strategic Cropping Land Act 2011*, section 28(2).

Editor's note: Protection area means an area shown as a protection area on the protection area map. The protection area map is the electronic map of that name held by the Department of Natural Resources and Mines.

Security means the requirement for financial assurance in favour of the State for the applicant's compliance with restoring the land to its pre-development condition. In deciding the amount, the chief executive may consider the cost of restoring the land to that condition. Security includes a bond, deposit of an amount as security, guarantee, indemnity or other surety, insurance, mortgage and undertaking.

Strategic cropping land see the *Strategic Cropping Land Act 2011*, section 9.

Editor's note: Strategic cropping land is the land recorded in the decision register as being strategic cropping land. Strategic cropping land means strategic cropping land and potential strategic cropping land.

Temporary impact see the *Strategic Cropping Land Act 2011*, section 14.

Editor's note: Temporary impact means carrying out development on strategic cropping land has a temporary impact on the land if:

(1) the carrying out does not have a permanent impact on the land under section 14 of the *Strategic Cropping Land Act 2011*, or
(2) it is development of a type prescribed under a regulation.

Module 7. Water resources

7.1 Sustainable management of water resources state code

7.1.1 Purpose

The purpose of the code is to provide for the sustainable management of water and other resources.

7.1.2 Criteria for assessment

Subject to subsection (2), development mentioned in column 1 below must be assessed against the assessment criteria in the table mentioned in column 2.

Column 1	Column 2
Operational work	Table 7.1.1

Development mentioned in column 1 of Table 7.1.1 must comply with the relevant provisions of Table 7.1.2 and Table 7.1.3 mentioned in column 2 of Table 7.1.1.

Table 7.1.1: Development and relevant provisions of the code

Development	Relevant provisions of code
For works that take or interfere with water in a watercourse, lake or spring.	**Table 7.1.2**—General: PO1–PO4
For works that take or interfere with artesian or subartesian water.	**Table 7.1.2**—General: PO1–PO4 **Table 7.1.2**—Artesian and subartesian water: PO5–PO7
For works that take or interfere with overland flow water in a declared drainage and embankment area.	**Table 7.1.2**—General: PO1–PO4 **Table 7.1.2**—Overland flow: PO8–PO10
For works that take or interfere with overland flow water in a wild river floodplain management area or a wild river special floodplain management area.	**Table 7.1.2**—General: PO1–PO4 **Table 7.1.3**—Interfering with overland flow water in a wild river area: PO1–PO5
For works that take overland flow water in a wild river high-preservation area, or a wild river floodplain management area, or a wild river special floodplain management area.	**Table 7.1.2**—General: PO1–PO4 **Table 7.1.3**—Taking overland flow water in a wild river area: PO6–PO10
For works that take or interfere with overland flow water where the works are reconfiguring existing works.	**Table 7.1.2**—General: PO1–PO4 **Table 7.1.2**—Overland flow: PO8–PO10 **Table 7.1.2**—Reconfiguring existing works: PO11–PO14
For works that take or interfere with overland flow water in a limited catchment area identified in a water resource plan.	**Table 7.1.2**—General: PO1–PO4 **Table 7.1.2**—Overland flow: PO8–PO10 **Table 7.1.2**—Limited catchment area: PO15
For works that take or interfere with overland flow water or contaminated agricultural run-off water.	**Table 7.1.2**—General: PO1–PO4 **Table 7.1.2**—Overland flow: PO8–PO10 **Table 7.1.2**—Contaminated agricultural run-off: PO16
For works that take or interfere with overland flow water as part of an environmentally relevant activity or under an environmental authority.	**Table 7.1.2**—General:PO1–PO4 **Table 7.1.2**—Overland flow: PO8–PO10 **Table 7.1.2**—Environmentally relevant activity: PO17
For works that take or interfere with overland flow water as a result of rehabilitating degraded land.	**Table 7.1.2**—General: PO1–PO4 **Table 7.1.2**—Overland flow: PO8–PO10 **Table 7.1.2**—Rehabilitating degraded land: PO18–PO19
For works that take or interfere with overland flow water, incidental to capturing coal seam gas water.	**Table 7.1.2**—General: PO1–PO4 **Table 7.1.2**—Overland flow: PO8–PO10 **Table 7.1.2**—Coal seam gas water: PO20

Development	Relevant provisions of code
For works that take or interfere with overland flow water, where prescribed in a water resource plan or a regulation under the *Water Act 2000*.	**Table 7.1.2**—General: PO1–PO4 **Table 7.1.2**—Overland flow: PO8–PO10

Table 7.1.2: Operational work

Performance outcomes	Acceptable outcomes
General	
PO1 Works do not adversely impact on the natural riverine ecosystem.	No acceptable outcome is prescribed.
PO2 Works do not adversely impact other users' ability to access the resource.	No acceptable outcome is prescribed.
PO3 Works do not adversely impact on the physical integrity of the watercourse.	No acceptable outcome is prescribed.
PO4 All works are located and constructed in a way that is consistent with any of the following plans or declarations to the extent they are relevant to the proposed development: (1) a water resource plan (2) a resource operations plan (3) a wild river declaration (4) a moratorium notice issued under the *Water Act 2000.* Editor's note: Moratorium notices are published on the DNRM website.	No acceptable outcome is prescribed.
Artesian and subartesian water	
PO5 To regulate the impact on the integrity of the artesian or subartesian system, water bores deeper than 6 metres are constructed in accordance with the relevant standard as follows: (1) *Minimum construction requirements for water bores in Australia*, National Water Commission, 2012, or (2) *Minimum standards for the construction and reconditioning of water bores that intersect the sediments of artesian basins in Queensland*, Department of Natural Resources and Mines, 2012.	No acceptable outcome is prescribed.
PO6 To regulate the impact on the natural processes of the artesian or subartesian system, works maintain the natural ecosystem of the artesian or subartesian system.	No acceptable outcome is prescribed.
PO7 To regulate the impact on the connectivity of artesian or subartesian waters to surface water, works are to minimise impact on connectivity between subartesian or artesian water and surface water.	No acceptable outcome is prescribed.
Overland flow	
PO8 Development ensures that the natural ecosystem processes and water quality of wetlands of ecological significance is maintained.	**AO8.1** Works are not located within 200 metres of wetlands of ecological significance.

Performance outcomes	Acceptable outcomes
PO9 Works are located and constructed in a way that minimises adverse impacts on neighbouring properties.	**AO9.1** Works are contained within the property boundaries of the premises. AND **AO9.2** At full supply level, the area inundated is contained within the boundaries of the premises. AND **AO9.3** Any bywash resulting from the works, and any water diverted away from contaminated areas, exits the premises as close as practicable to the same location to which it exited the premises prior to construction of the works.
PO10 Works are constructed and operated in accordance with a certified report.	**AO10.1** The works are for: (1) taking a maximum of 12 megalitres of contaminated agricultural run-off water, or (2) taking for stock and domestic purposes, or (3) rehabilitating degraded land.
Reconfiguring existing works	
PO11 Construction of new works must not increase overall take or increase: (1) the capacity of the works to store water (2) the rate at which the works take water (3) the average volume of water taken by the works.	No acceptable outcome is prescribed.
PO12 Works must not involve reconfiguration of natural bodies of water or bunded areas.	No acceptable outcome is prescribed.
PO13 Works must not involve reconfiguration of storage capacity of any of the following: (1) a lake that was not used for irrigation or other intensive stocking or production (2) land being used for irrigated or dryland agriculture or areas surrounded by levee banks designed to prevent the land becoming inundated (3) naturally occurring infield storages.	No acceptable outcome is prescribed.
PO14 New works must be located on the same premises as the existing works.	No acceptable outcome is prescribed.
Limited catchment area	
PO15 In the limited catchment areas, any works for storing water must not: (1) be larger than necessary for storing water other than overland flow water, or (2) be able to take floodwater overflowing from any adjacent watercourse, or (3) involve pumping or diverting the stored water to another storage. Editor's note: Limited catchment areas are listed in Table 7.5.1, column 1.	**AO15.1** In the limited catchment areas (identified in Table 7.5.1, column 1), the incidental take of overland flow water: (1) is located within the sub-catchment/management area listed in Table 7.5.1, column 2 for the relevant limited catchment area (2) is stored in a local catchment area that is less than or equal to the area of the limited catchment area specified in Table 7.5.1, column 3 (3) is less than the limited capacity works volume for the relevant limited catchment area specified in Table 7.5.1, column 4.
Contaminated agricultural run-off	
PO16 If development involves storage capacities greater than 12 megalitres, the storage capacities must: (1) be necessary because there is no alternative way to take the water by reconfiguring existing works	**AO16.1** Development involves storage capacity less than 12 megalitres.

Performance outcomes	Acceptable outcomes
(2) be no larger than necessary to contain contaminated agricultural run-off water or tailwater (3) minimise the volume of water that becomes contaminated agricultural run-off water (4) where practicable, allow for water that is not contaminated agricultural run-off water or tailwater to be passed through the works.	
Environmentally relevant activity	
PO17 Works capture no more overland flow water than is necessary for the operation of the environmentally relevant activity or environmental authority under the *Environmental Protection Act 1994*.	No acceptable outcome is prescribed.
Rehabilitating degraded land	
PO18 The maximum height or depth of any part of the works is 400 millimetres.	No acceptable outcome is prescribed.
PO19 The works are only for rehabilitating degraded land, as certified by: (1) a soil scientist, stating that the area to be inundated is degraded and the works are an appropriate method for rehabilitation, or (2) a requirement of the *Land Act 1994*, or (3) the works have been approved for funding under the Primary Industry Productivity Enhancement Scheme.	**AO19.1** The area inundated as a result of the rehabilitation is 2 hectares or less.
Coal seam gas water	
PO20 Any storage for the works must: (1) be no larger than necessary to store coal seam gas water for the beneficial use of the resource under Chapter 8 of the *Waste Reduction and Recycling Act 2011* (2) minimise the volume of overland flow water that is taken (3) not have the ability to take floodwater from any adjacent watercourse (4) not contain coal seam gas water that could be stored in an existing alternative storage.	No acceptable outcome is prescribed.

Table 7.1.3: Operational work in a wild river area

Performance outcomes	Acceptable outcomes
Interfering with overland flow water in a wild river area	
PO1 Works are not located in a flood channel.	No acceptable outcome is prescribed.
PO2 Natural overland flow paths are not significantly altered.	**AO2.1** For off-stream storages, the length of the works measured perpendicular to the main direction of floodplain flows is not longer than 500 metres. AND **AO2.2** If the works involve more than one storage, storages are located at least 200 metres apart in all directions.

Performance outcomes	Acceptable outcomes
	AND **AO2.3** For specified works, linear infrastructure is to be constructed at ground level, or have openings or culverts to allow overland flows to pass through. AND **AO2.4** For specified works, an open drain or trench must be on average no greater than 30 centimetres in depth. AND **AO2.5** Borrow pits are not deeper than 50 centimetres. AND **AO2.6** For levees and other solid earth works in relation to commercial and industrial development or non-domestic agriculture buildings that are larger than that permitted for self-assessable works — no acceptable outcome is prescribed.
PO3 The physical impact of the works on neighbouring properties is minimised.	**AO3.1** The works are contained within the boundaries of the premises. AND **AO3.2** Any overland flow water resulting from the works exits the premises at approximately the same location that the water exited the premises prior to the works.
PO4 Key riparian areas and wildlife corridors are preserved.	**AO4.1** Works other than specified works are setback at least 200 metres from the outer banks of a watercourse or lake in a wild river high-preservation area (where a wild river high-preservation area overlaps a wild river floodplain management area) or from a nominated waterway as defined in the *Wild Rivers Act 2005*.
PO5 Works do not degrade water quality of receiving waters.	**AO5.1** Works do not concentrate overland flows in a way that causes soil erosion.
Taking overland flow water in a wild river area	
PO6 Works are: (1) not located in a flood channel, or (2) necessary for the taking of stock or domestic water through the construction of works that are larger than may be constructed as self-assessable works, or (3) necessary for the taking of contaminated run-off, contaminated agricultural run-off water and required by another approval such as an environmentally relevant activity. And: (a) any existing works cannot be used to capture the run-off (b) the works are no larger than necessary to capture the run-off (c) the works minimise the volume of water that becomes contaminated.	No acceptable outcome is prescribed.
PO7 Natural overland flow paths are not significantly altered.	**AO7.1** The length of works, measured perpendicular to the main direction of floodplain flows, are not longer than 500 metres. AND **AO7.2** If more than one storage, storages are located at least 200 metres apart in all directions. AND

Performance outcomes	Acceptable outcomes
	AO7.3 Levees, diversion banks and bunds used to direct water into storages, or to increase the amount of water that infiltrates the soil, are not longer than 200 metres. AND **AO7.4** Drains and trenches used to direct water into storages, or to increase the amount of water that infiltrates the soil, are not more than 30 centimetres deep on average.
PO8 The physical impact of the works on neighbouring properties is minimised.	**AO8.1** The works and area inundated at full supply level are contained within the boundaries of the premises. AND **AO8.2** Any bywash resulting from the works exits the premises at approximately the same location that the water exited the premises prior to the works.
PO9 Key riparian areas and wildlife corridors are preserved.	**AO9.1** Works other than specified works are setback at least 200 metres from the outer banks of a watercourse or lake in a high-preservation area, or from a nominated waterway, as defined in the *Wild Rivers Act 2005*.
PO10 Works do not degrade the water quality of receiving waters.	**AO10.1** Works do not concentrate overland flows in a way that causes soil erosion.

7.2 Removal of quarry material state code

7.2.1 Purpose

The purpose of the code is to provide for the sustainable removal of quarry material and management of water resources.

7.2.2 Criteria for assessment

Development mentioned in column 1 below must be assessed against the assessment criteria in the table mentioned in column 2.

Column 1	Column 2
Various aspects of development	Table 7.2.1

Table 7.2.1: Various aspects of development

Performance outcomes	Acceptable outcomes
Riverine quarry material	
PO1 Development does not adversely impact on the natural riverine ecosystem.	No acceptable outcome is prescribed.
PO2 Development does not adversely impact other users' ability to access the resource.	No acceptable outcome is prescribed.
PO3 Development does not adversely impact on the physical integrity of the watercourse.	No acceptable outcome is prescribed.
PO4 The development is located and constructed in a way that is consistent with any of the following plans or declarations to the extent they are relevant to the proposed development: (1) a water resource plan (2) a resource operations plan (3) a wild river declaration	No acceptable outcome is prescribed.

Performance outcomes	Acceptable outcomes
(4) a moratorium notice issued under the *Water Act 2000*. Editor's note: Moratorium notices are published on the DNRM website.	
PO5 Development does not adversely impact on downstream features, including but not limited to estuaries and beaches, that naturally require riverine quarry material from the watercourse or lake.	No acceptable outcome is prescribed.
PO6 Development is carried out in a way that does not adversely impact built infrastructure such as road crossings, bridges, weirs and pump sites.	No acceptable outcome is prescribed.
In-stream quarry material extraction in wild river areas	
PO7 Extraction occurs only in areas of active deposition, such as: (1) aggrading bars, or (2) sand slugs, or (3) benches and islands, or (4) sediment pockets in bedrock channels.	No acceptable outcome is prescribed.
PO8 Excavation does not occur below the current bed level of a watercourse or lake.	No acceptable outcome is prescribed.
PO9 Bed and bank stability is preserved during operations.	**AO9.1** Vehicle access tracks and crossings associated with the development have scour protection on the bed immediately downstream of the crossing. AND **AO9.2** Access ramps and tracks are kept to a minimum, and constructed to minimise erosion and turbulence problems at times of high flow. AND **AO9.3** Ramps cut into the bank for vehicle access are orientated downstream. AND **AO9.4** Vehicle crossings are orientated perpendicular to the stream channel ± 10°. AND AO9.5 Where vehicle crossings are required: (1) the crossings are at stream-bed level, or (2) if it can be demonstrated that stream-bed level crossings are inappropriate, any culverts for vehicle crossings are aligned with the direction of natural stream flow, when that flow is of a depth equal to the culvert height. AND AO9.6 Development includes measures to prevent stormwater erosion in drains and cuttings on the bank. AND **AO9.7** Stream-bed controls are located upstream and downstream of the site. AND **AO9.8** Excavation in the bed of the stream is less than one-third of the bed width.

Performance outcomes	Acceptable outcomes
	AND **AO9.9** Clearing of in-stream vegetation is limited to the minimum area required for the development to occur.
PO10 Bed and bank stability is preserved.	**AO10.1** The stream is rehabilitated as near as possible to its natural state after the development is carried out. AND **AO10.2** Exposed bank areas are prepared to facilitate natural regeneration of native plant species. AND **AO10.3** Stream-bed and bank controls are retained upstream and downstream of the site.
PO11 Riparian areas and wildlife corridors along the watercourse or lake are preserved.	**AO11.1** Provision is made for fish passage during the carrying out of the development. AND **AO11.2** The width of vegetation clearing in the riparian zone is limited to that required for the development plus 2 metres each side. AND **AO11.3** Areas of riparian zone cleared of vegetation but no longer required for the development are prepared to facilitate natural regeneration of native plant species.

7.3 Reference documents

Department of Environment and Resource Management 2012 *Minimum standards for the construction and reconditioning of water bores that intersect the sediments of artesian basins in Queensland*.

Australian Government National Water Commission 2012 *Minimum construction requirements for water bores in Australia, Edition 3.*

7.4 Reference tables

Table 7.5.1 Limited catchment area parameters

Column 1: Water resource plan area	Column 2: Sub-catchment/ management area	Column 3: Area of local catchment	Column 4: Limited capacity
Fitzroy Basin	Fitzroy, Lower Mackenzie, Upper Mackenzie, Lower Dawson, Upper Dawson, Isaac Connors, and Nogoa	250 ha	50 ML
Burnett Basin	Coastal Burnett overland flow management area	25 ha	20 ML
Burnett Basin Inland	Burnett overland flow management area	625 ha	250 ML

7.5 Glossary of terms

Artesian water see the *Water Act 2000*, schedule 4.

Editor's note: Artesian water means water that occurs naturally in, or is introduced artificially into, an aquifer, which if tapped by a bore, would flow naturally to the surface.

Beneficial use means the resource such as water has a beneficial use other than disposal,- an example of beneficial use is reusing or recycling water.

Bywash means water that is diverted from a dam or reservoir and is usually associated with a pipe or other structure to prevent uncontrolled overtopping.

Certified report is a report:

(1) produced and certified by a person:
   (a) who is an RPEQ
   (b) who has relevant farm water supply discipline experience if the proposed development is for agricultural production
(2) that is prepared in accordance with the *Certification guidelines for assessable works that take overland flow water*, Department of Natural Resources and Water, 2008.

Coal seam gas water means underground water brought to the surface of the earth or moved underground in connection with exploring for or producing coal seam gas.

Contaminated agricultural runoff water means overland flow water that contains, or is likely to contain, excess nutrients or farm chemicals at levels potentially harmful to the quality of water in a watercourse.

Declared drainage and embankment area means an area declared to be a drainage and embankment area under the *Water Act 2000*.

Environmental authority see the *Environmental Protection Act 1994*.

Editor's note: Environmental authority means generally an environmental authority issued under section 195 of the *Environmental Protection Act 1994* **that approves an environmentally relevant activity applied for in an application;**

Existing works means works that allow taking of overland flow water that are in existence at the time the relevant development application is made.

Flood channel means a natural secondary channel on a floodplain that carries water during flood events. This term includes distributary channels that disperse waters across floodplains and terminal wetlands, and flood runners that are shallow channels with entry and exit points off watercourses.

Floodplain see the *Water Act 2000*.

Editor's note: Floodplain means an area of relatively flat land next to a drainage channel and which is covered by water when it overflows from the drainage channel.

Floodwater see the *Water Act 2000*.

Editor's note: Floodwater, in relation to a watercourse or lake, means water that has overflowed the outer banks of the watercourse, or the bed and banks of the lake, because of a flood event affecting the watercourse or lake, and is on land near the watercourse or lake.

High preservation area means the part of the wild river area described as the high preservation area in the wild river declaration for the area.

Incidental take of overland flow water means to take overland flow water in a storage that is primarily for storing water from a source other than overland flow.

Intensive stocking is a technique of stocking land on a long term basis above what is normally considered to be the carrying capacity of the land, for example, by implementing strategic or rotational grazing.

Lake see the *Water Act 2000*, schedule 4.

Editor's note: Lake includes —

(1) a lagoon, swamp or other natural collection of water, whether permanent or intermittent
(2) the bed and banks and any other element confining or containing the water.

Overland flow water see the *Water Act 2000*, schedule 4.

Editor's note: Overland flow water —

(1) 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.
(2) 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.

Quarry material see the *Water Act 2000*, schedule 4.

Editor's note: Quarry material means material, other than a mineral within the meaning of any Act relating to mining, in a watercourse or lake. Quarry material includes stone, gravel, sand, rock, clay, earth and soil unless it is removed from the watercourse or lake as waster material.

Resource operations plan see the *Water Act 2000*, schedule 4.

Editor's note: Resource operations plan means a plan approved under section 103(5) of the *Water Act 2000*.

Same premises means contiguous parcels of land or tenure under the same land ownership or tenure holder.

Subartesian water see the *Water Act 2000*, schedule 4.

Editor's note: Subartesian water means water that occurs naturally in, or is introduced artificially into, an aquifer, which if tapped by a bore, would not flow naturally to the surface.

Water resource plan see the *Water Act 2000*, schedule 4.

Editor's note: Water resource plan means a plan approved under section 50(2) of the *Water Act 2000*.

Watercourse see the *Water Act 2000*, schedule 4.

Editor's note: A watercourse

(1) is a river, creek or other stream, including a stream in the form of an anabranch or a tributary, in which water flows permanently or intermittently, regardless of the frequency of flow events —
  (a) in a natural channel, whether artificially modified or not, or
  (b) in an artificial channel that has changed the course of the stream.

(2) A watercourse includes any of the following located in it —
  (a) in-stream islands
  (b) benches
  (c) bars

(3) However, a watercourse does not include a drainage feature

(4) Further—
  (a) Unless there is a contrary intention, a reference to a watercourse in the *Water Act 2000*, other than in section 5 or in the definitions in schedule 4 to the extent they support the operation of section 5, is a reference to anywhere that is—
    (i) upstream of the downstream limit of the watercourse
    (ii) if there is an upstream limit of the watercourse – downstream of the upstream limit
    (iii) between the outer bank on one side of the watercourse and the outer bank on the other side of the watercourse
  (b) a reference to the *Water Act 2000* to, or a to a circumstance that involves, land adjoining a watercourse, is a reference to, or a circumstance that involves, and effectively adjoining a watercourse.

7.6 Abbreviations

DNRM – Department of Natural Resources and Mines

RPEQ – Registered Professional Engineer Queensland

Module 8. Native vegetation clearing

8.1 Queensland vegetation management state code

8.1.1 Purpose

The purpose of the code is to regulate the clearing of native vegetation within Queensland to:

(1) conserve remnant vegetation that is—
  (a) an endangered regional ecosystem
  (b) an of concern regional ecosystem
  (c) a least concern regional ecosystem
(2) conserve vegetation in declared areas
(3) ensure clearing does not cause land degradation
(4) prevent loss of biodiversity
(5) maintain ecological processes
(6) manage environmental effects of the clearing to achieve (1) through (5)
(7) reduce greenhouse gas emissions
(8) allow for sustainable land use.

8.1.2 Criteria for assessment

(1) Subject to subsection (2), development mentioned in column 1 below must be assessed against the assessment criteria in the table mentioned in column 2.

Column 1	Column 2
Material change of use	Table 8.1.1
Operational work	Table 8.1.2
Reconfiguring a lot	Table 8.1.1

(2) Development that is a material change of use or reconfiguring a lot mentioned in column 1 of Table 8.1.1 must comply with the relevant provisions of Tables 8.1.3 to 8.1.11 mentioned in column 2 of Table 8.1.1.

(3) Development that is operational work mentioned in column 1 of Table 8.1.2 must comply with the relevant provisions of Tables 8.1.4 to 8.1.11 mentioned in column 2 of Table 8.1.2.

Table 8.1.1: Development and relevant provisions of the code—material change of use and reconfiguring a lot

Development	Relevant provisions of code
An application for a project declared to be a coordinated project	**Table 8.1.3** — General: PO1 – PO2 **Table 8.1.4** — Public safety, relevant infrastructure and coordinated projects: PO2 — PO10
An application for any other purpose	**Table 8.1.3** — General: PO1 – PO2 **Table 8.1.5** — Extractive industry: PO2 – PO9 OR For all other purposes: **Table 8.1.4** — Public safety, relevant infrastructure and coordinated projects: PO2 — PO10
An application for a material change of use or reconfiguring a lot for which there will be no clearing as a result of the material change of use or reconfiguring a lot	**Table 8.1.3** — General: PO1 – PO3

Development	Relevant provisions of code
An application for a material change of use or reconfiguring a lot for which all clearing is limited to clearing that could be done under an exemption for the purpose of the development (as prescribed under Schedule 24, Parts 1 and 2 of the Sustainable Planning Regulation 2009) prior to the material change of use or reconfiguring a lot application being approved	**Table 8.1.3** — General: PO1, PO2 and PO4

Table 8.1.2: Development and relevant provisions of the code—operational work

Development	Relevant provisions of code
Clearing of encroachment	**Table 8.1.3** — General: PO2 **Table 8.1.10** — Encroachment: PO1 – PO7
For fodder harvesting	**Table 8.1.3** — General: PO2 **Table 8.1.11** — Fodder: PO1 – PO11
Establishing a necessary fence, firebreak, road or vehicular track, or for constructing necessary built infrastructure (each relevant infrastructure), and the clearing for the relevant infrastructure cannot reasonably be avoided or minimised	**Table 8.1.3** — General: PO2 **Table 8.1.4—** Public safety, relevant infrastructure and coordinated projects: PO1 – PO10
Clearing that is a natural and ordinary consequence of other assessable development for which a development approval was given under the repealed *Integrated Planning Act 1997*, or a development application was made under that Act, before 16 May 2003	**Table 8.1.3** — General: PO2 **Table 8.1.4** — Public safety, relevant infrastructure and coordinated projects: PO1 – PO10
To ensure public safety	**Table 8.1.3** — General: PO2 **Table 8.1.4** — Public safety, relevant infrastructure and coordinated projects: PO1 – PO10
A project declared to be a coordinated project under the *State Development and Public Works Organisation Act 1971*, section 26	**Table 8.1.3** — General: PO2 **Table 8.1.4** — Public Safety, relevant Infrastructure and coordinated projects: PO1 – PO10
For thinning	**Table 8.1.3** — General: PO2 **Table 8.1.9** — Thinning: PO1 – PO7
Necessary to control non-native plants or declared pests	**Table 8.1.3** — General: PO2 **Table 8.1.8** — Weed or pest management: PO1 – PO7
For an extractive industry	**Table 8.1.3** — General: PO2 **Table 8.1.5** — Extractive industry: PO1 – PO9
For necessary environmental clearing	**Table 8.1.3** — General: PO2 **Table 8.1.7** — Necessary environmental clearing: PO1 – PO14
For high value agriculture clearing and irrigated high value agriculture clearing	**Table 8.1.3** — General: PO2 **Table 8.1.6** — High value agriculture clearing and irrigated high value agriculture clearing: PO1 – PO9

Table 8.1.3: General

Performance outcomes	Acceptable outcomes
Clearing to avoid and minimise impacts	
PO1 Clearing only occurs where the applicant has demonstrated that the development has first avoided, and then minimised the impacts of development.	No acceptable outcome is prescribed.
Clearing on land where compliance or enforcement notice or offset exists	
PO2 Clearing in an area that is subject to any of the following: (1) a restoration notice, or (2) a compliance notice containing conditions about the restoration of vegetation, or (3) a Land Act notice, or (4) a trespass notice if the trespass related act under the *Land Act 1994* for the notice is the clearing of vegetation on the relevant land, or (5) an enforcement notice under the *Sustainable Planning Act 2009* issued for a vegetation clearing offence, or (6) an environmental offset must not be inconsistent with the notice, unless a better environmental outcome can be achieved, or inconsistent with the environmental offset or another agreement related to the environmental offset.	No acceptable outcome is prescribed.
No clearing of vegetation as a result of the material change of use or reconfiguration of a lot	
PO3 Clearing as a result of the material change of use or reconfiguration of a lot will not occur.	No acceptable outcome is prescribed.
Clearing that could already be done under an exemption	
PO4 All clearing is limited to clearing that could be done under an exemption for the purpose of the development (as prescribed under Schedule 24, Parts 1 and 2 of the *Sustainable Planning Regulation 2009*) prior to the material change of use application being approved.	No acceptable outcome is prescribed.

Table 8.1.4: Public safety, relevant infrastructure and coordinated projects

Performance outcomes	Acceptable outcomes
Limits to clearing	
PO1 Clearing is limited to the extent that is necessary: (1) for establishing a necessary fence, firebreak, road or vehicular track, or for constructing necessary built infrastructure, if there is no suitable alternative site for the fence, firebreak, road, track or infrastructure (relevant infrastructure), or (2) as a natural and ordinary consequence of other assessable development for which a development approval as defined under	No acceptable outcome is prescribed.

Performance outcomes	Acceptable outcomes
the repealed *Integrated Planning Act 1997* was given, or a development application as defined under that Act was made, before 16 May 2003, or (3) to ensure public safety, or (4) for a coordinated project and any associated ancillary works —other than a coordinated project that involves high value agriculture clearing, or irrigated high value agriculture clearing.	
Wetlands	
PO2 Maintain the current extent of vegetation associated with any natural wetland to protect: (1) water quality by filtering sediments, nutrients and other pollutants (2) aquatic habitat (3) terrestrial habitat.	**AO2.1** Clearing does not occur in or within 100 metres of any natural wetland. OR **AO2.2** Clearing only occurs within 100 metres of any natural wetland where: (1) the widths stipulated by Table 1 are not exceeded (2) the clearing does not occur within 50 metres of the defining bank of any natural wetland. OR **AO2.3** Where it can be demonstrated that clearing cannot be avoided, and the extent of clearing has been minimised, an environmental offset is provided for any impacts from clearing of vegetation associated with a natural wetland. Editor's note: Refer to *Appendix A: Policy for vegetation management offsets* of the code for guidance regarding the provision of an environmental offset.
Watercourses	
PO3 Maintain the current extent of vegetation associated with any watercourse to protect: (1) bank stability by protecting against bank erosion (2) water quality by filtering sediments, nutrients and other pollutants (3) aquatic habitat (4) terrestrial habitat.	**AO3.1** Clearing does not occur: (1) in any watercourse, or (2) within the relevant distance stipulated by Table 2 of the defining bank of any watercourse. OR **AO3.2** Clearing only occurs within any watercourse or within the relevant distance stipulated by Table 2 of the defining bank of any watercourse where: (1) the widths stipulated by Table 1 is not exceeded (2) the clearing does not occur within 5 metres of the defining bank. OR **AO3.3** Where it can be demonstrated that clearing cannot be avoided, and the extent of clearing has been minimised, an environmental offset is provided for any impacts from clearing of vegetation associated with any watercourse. Editor's note: Refer to *Appendix A: Policy for vegetation management offsets* of the code for guidance regarding the provision of an environmental offset.
Connectivity (public safety and relevant infrastructure)	
PO4 In consideration of vegetation on the subject lot(s) and in the landscape adjacent to the subject lot(s), vegetation is retained that: (1) is of sufficient size and configured in a way that maintains ecosystem functioning (2) remains in the landscape despite threatening processes.	**AO4.1** Clearing occurs in accordance with Table 3.

Performance outcomes	Acceptable outcomes
Connectivity (coordinated projects)	
PO5 In consideration of vegetation on the subject lot(s) and in the landscape adjacent to the subject lot(s), vegetation is retained that: (1) is of sufficient size and configured in a way that maintains ecosystem functioning (2) remains in the landscape despite threatening processes or where this is not reasonably possible, maintain the current extent of vegetation.	**AO5.1** Clearing occurs in accordance with Table 3. OR **AO5.2** Where it can be demonstrated that clearing cannot be avoided, and the extent of clearing has been minimised, an environmental offset is provided for the clearing of vegetation that forms a connectivity area. Editor's note: Refer to *Appendix A: Policy for vegetation management offsets* of the code for guidance regarding the provision of an environmental offset.
Soil erosion	
PO6 Clearing does not result in: (1) mass movement, gully erosion, rill erosion, sheet erosion, tunnel erosion, stream bank erosion, wind erosion, or scalding (2) any associated loss of chemical, physical or biological fertility — including, but not limited to water holding capacity, soil structure, organic matter, soil biology, and nutrients within or outside the lot(s) that are the subject of the application.	**AO6.1** Clearing is undertaken in accordance with a sediment and erosion control plan which avoids and minimises land degradation. OR **AO6.2** The application is a development application where a local government is the assessment manager.
Salinity	
PO7 Clearing does not contribute to land degradation through: (1) waterlogging, or (2) the salinisation of groundwater, surface water or soil.	**AO7.1** Clearing does not occur in or within 200 metres of a discharge area or recharge area. OR **AO7.2** Clearing is less than: (1) 2 hectares, or (2) 10 metres wide.
Conserving endangered and of concern regional ecosystems	
PO8 Maintain the current extent of endangered regional ecosystems and of concern regional ecosystems.	**AO8.1** Clearing does not occur in: (1) an endangered regional ecosystem, or (2) an of concern regional ecosystem. OR **AO8.2** Clearing in an endangered regional ecosystem or an of concern regional ecosystem does not exceed the width or area prescribed in Table 1. OR **AO8.3** Where it can be demonstrated that clearing cannot be avoided, and the extent of clearing has been minimised, an environmental offset is provided for the clearing of endangered regional ecosystems and of concern regional ecosystems. Editor's note: Refer to *Appendix A: Policy for vegetation management offsets* of the code for guidance regarding the provision of an environmental offset.
Essential habitat	
PO9 Maintain the current extent of essential habitat.	**AO9.1** Clearing does not occur in an area of essential habitat. OR **AO9.2** Clearing in essential habitat does not exceed the widths or areas prescribed in Table 1.

Performance outcomes	Acceptable outcomes
	OR **AO9.3** Where it can be demonstrated that clearing cannot be avoided, and the extent of clearing has been minimised, an environmental offset is provided for the clearing of essential habitat. Editor's note: Refer to *Appendix A: Policy for vegetation management offsets* of the code for guidance regarding the provision of an environmental offset.
Acid sulfate soils	
PO10 Clearing activities do not result in disturbance of acid sulfate soils or changes to the hydrology of the location that will either: (1) aerate horizons containing iron sulfides, or (2) mobilise acid or metals.	**AO10.1** Clearing does not occur in land zone 1, land zone 2 or land zone 3. OR **AO10.2** Clearing in land zone 1, land zone 2 or land zone 3 in areas below the 5 metre Australian Height Datum only occurs where: (1) it does not involve mechanical clearing (2) the acid sulfate soils are managed consistent with the *State Planning Policy*, and with the Soil Management Guidelines in the *Queensland Acid Sulfate Soil Technical Manual*, Department of Natural Resources and Mines, 2002. OR **AO10.3** The application is a development application where a local government is the assessment manager.

Table 8.1.5: Extractive industry

Performance outcomes	Acceptable outcomes
Limits to clearing for an extractive industry	
PO1 Clearing is limited to the extent that is necessary for: (1) dredging material from the bed of any waters (2) extracting, from a pit or quarry, rock, sand, clay, gravel, loam or other material (3) screening, washing, grinding, milling, sizing or separating material extracted from a pit or quarry (4) carrying out work that is the natural and ordinary consequence of carrying out work mentioned in subparagraphs (1), (2) and (3) above.	No acceptable outcome is prescribed.
Clearing is staged	
PO2 Clearing: (1) is staged in line with operational needs that restrict clearing to the current operational area (2) is limited to the area from which material will be extracted, and any reasonably associated infrastructure, within the term of the development approval (3) cannot occur until all required permits are obtained.	No acceptable outcome is prescribed.
Wetlands	
PO3 Maintain the current extent of vegetation associated with any natural wetland to protect:	**AO3.1** Clearing does not occur in, or within 100 metres of, any natural wetland.

Performance outcomes	Acceptable outcomes
(1) water quality by filtering sediments, nutrients and other pollutants (2) aquatic habitat (3) terrestrial habitat.	OR **AO3.2** Clearing only occurs within 100 metres of any natural wetland where: (1) the widths stipulated by Table 1 are not exceeded (2) the clearing does not occur within 50 metres of the of the natural wetland. OR **AO3.3** Where it can be demonstrated that clearing cannot be avoided, and the extent of clearing has been minimised, an environmental offset is provided for any impacts from clearing of vegetation associated with a natural wetland. Editor's note: Refer to *Appendix A: Policy for vegetation management offsets* of the code for guidance regarding the provision of an environmental offset.
Watercourses	
PO4 Maintain the current extent of vegetation associated with any watercourse to protect: (1) bank stability by protecting against bank erosion (2) water quality by filtering sediments, nutrients and other pollutants (3) aquatic habitat (4) terrestrial habitat.	**AO4.1** Clearing does not occur: (1) in any watercourse (2) within the relevant distance stipulated in Table 2 of the defining bank of any watercourse. OR **AO4.2** Clearing only occurs within any watercourse or within the relevant distance stipulated by Table 2 of the defining bank of any watercourse where: (1) the widths stipulated by Table 1 is not exceeded (2) the clearing does not occur within 5 metres of the defining bank. OR **AO4.3** Where it can be demonstrated that clearing cannot be avoided, and the extent of clearing has been minimised, an environmental offset is provided for any impacts from clearing of vegetation associated with any watercourse. Editor's note: Refer to *Appendix A: Policy for vegetation management offsets* of the code for guidance regarding the provision of an environmental offset.
Connectivity	
PO5 In consideration of vegetation on the subject lot(s) and in the landscape adjacent to the subject lot(s), vegetation is retained that: (1) is of sufficient size and configured in a way that maintains ecosystem functioning (2) remains in the landscape despite threatening processes.	**AO5.1** Clearing occurs in accordance with Table 3.
Salinity	
PO6 Clearing does not contribute to land degradation through: (1) waterlogging, or (2) the salinisation of groundwater, surface water or soil.	**AO6.1** Clearing does not occur in or within 200 metres of a discharge area or recharge area. OR **AO6.2** Clearing is less than: (1) 2 hectares, or (2) 10 metres wide.
Conserving endangered and of concern regional ecosystems	
PO7 Maintain the current extent of endangered regional ecosystems and of concern regional ecosystems.	**AO7.1** Clearing does not occur in (1) an endangered regional ecosystem, or (2) an of concern regional ecosystem. OR

Performance outcomes	Acceptable outcomes
	AO7.2 Clearing in an endangered regional ecosystem or an of concern regional ecosystem does not exceed the width or area prescribed in Table 1. OR **AO7.3** Where it can be demonstrated that clearing cannot be avoided, and the extent of clearing has been minimised, an environmental offset is provided for the clearing of endangered regional ecosystems and of concern regional ecosystems. Editor's note: Refer to *Appendix A: Policy for vegetation management offsets* of the code for guidance regarding the provision of an environmental offset.
Essential habitat	
PO8 Maintain the current extent of essential habitat.	**AO8.1** Clearing does not occur in an area of essential habitat. OR **AO8.2** Clearing in essential habitat does not exceed the width or area prescribed in Table 1. OR **AO8.3** Where it can be demonstrated that clearing cannot be avoided, and the extent of clearing has been minimised, an environmental offset is provided for the clearing of essential habitat. Editor's note: Refer to *Appendix A: Policy for vegetation management offsets* of the code for guidance regarding the provision of an environmental offset.
Acid sulfate soils	
PO9 Clearing activities do not result in the disturbance of acid sulfate soils or changes to the hydrology of the location that will either: (1) aerate horizons containing iron sulfides, or (2) mobilise acid or metals.	**AO9.1** Clearing does not occur in land zone 1, land zone 2 or land zone 3. OR **AO9.2** Clearing in land zone 1, land zone 2 or land zone 3 in areas below the 5 metre Australian Height Datum only occurs where: (1) it does not involve mechanical clearing (2) the acid sulfate soils are managed consistent with the *State Planning Policy*, Department of State Development, Infrastructure and Planning 2013, and with the Soil Management Guidelines in the *Queensland Acid Sulfate Soil Technical Manual*, Department of Natural Resources and Mines, 2002. OR **AO9.3** The application is a development application where a local government is the assessment manager.

Table 8.1.6: High value agriculture clearing and irrigated high value agriculture clearing

Performance outcomes	Acceptable outcomes
High value and irrigated high value agriculture clearing	
PO1 Clearing is only for high value agriculture clearing or irrigated high value agriculture clearing.	No acceptable outcome is prescribed.
Wetlands	
PO2 Maintain the current extent of vegetation associated with any natural wetland to protect: (1) water quality by filtering sediments, nutrients and other pollutants (2) aquatic habitat (3) terrestrial habitat.	**AO2.1** Clearing does not occur in, or within 100 metres of, any natural wetland. OR **AO2.2** Clearing only occurs within 100 metres of any natural wetland where: (1) the widths stipulated by Table 1 are not exceeded (2) the clearing does not occur within 50 metres of the natural wetland.

Performance outcomes	Acceptable outcomes
	OR **AO2.3** Where it can be demonstrated that clearing cannot be avoided, and the extent of clearing has been minimised, an environmental offset is provided for the clearing of vegetation associated with a natural wetland. Editor's note: Refer to *Appendix A: Policy for vegetation management offsets* of the code for guidance regarding the provision of an environmental offset.
Watercourses	
PO3 Maintain the current extent of vegetation associated with any watercourse to protect: (1) bank stability by protecting against bank erosion (2) water quality by filtering sediments, nutrients and other pollutants (3) aquatic habitat (4) terrestrial habitat.	**AO3.1** Clearing does not occur: (1) in any watercourse (2) within the relevant distance stipulated in Table 2 of the defining bank of any watercourse. OR **AO3.2** Clearing only occurs within any watercourse or within the relevant distance stipulated by Table 2 of the defining bank of any watercourse where: (1) the widths stipulated by Table 1 is not exceeded (2) the clearing does not occur within 5 metres of the defining bank. OR **AO3.3** Where it can be demonstrated that clearing cannot be avoided, and the extent of clearing has been minimised, an environmental offset is provided for any impacts from clearing of vegetation associated with any watercourse. Editor's note: Refer to *Appendix A: Policy for vegetation management offsets* of the code for guidance regarding the provision of an environmental offset.
Connectivity area	
PO4 In consideration of vegetation on the subject lot(s) and in the landscape adjacent to the subject lot(s), vegetation is retained that: (1) is of sufficient size and configured in a way that maintains ecosystem functioning (2) remains in the landscape despite threatening processes.	**AO4.1** Clearing occurs in accordance with Table 3.
Soil erosion	
PO5 Clearing: (1) does not result in soil erosion stemming from: (a) mass movement, gully erosion, rill erosion, sheet erosion, tunnel erosion, stream bank erosion, wind erosion, or scalding (b) any associated loss of chemical, physical or biological fertility—including, but not limited to water holding capacity, soil structure, organic matter, soil biology, and nutrients (2) maintains ecological processes, within or outside the lot(s) that are the subject of the application.	**AO5.1** Clearing is undertaken in accordance with a sediment and erosion control plan which avoids and minimises land degradation.
Salinity	
PO6 Clearing does not contribute to land degradation through: (1) waterlogging, or (2) the salinisation of groundwater, surface	**AO6.1** Clearing of vegetation does not occur in, or within 200 metres of, a discharge area or recharge area. OR

Performance outcomes	Acceptable outcomes
water or soil.	**AO6.2** Clearing of vegetation is less than: (1) 2 hectares, or (2) 10 metres wide.
Conserving endangered and of concern regional ecosystems	
PO7 Maintain the current extent of endangered regional ecosystems and of concern regional ecosystems, or provide a significant beneficial outcome where the clearing cannot be avoided, and impacts minimised.	**AO7.1** Clearing does not occur in: (1) an endangered regional ecosystem, or (2) an of concern regional ecosystem. OR **AO7.2** Clearing in an endangered regional ecosystem, or an of concern regional ecosystem does not exceed the width or area prescribed in Table 1. OR **AO7.3** Where it can be demonstrated that clearing cannot be avoided, and the extent of clearing has been minimised, an environmental offset or significant beneficial outcome is provided for the clearing of endangered or of concern regional ecosystems. Editor's note: Refer to *Appendix A: Policy for vegetation management offsets* of the code for guidance regarding the provision of an environmental offset.
Essential habitat	
PO8 Maintain the current extent of essential habitat.	**AO8.1** Clearing of vegetation does not occur in an area of essential habitat. OR **AO8.2** Clearing of vegetation in essential habitat does not exceed the width or area prescribed in Table 1. OR **AO8.3** Where it can be demonstrated that clearing cannot be avoided, and the extent of clearing has been minimised, an environmental offset is provided for the clearing of essential habitat. Editor's note: Refer to *Appendix A: Policy for vegetation management offsets* of the code for guidance regarding the provision of an environmental offset.
Acid sulfate soils	
PO9 Clearing activities do not result in the disturbance of acid sulfate soils or changes to the hydrology of the location that will either: (1) aerate horizons containing iron sulfides, or (2) mobilise acid or metals.	**AO9.1** Clearing does not occur in land zone 1, land zone 2 or land zone 3. OR **AO9.2** Clearing in land zone 1, land zone 2 or land zone 3 in areas below the 5 metre Australian Height Datum only occurs where: (1) it does not involve mechanical clearing (2) the acid sulfate soils are managed consistent with the *State Planning Policy* Department of State Development, Infrastructure and Planning, 2013 and with the Soil Management Guidelines in the *Queensland Acid Sulfate Soil Technical Manual*, Department of Natural Resources and Mines, 2002. OR **AO9.3** The application is a development application where a local government is the assessment manager.

Table 8.1.7: Necessary environmental clearing

Performance outcomes	Acceptable outcomes
Limits to clearing	
PO1 Clearing is avoided, or is limited to the extent that is necessary to: (1) restore the ecological and environmental condition of land, or (2) divert existing natural channels in a way that replicates the existing form of the natural channels, or (3) prepare for the likelihood of a natural disaster, or (4) remove contaminants from land.	No acceptable outcome is prescribed.
Wetlands (land restoration, natural disaster preparation)	
PO2 Maintain vegetation associated with any natural wetland to protect: (1) water quality by filtering sediments, nutrients and other pollutants (2) aquatic habitat (3) terrestrial habitat or where this is not reasonably possible, rehabilitate.	**AO2.1** Clearing does not occur: (1) in any natural wetland, or (2) within 100 metres of any natural wetland. OR **AO2.2** Clearing only occurs within 100 metres of any natural wetland where: (1) the widths stipulated by Table 1 are not exceeded (2) the clearing does not occur within 50 metres of the natural wetland. OR **AO2.3** Where it can be demonstrated that clearing cannot be avoided, and the extent of clearing has been minimised, the cleared area is rehabilitated in accordance with an environmental clearing management plan.
Wetlands (natural channel diversion and contaminants removal)	
PO3 Maintain vegetation associated with any natural wetland to protect: (1) water quality by filtering sediments, nutrients and other pollutants (2) aquatic habitat (3) terrestrial habitat or where this is not reasonably possible, rehabilitate or maintain the current extent.	**AO3.1** Clearing does not occur: (1) in any natural wetland, or (2) within 100 metres of any natural wetland. OR **AO3.2** Clearing only occurs within 100 metres of any natural wetland where: (1) the widths stipulated by Table 1 are not exceeded (2) the clearing does not occur within 50 metres of the natural wetland. OR **AO3.3** Where it can be demonstrated that clearing cannot be avoided, and the extent of clearing has been minimised, the cleared area is rehabilitated. OR **AO3.4** Where clearing is for natural channel diversion or contaminants removal, and it can be demonstrated that clearing cannot be avoided, and: (1) the extent of clearing has been minimised (2) the cleared area cannot be rehabilitated an environmental offset is provided for any impacts from clearing vegetation associated with a natural wetland. Editor's note: Refer to *Appendix A: Policy for vegetation management offsets* of the code for guidance regarding the provision of an environmental offset.
Watercourses (land restoration and natural disaster preparation)	
PO4 Maintain vegetation associated with any watercourse to protect: (1) bank stability by protecting against bank erosion	**AO4.1** Clearing does not occur: (1) Within any watercourse, or (2) Within the relevant distances stipulated in Table 2 from each defining

Performance outcomes	Acceptable outcomes
(2) water quality by filtering sediments, nutrients and other pollutants (3) aquatic habitat (4) terrestrial habitat. or where this is not reasonably possible, rehabilitate.	bank of any watercourse. OR **AO4.2** Clearing only occurs within any watercourse or within the relevant distance stipulated by Table 2 of the defining bank of any watercourse where: (1) the widths stipulated by Table 1 are not exceeded (2) the clearing does not occur within 5 metres of the defining bank of any watercourse. OR **AO4.3** Where it can be demonstrated that clearing cannot be avoided, and the extent of clearing has been minimised, the cleared area is rehabilitated.
Watercourses (natural channel diversion and contaminants removal)	
PO5 Maintain vegetation associated with any watercourse to protect: (1) bank stability by protecting against bank erosion (2) water quality by filtering sediments, nutrients and other pollutants (3) aquatic habitat (4) terrestrial habitat or where this is not reasonably possible, rehabilitate or maintain the current extent.	**AO5.1** Clearing does not occur: (1) within any watercourse, or (2) within the relevant distances stipulated in Table 2 from each defining bank of any watercourse. OR **AO5.2** Clearing only occurs within any watercourse or within the relevant distance stipulated by Table 2 of the defining bank of any watercourse where: (1) the widths stipulated by Table 1 are not exceeded (2) the clearing does not occur within 5 metres of the defining bank of any watercourse. OR **AO5.3** Where it can be demonstrated that clearing cannot be avoided, and the extent of clearing has been minimised, the cleared area is rehabilitated. OR **AO5.4** Where it can be demonstrated that clearing cannot be avoided, and: (1) the extent of clearing has been minimised (2) the cleared area cannot be rehabilitated an environmental offset is provided for any impacts from clearing of vegetation associated with a watercourse. Editor's note: Refer to *Appendix A: Policy for vegetation management offsets* of the code for guidance regarding the provision of an environmental offset.
Connectivity (land restoration and natural disaster preparation)	
PO6 In consideration of vegetation on the subject lot(s), and in the landscape adjacent to the subject lot(s), vegetation is retained that: (1) is of sufficient size and configured in a way that maintains ecosystem functioning (2) remains in the landscape despite threatening processes or where this is not reasonably possible, rehabilitate.	**AO6.1** Clearing occurs in accordance with Table 3. OR **AO6.2** Where it can be demonstrated that clearing cannot be avoided, and the extent of clearing has been minimised, the cleared area is rehabilitated.
Connectivity (natural channel diversion and contaminants removal)	
PO7 In consideration of vegetation mapped on the subject lot(s) and in the landscape adjacent to the subject lot(s), vegetation is retained that: (1) is of sufficient size and configured in a way	**AO7.1** Clearing occurs in accordance with Table 3. OR **AO7.2** Where it can be demonstrated that clearing cannot be avoided, and the

Performance outcomes	Acceptable outcomes
that maintains ecosystem functioning (2) remains in the landscape despite threatening processes or where this is not reasonably possible, rehabilitate, or maintain the current extent.	extent of clearing has been minimised, the cleared area is rehabilitated. OR **AO7.3** Where it can be demonstrated that clearing cannot be avoided, and: (1) the extent of clearing has been minimised (2) the cleared area cannot be rehabilitated an environmental offset is provided for the clearing of vegetation that forms a connectivity area. Editor's note: Refer to *Appendix A: Policy for vegetation management offsets* of the code for guidance regarding the provision of an environmental offset.
Soil erosion	
PO8 Clearing does not result in or accelerate land degradation resulting from: (1) mass movement, gully erosion, rill erosion, sheet erosion, tunnel erosion, stream bank erosion, wind erosion, or scalding (2) any associated loss of chemical, physical or biological fertility— including, but not limited to water holding capacity, soil structure, organic matter, soil biology, and nutrients within and outside the lot(s) that are the subject of the application.	**AO8.1** Clearing is undertaken in accordance with a sediment and erosion control plan which avoids and minimises land degradation.
Salinity	
PO9 Clearing does not contribute to, or accelerate, land degradation through: (1) waterlogging, or (2) the salinisation of groundwater, surface water or soil.	**AO9.1** Clearing does not occur in, or within 200 metres of, a discharge area or recharge area. OR **AO9.2** Clearing is less than: (1) 2 hectares, or (2) 10 metres wide.
Essential habitat (land restoration and natural disaster preparation)	
PO10 Clearing does not occur in essential habitat, or where this is not reasonably possible, rehabilitate where the clearing cannot be avoided and impacts minimised.	**AO10.1** Clearing does not occur in essential habitat. OR **AO10.2** Clearing in essential habitat does not exceed the widths or areas prescribed in Table 1. OR **AO10.3** Where it can be demonstrated that clearing cannot be avoided, and the extent of clearing has been minimised, the cleared area is rehabilitated.
Essential habitat (natural channel diversion and contaminants removal)	
PO11 Clearing does not occur in essential habitat, or where this cannot reasonably be avoided, rehabilitate or maintain the current extent of essential habitat.	**AO11.1** Clearing does not occur in essential habitat. OR **AO11.2** Clearing in essential habitat does not exceed the widths or areas prescribed in Table 1. OR **AO11.3** Where it can be demonstrated that clearing cannot be avoided, and the extent of clearing has been minimised, the cleared area is rehabilitated. OR

Performance outcomes	Acceptable outcomes
	AO11.4 Where it can be demonstrated that clearing cannot be avoided, and: (1) the extent of clearing has been minimised (2) the cleared area cannot be rehabilitated an environmental offset is provided for clearing of essential habitat. Editor's note: Refer to *Appendix A: Policy for vegetation management offsets* of the code for guidance regarding the provision of an environmental offset.
Clearing regional ecosystems (land restoration and natural disaster preparation)	
PO12 Clearing does not occur in endangered regional ecosystems, of concern regional ecosystems or least concern regional ecosystems, or where this is not reasonably possible, rehabilitate where the clearing cannot be avoided and impacts minimised.	**AO12.1** Clearing does not occur in: (1) an endangered regional ecosystem, or (2) an of concern regional ecosystem, or (3) a least concern regional ecosystem. OR **AO12.2** Clearing: (1) maintains the natural floristic composition and range of sizes across the application area, or (2) does not exceed the widths or areas prescribed in Table 1. OR **AO12.3** Where it can be demonstrated that clearing cannot be avoided, and the extent of clearing has been minimised, the cleared area is rehabilitated.
Clearing regional ecosystems (natural channel diversion and contaminants removal)	
PO13 Clearing does not occur in endangered regional ecosystems, of concern regional ecosystems or least concern regional ecosystems, or where this cannot be reasonably be avoided, rehabilitate or maintain the current extent of endangered regional ecosystems and of concern regional ecosystems.	**AO13.1** Clearing does not occur in (1) an endangered regional ecosystem, or (2) an of concern regional ecosystem, or (3) a least concern regional ecosystem. OR **AO13.2** Clearing: (1) maintains the natural floristic composition and range of sizes across the application area, or (2) does not exceed the widths or areas prescribed in Table 1. OR **AO13.3** Where it can be demonstrated that clearing cannot be avoided and the extent of clearing has been minimised, endangered regional ecosystems and of concern regional ecosystems are rehabilitated. OR **AO13.4** Where clearing an endangered regional ecosystem or of concern regional ecosystem and it can be demonstrated that clearing cannot be avoided, minimised or rehabilitated, an environmental offset is provided. Editor's note: Refer to *Appendix A: Policy for vegetation management offsets* of the code for guidance regarding the provision of an environmental offset.
Acid sulfate soils	
PO14 Clearing does not result in, or accelerate, the disturbance of acid sulfate soils or changes to the hydrology of the location that will either: (1) aerate horizons containing iron sulfides, or (2) mobilise acid or metals.	**AO14.1** Clearing vegetation does not occur in: (1) land zone 1, land zone 2 or land zone 3 (2) areas below the 5 metre Australian Height Datum where acid sulfate soils are present. OR **AO14.2** Clearing in land zone 1, land zone 2 or land zone 3 in areas below the 5 metre Australian Height Datum only occurs where: (1) it does not involve mechanical clearing

Performance outcomes	Acceptable outcomes
	(2) the acid sulfate soils are managed consistent with the *State Planning Policy*, Department of State Development, Infrastructure and Planning, 2013 and with the Soil Management Guidelines in the *Queensland Acid Sulfate Soil Technical Manual,* Department of Natural Resources and Mines, 2002. OR **AO14.3** The application is a development application where a local government is the assessment manager.

Table 8.1.8: Weed or pest management

Performance outcomes	Acceptable outcomes
Limits to clearing for weed or pest management	
PO1 Clearing is limited to the extent necessary to: (1) control non-native plants or declared pests, or (2) provide access for control of non-native plants or declared pests if no alternative route exists.	No acceptable outcome is prescribed
Wetlands	
PO2 Maintain vegetation associated with a natural wetland to protect: (1) water quality by filtering sediments, nutrients and other pollutants (2) aquatic habitat (3) terrestrial habitat.	**AO2.1** Mechanical clearing does not occur within 5 metres of a natural wetland. AND **AO2.2** Clearing only occurs: (1) within a 1.5 meter radius from the base of the stem of individual non-native or declared plants, or (2) to the extent necessary to provide access for the control of the non-native or declared plants. AND **AO2.3** Clearing for access tracks running parallel to a natural wetland is not located within 10 metres of the natural wetland.
Watercourses	
PO3 Maintain vegetation associated with any watercourse to protect: (1) bank stability by protecting against bank erosion (2) water quality by filtering sediments, nutrients and other pollutants (3) aquatic habitat (4) terrestrial habitat.	**AO3.1** Mechanical clearing does not occur within 20 metres of the defining bank of a watercourse. AND **AO3.2** Clearing only occurs: (1) within a 1.5 metre radius from the base of the stem of individual non-native or declared plants, or (2) to the extent necessary to provide access for the control of the non-native or declared plant. AND **AO3.3** Clearing for access tracks running parallel to a watercourse are not be located within 10 metres of the defining bank of the watercourse.
Soil erosion	
PO4 Clearing does not result in: (1) mass movement, gully erosion, rill erosion, sheet erosion, tunnel erosion, stream bank erosion, wind erosion, or scalding	**AO4.1** Mechanical clearing retains 50 per cent of the ground cover (dead or alive) in each 50 by 50 metre (0.25 hectare) area. AND

Performance outcomes	Acceptable outcomes
(2) any associated loss of chemical, physical or biological fertility— including, but not limited to water holding capacity, soil structure, organic matter, soil biology and nutrients within or outside the lot(s) that are the subject of the application.	**AO4.2** New access tracks, necessary to gain access to a weed infestation, do not: (1) exceed 5 metres in width (2) de-stabilise the banks of any watercourse as a result of crossing construction or use.
Conserving remnant vegetation that are regional ecosystems	
PO5 Clearing activities: (1) maintain the natural floristic composition and range of sizes of each species of the regional ecosystem evenly spaced across the application area (2) do not remove mature trees.	**AO5.1** Mechanical clearing does not exceed the limitations defined in Table 4. AND **AO5.2** Soil absorbed broad spectrum herbicides are not: (1) applied via aerial application, or (2) ground applied on a broad acre basis, or (3) used inconsistently with the product directions.
Requirements for dense regional ecosystems	
PO6 The removal of canopy vegetation does not occur in the regional ecosystems listed in Table 5.	**AO6 1**Clearing and associated soil disturbance in regional ecosystems listed in Table 5 occurs only: (1) within a 1.5 metre radius from the base of the stem or individual non-native or declared plants, or (2) to the extent necessary to provide access for the control of the non-native or declared plant.
Acid sulfate soils	
PO7 Clearing activities do not result in disturbance of acid sulfate soils or changes to the hydrology of the location that will either: (1) aerate horizons containing iron sulfides, or (2) mobilise acid or metals.	**AO7.1** Clearing does not occur in land zone 1, land zone 2 or land zone 3. OR **AO7.2** Clearing in land zone 1, land zone 2 or land zone 3 in areas below the 5 metre Australian Height Datum only occurs where: (1) it does not involve mechanical clearing (2) the acid sulfate soils are managed consistent with the *State Planning Policy*, Department of State Development, Infrastructure and Planning, 2013 and with the Soil Management Guidelines in the *Queensland Acid Sulfate Soil Technical Manual*, Department of Natural Resources and Mines, 2002. OR **AO7.3** The application is a development application where a local government is the assessment manager.

Table 8.1.9: Thinning

Performance outcomes	Acceptable outcomes
Clearing limited to specific regional ecosystems	
PO1 Clearing for the purpose of thinning does not occur in the regional ecosystems listed in Table 6, except where clearing is solely for removing native plants not naturally occurring within the regional ecosystem.	No acceptable outcome is prescribed.
Retained vegetation density	
PO2 Clearing must retain a density of vegetation consistent with the natural floristic composition of the regional ecosystem.	**AO2.1** The vegetation density is consistent with a representative reference site of the same regional ecosystem.

Performance outcomes	Acceptable outcomes
	OR **AO2.2** The vegetation density is consistent with the natural floristic composition of the regional ecosystem as demonstrated by, biocondition benchmarks for regional ecosystem condition assessment, the *Regional Ecosystem Description Database* and supplementary data, or the Queensland Herbarium.
Wetlands	
PO3 Maintain vegetation associated with any natural wetland to protect: (1) water quality by filtering sediments, nutrients and other pollutants (2) aquatic habitat (3) terrestrial habitat.	**AO3.1** Mechanical clearing does not occur within 20 metres of a natural wetland.
Watercourses	
PO4 Maintain vegetation associated with any watercourse to protect: (1) bank stability by protecting against bank erosion (2) water quality by filtering sediments, nutrients and other pollutants (3) aquatic habitat (4) terrestrial habitat.	**AO4.1** Mechanical clearing does not occur within 20 metres from the defining bank of a watercourse.
Soil erosion	
PO5 Clearing does not result in soil erosion stemming from: (1) mass movement, gully erosion, rill erosion, sheet erosion, tunnel erosion, stream bank erosion, wind erosion, or scalding (2) any associated loss of chemical, physical or biological fertility — including, but not limited to water holding capacity, soil structure, organic matter, soil biology, and nutrients within or outside the lot(s) that are the subject of the application.	**AO5.1** Mechanical clearing must: (1) retain 50per cent of the ground cover (dead or alive) in each 50 by 50 metre (0.25 hectare) area (2) not occur on slopes in excess of 10 per cent.
Conserving remnant vegetation that are regional ecosystems	
PO6 Clearing of vegetation: (1) maintains the natural floristic composition and range of sizes of each species of the regional ecosystem evenly spaced across the application area (2) does not remove habitat trees.	**AO6.1** Thinning must retain mature trees and habitat trees. AND **AO6.2** Thinning must retain immature trees to: (1) return the immature tree density to a more typical level (2) retain representatives of all the species that occur in the regional ecosystem in about the proportion to what would normally exist (3) retain the range of tree sizes that would normally occur (4) space immature trees as evenly as possible across the thinned area. AND **AO6.3** Thinning is not undertaken: (1) by ground application of soil absorbed broad spectrum herbicides, or (2) aerial application of any herbicides.
Acid sulfate soils	

Performance outcomes	Acceptable outcomes
PO7 Clearing activities do not result in disturbance of acid sulfate soils or changes to the hydrology of the location that will either: (1) aerate horizons containing iron sulfides, or (2) mobilise acid or metals.	**AO7.1** Clearing does not occur in land zone 1, land zone 2 or land zone 3. OR **AO7.2** Clearing in land zone 1, land zone 2 or land zone 3 in areas below the 5 metre Australian Height Datum only occurs where: (1) it does not involve mechanical clearing (2) the acid sulfate soils are managed consistent with the *State Planning Policy*, Department of State Development, Infrastructure and Planning, 2013 and with the Soil management guidelines in the *Queensland Acid Sulfate Soil Technical Manual*, Department of Natural Resources and Mines 2002. OR **AO7.3** The application is a development application where a local government is the assessment manager.

Table 8.1.10: Encroachment

Performance outcomes	Acceptable outcomes
Clearing limited to specific regional ecosystems	
PO1 Clearing for the purpose of encroachment only occurs in the regional ecosystems listed in Table 7.	No acceptable outcome is prescribed.
Mature trees	
PO2 Clearing for the purpose of encroachment: (1) results in the restoration of the regional ecosystem (2) does not remove habitat trees.	**AO2.1** Clearing of encroachment, based on ground assessment: (1) retains all mature trees, habitat trees and groves (2) retains representatives of all immature, non-encroaching species (3) may remove non-native species and native species, that do not belong in that regional ecosystem, from the clearing area. OR **AO2.2** Clearing of encroachment is limited to: (1) those areas where encroachment was not visible on aerial photographs taken in the 1950 to present (2) retain habitat trees and mature trees of all non-encroaching species.
Wetlands	
PO3 Maintain vegetation associated with a wetland to protect: (1) water quality by filtering sediments, nutrients and other pollutants (2) aquatic habitat (3) terrestrial habitat.	**AO3.1** Mechanical clearing does not occur within 20 metres of the defining bank of a natural wetland. AND **AO3.2** The application of soil absorbed broad spectrum herbicides does not occur within 50 metres of the defining bank of a natural wetland.
Watercourses	
PO4 Clearing associated with a watercourse is protected in a manner that maintains: (1) bank stability by protecting against bank erosion (2) water quality by filtering sediments, nutrients and other pollutants (3) aquatic habitat (4) terrestrial habitat.	**AO4.1** Mechanical clearing does not occur within 20 metres of the defining bank of a watercourse. AND **AO4.2** The application of soil absorbed broad spectrum herbicides does not occur within 50 metres of the defining bank of a watercourse.

Performance outcomes	Acceptable outcomes
Soil erosion	
PO5 Clearing does not result in: (1) mass movement, gully erosion, rill erosion, sheet erosion, tunnel erosion, stream bank erosion, wind erosion, or scalding (2) any associated loss of chemical, physical or biological fertility — including, but not limited to water holding capacity, soil structure, organic matter, soil biology and nutrients within or outside the lot(s) that are the subject of the application.	**AO5.1** Mechanical clearing: (1) is limited to slopes less than 5 per cent (2) retains 50 per cent of the ground cover (dead or alive) in each 50 by 50 metre (0.25 hectare) area.
Acid sulfate soils	
PO6 Clearing activities do not result in disturbance of acid sulfate soils or changes to the hydrology of the location that will either: (1) aerate horizons containing iron sulfides, or (2) mobilise acid or metals	**AO6.1** Clearing does not occur in land zone 1, land zone 2 or land zone 3. OR **AO6.2** Clearing in land zone 1, land zone 2 or land zone 3 in areas below the 5 metre Australian Height Datum only occurs where: (1) it does not involve mechanical clearing (2) the acid sulfate soils are managed consistent with the *State Planning Policy*, Department of State Development, Infrastructure and Planning, 2013 and with the Soil management guidelines in the *Queensland Acid Sulfate Soil Technical Manual*, Department of Natural Resources and Mines, 2002. OR **AO6.3** The application is a development application where a local government is the assessment manager.

Table 8.1.11: Fodder

Performance outcomes	Acceptable outcomes
Limits to fodder harvesting	
PO1 Clearing for fodder harvesting: (1) occurs only in the following areas: (a) Balonne Shire Council (b) Barcaldine Shire Council (c) Barcoo Shire Council (d) Blackall Tambo Regional Council (e) Bulloo Shire Council (f) Diamantina Shire Council (g) Goondiwindi Regional Council (h) Longreach Regional Council (i) Maranoa Regional Council (j) Murweh Shire Council (k) Paroo Shire Council (l) Quilpie Shire Council (m) Western Downs Regional Council (n) Winton Shire Council is limited to the extent necessary to	No acceptable outcome is prescribed.

Performance outcomes	Acceptable outcomes
provide fodder for stock.	
Conserving vegetation that contains endangered regional ecosystems and of concern regional ecosystems	
PO2 Clearing: (1) does not occur in vegetation that contains endangered regional ecosystems (2) is limited to vegetation that contains of concern regional ecosystems 6.5.3, 11.5.13, 6.5.5 and 4.7.3, and by selective harvesting where it does not remove more than 3 in 10 fodder trees.	No acceptable outcome is prescribed.
Cleared vegetation	
PO3 Cleared vegetation is not moved from where it falls.	No acceptable outcome is prescribed.
Conserving the fodder resource	
PO4 Fodder harvesting does not reduce the total extent of the fodder in the regional ecosystem listed in Tables 8 and 9 on a lot to below 50 per cent of its current extent within any 10 year period.	**AO4.1** Fodder harvesting is limited to the regional ecosystems and harvesting methods listed in Tables 8 and 9, and: (1) is limited to areas that have not been harvested in the past 10 years (2) retained vegetation is not harvested within 10 years of the harvesting of an adjacent area which has been subject to either strip harvesting or block harvesting.
Wetlands	
PO5 Maintain vegetation associated with any natural wetland to protect: (1) water quality by filtering sediments; nutrients and other pollutants (2) aquatic habitat (3) terrestrial habitat.	**AO5.1** Mechanical clearing does not occur within 20 metres of any natural wetland. OR **AO5.2** Strip harvesting or block harvesting does not occur within 100 metres of any natural wetland.
Watercourses	
PO6 Maintain vegetation associated with any watercourse to protect: (1) bank stability by protecting against bank erosion (2) water quality by filtering sediments, nutrients and other pollutants (3) aquatic habitat (4) terrestrial habitat.	**AO6.1** Mechanical clearing does not occur within 20 metres from the defining bank of any watercourse. OR **AO6.2** Strip harvesting or block harvesting does not occur within 100 metres of the defining bank of any watercourse.
Soil erosion	
PO7 Clearing does not result in: (1) mass movement, gully erosion, rill erosion, sheet erosion, tunnel erosion, stream bank erosion, wind erosion, or scalding (2) any associated loss of chemical, physical or biological fertility — including, but not limited to water holding capacity, soil structure, organic matter, soil biology and nutrients within or outside the lot(s) that are the subject of the application.	**AO7.1** Strip harvesting or block harvesting: (1) does not occur on a slope that exceeds 5 per cent (2) is aligned across the slope. OR **AO7.2** Harvesting occurs using selective harvesting or breaker harvesting methods.
Salinity	

Performance outcomes	Acceptable outcomes
PO8 Clearing does not contribute to land degradation through: (1) waterlogging, or (2) the salinisation of groundwater, surface water or soil	**AO8.1** Clearing does not occur in or within 200 metres of a discharge area or recharge area, or salinity warning area. OR **AO8.2** Clearing is less than: (1) 2 hectares, or (2) 10 metres wide.
Conserving vegetation	
PO9 Fodder harvesting activities: (1) retain at least: (a) 50 per cent of the predominant canopy cover of the vegetation over each 300 by 300 metre (9 hectare) area when selective harvesting or narrow strip harvesting (b) 55 per cent of the predominant canopy cover of the vegetation over each 300 by 300 metre (9 hectare) area when block harvesting or wide strip harvesting (2) maintain the range of species of the regional ecosystem at the locality.	**AO9.1** Selective harvesting does not: (1) harvest more than 5 in 10 individual fodder trees in any given area (2) remove non-fodder species beyond that needed to provide access for harvesting, or (3) involve mechanical clearing within 50 metres of a scarp or an area of instability, in the following regional ecosystems 6.7.1, 6.7.6, 6.7.14, 6.7.15, 6.7.16, 11.7.1, 11.7.2 and 11.7.5. OR **AO9.2** Strip harvesting or block harvesting only occurs in regional ecosystems listed in Table 8. AND **AO9.3** Block harvesting: (1) is limited to the harvesting area and width of retained vegetation listed in Table 10 (2) retains non-fodder species with height of 4 metres or more within the harvested area (3) does not occur in fodder regional ecosystems that are less than 10 hectares in area or 500 metres in width (4) tracks between blocks are limited to a width of 10 metres. OR **AO9.4** Wide strip harvesting: (1) occurs where the harvested strip is 70-135 metres in width (1) retains a minimum of 165 metres wide strip of retained vegetation on either side of the cleared strip (2) only occurs for a 800 metre length with the retention of a 200 metre wide patch of vegetation at the end of each length (3) does not occur in fodder regional ecosystems that are less than 10 hectares in area or 500 metres in width. OR **AO9.5** Narrow strip harvesting: (1) occurs where the harvested strip is 20 to 50 metres in width (2) retains vegetation on either side of the strip a width at least equal to the width of the harvested strip (3) does not occur in fodder regional ecosystems listed in Tables 8 and 9 that are less than 10 hectares in area or 500 metres in width.
Essential habitat	
PO10 Maintain the current extent of essential habitat.	**AO10.1** Fodder harvesting does not occur in essential habitat. OR **AO10.2** Clearing in essential habitat does not exceed the width or area prescribed in Table 1. OR

Performance outcomes	Acceptable outcomes
	AO10.3 Where it can be demonstrated that the clearing cannot be avoided, and the extent of clearing has been minimised an environmental offset is provided for clearing of essential habitat. Editor's note: Refer to *Appendix A: Policy for vegetation management offsets* of the code for guidance regarding the provision of an environmental offset.
Fodder species	
PO11 Fodder harvesting consists predominantly of fodder species.	**AO11.1** Fodder harvesting consists predominantly of fodder species and only occurs in the regional ecosystems listed in Tables 8 or 9.

8.1.3 Reference tables

Table 1

Clearing limits per regional ecosystem structure category		
Structure category	**Width (metres)**	**Area (hectares)**
Dense and mid-dense*	10	0.5
Sparse and very sparse*	20	2
Grassland*	25	5

*Editor's note: Refer to the structure category within the *Regional Ecosystem Description Database* available on the Department of Environment and Heritage Protection website.

Table 2

Distance from defining banks of watercourses in which clearing cannot occur	
Watercourse stream order	**Distance from the defining bank (metres)**
Coastal bioregions and sub-regions	
1 or 2	10
3 or 4	25
5 or greater	50
Non-coastal bioregions and sub-regions	
1 or 2	25
3 or 4	50
5 or greater	100

Table 3

Maintaining connectivity	
Coastal bioregions and sub-regions	**Non-coastal bioregions and sub-regions**
Clearing does not: (1) occur in areas of vegetation that are less than 10 hectares (2) reduce the extent of vegetation to less than 10hectares (3) occur in areas of vegetation less than 100 metres wide	Clearing does not: (1) occur in areas of vegetation that are less than 50 hectares (2) reduce the extent of vegetation to less than 50 hectares (3) occur in areas of vegetation less than 200 metres wide (4) reduce the width of vegetation to less than 200 metres

Maintaining connectivity	
Coastal bioregions and sub-regions	**Non-coastal bioregions and sub-regions**
(4) reduce the width of vegetation to less than 100 metres (5) occur where the extent of vegetation on the subject lot(s) is reduced or less than 30 per cent of the total area of the lot(s)	(5) occur where the extent of vegetation on the subject lot(s) is reduced or less than 30 per cent of the total area of the lot(s).

Table 4

Clearing limitations for mechanical weed control	
Estimated per cent weed cover	**Clearing limitations**
Up to 50 per cent	Retain all habitat trees and retained trees and at least 50 per cent of the trees with a diameter of 15-19 cm, measured at breast height.
More than 50 per cent	Retain all retained trees or habitat trees.

Table 5

Dense regional ecosystems					
3.2.1	3.10.17	7.8.2	7.12.16	8.12.17	12.2.3
3.2.2	3.10.18	7.8.3	7.12.17	8.12.18	12.2.12
3.2.11	3.10.19	7.8.4	7.12.19	8.12.19	12.2.21
3.2.12	3.11.1	7.8.11	7.12.20	8.12.28	12.3.1
3.2.13	3.11.2	7.8.12	7.12.37	8.12.29	12.3.13
3.2.17	3.11.3	7.8.13	7.12.39	8.12.30	12.5.13
3.2.21	3.12.1	7.8.14	7.12.40	9.5.2	12.8.3
3.2.28	3.12.2	7.11.1	7.12.41	9.8.3	12.8.4
3.2.29	3.12.20	7.11.2	7.12.42	9.8.7	12.8.5
3.2.30	3.12.21	7.11.3	7.12.43	9.11.8	12.8.6
3.2.31	3.12.22	7.11.6	7.12.44	9.11.9	12.8.7
3.3.1	3.12.35	7.11.7	7.12.45	9.12.8	12.8.13
3.3.2	3.12.36	7.11.8	7.12.46	9.12.34	12.8.18
3.3.3	3.12.3	7.11.10	7.12.47	11.2.3	12.8.21
3.3.4	3.12.4	7.11.12	7.12.48	11.3.11	12.8.22
3.3.5	3.12.5	7.11.14	7.12.49	11.4.1	12.9-10.15
3.3.6	3.12.6	7.11.23	7.12.50	11.4.6	12.9-10.16
3.3.7	7.2.1	7.11.24	7.12.64	11.5.11	12.11.1
3.3.38	7.2.2	7.11.25	7.12.68	11.5.15	12.11.4
3.3.39	7.2.5	7.11.27	8.2.2	11.5.18	12.11.10
3.3.40	7.2.6	7.11.28	8.2.4	11.7.5	12.11.11
3.3.55	7.2.9	7.11.29	8.2.5	11.8.3	12.11.12
3.3.68	7.2.10	7.11.30	8.3.1	11.8.6	12.11.13

Dense regional ecosystems					
3.5.3	7.3.3	7.11.36	8.3.9	11.8.7	12.12.1
3.5.4	7.3.4	7.12.1	8.3.10	11.8.13	12.12.10
3.5.20	7.3.5	7.12.2	8.8.1	11.9.4	12.12.13
3.5.32	7.3.10	7.12.4	8.10.1	11.9.8	12.12.16
3.7.1	7.3.17	7.12.5	8.11.2	11.10.8	12.12.17
3.8.1	7.3.23	7.12.6	8.11.10	11.11.5	12.12.18
3.8.2	7.3.35	7.12.7	8.12.1	11.11.18	13.11.7
3.8.5	7.3.36	7.12.9	8.12.2	11.11.21	13.12.6
3.10.1	7.3.37	7.12.10	8.12.3	11.12.4	
3.10.2	7.3.38	7.12.11	8.12.10	11.12.18	
3.10.3	7.3.49	7.12.12	8.12.11	12.2.1	
3.10.5	7.8.1	7.12.13	8.12.16	12.2.2	

Table 6

Regional ecosystems where thinning cannot occur					
1.10.5	3.12.4	7.11.7	8.3.9	10.4.5	11.11.18
2.1.1	3.12.5	7.11.8	8.3.10	10.4.6	11.11.19
2.1.2	3.12.6	7.11.10	8.5.7	10.4.7	11.11.21
2.1.3	3.12.20	7.11.12	8.8.1	10.7.3	11.12.4
2.1.4	3.12.21	7.11.14	8.10.1	10.7.7	11.12.12
2.7.1	3.12.22	7.11.23	8.11.2	10.7.8	11.12.18
2.7.2	3.12.28	7.11.24	8.11.7	10.9.1	11.12.21
2.10.5	3.12.35	7.11.25	8.11.9	10.9.2	12.1.1
3.1.1	3.12.36	7.11.26	8.11.10	10.9.3	12.1.2
3.1.2	3.12.37	7.11.27	8.12.1	10.9.6	12.1.3
3.1.3	3.12.38	7.11.28	8.12.2	10.10.1	12.2.1
3.1.4	4.3.23	7.11.29	8.12.3	11.1.1	12.2.2
3.1.5	4.7.1	7.11.30	8.12.10	11.1.2	12.2.3
3.1.6	4.7.6	7.11.36	8.12.11	11.1.3	12.2.12
3.2.1	4.7.7	7.12.1	8.12.16	11.1.4	12.2.21
3.2.2	4.7.8	7.12.2	8.12.17	11.2.3	12.3.1
3.2.11	4.9.15	7.12.4	8.12.18	11.3.1	12.3.13
3.2.12	4.9.17	7.12.5	8.12.19	11.3.5	12.5.9
3.2.13	4.9.19	7.12.6	8.12.28	11.3.8	12.5.13
3.2.17	5.7.1	7.12.7	8.12.30	11.3.11	12.8.3
3.2.21	5.7.2	7.12.9	9.3.9	11.3.17	12.8.4
3.2.28	5.7.5	7.12.10	9.3.23	11.3.34	12.8.5
3.2.29	5.7.12	7.12.11	9.4.1	11.4.1	12.8.6
3.2.30	5.7.13	7.12.12	9.4.2	11.4.3	12.8.7

Regional ecosystems where thinning cannot occur					
3.2.31	5.7.14	7.12.13	9.4.3	11.4.5	12.8.13
3.3.1	7.1.1	7.12.16	9.5.2	11.4.6	12.8.18
3.3.2	7.1.2	7.12.17	9.5.15	11.4.7	12.8.19
3.3.3	7.1.3	7.12.19	9.5.16	11.4.8	12.8.21
3.3.4	7.1.4	7.12.20	9.7.2	11.4.9	12.8.22
3.3.5	7.2.1	7.12.39	9.8.3	11.4.10	12.8.23
3.3.6	7.2.2	7.12.40	9.8.6	11.5.10	12.9-10.6
3.3.7	7.2.5	7.12.41	9.8.7	11.5.11	12.9-10.9
3.3.38	7.2.6	7.12.42	9.10.3	11.5.15	12.9-10.15
3.3.39	7.2.10	7.12.43	9.11.8	11.5.16	12.9-10.16
3.3.40	7.3.3	7.12.44	9.11.9	11.5.18	12.11.1
3.3.68	7.3.4	7.12.45	9.11.28	11.7.1	12.11.4
3.3.69	7.3.10	7.12.46	9.11.29	11.7.2	12.11.10
3.3.70	7.3.17	7.12.47	9.11.30	11.7.5	12.11.11
3.5.3	7.3.23	7.12.48	9.12.8	11.8.3	12.11.12
3.5.4	7.3.35	7.12.49	9.12.9	11.8.6	12.11.13
3.5.20	7.3.36	7.12.50	9.12.34	11.8.7	12.12.1
3.5.32	7.3.37	7.12.54	9.12.36	11.8.13	12.12.10
3.7.1	7.3.38	7.12.57	9.12.37	11.9.1	12.12.13
3.7.2	7.3.49	7.12.64	9.12.38	11.9.4	12.12.16
3.8.1	7.8.1	7.12.65	10.3.1	11.9.5	12.12.17
3.8.2	7.8.2	7.12.66	10.3.2	11.9.6	12.12.18
3.8.5	7.8.3	7.12.68	10.3.3	11.9.8	12.12.19
3.10.1	7.8.4	8.1.1	10.3.4	11.9.11	12.12.26
3.10.3	7.8.11	8.1.2	10.3.16	11.9.12	13.11.7
3.10.5	7.8.12	8.1.3	10.3.19	11.10.3	13.12.6
3.11.1	7.8.13	8.1.5	10.3.29	11.10.8	
3.11.2	7.8.14	8.2.2	10.3.30	11.11.2	
3.11.3	7.11.1	8.2.4	10.4.1	11.11.5	
3.12.1	7.11.2	8.2.5	10.4.2	11.11.13	
3.12.2	7.11.3	8.2.14	10.4.3	11.11.14	
3.12.3	7.11.6	8.3.1	10.4.4	11.11.16	

Table 7

Grassland regional ecosystems in which encroachment can be cleared					
3.3 56	4.3.13	4.9.9	6.7.17	10.3.7	11.4.11
3.3.60	4.3.20	5.7.9	8.3.12	10.3.8	11.8.11
3.3.61	4.9.7	5.7.10	9.8.5	11.3.20	11.9.12
3.12.32	4.9.8	6.3.13	9.12.42	11.3.31	

Table 8

Regional ecosystems in which fodder species are dominant and suitable for fodder harvesting by all harvesting practices						
4.5.1	5.5.2	5.7.14	6.5.8	6.5.14	6.7.9	6.7.17
4.5.2	5.5.4	6.3.21	6.5.9	6.5.15	6.7.10	
4.5.3	5.5.6	6.5.1	6.5.10	6.5.16	6.7.11	
4.5.4	5.6.4	6.5.6	6.5.11	6.5.18	6.7.12	
5.5.1	5.7.5	6.5.7	6.5.13	6.6.1	6.7.13	

Table 9

Regional ecosystems in which fodder species are not dominant and harvesting is limited to selective harvesting only.					
4.7.3	6.3.24	6.5.17	6.7.15	11.3.28	11.7.2
5.5.3	6.5.2	6.7.1	6.7.16	11.3.17	11.11.2
6.3.16	6.5.3	6.7.6	11.3.2	11.5.13	
6.3.18	6.5.5	6.7.14	11.3.20	11.7.1	

Table 10

Block harvesting	
Block Harvesting Area	**Minimum width of retained vegetation**
1 – 4 hectares (100 metre by 100 metre – 200 metre by 200 metre)	100 metres
0.5 hectare (75 metre by 75 metre)	50 metres
0.25 hectare (50 metre by 50 metre)	25 metres

Table 11

Measurements of mature trees at 1.3 metres (diameter breast height)		
Clearing Purpose	**Bioregion/subregion**	**Measurement at 1.3 metres**
Encroachment	N/A	Trees with a single trunk – ›20 centimetres Trees with several trunks – ›30 centimetres
Thinning and weed control	Coastal bioregions and subregions	Eucalyptus, Corymbia, Angophora, Lophostemon - ›40 centimetres Genera other than Eucalyptus, Corymbia, Angophora and Lophostemon – ›20 centimetres
Thinning and weed control	Non-coastal bioregions and subregions	Eucalyptus, Corymbia, Angophora, Lophostemon - ›30 centimetres Genera other than Eucalyptus, Corymbia, Angophora and Lophostemon - ›20 centimetres

Table 12

Range of size classes – trees	
Class	**Diameter at breast height (1.3 metres)**
1	‹5 centimetres
2	5-10 centimetres
3	›10-20 centimetres

Range of size classes – trees	
4	>20-40 centimetres

8.2 Figures

Figure 1: Location of coastal and non-coastal bioregions and sub-regions

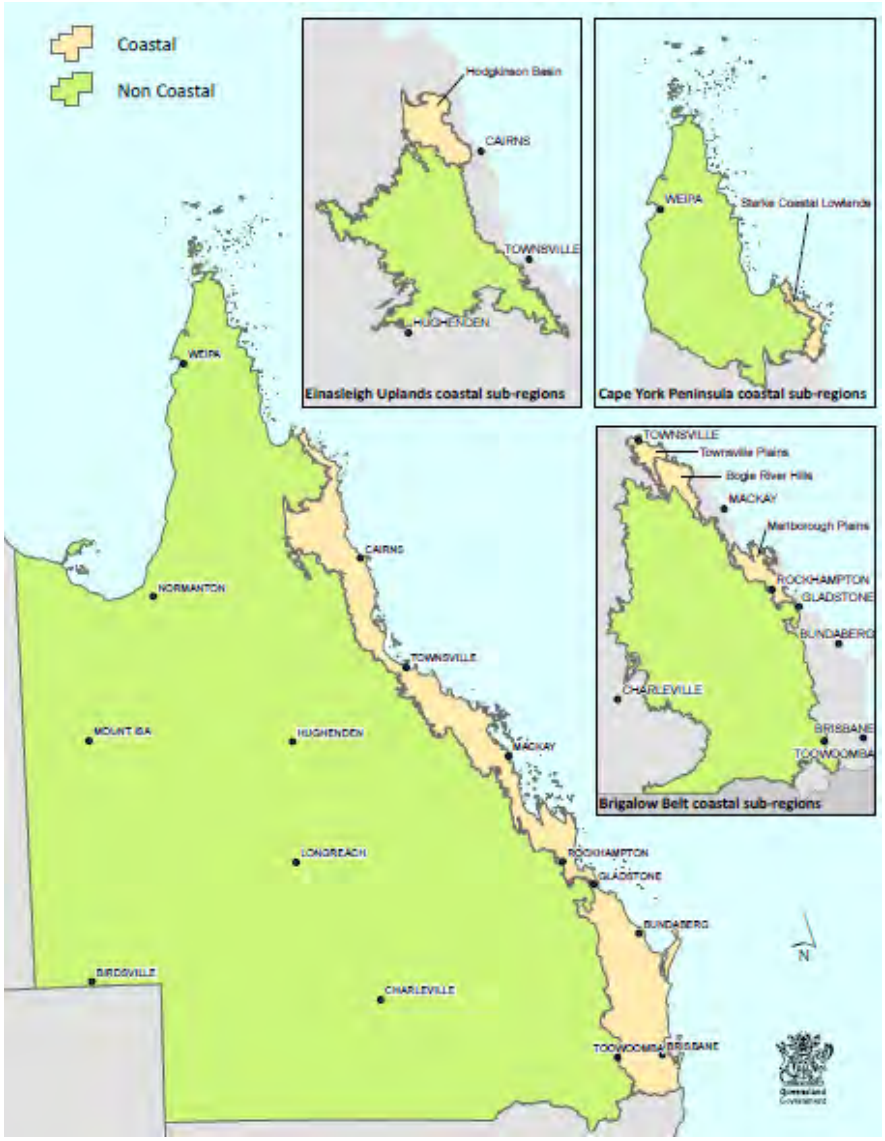
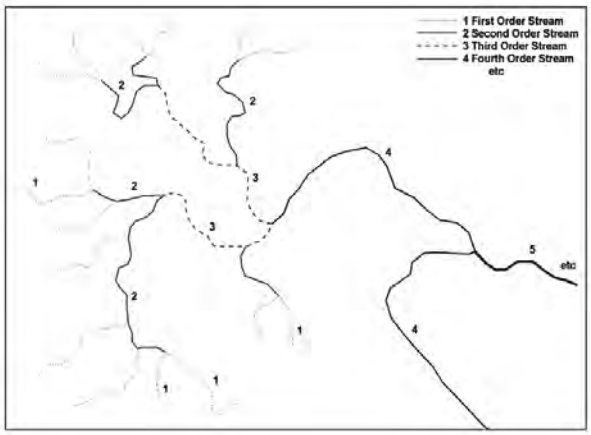


Figure 2: Diagrammatic view of stream ordering

When two streams of the same order join, the resulting watercourse becomes one stream order larger. If two streams of different orders join, the resultant stream order is that of the larger stream.



8.3 Reference documents

Department of State Development, Infrastructure and Planning 2013 *State Planning Policy*

Department of Natural Resources and Mines *Queensland Acid Sulfate Soil Technical Manual*

Department of Natural Resources and Mines 2013 *Guideline for determining high value and irrigated high value agriculture*

Department of Environment and Heritage Protection *Regional ecosystems database*

Department of Environment and Heritage Protection *Benchmarks*

Department of Environment and Resource Management 2011 *Salinity Management Handbook*

Department of Natural Resources and Mines 2013 *Guide for necessary environmental clearing*

8.4 Glossary of terms

Aerial application is application by aircraft.

Application area is the area identified as proposed for clearing in the property vegetation management plan.

Benchmarks are quantitative values derived from reference sites for each condition attribute assessed in BioCondition, and are used as a reference value for comparison purposes. Benchmarks have been developed from information published by the State of Queensland (acting through the Department of Science, Information Technology, Innovation and the Arts).

Block harvesting refers to fodder harvesting in a patch or clump and retaining undisturbed fodder vegetation around the block.

Breaker harvesting refers to fodder harvesting using a single tractor with a breaker bar to push down or break off the top or branches of fodder trees.

Category A area see the *Vegetation Management Act 1999* section 20AL.

Editor's note: A category A area is an area, other than a category B area, category C area, category R area or category X area, shown on the regulated vegetation management map as a category A area that—

(1) is any of the following—

(a) a declared area;

(b) an offset area;

(c) an exchange area; or

(2) has been unlawfully cleared; or

(3) is, or has been, subject to—

(a) a restoration notice; or

(b) an enforcement notice under the Planning Act containing conditions about restoration of vegetation; or

(4) has been cleared of native vegetation and in relation to the clearing a person has been found guilty by a court, whether or not a conviction has been recorded, of a clearing offence; or

(5) the chief executive decides under section 20BA [of the VMA] is a category A area.

Category B area see the *Vegetation Management Act 1999* section 20AM.

Editor's note: A category B area is an area, other than a category A area, category C area, category R area or category X area, shown on the regulated vegetation management map as a category B area that—

(1) contains remnant vegetation; or

(2) the chief executive [administering the VMA] decides to show on the regulated vegetation management map as a category B area; or

(3) if section 20AN [of the VMA] does not apply to the area—

(a) is a Land Act tenure to be converted under the *Land Act 1994* to another form of tenure; and

(b) contains—

(i) an endangered regional ecosystem; or

(ii) an of concern regional ecosystem; or

(iii) a least concern regional ecosystem.

Clearing to clear, for vegetation:

(1) means remove, cut down, ringbark, push over, poison or destroy in any way including by burning, flooding or draining, but

(2) does not include destroying standing vegetation by stock, or lopping a tree.

Editor's note: For the purpose of assessment of a material change of use or reconfiguring a lot application, any reference to clearing is taken to be "clearing as a result of the material change of use" or "clearing as a result of the reconfiguring a lot".

"Clearing as a result of the material change of use" includes:

(1) Clearing of vegetation that will result from the change in use, consisting of any of the following:

(a) Clearing to construct built infrastructure—including buildings, stormwater management systems, water supply and sewerage systems—that are proposed as part of the material change of use application.

(b) Clearing for roads, vehicle parking, vehicle and pedestrian access, utilities corridors, services, fences, firebreaks and fire management lines that are proposed as part of the material change of use application.

(c) Clearing that may not be necessary for developing infrastructure but is associated with the use applied for.

(2) Clearing of vegetation that will become exempt if the development application is approved. This includes any of the following examples:

(a) Clearing for routine management and essential management purposes associated with the approved development including clearing to maintain proposed infrastructure, facilities, roads, access routes, utilities, services and fences, and clearing to maintain the safety of persons and property that will be associated with the development.

(b) Clearing for necessary fire breaks and fire management lines and safety buffers associated with the development. This will be assessed as follows:

(i) All built infrastructure other than underground services, roads and fences will be assessed as requiring clearing for firebreaks and safety buffers with a width of 20 metres or 1.5 times the height of the tallest adjacent tree to the infrastructure, whichever is the greater

(ii) All proposed allotment boundaries will be assessed as requiring clearing for fire management lines with a width of 10 metres constructed on either side of the allotment boundary unless written evidence from the relevant Area Director of the Queensland Fire and Rescue Service which confirms an alternative fire management line width is required or acceptable.

(iii) In the case of evidence being presented which demonstrates constraints on clearing for fire management lines as being reasonably imposed in accordance with written evidence from the relevant Area Director or equivalent officer of the Queensland Fire and Rescue Service, the development may be conditioned so that the full extent of exempt clearing prescribed for essential management under Schedule 24 of the Sustainable Planning Regulation 2009 cannot be carried out by current or future **landholders.**

"Clearing of a result of reconfiguring a lot" includes:

(1) Clearing of vegetation that will result from reconfiguring a lot, consisting of any of the following:

(a) Clearing for boundary fence lines for each proposed allotment (whether or not the clearing is proposed as part of the application)

(b) Clearing to construct built infrastructure, including stormwater management systems, water supply and sewerage systems, roads, access routes or utilities corridors that are proposed as part of the reconfiguring a lot application or that will be required as a condition of approval by the assessment manager

(c) Clearing for excavation and filling, for example, where the lots are to be levelled.

(2) Clearing of vegetation that will become exempt if the development application is approved. This includes any of the following examples:

(a) Clearing for a single residence and reasonably associated buildings and structures for each allotment to be created as a result of the reconfiguring a lot, where no such dwelling house already exists on the proposed allotment

(b) All lots will be assessed as including clearing of 2 hectares for of the purpose stated in (d)(i), or for lots smaller than 2 hectares the whole area of the lot, unless the application demonstrates that a greater or smaller area will be required and achieved—for example, building envelopes binding on title

(c) Clearing for routine management and essential management purposes associated with the approved development including clearing to maintain proposed infrastructure, facilities, roads, access routes, utilities, services and fences, and clearing to maintain the safety of persons and property that will be associated with the development

(d) Clearing for necessary fire breaks, fire management lines and safety buffers associated with the development. This will be assessed as follows:

(i) All built infrastructure other than underground services, roads and fences will be assessed as requiring clearing for firebreaks and safety buffers with a width of 20 metres or 1.5 times the height of the tallest adjacent tree to the infrastructure, whichever is the greater.

(ii) All proposed allotment boundaries will be assessed as requiring clearing for fire management lines with a width of 10 metres constructed on either side of the allotment boundary unless written evidence from the relevant Area Director of the Queensland Fire and Rescue Service which confirms an alternative fire management line width is required or acceptable.

(iii) In the case of evidence being presented which demonstrates constraints on clearing for fire management lines as being reasonably imposed in accordance with written evidence from the relevant Area Director of the Queensland Fire and Rescue Service, the development may be conditioned so that the full extent of exempt clearing prescribed for essential management under Schedule 24 of the Sustainable Planning Regulation 2009 cannot be carried out by current or future landholders. .

Coastal bioregions and subregions include the following bioregions and subregions, as shown in Figure 1:

(1) Brigalow Belt Bioregion sub-regions Townsville Plains (sub-region 11.1), Bogie River Hills (sub-region 11.2), and Marlborough Plains (sub-region 11.14)

(2) Central Queensland Coast Bioregion

(3) Cap York Peninsula Bioregion sub-region Starke Coastal Lowlands (sub-region 3.2)

(4) Einasleigh Uplands Bioregion sub-region Hodgkinson Basin

(5) Wet Tropics Bioregion

(6) South East Queensland Bioregion.

Contaminants removal means part (d) of necessary environmental clearing, defined as clearing of vegetation that is necessary to remove contaminants from land.

Coordinated project see the *State Development and Public Works Organisation Act 1971*, section 26.

Editor's Note: A coordinated project is a project declared to be a coordinated project under the *State Development and Public Works Organisation Act 1971*.

Defining bank is the bank which confines the seasonal flows but may be inundated by flooding from time to time. This can be either:

(1) the bank or terrace that confines the water before the point of flooding, or

(2) where there is no bank the seasonal high water line which represents the point of flooding.

Dense regional ecosystems are those listed in Table 5.

Discharge area is an area in the landscape where the net movement of groundwater is out of the catchment. Waterlogging and salting are most likely to occur in this area, as expressions of groundwater discharging at the soil surface by seepage or evaporation. A discharge area is identified by an assessment process that is consistent with the *Salinity Management Handbook*, second edition, Department of Environment and Resource Management, 2011.

Encroachment means a woody species that has invaded an area of a grassland regional ecosystem to an extent the area is no longer consistent with the description of the regional ecosystem.

Endangered regional ecosystem see the *Vegetation Management Act 1999*

Editor's note: Endangered regional ecosystem means a regional ecosystem declared to be an endangered regional ecosystem under the *Vegetation Management Act 1999.*

Environmental clearing management plan outlines management actions that will be undertaken in an area cleared for necessary environmental clearing to rehabilitate the area over time to ensure endangered regional ecosystems, of concern regional ecosystems, least concern regional ecosystems, essential habitat and connectivity are maintained, wetlands and watercourses are protected, and the effects of clearing do not result in land degradation.

Editor's note: Refer to the *Guide for necessary environmental clearing,* Department of Natural Resources and Mines, 2013 to assist with developing the management plan.

Environmental offset see the *Sustainable Planning Act 2009*.

Editor's note: Environmental offset means works or activities undertaken to counterbalance the impacts of a development on the natural environment.

Editor's note: Environmental offset for the purpose of this code is an offset provided in accordance with Appendix A: Policy for vegetation management offsets.

Essential habitat See the *Vegetation Management Act 1999*.

Editor's note: Essential habitat, for protected wildlife, means a category A area, category B area or category C area shown on the regulated vegetation management map—

(1) that has at least 3 essential habitat factors for the protected wildlife that must include any essential habitat factors that are stated as mandatory for the protected wildlife in the essential habitat database; or

(2) in which the protected wildlife, at any stage of its life cycle, is located.

Essential habitat database see the *Vegetation Management Act 1999*.

Editor's note: An essential habitat database means a database, listing essential habitat factors for protected wildlife, certified by the chief executive administering the *Vegetation Management Act 1999* as an essential habitat database.

Essential habitat factor see the *Vegetation Management Act 1999*.

Editor's note: Essential habitat factor, for protected wildlife, is a component of the wildlife's habitat, including for example, a landform, pollinator, regional ecosystem, soil and water, that is necessary or desirable for the wildlife at any stage of its lifecycle.

Essential management see the *Sustainable Planning Regulation 2009*.

Editor's note: Essential management means clearing native vegetation:

(1) for establishing or maintaining a necessary firebreak to protect infrastructure other than a fence, road or vehicular track, fi the maximum width of the firebreak is equivalent to 1.5 times the height of the tallest vegetation adjacent to the infrastructure, or 20 metres, whichever is the greater, or
(2) for establishing a necessary fire management line if the maximum width of the clearing for the fire management line is 10 metres, or
(3) necessary to remove or reduce the imminent risk that the vegetation poses of serious personal injury or damage to the infrastructure, or
(4) by fire under the *Fire and Rescue Service Act 1990* to reduce hazardous fuel load, or
(5) necessary to maintain infrastructure including any core airport infrastructure, buildings, fences, helipads, roads, stockyards, vehicular tracks, watering facilities and constructed drains other than contour banks, other than to source construction material, or
(6) for maintaining a garden or orchard, other than clearing predominant canopy trees to maintain underplantings established within remnant vegetation, or
(7) on land subject to a lease issued under the *Land Act 1994* for agriculture or grazing purposes to source construction timber to repair existing infrastructure on the land, if —
    (a) the infrastructure is in need of immediate repair
    (b) the clearing does not cause land degradation as defined under the VMA
    (c) restoration of a similar type, and to the extent of the removed trees, is ensured, or
(8) by the owner on freehold land to source construction timber to maintain infrastructure on any land of the owners, if —
    (a) the clearing does not cause land degradation as defined under the VMA
    (b) restoration of a similar type, and to the extent of the removed trees, is ensured.

Extractive industry see the *Vegetation Management Act 1999*.

Editor's note: Extractive industry means an extractive industry as defined under the standard planning scheme provisions.

Extractive industry means premises used for the extraction and processing of extractive resources and associated activities, including their transportation to market.

Fodder harvesting see the *Vegetation Management Act 1999.*

Editor's note: Fodder harvesting is the clearing of vegetation predominantly consisting of fodder species:

(1) necessary to provide fodder for stock

(2) carried out in a way that—

(a) conserves the vegetation in perpetuity

(b) conserves the regional ecosystem in which the vegetation is situated

(c) results in the woody biomass of the cleared vegetation remaining where it is cleared.

Fodder species are any of the following:

(1) *Acacia aneura*

(2) *Acacia cibaria (Acacia brachystachya)*

(3) *Acacia excelsa*

(4) *Acacia pendula*

(5) *Acacia stowardii*

(6) *Alphitonia excelsa*

(7) *Flindersia maculosa*

(8) *Geijera parviflora*.

Groundwater is water occurring below the surface of the ground.

Gully erosion is the removal of soil by water creating large incised channels more than 30 centimetres in depth.

Habitat trees includes trees used for habitat, nesting and feeding. Habitat trees are trees used or potentially used by hollow-dwelling fauna. Habitat trees are identified as a living tree with one or more visible hollows of 10 cm or more in diameter that are positioned at least 2 metres above the base of the tree. Nest trees are trees which contain an active bird's nest or the nest of a raptor or other bird which utilises the same nest year after year. Feed trees are trees which display five or more incisions typically made by a yellow bellied glider.

High value agriculture clearing see the *Vegetation Management Act 1999*.

Editor's note: High value agriculture clearing means clearing carried out to establish, cultivate and harvest crops, other than clearing for grazing activities or plantation forestry. For further information refer to *Guideline for determining high value and irrigated high value agriculture*, Department of Natural Resources and Mines, 2013.

Immature trees are all woody plants that are greater than 2 metres high, other than mature trees.

Irrigated high value agriculture clearing see the *Vegetation Management Act 1999*.

Editor's note: Irrigated high value agriculture clearing means clearing carried out to establish, cultivate and harvest crops, or pasture, other than clearing for plantation forestry, that will be supplied with water by artificial means. For further information refer to *Guideline for determining high value and irrigated high value agriculture*, Department of Natural Resources and Mines, 2013.

Land degradation see the *Vegetation Management Act 1999*.

Editor's note: Land degradation includes the following:

(1) soil erosion

(2) rising water tables

(3) the expression of salinity

(4) mass movement by gravity of soil or rock

(5) stream bank instability

(6) a process that results in declining water quality.

Land restoration means part (a) of the necessary environmental clearing, defined as clearing of vegetation that is necessary to restore the ecological and environmental condition of land.

Land Zone 1 quaternary estuarine and marine deposits subject to periodic inundation by saline or brackish marine waters. Includes mangroves, saltpans, off-shore tidal flats and tidal beaches.

Land Zone 2 quaternary coastal dunes and beach ridges. Includes degraded dunes, sand plains and swales, lakes and swamps enclosed by dunes, as well as coral and sand cays.

Land Zone 3 quaternary alluvial systems, including floodplains, alluvial plains, alluvial fans, terraces, levees, swamps, channels, closed depressions and fine textured palaeo- estuarine deposits. Also includes estuarine plains currently under fresh water influence, inland lakes and associated dune systems (lunettes).

Least concern regional ecosystem see the *Vegetation Management Act 1999*

Editor's note: Least concern regional ecosystem means a regional ecosystem declared to be a least concern regional ecosystem under the *Vegetation Management Act 1999*.

Maintain the current extent means to:

(1) avoid clearing the regional ecosystems, or

(2) if subparagraph (1) is not reasonably practicable, ensure the structure and function of the regional ecosystem is maintained (minimise the clearing), or

(3) if subparagraphs (1) or (2) are not reasonably practicable, provide an environmental offset.

Mass movement is a landslip, earthflow, landslide, rock avalanche or soil creep.

Mature trees are trees with a diameter at 1.3 metres (diameter breast height) as specified in Table 11.

Mechanical clearing is the clearing of vegetation using machinery which disturbs the soil surface or uproots woody vegetation.

Natural channel diversion means part (b) of necessary environmental clearing, defined as clearing that is necessary to divert existing natural channels in a way that replicates the existing form of the natural channels.

Natural disaster preparation means part (c) of necessary environmental clearing, defined as clearing that is necessary to prepare for the likelihood of a natural disaster.

Necessary environmental clearing see the *Vegetation Management Act 1999*.

Editor's note: Necessary environmental clearing means clearing of vegetation that is necessary to—

(a) restore the ecological and environmental condition of land, or

Example—stabilising banks of watercourses, works to rehabilitate eroded areas, works to prevent erosion of land or for ecological fire management

(b) divert existing natural channels in a way that replicates the existing form of the natural channels, or

(c) prepare for the likelihood of a natural disaster, or

Example—removal of silt to mitigate flooding

(d) remove contaminants from land.

Non-coastal bioregions and subregions include the following bioregions and subregions, as shown in Figure 1:

(1) Brigalow Belt Bioregion sub-regions not listed under coastal bioregions and subregions

(2) New England Tableland Bioregion

(3) Northwest Highlands Bioregion

(4) Gulf Plains Bioregion

(5) Cape York Peninsula Bioregion sub-regions not listed under coastal bioregions and sub-regions

(6) Mitchell Grass Downs Bioregion

(7) Channel Country Bioregion

(8) Mulga Lands Bioregion

(9) Einasleigh Uplands Bioregion sub-regions not listed under coastal bioregions and sub-regions

(10) Desert Uplands Bioregion.

Of concern regional ecosystem see the *Vegetation Management Act 1999.*

Editor's note: Of concern regional ecosystem means a regional ecosystem declared to be an of concern regional ecosystem under the *Vegetation Management Act 1999*.

Property vegetation management plan see the *Vegetation Management Act 1999*

Editor's note: Property vegetation management plan mean a plan of the are to which a vegetation clearing application or concurrence agency application relates showing the matters prescribed under a regulation.

Protected wildlife see the *Vegetation Management Act 1999.*

Editor's note: Protected wildlife means native wildlife prescribed under the *Nature Conservation Act 1992* as —

(1) extinct in the wild wildlife, or

(2) endangered wildlife, or

(3) vulnerable wildlife, or

(4) rare wildlife, or

(5) near threatened wildlife, or

(6) least concern wildlife.

Public safety means clearing to ensure public safety.

Range of sizes means retaining a range of all size classes as outlined in Table 12.

Recharge area an area in the landscape where the net movement of water is downwards into and 'recharging' the groundwater. (Also sometimes referred to as an intake area.) A recharge area is identified by an assessment process that is consistent with the *Salinity Management Handbook*, second edition, Department of Environment and Resource Management, 2011.

Regional ecosystem description database is a database prepared by the Queensland Herbarium, which can be accessed at www.ehp.qld.gov.au.

Regulated vegetation management map see the *Vegetation Management Act 1999* section 20A.

Editor's note: The regulated vegetation management map is the map certified by the chief executive [administering the VMA] as the regulated vegetation management map for a part of the State and showing the vegetation category areas for the part.

Rehabilitated means undertaking management actions in accordance with an environmental clearing management plan to ensure:

(1) clearing vegetation associated with a wetland protects:

  (a) water quality by filtering sediments, nutrients and pollutants

  (b) aquatic habitat

  (c) terrestrial habitat

(2) clearing vegetation associated with a watercourse protects:

  (a) bank stability by protecting against bank erosion

  (b) water quality by filtering sediments, nutrients and pollutants

  (c) aquatic habitat

  (d) terrestrial habitat

(3) connectivity areas are maintained

(4) essential habitat is maintained

(5) endangered regional ecosystems, of concern regional ecosystem and least concern regional ecosystems are maintained.

Editor's note: Refer to the *Guide for necessary environmental clearing*, Department of Natural Resources and Mines, 2013 to assist with developing relevant management actions to ensure the application area is appropriately rehabilitated.

Relevant infrastructure see the *Vegetation Management Act 1999*.

Editor's note: A vegetation clearing application is for a relevant purpose if the applicant satisfies the chief executive administering the VMA that the development applied for is for a necessary fence, firebreak, road or vehicular track, or for constructing necessary built infrastructure (each relevant infrastructure) and the clearing for the relevant infrastructure cannot be reasonably avoided or minimised.

Remnant vegetation see the *Vegetation Management Act 1999.*

Editor's note: Remnant vegetation means vegetation:

(1) that is—

  (a) an endangered regional ecosystem, or

  (b) an of concern regional ecosystem, or

  (c) a least concern regional ecosystem

(2) forming the predominant canopy of the vegetation:

(a) covering more than 50 per cent of the undisturbed predominant canopy

(b) averaging more than 70 per cent of the vegetation's undisturbed height

(c) composed of species characteristic of the vegetation's undisturbed predominant canopy.

Retained tree is any native tree that has a diameter at 1.3 metres above ground level which is 20 centimetres or more. For multi-stemmed trees, add the diameters of the two largest stems.

Retained vegetation is an area of a fodder regional ecosystem that has an average canopy height of fodder species that is more than 4 metres.

Regional ecosystem see the *Vegetation Management Act 1999*

Editor's note: Regional ecosystem means a vegetation community in a bioregion that is consistently associated with a particular combination of geology, landform and soil.

Rill erosion is the removal of soil creating small channels up to 30 centimetres deep.

Routine management see the Sustainable Planning Regulation 2009.

Editor's note: Routine management, for clearing native vegetation on land, means the clearing of native vegetation:

(1) to establish a necessary fence, road or vehicular track if the maximum width of clearing for the fence, road or track is 10 metres, or

(2) to construct necessary build infrastructure, including core airport infrastructure, other than contour banks, fences, roads or vehicular tracks, if:

(a) the clearing is not to source construction timber

(b) the total extent of clearing is less than 2 hectares

(c) the total extent of the infrastructure is less than 2 hectares, or

(3) by the owner on freehold land to source construction timber for establishing necessary infrastructure on any land of the owner, if —

(a) the clearing does not cause land degradation as defined under the VMA

(b) restoration of a similar type, and to the extent of the removed trees, is ensured, or

(4) by the lessee of land subject to a lease issued under the *Land Act 1994* for agriculture or grazing purposes to source construction timber, other than commercial timber, for establishing necessary infrastructure on the land if:

(a) the clearing does not cause land degradation as defined under the VMA

(b) restoration of a similar type, and to the extent of the removed trees, is ensured.

Salinisation is the process of salts accumulating in soils or waters.

Salinity means waterlogging or the salinisation of groundwater, surface water or soil.

Salinity warning area means:

(1) vegetation indicative of saline conditions

(2) current or periodic seepage of the soil level or where the water table depth is less than 5 meters

(3) low-lying or break of slope areas

(4) landforms where seepage is likely (e.g. sandy soils overlaying heavier soils)

(5) vegetation indicative of wet conditions or bare areas, scalds or areas that are prone to erosion.

Scalding is:

(1) a bare area formed when the surface soil is removed by wind or water erosion, exposing a more clayey subsoil which is relatively impermeable to water, or

(2) where surface soil has been transformed into a hard-setting condition by exposure to raindrop impact or wind erosion.

Seasonal high water line is a zone which represents the usual peak seasonal flow level and can be identified by deposition, debris or characteristic vegetation zonation. If this is not obvious, project a horizontal line from the seasonal high water line on the opposite bank.

Selective harvesting means the harvesting of individual fodder trees in regional ecosystems identified in Tables 8 or 9 while retaining at least 50 per cent of the fodder trees in the harvesting area.

Sheet erosion is the removal of a uniform layer of soil from the surface with generally no obvious channel created.

Significant beneficial outcome is environmental work that will achieve a significant beneficial outcome to the biodiversity values of the land. This can include:

(1) repairing soil erosion or scalds, or

(2) stabilising unstable gullies, or

(3) fencing stock out of the area between the defining banks of a watercourse, or

(4) improving the condition of regulated vegetation or wildlife habitat by activities such as:

  (a) weed or pest control

  (b) using environmental burning to restore the regional ecosystem

  (c) undertake revegetation.

Editor's note: The environmental work can occur on the same lot as the clearing, another lot on the same property, or another lot on a different property in the locality. Applicant will be required to identify the location, nature of the works and a management plan for the works.

Slope is a measure of the upward or downward incline of the land surface over any 30 metre length in the application area.

Soil absorbed broad spectrum herbicides are herbicides that are taken up through the root systems of plants, such as those with hexazinone and tebuthiuron as active ingredients.

Soil erosion means mass movement, gully erosion, rill erosion, sheet erosion, tunnel erosion, stream bank erosion, wind erosion, or scalding; and any associated loss of chemical, physical or biological fertility— including, but not limited to water holding capacity, soil structure, organic matter, soil biology, and nutrients,

Stream order is a numerical ordering classification of each watercourse segment according to its position within a catchment, as shown in Figure 2. Stream orders are determined using the vegetation management watercourse map.

Strip harvesting refers to harvesting fodder in a strip and retaining undisturbed fodder vegetation along both sides of the strip.

Thinning is the selective clearing of vegetation to restore a regional ecosystem to the floristic composition and range of densities typical of that regional ecosystem in that area.

Vegetation see the *Vegetation Management Act 1999*.

Editor's note: Vegetation is a native tree to plant other than the following—

(1) a grass or non-woody herbage

(2) a plant within a grassland ecosystem prescribed under a regulation

(3) a mangrove.

Editor's note: For the purpose of this code, vegetation is limited to vegetation located within a category A area or category B area, shown on the regulated vegetation management map or a property map of assessable vegetation.

Vegetation management watercourse map see the *Vegetation Management Act 1999*.

Editor's note: The vegetation management watercourse map is the map certified by the chief executive administering the VMA as the vegetation management watercourse map showing particular watercourses for the State.

The map consists of the following documents:

(1) the document called Vegetation management watercourse map (1:25 000)

(2) the document called Vegetation management watercourse map (1:100 000 and 1:250 000).

Vegetation management wetlands map see the *Vegetation Management Act 1999*.

Editor's note: The vegetation management wetlands map is the map certified by the chief executive administering the VMA as the vegetation management wetlands map showing particular wetlands for the State.

Watercourse means the area of land:

(1) that is between the defining banks of a natural channel, whether artificially improved or not, in which water flows permanently or intermittently

(2) that is shown:

(a) as a watercourse at a scale of 1:25 000 on the vegetation management watercourse map for the local government areas of Brisbane, Moreton Bay, Gold Coast, Sunshine Coast, Logan and Redlands, excluding applications to clear vegetation for extractive industry, or

(b) as a watercourse shown on the vegetation management watercourse map for all other local governments and applications to clear vegetation for extractive industries.

Waterlogging is to soak or saturate with water.

Weed cover is the estimated percentage of the area that is covered by weeds, measured over a 30 by 30 metre (0.09 hectare) area.

Wetland means an area of land that supports plants or is associated with plants that are adapted to and dependent on living in wet conditions for at least part of their life cycle, and are shown on the vegetation management wetlands map.

Wind erosion is the movement of soil by wind.

8.5 Abbreviations

DNRM – Department of Natural Resources and Mines

VMA – *Vegetation Management Act 1999*

Appendix A: Policy for vegetation management offsets

8A.1 Purpose

The purpose of the Policy for vegetation management offsets (the offset policy) is to set the requirements for an offset as a condition of a development approval that the chief executive considers is necessary or desirable for achieving the purpose of the *Sustainable Planning Act 2009*.

The chief executive administering the *Sustainable Planning Act 2009* should comply with the offset policy when imposing an offset as a condition of a development approval.

8A.2 Rationale

The *Sustainable Planning Act 2009* makes certain categories of vegetation clearing assessable development to be assessed by the chief executive as assessment manager or referral agency.

Module 8: Native vegetation clearing supports both the purposes of the *Sustainable Planning Act 2009*, and the purposes of the *Vegetation Management Act 1999*. The purpose of the *Vegetation Management Act 1999* is to regulate the clearing of vegetation in a way that:

(1) conserves remnant vegetation that is:
  (a) an endangered regional ecosystem
  (b) an of concern regional ecosystem
  (c) a least concern regional ecosystem
(2) conserves vegetation in declared areas:
  (a) ensures clearing does not cause land degradation
  (b) prevents loss of biodiversity
  (c) maintains ecological processes
  (d) manages the environmental effects of the clearing to achieve (a) through (f)
  (e) reduces greenhouse gas emissions
  (f) allows for sustainable land use.

8A.3 Policy

The offset policy is a policy under the *Queensland Government Environmental Offsets Policy,* Environmental Protection Agency, 2008.

Module 8: Native vegetation clearing, sets out performance outcomes which development applications for clearing native vegetation should meet, including specific performance outcomes that require a development to maintain the current extent of a particular regional ecosystem.

Maintaining the current extent of a particular regional ecosystem can be achieved by:

(1) not clearing the regional ecosystem, or
(2) if subparagraph (1) is not reasonably practicable, ensuring the structure and function of the regional ecosystem is maintained, or
(3) if subparagraphs (1) and (2) are not reasonably practicable, the applicant proposes a land-based offset to satisfy the required outcome.

However, an offset may only be used to satisfy a performance outcome or acceptable outcome where the applicant has demonstrated to the chief executive that the development has first avoided and minimised the impacts of the development on vegetation prior to proposing an offset.

Where a development does not meet all the performance outcomes in the state code, irrespective of whether an offset has been proposed, the development should not be approved.

The chief executive of the *Sustainable Planning Act 2009* is the administering authority for the offset policy. However, the Department of Natural Resource and Mines (DNRM) performs offset monitoring, evaluation and compliance, and provides technical advice, to support the administering authority.

8A.4 Compliance and monitoring

An evaluation of the offset policy will be incorporated into the DNRM annual compliance plan. This evaluation will assess the level of compliance of individual offsets and offset area management plans, as well as evaluating the offset policy's overall success in maintaining the current extent of regional ecosystems.

This evaluation will be based on information sources including:

(1) satellite analysis based on the statewide landcover and tree study (SLATS)
(2) regular reporting provided by approval holders and offset providers
(3) targeted field audits by DNRM officers.

8A.5 How to use this policy

8A5.1 Vegetation offset criteria

All offsets must meet the vegetation offset criteria 1 to 6:

(1) offset limitations
(2) performance outcomes
(3) obtaining ecological equivalence
(4) ensuring the offset area is legally secured
(5) information requirements
(6) when an offset ceases to have effect.

8A.6 Advance offset

This section applies where an applicant seeks acknowledgment from the administering authority for an advance offset (refer to section 8A.8 Advance offsets).

8A.7 Vegetation offset criteria

8A7.1 Criteria 1 – offset limitations

All offset proposals must meet the following:

(1) be land-based, however, may be delivered as either a direct offset or offset transfer, or by an offset payment
(2) may be used to satisfy multiple offset requirements, where an offset is required under the *Sustainable Planning Act 2009* or another Act or policy of Commonwealth, state or local government for the one development application, providing the requirements of this offset policy are met
(3) may be located on land owned by the applicant or by a third party

(4) must, at a minimum, be the same number of hectares as the area requiring offsetting on the clearing site. However, an area may be less if the ecological equivalence for the offset area significantly exceeds the clearing area for both ecological equivalence criteria
(5) must, if the offset is less than 10 hectares, be connected to an area of assessable or otherwise protected vegetation that in total, is equal to or greater than 10 hectares
(6) must contain functioning regional ecosystems.

The proposed offset area must not:

(1) be vegetation shown as a Category A or Category B area on the regulated vegetation management map unless the area has a valid clearing approval under the *Sustainable Planning Act 2009* or *Vegetation Management Act 1999*, issued by the administering authority, that would result in the area being cleared
(2) be vegetation that is required to be retained by an approval issued under any Act administered by the Commonwealth, state or local government
(3) be on land that is the subject of an offset or exchange area arrangement administered by the Commonwealth, state or local government
(4) be land on which the vegetation is protected by an instrument of the state government, unless the area is an advance offset approved under the offset policy
(5) be vegetation shown as a Category C area on the regulated vegetation management map that is:
  (a) an endangered or of concern regional ecosystem on leasehold land (agriculture and grazing)
  (b) essential habitat
  (c) within a watercourse or wetland protection zone as determined using the Department of Natural Resources and Mines documents Managing category C regrowth vegetation: Self assessable vegetation clearing code, 2013. or Managing category R regrowth vegetation: Self assessable vegetation clearing code, 2013
  (d) on a slope greater than 20 per cent.

An offset area, where it meets the requirements of the offset policy, may be sourced from the following areas:

(1) category X areas identified on the regulated vegetation management map
(2) category C areas identified on the regulated vegetation management map, unless the area is identified in criteria 1
(3) category R areas identified on the regulated vegetation management map.

8A7.2 Criteria 2 – performance outcomes

The applicable section and performance outcome of the relevant assessment table identifies when an applicant may propose an offset as a means of meeting the performance outcome and the vegetation it relates to.

One offset area may address the offset requirements for multiple performance outcomes, providing that all the requirements for the clearing area are met.

The following list identifies the offset requirements for the vegetation associated with each of the performance outcomes.

8A.7.2.1 Wetlands

An offset area for wetlands must:

(1) be located within the same bioregion

(2) be an area of land that naturally supports plants or is associated with plants that are adapted to and dependent on living in wet conditions for at least part of their life cycle

(3) be a regional ecosystem associated with a wetland which assists with maintaining water quality, aquatic habitat and terrestrial habitat.

8A.7.2.2 Watercourses

An offset area for watercourses must be:

(1) located within the same bioregion

(2) the same or higher stream order as the watercourse proposed for clearing

(3) a regional ecosystem associated with a watercourse which assists with maintaining bank stability, water quality, aquatic habitat and terrestrial habitat.

8A.7.2.3 Connectivity

An offset area for connectivity must be:

(1) located within the same bioregion

(2) identified on a map within one of the following:

  (a) a strategic area or strategic rehabilitation area identified by DNRM

  (b) an ecological corridor identified by the Commonwealth, state or local government either on its website or in an approved and publically available document

  (c) a DNRM-approved strategic corridor identified by a recognised organisation or group.

8A.7.2.4 Endangered regional ecosystems

An offset area for an endangered regional ecosystem must be:

(1) an endangered regional ecosystem in the same broad vegetation group (at the regional scale of 1:1 000 000)

(2) located within the same bioregion.

8A.7.2.5 Of concern regional ecosystems

An offset for an of concern regional ecosystem must be:

(1) an of concern regional ecosystem in the same broad vegetation group (at the regional scale of 1:1 000 000)

(2) located within the same bioregion

(3) the same or higher conservation status as the area proposed for clearing.

8A.7.2.6 Essential habitat

An offset area for essential habitat must:

(1) be located within the same bioregion

(2) include at least three essential factors for the protected wildlife, and must include any essential habitat factors that are stated as mandatory for the protected wildlife in the essential habitat database, or be an area utilised by the protected wildlife at any stage of its life cycle for which there is recent evidence

(3) demonstrate that the direct impacts on the protected wildlife are mitigated by the offset area and surrounding environment.

8A.7.2.7 Essential habitat for koalas in South East Queensland

Where essential habitat is for the koala (*Phascolarctos cinereus*) and the clearing occurs within South East Queensland as mapped by the *South East Queensland Regional Plan*, Department of Infrastructure and Planning, 2009 (excluding the Toowoomba Regional Council area), the offset area must:

(1) be located within bushland habitat or an area suitable for rehabilitation, as identified by a *South East Queensland Koala Conservation State Planning Regulatory Provisions koala habitat values map*, Queensland Government, 2010 or a map in the *State Planning Policy*
(2) be located within the same regional or city council area as the primary clearing site or, where this is not achievable, be within an adjacent local government area
(3) demonstrate that the direct impacts on the protected wildlife are mitigated by the offset area and surrounding environment.

8A.7.2.8 Critically limited regional ecosystems

An offset area for a critically limited regional ecosystem listed in Appendix B must be:

(1) the same regional ecosystem as the area proposed for clearing
(2) located within the same bioregion.

8A.7.2.9 Offsetting values within a highly vegetated bioregion

An offset area may be proposed within another bioregion if the area proposed for clearing is located within the following highly vegetated bioregions:

(1) Northwest Highlands
(2) Gulf Plains
(3) Cape York Peninsula
(4) Mitchell Grass Downs
(5) Channel Country
(6) Einasleigh Uplands.

The offset area must:

(1) address the requirements associated with the relevant value in criteria 2, with the exception of being located within the same bioregion
(2) where relevant, be within the same broad vegetation group (at the state scale of 1:2 000 000)
(3) The above does not apply to endangered and critically limited regional ecosystems in Appendix B, which must be located within the bioregion where the clearing is proposed.

8A7.3 Criteria 3 – obtaining ecological equivalence

Demonstrating ecological equivalence on the proposed clearing area and offset area requires an ecological equivalence assessment of both areas. Ecological equivalence is comprised of two components —ecological condition and special features.

Ecological equivalence between the proposed impact site and the offset area is demonstrated when all of the following apply:

(1) when an ecological equivalence assessment is undertaken against the ecological equivalence indicators in Appendix C
(2) when the proposed offset area achieves a level of ecological condition the same as, or higher, than the impact site
(3) when the proposed offset area achieves a level of special features the same as, or higher, than the impact site.

Sufficient information must be provided to the administering authority to demonstrate that ecological equivalence between the proposed clearing area and offset area has been achieved.

Ecological equivalence can be measured using the ecological equivalence methodology, a decision support tool designed to assist the applicant and decision make determine the appropriateness of the offset.

For guidance on completing an assessment for ecological equivalence, refer to the *Ecological equivalence methodology guideline,* Department of Environment and Resource Management, 2011.

8A7.4 Criteria 4 – ensuring the offset area is legally secured

All land-based offset areas must be legally secured. Securing an offset area means the vegetation within an offset area, which meets the requirements of this offset policy, is provided with additional protection from clearing through the use of a legally binding mechanism such as a covenant, voluntary declaration or nature refuge.

The legally binding mechanism must be supported by an offset area management plan that identifies the actions required to ensure an offset area is managed in a way that meets the objectives of the offset area, such as achieving remnant status.

There are three options for delivering an offset under this offset policy. Applicants must choose one of the following:

(1) direct offsets
(2) offset transfer
(3) offset payments.

8A.7.4.1 Direct offsets

A direct offset is provided by an applicant at the same time as the development application is being assessed. This requires that the offset area, legally binding mechanism and offset area management plan are assessed prior to a development permit being approved.

Where the offset area, legally binding mechanism and offset area management plan are approved and a development approval is issued, and a condition of the approval requires the legally binding mechanism, the applicant has four months to ensure the legally binding mechanism is finalised, for example, a covenant under the *Land Act 1994* is registered on title with the Land Titles Registry within four months of the development permit being issued.

8A.7.4.2 Offset transfer

An applicant may enter into a legally binding contractual agreement with an offset broker for the provision of an offset area as a means of meeting the regulatory performance outcomes contained in Module 8: Native vegetation clearing, including the offset policy.

For an offset to be considered, it must be evident that an offset is available at the time of the development approval being issued, and that the offset can be legally secured within 12 months.

It is unlikely that an offset transfer would be suitable for threshold or critically limited regional ecosystems.

Prior to the development being approved, the applicant shall:

(1) provide the administering authority with a copy of a legally executed contractual agreement with an offset broker (broker agreement)
(2) enter into an agreement with the administering authority whereby the administering authority may approve the broker agreement, and whereby the applicant provides the financial surety in the form of an unconditional bank guarantee, consistent with the amount identified in the offset transfer with the offset broker.

Note: Queensland Government departments and government-owned corporations are not required to provide financial surety.

The offset transfer with the offset broker (broker agreement) must identify the following:

(1) proponent, project, stage, address and key contact details
(2) lot and plan of the clearing area, including tenure
(3) MyDAS reference number
(4) requirement to locate and legally secure an offset area consistent with the requirements set out in the offset policy
(5) requirement to provide a legally secured offset area within 12 months of the issuing of the applicant's development approval, whereby time is to be of the essence
(6) requirement to provide a written quarterly report to the administering authority on the progress of legally securing an offset area
(7) regional ecosystems, essential habitat species, wetland , stream order of the areas proposed for clearing, the areas (hectares) involved for each value
(8) ecological equivalence scores for ecological condition and special features on the clearing area
(9) financial amount which is the subject of the broker agreement.

Note: This financial amount will become the financial surety provided to the administering authority (this is not required where the applicant is state government departments and government-owned corporations).

The administering authority may refuse to accept an offset transfer as evidence of not meeting the performance outcomes within the state code:

(1) where insufficient evidence has been provided to demonstrate that an offset area is available in the landscape which meets the requirements of the offset policy
(2) where an applicant has not complied with a condition of a previous development permit, when that condition imposed an offset
(3) where the applicant has not concluded, as at the date of the application at hand, the terms and timeframes of a prior offset transfer as required by the conditions of a previous development approval.

Should the applicant be unable to legally secure an offset within 12 months as agreed through no default on the applicant's part, the applicant may apply for a time extension. The grant of an extension shall be at the discretion of the administering authority. The applicant must demonstrate substantial progress in locating and securing an offset and despite this effort is unable to meet the timeframes.

8A.7.4.3 Offset payment

An offset payment is a financial payment made by an applicant to a trust established for land management or nature conservation purposes and approved by administering authority.

The use of an offset payment will not be approved by the administering authority where an application does not meet all the performance outcomes in the state code.

An applicant must, prior to the administering authority approving the use of an offset payment and issuing the vegetation clearing approval, provide the following information:

(1) how the development has been designed and located to avoid and minimise the extent of clearing
(2) an ecological equivalence assessment, consistent with criteria 3—obtaining ecological equivalence, for the clearing area
(3) evidence from the approved trust to support the availability of a known pre-identified area which meets the requirements of the offset policy
(4) the offset payment amount, as quoted by the approved trust, based on the costs associated with locating and legally securing the pre-identified area above. The costs should include all administrative, legal and land management costs associated with delivering on the requirements of this offset policy.

Once the administering authority has approved the use of an offset payment, the applicant must provide the administering authority with a copy of the receipt from the approved trust prior to approval of the development application.

Once the development application has been approved by the assessment manager, the applicant must provide a copy of the development approval to the approved trust within 10 business days.

In accepting the offset payment, the approved trust must:

(1) locate an offset area within a strategic biodiversity corridor identified by DNRM
(2) locate an offset area which meets the offset requirements consistent with this offset policy
(3) provide quarterly written reports on the progress of legally securing the pre-identified offset
(4) provide an offset area proposal to the administering authority for assessment against the offset policy. The proposal must address how the offset area meets the requirements of the offset policy, and include a legally binding mechanism and offset area management plan
(5) legally secure the pre-identified offset area within 12 months of the issuing of the development approval.

8A.7.4.5 Indirect offsets

An indirect offset may form part of an offset package, in combination with either a direct offset or an offset transfer, where an applicant has provided an offset area which substantially achieves ecological equivalence with the clearing area, but fails to meet the required ecological equivalence scores.

For an indirect offset to be considered, the land-based offset must:

(1) meet assessment for ecological equivalence using the ecological equivalence methodology
(2) achieve the minimum threshold requirements for any ecological equivalence indicator identified in the ecological equivalence methodology
(3) obtain ecological equivalence scores for ecological condition and special features which are within 90 per cent of the ecological equivalence scores for the clearing area.

For an indirect offset to qualify, it must be an activity that will result in, or improve the spatial capture of vegetation and wildlife information, or be an action associated with a threatening process identified in a conservation plan or recovery plan. It must be for species or ecosystems within the same bioregion. These activities are either:

(1) habitat mapping or modelling for priority endangered, vulnerable or listed under the *Nature Conservation Act 1992* using a methodology approved by DNRM
(2) development of regional ecosystem benchmark data undertaken consistent with the *Methodology for the establishment and survey of reference sites for biocondition*, Department of Environment and Resource Management, 2011
(3) fauna survey of DNRM-identified strategic areas where inadequate data exists
(4) finer scale regional ecosystem mapping undertaken is consistent with the *Methodology for survey and mapping regional ecosystems and vegetation communities in Queensland*, Department of Science, Information Technology, Innovation and the Arts ,2012
(5) addressing a threatening process outlined in a state or Commonwealth approved conservation or recovery plan.

An applicant may contract either the Queensland Government (where this service is offered), or a suitability qualified consultant. All output stemming from an indirect offset must be made publically available via the Queensland Government.

The expenditure on an indirect offset activity must be relevant to the overall financial outlay of providing the land-based offset and the extent to which it makes up the ecological equivalence score (for example, 5 per cent, 10 per cent).

The applicant is responsible for providing sufficient information to the administering authority to facilitate assessment and approval of the indirect offset proposal. This information should include, but is not restricted to:

(1) financial outlay associated with the land-based offset
(2) activities to be undertaken to meet the requirements for an indirect offset
(3) responsible consultants, expertise and experience
(4) contractual arrangements
(5) timeframe for providing the indirect offset.

Where insufficient information is provided, the use of an indirect offset will not be approved. An indirect offset activity must be finalised within 12 months of approval of the indirect offset by the administering authority. A quarterly report on the progress of finalising the indirect offset activity is to be provided to the administering authority.

8A7.5 Criteria 5 – information requirements

All offset proposals must provide the following information to demonstrate how the requirements identified in the *Sustainable Planning Act 2009*, the state code, and the offset policy will be achieved. The following information must be provided to the satisfaction of the administering authority.

8A.7.5.1 General assessment requirements

(1) how the development has been designed and located on the lot(s) to avoid and minimise the extent of clearing
(2) tenure of the clearing area
(3) details of any rights to take forestry products.

8A.7.5.2 Offset proposal requirements

(1) details of how the vegetation offset criteria contained in this offset policy have been met, including the provision of the legally binding mechanism and offset area management plan
(2) tenure of offset area

(3) details of any mining encumbrances, including exploration permits

(4) an analysis of the proposed location of the offset area in relation to existing and future land uses, and the implications of the land use on the offset area's long term viability. Matters to be considered as part of the analysis include:

  (a) zoning and regional land use category (if available) of the offset area and surrounding area under the local government planning scheme and regional plan produced either under the repealed *Integrated Planning Act 1997* or *Sustainable Planning Act 2009*

  (b) maps spatially identifying the current and potential future land uses, including proposals for major infrastructure, mining, petroleum and gas activities on or in the general vicinity of the offset area

  (c) threatening processes which may impact on the effectiveness of the management actions on the proposed offset area.

8A.7.5.3 Offset area management plan requirements

The following requirements must be provided for all offset areas.

An offset area management plan which includes (but is not limited to):

(1) a map (preferably digital) that clearly identifies the proposed offset area with global positioning system (GPS) points, including any areas subject to specific management actions

(2) the proposed clearing regional ecosystems and essential habitat, and those on the proposed offset area

(3) the ecological equivalence assessment of the offset area and the date it was undertaken

(4) the offset area management objectives and outcomes

(5) activities to be undertaken on the offset area to achieve the management objectives and outcomes

(6) restrictions imposed on the use of the offset area to achieve the management objectives and outcomes

(7) an analysis of the risks to achieving the management objectives and outcomes, actions to minimise the risks and remedial action that will be undertaken if any of the risks occur

(8) a yearly schedule of management actions, to ensure achievement of the management objectives and outcomes, for the period until the offset area is mapped as remnant regional ecosystem or essential habitat

(9) a monitoring and reporting program

(10) the estimated time until the offset management objectives and outcomes will be achieved

(11) identification of all registered interests including mortgages, leases, subleases, covenants, profit-a-prendre, easements and building management statements, that have been registered on title under the *Land Act 1994* or the *Land Title Act 1994*

(12) identification of all registered interests including mortgages, leases, subleases, covenants, profit-a-prendre, easements and building management statements, that have been registered on title under the *Land Act 1994* or the *Land Title Act 1994*.

8A.7.5.4 Management costs and activities (to be provided for all offset proposals)

The following requirements are to ensure that the landholder providing the offset is aware of their responsibilities and there are adequate resources available to deliver the offset area management plan:

(1) evidence that the landholder has received legal advice in regard to their obligations under the legally binding mechanism

(2) the estimated management costs associated with achieving the offset management objectives, actions and outcomes

(3) where management is required for more than three years, the trust account details (financial institution, bank account number and name) for the holding of funds for the ongoing management actions of the offset area, and milestone payments

(4) where management of the area will be for three years or less, a trust account is not required. However, the applicant will need to provide information, including any management contracts with third parties and the payment of funds arrangements to the landholder, within four months of the relevant development permit being issued (for direct offsets), or at the time the offset area is legally secured (for offset transfers)

(5) evidence that the management costs identified have been transferred into the nominated trust account within four months of the relevant development permit being issued (for direct offsets) or at the time the offset area is legally secured (for offset transfers)

(6) the entities responsible for undertaking the management actions, and the skills or expertise of the entities responsible for undertaking the management actions.

8A7.6 Criteria 6 – when an offset ceases to have effect

All offset areas must meet the following criteria.

An offset area remains in effect until the offset area ceases under its terms. For the purposes of an offset area, this will include the offset meeting any requirements that are stipulated within the development approval, or legally binding mechanism and offset area management plan.

To bring an offset area to an end, evidence must be provided to the administering authority which demonstrates that the requirements of the development approval (if applicable), legally binding mechanism and offset area management plan have been achieved. This includes providing evidence that the offset area:

(1) has achieved remnant status

(2) is a regional ecosystem

and where applicable:

(a) includes at least three essential habitat factors for the protected wildlife and must include any essential habitat factors that are stated as mandatory for the protected wildlife in the essential habitat database, or

(b) is an area in which the protected wildlife, at any stage of its life cycle, is located.

Once the requirements of the development approval (if applicable), legally binding mechanism and offset area management plan have been achieved, the offset area must either be mapped as a Category B area on the regulated vegetation management map, or certified as essential habitat on an essential habitat map. The administering authority will only agree to the removal of the legally binding mechanism once this has occurred.

Note: The legally binding mechanism must remain in place where the values within the offset area (at the time of the legally binding mechanism being placed over the offset area) will not be regulated under the *Sustainable Planning Act 2009* or *Vegetation Management Act 1999* upon achieving the management objectives within the management plan and it being mapped.

For example, an offset area for an of concern regional ecosystem which is within an area zoned as an urban purpose in an urban area under a local government planning scheme and not protected under the *Sustainable Planning Act 2009* or *Vegetation Management Act 1999*. However, where a landowner can demonstrate that the values within the offset area are regulated under the *Sustainable Planning Act 2009* or *Vegetation Management Act 1999*, the legally binding mechanism can be removed.

8A.8 Advance offset

An advance offset is an offset area of land which has been protected from impacts, in advance of the lodgement of a development application, which would require an offset in the future.

An applicant may request a notice of acknowledgement from the administering authority that an advance offset is consistent with the relevant requirements contained in this policy. The administering authority will provide an notice of acknowledgement for the advance offset, and the extent to which it complies with the policy.

The acknowledgment notice will detail the ecological condition and special feature scores of the advance offset site, using the ecological equivalence methodology. This score can be used to measure the ecological equivalence of the advance offset area with a future impact site at the time the application is assessed.

An acknowledgment notice does not provide an indication that a future development application to which the advance offset relates will be approved. Assessment of the development application will be under the laws and policies in place at the time of lodgement.

Where an offset area is sourced from an acknowledged advance offset, an assessment of the offset area will be undertaken against the offset policy in place at the time of the development application. The applicant is responsible for providing any information necessary for assessment to meet the requirements of the offset policy.

The ecological condition and special feature scores set out in the acknowledgment notice for an advance offset must, at the time the application is assessed, be the same or greater than for the clearing area. The offset will be required to be managed to achieve, at a minimum, the mapped remnant status.

The acknowledged advance offset is required to be protected from clearing via a legally binding mechanism; however, it is not required to be managed in accordance with an offset area management plan. However, the ecological condition and special feature scores set out in the acknowledgment notice must, at the time the application is assessed, be the same or greater than set out in the acknowledgment notice for the offset site.

To facilitate an assessment of an advance offset, the applicant must provide the administering authority with the following:

(1) locational information of the advance offset area
(2) the values located on the land on the proposed advance offset area
(3) an ecological equivalence assessment, consistent with the ecological equivalence methodology, for the proposed advance offset
(4) how the advance offset meets criteria 1, 3 and 5 (where applicable) of the offset policy
(5) a draft legally binding mechanism which protects the values on the advance offset from clearing.

8A.9 Reference documents

Environmental Protection Agency 2008 Queensland Government Environmental Offsets Policy available from the Department of Environment and Heritage Protection *library catalogue*

Department of Natural Resources and Mines 2013 Managing category C regulated regrowth vegetation: Self assessable vegetation clearing code

Department of Natural Resources and Mines 2013 Managing category R regulated regrowth vegetation: Self assessable vegetation clearing code

Department of Infrastructure and Planning, 2009 *South East Queensland Regional Plan 200-2031*

Department of Environment and Resource Management, 2010 *South East Queensland Koala Conservation State Planning Regulatory Provisions Maps*

Department of State Development, Infrastructure and Planning 2013 State Planning Policy

Department of Environment and Resource Management, 2011 Ecological Equivalence Methodology Guideline available from the Department of Environment and Heritage Protection *library catalogue*

Department of Environment and Resource Management, 2011 *Method for the Establishment and Survey of Reference Sites for BioCondition*

Department of Science, Information Technology, Innovation and the Arts, 2012 *Methodology for Survey and Mapping of Regional Ecosystems and Vegetation Communities in Queensland*

Department of Environment and Heritage Protection *Regional ecosystems description database (REDD)*

8A.10 Glossary of terms

Administering authority is the chief executive of the agency administering the *Sustainable Planning Act 2009*.

Bioregions are based on broad landscape patterns that reflect the major structural geologies and climate as well as major changes in floristic and faunal assemblages. Bioregions contain a number of subregions. The exact location of the bioregion boundaries are available from the Department of Natural Resources and Mines in digital electronic form.

Broad vegetation groups are higher level groupings of vegetation units or regional ecosystems. There are three levels of broad vegetation groups which reflect the scale at which they are designed to be used: 1: 5,000,000 (national), 1: 2,000,000 (state) and 1: 1,000,000 (regional).

Editor's note: For further information on broad vegetation groups and supporting spatial datasets, contact www.dnrm.qld.gov.au

Critically limited regional ecosystem has remnant extent below five per cent of their pre-clearing extend and are less than 500 hectares in total, or have a remnant extent less than 200 hectares, or are at risk of the remnant extent falling below 200 hectares.

Functioning regional ecosystems refers to the processes, relationships and interactions among species, and between living organisms and the environment in which they live. These can be used to determine whether an area of vegetation is functioning as a regional ecosystem. Some signs of ecosystem functioning are:

(1) variations in the range, height and age of plant species

(2) recruitment evidenced through the presence of seedlings or saplings of different species

(3) presence of a range of habitat options (for example, logs, leaf and branch debris)

(4) presence of leaf litter and organic matter

(5) evidence that the site is being used by native fauna.

Not all indicators need to be present in order for the vegetation to form a functioning ecosystem. Other indicators, not listed here, may also need to be considered.

If some indicators of a functioning ecosystem are present, then it is likely that the vegetation forms a vegetation community. For example, an area with vigorously growing native woody saplings among scattered mature trees and minimal weed invasion would be likely to constitute a vegetation community.

If no indicators of a functioning ecosystem are present, then vegetation is not likely to form a vegetation community. For example, a small isolated stand of large trees in a grazed paddock, with no understorey vegetation is not likely to form a vegetation community which is part of a functioning ecosystem – therefore, unlikely to be a regional ecosystem.

Vegetation is a regional ecosystem where it contains:

(1) evidence of ecosystem function

(2) species characteristics of a regional ecosystem. This information can be obtained from the *Regional Ecosystem Description Database* located on the Department of Environment and Heritage Protection website www.ehp.qld.gov.au.

Government-owned corporation means government owned trading enterprises which conduct activities and provide services in a commercially orientated environment. These bodies are listed on the Queensland Government website www.qld.gov.au

Editor's note: There are 12 government-owned corporations: CS Energy Ltd, Energex Ltd, Ergon Energy Corporation Ltd, Powerlink Queensland, Stanwell Corporation Ltd, Far North Queensland Ports Corporation Ltd, Gladstone Ports Corporation Ltd, North Queensland Bulk Ports Corporation Ltd, Port of Townsville Ltd, Queensland Rail Ltd, Queensland Investment Corporation Ltd, SunWater Ltd.

Legally binding mechanism may include:

(1) Declaration of an area under the *Vegetation Management Act 1999*

(2) A covenant under the *Land Act 1994*; *Land Title Act 1994* and *Sustainable Planning Act 2009*, or

(3) Gazettal as a protected place under the *Nature Conservation Act 1992*, or

(4) Other mechanism administered and approved by the state.

Legally secured for an offset area means that the offset area must:

(1) be provided protection from clearing through the use of a legally binding mechanism

(2) supported by an offset area management plan that identifies the actions required to ensure an offset area is managed to meet the objectives of the offset area

(3) be registered on title, certified or gazetted as required by the legally binding mechanism.

Significantly exceeds means that the offset area achieves an ecologically equivalence score for both ecological condition and special features that is three times the ecological equivalence scores for the clearing area using the ecological equivalence methodology.

8A.11 Abbreviations

DNRM – Department of Natural Resources and Mines

GPS – Global Positioning System

REDD – Regional Ecosystem Description Database

SLATS – Statewide Land Cover and Trees Study

Appendix B: Critically limited regional ecosystems

Table–Critically limited regional ecosystems

Regional ecosystem description		Status
1.10.5	*Acacia shirleyi* open-forest on skeletal soils and earths on sandstone plateaus	Least concern
1.11.4	*Eucalyptus pruinosa* low open-woodland on shallow soils in valleys below folded sediments	Least Concern
2.5.4	*Callitris glaucophylla* woodland on plains on deep sandy soils	Of concern
3.2.29	*Pisonia grandis* low closed-forest restricted to a few scattered sand cays	Of concern
3.2.30	*Pemphis acidula* ± *Rhizophora stylosa* ± *Avicennia marina* low closed-forest on coral atolls, shingle cays and sand cays	Of concern
3.3.43	*Melaleuca viridiflora* ± *Xanthorrhoea johnsonii* low woodland on fans and alluvial plains	Least Concern
3.3.68	Semi-deciduous notophyll vine forest and thicket on alluvial plains	Of concern
3.3.69	*Melaleuca dealbata* ± *Corymbia clarksoniana* tall open-forest on alluvial plains	Of concern
3.3.70	*Lophostemon suaveolens* ± *Melaleuca cajuputi* subsp. *platyphylla* ± *Pandanus* sp. ± *Livistona muelleri* woodland and open-forest. Alluvial plains of northern Torres Strait Islands	Of concern
3.10.11	Eucalyptus tetrodonta ± Corymbia nesophila woodland on undulating sandstone hills	Least Concern
3.12.1	Semi-deciduous mesophyll/notophyll vine forest on granite slopes, in the central bioregion	Of concern
3.12.5	Simple evergreen notophyll vine forest on upper slopes of mountains and ranges	Of concern
4.3.22	Springs on recent alluvia and fine-grained sedimentary rock	Endangered
6.3.23	Springs on recent alluvia, ancient alluvia and fine-grained sedimentary rock	Endangered
7.3.2	Grasslands and sedgelands ± *Melaleuca* spp. within volcanic craters, often on peat	Of concern
7.3.30	Complex of fernlands and sedgelands with emergent rainforest pioneering spp. in permanently wet peat swamps of alluvial plains	Endangered
7.3.32	Imperata cylindrica and/or Sorghum nitidum and/or Mnesithea rottboellioides and/or Themeda triandra closed-tussock grassland, on alluvial plains	Endangered
7.3.32	Imperata cylindrica and/or Sorghum nitidum and/or Mnesithea rottboellioides and/or Themeda triandra closed-tussock grassland, on alluvial plains	Endangered
7.3.33	Open water, and narrow shoreline sedge fringes of lakes within volcanic craters	Of concern
7.3.37	Complex semi-evergreen notophyll vine forest of uplands on alluvium	Endangered
7.3.37	Complex semi-evergreen notophyll vine forest of uplands on alluvium	Endangered
7.3.38	Complex notophyll vine forest with emergent *Agathis robusta* on alluvial fans	Of concern
7.3.42	*Eucalyptus grandis* open-forest to woodland (or vine forest with emergent *E. grandis*), on alluvium	Of concern
7.3.47	Allocasuarina littoralis, Corymbia intermedia and Lophostemon suaveolens open-forest, on poorly drained alluvium	Of concern
7.3.48	*Eucalyptus portuensis* and *E. drepanophylla* ± *C. intermedia*, ± *C. citriodora* open-woodland to open-forest, on dry uplands on alluvium	Of concern
7.8.13	Simple notophyll vine forest of *Blepharocarya involucrigera* of high rainfall, cloudy uplands on basalt	Of concern
7.8.17	Eucalyptus portuensis and Corymbia intermedia, ± C. citriodora open-forest to woodland, on basalt	Of concern
7.11.2	Notophyll or mesophyll vine forest with *Archontophoenix alexandrae* or *Licuala ramsayi*,	Of concern

Regional ecosystem description		Status
	on metamorphics	
7.11.39	*Themeda triandra*, or *Imperata cylindrica*, *Sorghum nitidum* and *Mnesithea rottboellioides* closed-tussock grassland of metamorphic headlands and near-coastal hills	Of concern
7.11.45	*Eucalyptus cloeziana* open-forest on metamorphics	Of concern
7.12.47	Notophyll-microphyll semi-evergreen vine forest with *Argyrodendron polyandrum* emergents, on rhyolite	Of concern
7.12.63	*Eucalyptus moluccana* woodland, on granite and rhyolite	Of concern
7.12.67	*Gleichenia dicarpa*, *Gahnia sieberiana*, *Lycopodiella cernua*, and *Lycopodium deuterodensum* closed-fernland, on granite highlands, on Thornton Peak and Mt Bartle Frere	Of concern
8.2.9	Tussock grassland on coastal dunes	Of concern
8.3.11	*Melaleuca viridiflora* var. *attenuata* open-forest in broad drainage areas	Endangered
8.10.1	*Acacia julifera* and/or *Eucalyptus* spp. ± *Corymbia* spp. open-forest and/or semi-evergreen, simple microphyll low closed-forest and/or *Heteropogon contortus* tussock grassland, on slopes of islands, on Cretaceous sedimentary rocks	Of concern
9.4.3	*Acacia harpophylla* and *Lysiphyllum carronii* open-woodland on Cainozoic clays	Of concern
9.10.2	Springs and their associated vegetation on quartzose sandstone, limestone, metamorphic rock and granite	Of concern
10.3.31	Artesian springs emerging on alluvial plains	Of concern
11.2.4	Lagoons in coastal dune swales	Of concern
11.3.24	*Themeda avenacea* grassland on alluvial plains. Basalt derived soils	Endangered
11.3.24	*Themeda avenacea* grassland on alluvial plains. Basalt derived soils	Endangered
11.8.10	*Themeda triandra* grassland on Cainozoic igneous rocks	Of concern
11.8.12	*Eucalyptus microcarpa*, *E. exserta* woodland on Cainozoic igneous rocks	Of concern
11.9.6	*Acacia melvillei* ± *A. harpophylla* open-forest on fine-grained sedimentary rocks	Endangered
12.8.11	*Eucalyptus dunnii* tall open-forest on Cainozoic igneous rocks	Of concern
12.8.12	*Eucalyptus obliqua* tall open-forest on Cainozoic igneous rocks	Of concern
12.8.22	Semi-evergreen vine thicket with *Brachychiton australis* on Cainozoic igneous rocks. Usually northern half of bioregion	Endangered
12.8.22	Semi-evergreen vine thicket with *Brachychiton australis* on Cainozoic igneous rocks. Usually northern half of bioregion	Endangered
12.8.27	*Dichanthium* spp. and *Themeda triandra* grassland on igneous rocks	Endangered
12.8.27	*Dichanthium* spp. and *Themeda triandra* grassland on igneous rocks	Endangered
12.9-10.13	*Eucalyptus corynodes* woodland on sedimentary rocks	Of concern
12.9-10.9	Shrubland/low woodland on sandstone lithosols	Of concern
13.11.7	Low microphyll vine forest on metamorphics	Of concern
13.3.2	*Eucalyptus nova-anglica* open-forest on alluvial plains	Endangered

Appendix C: Ecological equivalence indicators

Table–Ecological equivalence indicators

Ecological equivalence criteria	Indicators	Supporting information on www.dnrm.qld.gov.au
Ecological condition	(1) Recruitment of woody perennial species (2) Native plant richness (3) Tree canopy cover (4) Tree canopy height (5) Shrub cover (6) Native perennial grass cover (7) Large trees (8) Coarse woody debris (9) Weed cover (10) Organic litter (11) Size of patch (fragmented landscapes) (12) Connectivity (fragmented landscapes) (13) Context (fragmented landscapes) (14) Distance from permanent water (intact landscapes)	(1) Methodology for Determining Ecological Equivalence (2) Biocondition: A Condition Assessment Framework for Terrestrial Biodiversity in Queensland (3) Biocondition Benchmarks (4) Methodology for the Establishment and Survey of Reference Sites for BioCondition
Special features	(1) Centres of endemism (2) Wildlife refugia (3) Areas with concentrations of disjunct populations (4) Areas with concentrations of taxa at the limits of their geographic ranges (5) Areas with high species richness (6) Areas with concentrations for relictual populations (ancient and primitive taxa) (7) Areas containing regional ecosystems with distinct variation in species composition associated with geomorphology and other environmental variables (8) An artificial waterbody or managed or manipulated wetland of ecological significance (9) Areas with high density of hollow-bearing trees that provide habitat for animals (10) Breeding or roosting sites used by a significant number of individuals (11) Areas identified by the State and located within a state, bioregional, regional, or sub-regional corridor (terrestrial or riparian) (12) Priority species within the bioregion (13) Significance of patch within a one kilometre buffer (14) Areas adjacent to a protected area estate under the *Nature Conservation Act 1992*	(1) Methodology for Determining Ecological Equivalence (2) Biodiversity Assessment and Mapping Methodology: Criteria H, I, J (3) Biodiversity Planning Assessment: Criteria H, I, J (4) Biodiversity Planning Assessment: Expert Panel Report (5) Protected Areas under the *Nature Conservation Act 1992*

Module 9. Queensland heritage

9.1 Queensland heritage place state code

9.1.1 Purpose

The purpose of this code is to ensure that development of State heritage places and archaeological places is compatible with the long-term conservation of these places.

The Queensland heritage register contains detailed information for every place which is entered into the register. The information includes the history of the place, and for State heritage places, a statement about the cultural heritage significance of the place (section 31 of the *Queensland Heritage Act 1992*). A place may be entered in the register as a State heritage place if it satisfies one or more of the criteria in section 35 of the *Queensland Heritage Act 1992*, as follows:

(1) is important in demonstrating the evolution or pattern of Queensland's history
(2) demonstrates rare, uncommon or endangered aspects of Queensland's cultural heritage
(3) has potential to yield information that will contribute to an understanding of Queensland's history
(4) is important in demonstrating the principal characteristics of a particular class of cultural places
(5) is important because of its aesthetic significance
(6) is important in demonstrating a high degree of creative or technical achievement at a particular period
(7) has a strong or special association with a particular community or cultural group for social, cultural or spiritual reasons
(8) has a special association with the life or work of a particular person, group or organisation of importance in Queensland's history.

For archaeological places, the Queensland heritage register entry provides a statement about the place related to the archaeological criteria, which includes the potential of the place to contain an archaeological artefact that is an important source of information about Queensland's history.

The Queensland heritage register entry, statement of significance and statement about the archaeological criteria for an archaeological place should be considered when assessing development on a State heritage place or archaeological place.

9.1.2 Criteria for assessment

Development mentioned in column 1 below must be assessed against the assessment criteria in the table mentioned in column 2.

Column 1	Column 2
All development	Table 9.1.1

Editor's note: For Queensland heritage places, building work is defined in the *Sustainable Planning Act* 2009 section 10 to include relatively minor work, such as:

(1) altering, repairing, maintaining or moving a built, natural or landscape feature
(2) excavating, filling or other disturbances to land that may damage, expose or move archaeological artefacts
(3) altering, repairing or removing artefacts that contribute to the place's cultural heritage significance, including, for example, furniture or fittings
(4) altering, repairing or removing building finishes that contribute to the place's cultural heritage significance, including, for example, paint, wallpaper or plaster.

Table 9.1.1: All development

Performance outcomes	Acceptable outcomes
State heritage place	
PO1 Development does not destroy or substantially reduce the cultural heritage significance of a State heritage place unless there is no prudent and feasible alternative to carrying out the development.	**AO1.1** The features, fabric, contents, archaeological potential and setting of the place, which contribute to cultural heritage significance, are conserved and new fabric or uses are only introduced if they maintain or enhance cultural heritage significance. Editor's note: (1) Advice about how to meet this acceptable outcome is available in *Guideline: Developing heritage places – Using the development criteria*, Department of Environment and Heritage Protection 2013. (2) It is recommended that a heritage impact statement be prepared in accordance with *Guideline: Preparing a heritage impact statement*, Department of Environment and Heritage Protection, 2013 to demonstrate compliance with this acceptable outcome. (3) A conservation management plan may be required for some applications. Refer to *Guideline: Conservation management plans*, Department of Environment and Heritage Protection, 2013. OR **AO1.2** Development destroys or substantially reduces cultural heritage significance only if there is no prudent and feasible alternative. An alternative will not be prudent or feasible if it involves: (1) an extraordinary or unacceptable economic cost to the state, the community, a section of the community or an individual, or (2) an extraordinary or unacceptable environmental or social disadvantage, or (3) technical impractibility, or (4) risk to public health or safety, or (5) other unusual or unique circumstances. Editor's note: It is recommended that the application present sufficient alternative options to demonstrate there is no prudent and feasible alternative. The alternatives should include: (1) the option of not proceeding with the development (2) the optimum development that would result in the minimum impact on cultural heritage (3) the whole of the proposed development, not just the part occurring on the place (4) options outside the confines of the proposed development (5) sale, lease or other form of disposal of all or part of the property if this may favour or aid conservation. Further guidance is available in *Guideline: No prudent and feasible alternative,* Department of Environment and Heritage Protection, 2013. Editor's note: A pre-lodgement meeting is recommended to discuss the likely impact of the development proposal early in the process. Editor's note: Public engagement should be undertaken, including: (1) a process and timetable for dialogue about the proposed development with people and organisations having an interest in the heritage values of the place (2) identifying the relevant people and organisations, informing them about the development proposal, and offering to engage them in the discussion (3) sharing information and engaging in dialogue aimed at reaching a shared position (4) documenting the engagement process and recording community comment (to be included with the application).
Archaeological place	
PO2 Development does not have a detrimental impact on any archaeological artefact on an archaeological place.	**AO2.1** There is no potential for the development to have a detrimental impact on any archaeological artefact on the archaeological place. OR **AO2.2** Development on the archaeological place provides for appropriate management of the archaeological artefacts in accordance with the results of

Performance outcomes	Acceptable outcomes
	an archaeological investigation. Editor's note: Further guidance is available in the *Guideline: Archaeological investigations,* Department of Environment and Heritage Protection, 2013.

9.2 Reference documents

Australian National Committee of the International Council on Monuments and Sites:

- *The Burra Charter: The Australia ICOMOS Charter for places of cultural significance*
- *Practice note: Understanding and assessing cultural significance*
- *Practice note: Developing policy*
- *Practice note: Preparing studies and reports – contractual and ethical issues*
- *Practice note: The Burra Charter and archaeological practice*
- *Practice note: Interpretation*
- *Practice note: Burra Charter article 22 – New work*

Department of Environment and Heritage Protection 2013 *Guideline: Developing heritage places – Using the development criteria*

Department of Environment and Heritage Protection 2013 *Guideline: Conservation management plans*

Department of Environment and Heritage Protection 2013 *Guideline: Archival recording of heritage places*

Department of Environment and Heritage Protection 2013 *Guideline: Preparing a heritage impact statement*

Department of Environment and Heritage Protection 2013 *Guideline: No prudent and feasible alternative*

Department of Environment and Heritage Protection 2013 *Guideline: Archaeological investigations*

Department of Environment and Heritage Protection 2013 *Queensland heritage register*

Department of Environment and Heritage Protection 2013 *Guideline: Assessing cultural heritage significance - Using the cultural heritage criteria*

9.3 Glossary of terms

Archaeological artefact see the *Queensland Heritage Act 1992*, schedule.

Editor's note: Archaeological artefact means any artefact that is evidence of an aspect of Queensland's history, whether it is located in, on or below the surface of land. Archaeological artefact does not include a thing that is aboriginal cultural heritage under the *Aboriginal Cultural Heritage Act 2003* or Torres Strait Islander cultural heritage under the *Torres Strait Islander Cultural Heritage Act 2003*.

Archaeological investigation see the *Queensland Heritage Act 1992*, schedule.
Editor's note: Archaeological investigation of a place means a physical investigation of the place carried out by an appropriately qualified person for the purpose of investigating, recording or conserving archaeological artefacts on the place.

Archaeological place see the *Queensland Heritage Act 1992*, schedule.
Editor's note: Archaeological place means a place entered on the Queensland heritage register as an archaeological place under Part 5 of the *Queensland Heritage Act 1992*.

Archaeological potential means potential to contain an archaeological artefact.

Conservation means all the processes of looking after a place so as to retain its cultural heritage significance.

Editor's note: This definition has been sourced from the *Burra Charter*, Australia ICOMOS 1979

Cultural heritage significance see the *Queensland Heritage Act 1992*, schedule.

Editor's note: Cultural heritage significance, of a place or feature of a place, means its aesthetic, architectural, historical, scientific, social, or other significance, to the present generation or past or future generations.

Detrimental impact on an archaeological artefact means a detrimental impact on the cultural heritage significance of the archaeological artefact.

Fabric means all the physical material of the place including components, fixtures, contents, and objects.

Editor's note: This definition has been sourced from the *Burra Charter*.

Feature see the *Queensland Heritage Act 1992*, schedule.

Editor's note: Feature in relation to a place, includes the following:
(1) a building or structure, or part of a building or structure
(2) an artefact, including an archaeological artefact
(3) a precinct
(4) a natural or landscape feature.

Place see the Queensland Heritage Act 1992, schedule.

Editor's note: Place—
(1) means a defined or readily identifiable area of land, whether or not held under two or more titles or owners
(2) includes:
    (a) any feature on land mentioned in item 1
    (b) any part of the immediate surrounds of a feature mentioned in paragraph (a) that may be required for its conservation.

Queensland heritage place means a State heritage place, an archaeological place or a protected area.

Note: This definition has been sourced from the *Queensland Heritage Act 1992.*

Queensland heritage register see the *Queensland Heritage Act 1992*, schedule.

Editor's note: Queensland heritage register means the register kept under Part 3 of the *Queensland Heritage Act 1992*.

Setting means the area around a place, which may include the visual catchment.

Editor's note: This definition has been sourced from the *Burra Charter*.

State heritage place see the *Queensland Heritage Act 1992*, schedule.

Editor's note: State heritage place means a place entered in the Queensland heritage register as a State heritage place under Part 4 of the *Queensland Heritage Act 1992*.

Use means the functions of a place, as well as the activities and practices that may occur at the place.

Editor's note: This definition has been sourced from the *Burra Charter*.

Abbreviations

ICOMOS – International Council On Monuments and Sites

Module 10. Coastal protection

10.1 Tidal works, or development in a coastal management district state code

10.1.1 Purpose

The purpose of this code is to ensure tidal works and development in the coastal management district:

(1) is managed to protect and conserve environmental, social and economic coastal resources
(2) enhances the resilience of coastal communities to coastal hazards.

10.1.2 Criteria for assessment tables

Development mentioned in column 1 below must be assessed against the assessment criteria in the table mentioned in column 2.

Column 1	Column 2
All development	Table 10.1.1
Operational work	Table 10.1.2
Reconfiguring a lot	Take 10.1.3

Table 10.1.1: All development

Performance outcomes	Acceptable outcomes
PO1 Development in a coastal hazard area is compatible with the level of severity of the coastal hazard.	**AO1.1** Development is located outside a high coastal hazard area unless it is: (1) coastal-dependent development, or (2) compatible with inundation due to its nature or function, or (3) temporary, readily relocatable, or able to be abandoned, or (4) essential community service infrastructure, or (5) small - to medium-scale tourist development, or (6) redevelopment within an existing built-up urban area, or is redevelopment of built structures that cannot be relocated or abandoned. AND **AO1.2** Development referred to in AO1.1(6) avoids being located within a high coastal hazard area, or where this is not practicable, minimises the exposure of people and permanent structures to coastal hazard impacts.
PO2 Development siting, layout and access in a coastal hazard area responds to potential inundation due to a defined storm tide event and minimises associated risks to personal safety and property.	**AO2.1** Development within a coastal hazard area is located, designed, constructed and operated to maintain or enhance the community's resilience to defined storm tide events by limiting the exposure of people and structures to associated impacts. AND **AO2.2** Development mitigates any residual impacts from storm tide inundation in a coastal hazard area including by ensuring: (1) habitable rooms of built structures are located above the defined storm tide event level and any additional freeboard level that would ordinarily apply in a flood prone area under a relevant planning scheme standard, or (2) a safe refuge is available for people within the premises during a defined storm tide event, or (3) at least one evacuation route remains passable for emergency evacuations during a defined storm tide event, including consideration of the capacity of the route to support the evacuation of the entire local population within a reasonably short time frame (for example, 12 hours).

Performance outcomes	Acceptable outcomes
	AND **AO2.3** Development within a coastal hazard area is located, designed and constructed to ensure exposed structures can sustain flooding from a defined storm tide event. AND **AO2.4** Essential community service infrastructure is: (1) located so that it is not inundated by a recommended storm tide event specified for that infrastructure, or (2) located and designed to ensure any components of the infrastructure that are likely to fail to function or may result in contamination when inundated by a storm tide (for example, electrical switch gear and motors, water supply pipeline air valves) are: (a) located above the peak water level for a recommended storm tide event, or (b) designed and constructed to exclude storm tide intrusions or infiltration (including by being located in the ground), or (c) able to temporarily stop functioning during a recommended storm tide event without causing significant adverse impacts to the infrastructure or the community. AND **AO2.5** Emergency services infrastructure and emergency shelters, police facilities, and hospitals and associated facilities have an emergency rescue area above the peak water level for a recommended storm tide event.
PO3 Development directly, indirectly and cumulatively avoids an unacceptable increase in the severity of the coastal hazard, and does not significantly increase the potential for damage on the premises or to other premises.	**AO3.1** Development avoids increasing the number of premises from which people would need to be evacuated to prevent death or injury from a defined storm tide event.
PO4 Development avoids the release of hazardous materials as a result of a natural hazard event. Editor's note: Applications should: (1) assess the risk of storm tide inundation releasing or otherwise exposing hazardous materials, including appropriate emergency planning and contingency measures. (2) applications are to be supported by a report certified by a Registered Professional Engineer of Queensland (RPEQ) that demonstrates this performance outcome will be achieved.	**AO4.1** Development that involves the manufacture or storage of hazardous materials in bulk are designed to: (1) prevent the intrusion of waters from a defined storm tide event into structures or facilities containing the hazardous materials, or (2) ensure hazardous materials remain secured despite inundation, including secure from the effects of hydrodynamic forcing associated with wave action or flowing water.
PO5 Natural processes and the protective function of landforms and vegetation are maintained in coastal hazard areas. Editor's note: Applications should be supported by a report certified by an RPEQ that demonstrates this performance outcome will be achieved.	**AO5.1** Development in an erosion prone area within the coastal management district: (1) maintains vegetation on coastal landforms where its removal or damage may: (a) destablise the area and increase the potential for erosion, or (b) interrupt natural sediment trapping processes or dune or land building processes (2) maintains sediment volumes of dunes and near-shore coastal landforms, or where a reduction in sediment volumes cannot be avoided, increased risks to development from coastal erosion are mitigated by location, design, construction and operating standards (3) minimises the need for erosion control structures or riverbank hardening through location, design and construction standards (4) maintains physical coastal processes outside the development footprint for the development, including longshore transport of sediment along

Performance outcomes	Acceptable outcomes
	the coast (5) reduces the risk of shoreline erosion for areas adjacent to the development footprint unless the development is an erosion control structure (6) reduces the risk of shoreline erosion for areas adjacent to the development footprint to the maximum extent feasible in the case of erosion control structures. AND **AO5.2** Development in a storm tide inundation area is located, designed, constructed and operated to: (1) maintain dune crest heights, or where a reduction in crest heights cannot be avoided, mitigate risks to development from wave overtopping and storm surge inundation (2) maintain or enhance coastal ecosystems and natural features, such as mangroves and coastal wetlands, between the development and tidal waters, where the coastal ecosystems and natural features protect or buffer communities and infrastructure from sea level rise and impacts from storm tide inundation. AND **AO5.3** Redevelopment of built structures in the erosion prone area within a coastal management district: (1) avoids intensifying the use of the premises, or (2) demonstrates that any intensification of use will not result in an increase in the need for erosion control structures or riverbank hardening. AND **AO5.4** Development that is coastal protection work involves: (1) beach nourishment undertaken in accordance with a program of beach nourishment works that source sediment of a suitable quality and type from outside the active beach system, or (2) the construction of an erosion control structure, where it is demonstrated that installing an erosion control structure is the only feasible option for protecting permanent structures from coastal erosion and those structures cannot be abandoned or relocated in the event of coastal erosion occurring. Editor's note: Applications for coastal protection work should be supported by a report certified by an RPEQ that demonstrates how the engineering solution sought by the work will be achieved. Editor's note: Applications for erosion control structures should 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. AND **AO5.5** Development involving reclamation: (1) does not alter, or otherwise minimises impacts on, the physical characteristics of a waterway or the seabed near the reclamation, including flow regimes, hydrodynamic forces, tidal water and riverbank stability (2) is located outside the active sediment transport area, or otherwise maintains sediment transport processes as close as possible to their natural state (3) ensures activities associated with the operation of the development maintain the structure and condition of vegetation communities and avoid wind and water run-off erosion.

Performance outcomes	Acceptable outcomes
PO6 Erosion prone areas in a coastal management district are maintained as development free buffers, or where permanent buildings or structures exist, coastal erosion risks are avoided or mitigated.	**AO6.1** Development locates built structures outside the part of the coastal management district that is the erosion prone area unless the development is listed under AO1.1 (1) – (5). AND **AO6.2** Development is located outside the erosion prone area unless it is redevelopment. AND **AO6.3** Coastal-dependent development: (1) locates, designs and constructs relevant buildings or structures to withstand coastal erosion impacts, including by use of appropriate foundations, or (2) installs and maintains coastal protection works to mitigate adverse impacts to people and permanent structures from coastal erosion at the location. AND **AO6.4** Development that is temporary, readily relocatable or able to be abandoned, or essential community service infrastructure: (1) locates built structures landward of an applicable coastal building line, or (2) where there is no coastal building line, locates habitable built structures landward of the alignment of adjacent habitable buildings, orlocates lifesaver towers or beach access infrastructure to minimise its impacts on physical coastal processes, or (3) where it is demonstrated that (1) or (2) is not reasonable and (3) does not apply: (a) locates built structures as far landward as practicable (b) uses layout design to minimise the footprint of the development that remains within the erosion prone area. AND **AO6.5** Redevelopment of existing built structures not referred to in AO6.4, and excluding marine development: (1) relocates built structures outside that part of the erosion prone area that is within the coastal management district, or (2) relocates built structures as far landward as practicable, and landward of an applicable coastal building line, or (3) where there is no coastal building line: (a) relocates built structures landward of the alignment of adjacent habitable buildings, or (b) uses layout design to minimise the footprint of the development that remains within the erosion prone area, or (c) provides sufficient space seaward of the development within the premises to allow for the construction of erosion control structures. AND **AO6.6** Redevelopment of built structures in the erosion prone area within a coastal management district, which results in an intensification of use, mitigates the erosion threat to the development, having regard to: (1) design and construction standards (2) installing and maintaining on-site erosion control structures within the premises if the development is not intended to be temporary.
PO7 Development avoids or minimises adverse impacts on coastal resources and their values, to the maximum extent reasonable.	**AO7.1** Coastal protection work that is in the form of beach nourishment uses methods of placement suitable for the location that do not interfere with the long-term use of the locality of, or natural values within or neighbouring, the proposed placement site.

Performance outcomes	Acceptable outcomes
	AND **AO7.2** Marine development is located and designed to expand on or redevelop existing marine infrastructure unless it is demonstrated that it is not practicable to co-locate the development with existing marine infrastructure. AND **AO7.3** Marine development: (1) relies on a natural channel of a depth adequate for the intended vessels, or (2) where there are no feasible alternative locations for the facility in the local area that do not require dredging for navigation channel purposes: (a) involves capital dredging for new navigation channel purposes (b) is located, designed and operated to minimise the need for capital and subsequent maintenance dredging for navigation channel purposes. AND **AO7.4** Development minimises dredging or the disposal of material in coastal waters during key biological events (such as fish aggregations or spawning) for species found in the area. AND **AO7.5** Measures are to be incorporated as part of siting and design of the development to protect and retain identified ecological values and underlying ecosystem processes within or adjacent to the development site to the greatest extent practicable. This includes: (1) maintaining or restoring vegetated buffers between development and coastal waters to the extent practicable, unless the development is within ports or airports, or is marine development (2) maintaining or enhancing the connectivity of ecosystems in consideration of the cumulative effect of the development in addition to existing developed areas (3) retaining coastal wetlands, seagrass beds and other locally important feeding, nesting or breeding sites for native wildlife. AND **AO7.6** Measures are incorporated as part of siting and design of the development to maintain or enhance water quality to achieve the environmental values and water quality objectives outlined in the *Environmental Protection (Water) Policy 2009.* AND **AO7.7** Development avoids the disturbance of acid sulphate soils, or where it is demonstrated that this is not possible, the disturbance of acid sulphate soils is carefully managed to minimise and mitigate the adverse effects of the disturbance on coastal resources.
PO8 Coastal protection work is undertaken only as a last resort where erosion presents an imminent threat to public safety or permanent structures. Editor's note: Applications for coastal protection work must be supported by a report certified by an RPEQ that demonstrates how the engineering solution sought by the work will be achieved.	**AO8.1** Coastal protection work is only undertaken to protect existing permanent structures from imminent adverse coastal erosion impacts, and the structures cannot reasonably be relocated or abandoned. AND **AO8.2** Coastal protection work to protect private structures is undertaken on private land to the maximum extent reasonable. AND **AO8.3** Coastal protection work does not increase the coastal hazard risk for adjacent areas or properties.

Performance outcomes	Acceptable outcomes
PO9 Development avoids adverse impacts on matters of state environmental significance, or where this is not reasonably possible, impacts are minimised and residual impacts are offset.	**AO9.1** Development: (1) is set back from matters of state environmental significance (2) avoids interrupting, interfering or otherwise adversely impacting underlying natural ecosystem components or processes and interactions that affect or maintain the matters of state environmental significance, such as water quality, hydrology, geomorphology and biological processes, or (3) incorporates measures as part of its location and design to protect and retain matters of state environmental significance and underlying ecosystem processes within and adjacent to the development site to the greatest extent practicable. Editor's note: Applications for development should identify any threatened species or their habitats, or threatened ecosystems, that may be affected by the proposal. In particular, applications should identify and describe how the development avoids adverse impacts on any critical life stage ecological processes within or adjacent to the development area. AND **AO9.2** An environmental offset is provided for any unavoidable significant residual impact on matters of state environmental significance caused by the development. Editor's note: Applications for development should identify anticipated losses, and outline what actions are proposed to be undertaken to offset the loss in accordance with the relevant *Queensland Government Environmental Offset Policy* available from the Department of Environment and Heritage Protection library catalogue.
PO10 Development maintains or enhances general public access to or along the foreshore, unless this is contrary to the protection of coastal resources or public safety.	**AO10.1** Development adjacent to state coastal land or tidal water: (1) demonstrates that restrictions to public access are necessary for: (a) the safe or secure operation of development, or (b) the maintenance of coastal landforms and coastal habitat (2) separates residential, tourist and retail development from tidal water with public areas or public access facilities, or (3) maintains existing public access (including public access infrastructure that is in the public interest) through the site to the foreshore for: (a) pedestrians, via access points including approved walking tracks, boardwalks and viewing platforms, or (b) vehicles, via access points including approved roads or tracks. AND **AO10.2** Development adjacent to state coastal land, including land under tidal water: (1) is located and designed to: (a) allow safe and unimpeded access to, over, under or around built structures located on, over or along the foreshore (b) ensure emergency vehicles can access the area near the development, or (2) minimises and offsets any loss of access to and along the foreshore within two kilometres of the existing access points, and the access is located and designed to be consistent with (1)(a) and (b). AND **AO10.3** Any parts of private development that extend over tidal water are to be designed, constructed and used for marine access purposes only.
PO11 Development avoids structures attaching to, or extending across, non-tidal state coastal land abutting tidal waters.	**AO11.1** Private marine development and other structures such as decks or boardwalks for private use do not attach to, or extend across state coastal land that is situated above the high water mark. Editor's note: For occupation permits or allocations of State land, refer to the *Land Act 1994*.

Performance outcomes	Acceptable outcomes
PO12 Further development of canals, dry land marinas and artificial waterways avoids or minimises adverse impacts on coastal resources and their values, and does not contribute to: (1) degradation of water quality (2) an increase in the risk of flooding (3) degradation and loss of matters of state environmental significance (including, but not limited to, coastal wetlands, fish habitat areas and migratory species habitat).	**AO12.1** The design, construction and operation of artificial tidal waterways maintains the tidal prism volume of the natural waterway to which it is connected. AND **AO12.2** The design, construction and operation of artificial tidal waterways does not increase risk from flooding from a defined storm tide event. AND **AO12.3** The design, construction and operation of an artificial waterway in connection with the reconfiguration of a lot ensures: (1) the water inlet and outlets structures are of sufficient capacity to maintain the water level and water quality within the waterway (2) the top level for the waterway is specified and water level to support the effective operation of the waterway are maintained (3) siltation of the waterway during operation is minimised (4) monitoring guides the maintenance of water quality (5) revetment and hydraulic structures will be maintained. AND **AO12.4** The location of artificial waterways avoids matters of state environmental significance, or does not result in any significant adverse effect on matters of state environmental significance.
PO13 Development does not involve reclamation of land below tidal water, other than for the purposes of: (1) coastal-dependent development, public marine development or community infrastructure (2) strategic ports, boat harbours or strategic airports and aviation facilities, in accordance with a statutory land use plan, where there is a demonstrated net benefit for the state or region and no feasible alternative exists (3) coastal protection work or work necessary to protect coastal resources or physical coastal processes.	No acceptable outcome is prescribed.

Table 10.1.2: Operational work

Performance outcomes	Acceptable outcomes
PO1 Tidal works that is private marine development does not result in adverse impacts to tidal land. Editor's note: In addressing this performance outcome, the applicant should also have regard to requirements for private marine development in the prescribed tidal works code in the Coastal Protection and Management Regulation 2003. Editor's note: Applications should be supported by a report certified by an RPEQ to demonstrate compliance with this performance outcome.	**AO1.1** The location and design of tidal works that is private marine development: (1) is on private land abutting tidal water and used for property access purposes (2) occupies the minimum area reasonably required for its designed purpose (3) is not to be roofed or otherwise covered (4) does not require the construction of coastal protection works, shoreline or riverbank hardening or dredging for marine access (5) does not adversely impact on public safety or public access and use of the foreshore.
PO2 Development does not result in the disposal of material dredged from an artificial waterway into coastal waters, with the exception of:	No acceptable outcome is prescribed.

Performance outcomes	Acceptable outcomes
(1) reclamation works, or (2) coastal protection works, or (3) the maintenance of an existing artificial waterway and the at-sea disposal of material that has previously been approved for the waterway.	
PO3 The design and construction of an artificial waterway maintains coastal landforms.	**AO3.1** The design and construction of the artificial waterway provides for sand bypassing where this is necessary to maintain coastal processes while minimising sedimentation of the waterway. AND **AO3.2** The design and construction of the waterway is fit for purpose with reference to training walls, waterbed and bank profiles, and revetment works on the bed or banks of the waterway.
PO4 Development that involves dredging includes and complies with a management plan that demonstrates how environmental impacts will be managed and mitigated, and how the requirements of the *National Assessment Guidelines for Dredging*, Australia Government Department of the Environment, Water, Heritage and the Arts, 2009 will be met.	**AO4.1** A management plan for the development: (1) directs the operation of the development (2) identifies disposal methods and disposal sites for the removed material for the construction and operational phases of the development (3) outlines how any adverse effects from extraction activities on sediment transport processes or adjacent coastal landforms will be mitigated or otherwise remediated by suitably planned and implemented beach nourishment and rehabilitation works. Editor's note: The development must comply with the *National assessment guidelines for dredging*, Australian Government Department of Environment, Water, Heritage and the Arts, 2009. AND **AO4.2** For land based disposal of dredged material, any area used for storing, dewatering, drying or rehandling dredged material as outlined in the dredge management plan is: (1) of sufficient size for the projected volume of dredged material from relevant capital or maintenance dredging (2) protected from future development that would compromise the use of the area for its intended purpose of material storage and dewatering. AND **AO4.3** For at-sea disposal of suitable dredged material, the dredge management plan specifies that material is placed at a dredged material disposal site only if it is demonstrated that it is not feasible to: (1) dispose of the material above the high water mark, if the material is from maintenance works for an existing artificial waterway for which at-sea disposal was previously approved, or (2) keep the dredged material within the active sediment transport system for the locality, or (3) use the material for beach nourishment or another beneficial purpose. AND **AO4.4** For at-sea disposal of dredged material where the marine spoil disposal site is a retentive (i.e. non-dispersive) site, the disposal site identified in the dredge management plan has the capacity to hold and retain the material within its boundaries during construction and operation of the development. Editor's note: The use of dredged material for a beneficial purpose could include development of port or other marine facilities, use for construction or industrial purposes, or use to create or modify land or waters for an approved environmental outcome (such as creation of a bird roosting site). Further information about beneficial uses is contained in the *National assessment guidelines for dredging*, Australian Government Department of Environment, Water, Heritage and the Arts, 2009.

Performance outcomes	Acceptable outcomes
Within a wild river area: riparian and wildlife corridor functions	
PO5 The clearing of native marine plants within a wild river area is minimised.	**AO5.1** Clearing of marine plants within a wild river area can only occur to the extent of the works, plus the prescribed area around the development to allow for maintenance.
PO6 Development within a wild river area does not impact fish passage.	No acceptable outcome is prescribed.
PO7 There is no net loss in marine plants beyond the extent of the works in a wild river area.	**AO7.1** Any marine plant damaged during construction in a wild river area is replaced at the completion of the development with the same species of plant in the disturbed area outside the footprint of the development.
PO8 Works within a wild river area do not impact on fish habitat values.	**AO8.1** Works located in tidal waters within a wild river area are located, designed, and constructed using materials to ensure that the activities do not impact on fish habitat values and function.
Within a wild river area: hydrological processes	
PO9 Development within a wild river area does not impound natural drainage lines or flow paths, during both construction and operation.	No acceptable outcome is prescribed.
Within a wild river area: geomorphic processes	
PO10 Excavation and filling for prescribed tidal work within a wild river area is carried out only to the extent necessary for the development.	No acceptable outcome is prescribed.
PO11 Works in a tidal area within a wild river area are designed and constructed in a way to ensure they do not adversely affect the stability of the bed and banks of any waterway.	**AO11.1** Where it is necessary to remove a marine plant, the root system must be left in the substrate to minimise disturbance to bed and banks. AND **AO11.2** When the works are completed, any tidal lands disturbed by activities beyond the footprint of the works are restored to pre-disturbance condition to promote natural restoration of marine plants and fish habitats.
Within a wild river area: water quality	
PO12 No pollutants are released from the activity.	No acceptable outcome is prescribed.

Table 10.1.3: Reconfiguring a lot

Performance outcomes	Acceptable outcomes
PO1 Erosion prone areas in a coastal management district are maintained as development free buffers, or where permanent buildings or structures exist, coastal erosion risks are avoided or mitigated.	**AO1.1** Where reconfiguring a lot is proposed within the coastal management district, the erosion prone area within the lot, or land within 40 metres of the foreshore (whichever is greater), is surrendered to the State for public use unless: (1) the development is in a port or is for coastal-dependent development, or (2) the surrender of the land will not enhance coastal management outcomes, for example, because there is already substantial development seaward of the lot. Editor's note: Land surrendered to the State for public use under AO1.1 is to be: (1) placed in a State land reserve for beach protection and coastal management purposes under the *Land Act 1994,* with local government as trustee, or (2) managed for beach protection and coastal management purposes under another management regime to the satisfaction of the chief executive administering the *Sustainable Planning Act 2009* and *Land Act 1994*, if it is demonstrated that AO1.1(1) cannot be reasonably achieved. (3) The *Land Act 1994* also includes provisions for voluntary land surrender for freehold land to the satisfaction of the chief executive administering the Land Act.
PO2 Development maintains or enhances general public access to or along the foreshore,	**AO2.1** Reconfiguring a lot that abuts the foreshore or tidal waters is designed to enhance public access if it involves the creation of 10 or more lots or the

Performance outcomes	Acceptable outcomes
unless this is contrary to the protection of coastal resources or public safety.	opening of a new road, unless it is for coastal-dependent development.
PO3 Development in connection with an artificial waterway enhances public access to coastal waters.	**AO3.1** The artificial waterway avoids intersecting with or connection to inundated land or leased land where the passage, use or movement of vessels in water on the land could be restricted or prohibited by the registered proprietor of the inundated land or lessee of the leased land. AND **AO3.2** The area of the artificial waterway relating to the development is surrendered to the State as a public waterway. AND **AO3.3** The plans of subdivision for the artificial waterway are consistent with *Requirements for plans of subdivision of an artificial waterway*, Department of Environment and Heritage Protection, 2013.

10.2 Reference documents

Department of Environment and Heritage Protection *Certification (statutory declaration): Design of tidal works*

Department of Environment and Heritage Protection 2013 *Building and engineering standards for tidal works*

Department of Environment and Heritage Protection 2013 *Guideline: Removal or interfering with coastal dunes*

Department of Environment and Heritage Protection 2013 *Guideline: Approval requirements for local government works in coastal management district*

Department of Environment and Heritage Protection 2013 *Guideline: Building work seaward of a coastal building line*

Department of Environment and Heritage Protection 2012 *Guideline: Constructing tidal works*

Department of Environment and Heritage Protection 2013 *Guideline: Operational work on State coastal land*

Department of Environment and Heritage Protection 2013 *Guideline: Preparing a water allocation area for tidal works*

Department of Environment and Heritage Protection 2013 *Guideline: Development involving an artificial waterway*

Australian Government Department of Environment, Water Heritage and the Arts 2009 *National assessment guidelines for dredging*

Queensland Government *Environmental Offsets website*

10.3 Glossary of terms

Annual exceedance probability means the likelihood of occurrence of a flood of a given size or larger in any one year, usually expressed as a percentage.

Artificial waterway see the *Coastal Protection and Management Act 1995*.

Editor's note: Artificial waterway means an artificial channel, lake or other body of water. An artificial waterway includes:

(1) An access channel
(2) An artificial channel that is formed because land has been reclaimed from tidal water and is intended to allow boating access to allotments on subdivided land
(3) Other channels subject to the ebb and flow of the tide
(4) Any additional to an artificial waterway.

However, an artificial waterway does not include the following:

(1) A swimming pool
(2) An ornamental pond of no more than 5000 square metres in area
(3) A pond for aquaculture or for treating effluent
(4) A freshwater storage reservoir for domestic water supply
(5) A water storage facility situated on a natural watercourse and used for irrigiation or other agricultural purposes
(6) A part of a river, creek or stream in which water flows in a natural channel, whether artificially improved or not
(7) A drain for carrying stormwater or other material

(8) Any of the following used for accessing port infrastructure if constructed in the area of a part for which a port authority or port operator is responsible—
  (a) a navigation channel
  (b) a harbour swing basin
  (c) a berth pocket
  (d) a berth approach or departure path.

Beach nourishment means the replenishment of a beach system using imported sediment to balance erosion losses or to re-establish a wider dunal buffer zone.

Canal see the *Coastal Protection and Management Act 1995*, schedule

Editor's note: Canal means an artificial waterway:

(1) connected, or intended to be connected, to tidal water
(2) from which boating access to the tidal water is not hindered by a lock, weir or similar structure.

Coastal building line see the *Coastal Protection and Management Act 1995,* schedule.

Editor's note: Coastal building line means a line declared as a coastal building line under the *Coastal Protection and Management Act 1995*.

Coastal-dependent development means development that requires land adjoining the foreshore and access to tidal water to function and includes:
(1) industrial and commercial facilities such as ports, harbours and navigation channels and facilities, aquaculture involving marine species, desalination plants, tidal generators, erosion control structures and beach nourishment
(2) tourism facilities for marine (boating) purposes or that are part of an integrated development proposal incorporating a marina.

The term does not include residential development, waste management facilities (landfills, sewerage treatment plants) or transport infrastructure (other than for access to the coast).

Coastal erosion means the wearing away of land or the removal of beach or dune sediments by wave or wind action, tidal currents and water flows.

Coastal hazard see the *Coastal Protection and Management Act 1995*, schedule.

Editor's note: Coastal hazard means erosion of the foreshore or tidal inundation.

Coastal hazard area means a storm tide inundation area or an erosion prone area.

Coastal hazard impact means the impact resulting from one or more of the following:
(1) coastal erosion within an erosion prone area that is also within the coastal management district
(2) a defined storm tide event
(3) the permanent inundation of land due to a sea-level rise of 0.8 metres by the year 2100.

Coastal management district see the *Sustainable Planning Act 2009*

Editor's note: Coastal management district means a coastal management district under the *Coastal Protection and Management Act 1995*, other than an area declared as a coastal management district under section 54(2) of that Act.

Coastal protection work means any permanent or periodic work undertaken primarily to manage the impacts of coastal hazards, including altering physical coastal processes such as sediment transport.

Coastal resources see the *Coastal Protection and Management Act 1995*.

Editor's note: Coastal resources means the natural and cultural resources of the coastal zone. It includes natural and physical features and landforms, vegetation, wildlife, quarry material, soil, water and places and objectives that have anthropological, archaeological, historical, scientific, spiritual, visual or sociological significance or value, including such significance or value under Aboriginal tradition or Island customs.

Coastal waters see the *Coastal Protection and Management Act 1995*, section 13.

Editor's note: Coastal waters means Queensland waters to the limit of the highest astronomical tide.

Defined storm tide event (DSTE) means the event, measured in terms of likelihood of reoccurrence, and associated inundation level adopted to manage the development of a particular area.

Except in the case of redevelopment, the DSTE is equivalent to a one in 100 year average recurrence interval storm event incorporating:
(1) a projected sea level rise of 0.8 metres by the year 2100
(2) an increase in cyclone intensity by 10 per cent relative to maximum potential intensity.

In the case of redevelopment, the DSTE is equivalent to a one in 100 year average recurrence interval storm event incorporating:
(1) an increase in cyclone intensity by 10 per cent relative to maximum potential intensity, and

(2) a projected sea level rise of the amount outlined in table 10.3.1 based on the year of end of design life for the design life outlined for development in table 10.3.2.

Table 10.3.1: Projected sea-level rise for the year of the end of design life as per table 10.3.2

Year of end of design life	Projected sea level rise
Year 2050	0.3 metres
Year 2060	0.4 metres
Year 2070	0.5 metres
Year 2080	0.6 metres
Year 2090	0.7 metres
Year 2100	0.8 metres

Table 10.3.2. Design life for redevelopment

Type of development	Design life
Commercial buildings Industrial buildings Short-term tourist accommodation Residential dwellings including multi-storey unit blocks of 10 dwellings or less.	40 years
Multi-storey residential buildings of more than 10 dwellings. Reconfiguring a lot for urban purposes that involves the provision of new public infrastructure such as roads, water connections or sewage connections. Permanent community infrastructure such as sewage treatment plants.	90 years +

Defined storm tide event level means the peak water level reached during a defined storm tide event.

Dredged material means mud, sand, coral, ballast, shingle, gravel, clay, earth and other material removed by dredging from the bed of tidal waters.

Dredging means the mechanical removal of dredged material from below tidal water.

Dry land marina means a marina created by the excavation of land above high water mark.

Environmental offset see the *Sustainable Planning Act 2009*, section 346A.

Editor's note: Environmental offset means works or activities undertaken to counterbalance the impacts of a development on the natural environment.

Environmental value see the *Environmental Protection Act 1994*, section 9.

Editor's note: The *Environmental Protection (Water) Policy 2009* states the environmental values of waters.

Editor's note: Environmental value is:

(1) a quality or physical characteristic of the environment that is conducive to ecological health or public amenity or safety; or
(2) another quality of the environment identified and declared to be an environmental value under an environmental protection policy or regulation.

Erosion prone area see the *Coastal Protection and Management Act 1995,* schedule.

Editor's note: Erosion prone area means an area declared to be an erosion prone area under section 70(1) of the *Coastal Protection and Management Act 1995*.

Erosion control structure means a structure designed to protect land or to permanently alter sediment transport processes and includes a structure such as a seawall or revetment (rock walls), groyne, artificial reef, or breakwater.

Essential community service infrastructure includes:

(1) emergency services infrastructure
(2) emergency shelters
(3) police facilities
(4) hospitals and associated facilities
(5) stores of valuable records or heritage items
(6) power stations and substations
(7) major switch yards;

(8) communications facilities;
(9) sewerage treatment plants;
(10) water treatment plants.

Fish habitat see the *Fisheries Act 1994*.

Editor's note: Fish habitat includes land, waters and plants associated with the life cycle of fish, and includes land and water occupied by fisheries resources.

Foreshore see the *Coastal Protection and Management Act 1995,* schedule.

Editor's note: Foreshore means the land lying between the high water mark and low water mark as is ordinarily covered and uncovered by the flow and ebb of the tide at spring tides.

Habitable Room see the Building Code of Australia.

Editor's note: Habitable room means a room used for normal domestic activities, and includes a bedroom, living room, lounge room, music room, television room, kitchen, dining room, sewing room, study, playroom, family room, home theatre and sunroom but excludes a bathroom, laundry, water closet, pantry, walk-in wardrobe, corridor, hallway, lobby, photographic darkroom, clothes-drying room, and other spaces of a specialised nature occupied neither frequently nor for extended periods.

High coastal hazard area means:
(1) the part of the erosion prone area that is within the coastal management district
(2) land that is projected to be permanently inundated due to 0.8 metre sea-level rise by the year 2100
(3) the part of the storm tide inundation area that is projected to be temporarily inundated to a depth of one metre or more during a defined storm-tide event.

Highest astronomical tide (HAT) means the highest tide level that can be predicted to occur under average meteorological conditions and any combination of astronomical conditions. This level will not be reached every year, and is less than the extreme levels that can be caused by storm tides.

Hydrodynamic forcing means the force exerted on its surroundings by a moving body of water (for example, force exerted on a structure by waves).

Marine development means maritime infrastructure that is related to navigation, shipping and boating.

Matters of state environmental significance see the *State Planning Policy*

Editor's note: Matters of state environmental significance means the following natural values and areas:
(1) protected area estates (including all classes of protected area except coordinated conservation areas) under the *Nature Conservation Act 1992*
(2) marine parks and land within a 'marine national park', 'conservation park', 'scientific research', 'preservation' and 'buffer' zone under the *Marine Parks Act 2004*
(3) areas within declared fish habitat areas that are management A areas or management B areas under the Fisheries Regulation 2008
(4) threatened wildlife under the *Nature Conservation Act 1992* and special least concern animal under the Nature Conservation (Wildlife) Regulation 2006
(5) regulated vegetation under the *Vegetation Management Act 2009* that is:
    (a) category B areas on the regulated vegetation management map, that are 'endangered' or 'of concern' regional ecosystems
    (b) category C areas on the regulated vegetation management map that are 'endangered' or 'of concern' regional ecosystems
    (c) category R areas on the regulated vegetation management map
    (d) areas of essential habitat on the essential habitat map for wildlife prescribed as 'endangered wildlife' or 'vulnerable wildlife' under the *Nature Conservation Act 1992*
    (e) regional ecosystems that intersect with watercourses identified on the vegetation management watercourse map
    (f) regional ecosystems that intersect with wetlands identified on the vegetation management wetlands map
(6) high preservation areas of wild river areas under the *Wild Rivers Act 2005*
(7) wetlands in a wetland protection area or wetlands of high ecological significance shown on the Map of Referable Wetlands under the Environment Protection Regulation 2008
(8) wetlands and watercourses in high ecological value waters as defined in the Environmental Protection (Water) Policy 2009, schedule 2
(9) legally secured offset areas.

Physical coastal processes means the natural processes of the coast including sediment transport; fluctuations in the location and form of the foreshore, dune systems and associated ecosystems; tides; changes in sea level and coastal hazards (for example, storm-tide), ecological processes (for example, migration of plant and animal species) and the natural water cycle (for example, coastal wetlands' role in nutrient filtration and flood mitigation).

Private marine development means marine development constructed to provide private access to private land from tidal water for non-commercial purposes, including jetties, ramps, floating docks, fixed piers and gangways.

Reclamation see the *Coastal Protection and Management Act 1995*, schedule.

Editor's note: Reclamation of land under tidal water means raising the land above the high water mark, whether gradually and imperceptibly or otherwise, by carrying out works, including dredging and the depositing of solid material.

Recommended storm tide event (RSTE) means the recommended storm tide event level in table 10.3.3, column 2 for the infrastructure mentioned in table 10.3.3, column 1.

Table 10.3.3: Recommended storm tide event levels for essential community service infrastructure

Type of Infrastructure	Recommended storm tide event level (annual exceedance probability).
Hospitals and associated facilities Emergency service facilities* Power stations	0.2%
Major switch yards and substations* Police facilities* School facilities Stores of valuable records or items of historic or cultural significance (e.g. galleries and libraries) Water treatment plants*	0.5%
* The RSTE level applies only to electrical and other equipment that, if damaged by floodwater or debris, would prevent the infrastructure from functioning.	

Redevelopment means development that affects permanent built structures on an already developed site. Redevelopment includes the expansion of a building footprint or addition of a structure, reconstruction or remodelling an exterior, demolition and replacement of existing structures, or the establishment of an alternative type of use and associated land disturbing activities.

Small to medium scale tourist development means development catering for short term accommodation for tourist activity that contains no more than 300 persons and any associated ancillary facilities.

State coastal land see the *Coastal Protection and Management Act 1995*, section 17.

Editor's note: State coastal land means land in a coastal management district, other than land that is:

(1) freehold land, or land contracted to be granted in fee simple by the state; or
(2) a state forest or timber reserve under the *Forestry Act 1959*; or
(3) in a watercourse or lake as defined under the *Water Act 2000*; or
(4) subject to a lease or licence issued by the state.

Storm tide inundation means temporary inundation of land by abnormally high ocean levels caused by cyclones and severe storms.

Storm tide inundation area means the area of land determined to be inundated during a storm tide event that is defined by applying the following factors:
(1) For redevelopment, the factors outlined in Table 10.3.4, column 1
(2) For any other development, the factors outlined in Table 10.3.4, column 2.

Table 10.3.4 Factors for defining a storm tide event to determine the storm tide inundation area

Column 1	Column 2
Redevelopment	**All other development**
Planning period equivalent to the design life of the development, as outlined in Table 10.3.5 Projected sea level rise of the amount outlined in Table 10.3.6, based on expected year of end of design life Adoption of the 1 in 100 year average recurrence interval storm event or water level Increase in cyclone intensity by 10 per cent (relative to maximum potential intensity)	Planning period of 90+ years Projected sea level rise of 0.8 metres by the year 2100 Adoption of the 1 in 100 year average recurrence interval storm event or water level Increase in cyclone intensity by 10 per cent (relative to maximum potential intensity)

Table 10.3.5 Design life for redevelopment

Type of development	Design life
Commercial buildings Industrial buildings Short-term tourist accommodation Residential dwellings, including multi-storey unit blocks of 10 dwellings or less	40 years
Multi-storey residential buildings of more than 10 dwellings Reconfiguring a lot for urban purposes that involves the provision of new public infrastructure such as roads, water connections or sewage connections Permanent community infrastructure such as sewage treatment plants	90 years +

Table 10.3.6 Projected sea level rise for the year of the end of design life as per Table 10.3.5

Year of end of design life	Projected sea level rise
Year 2050	0.3 metres
Year 2060	0.4 metres
Year 2070	0.5 metres
Year 2080	0.6 metres
Year 2090	0.7 metres
Year 2100	0.8 metres

Temporary, readily relocatable or able to be abandoned development means a land use or structure that, if threatened by adverse coastal hazard impacts, will be relocated, or discontinued and removed rather than protected from the impacts because:

(1) it is not anticipated to remain in place for more than 10 years and/or is capable of being disassembled or easily removed

(2) there will be negligible adverse economic or social consequences associated with its relocation, or from it being discontinued or removed.

Tidal prism volume means the volume of water in an estuary or inlet between mean high tide and mean low tide, or the volume of water leaving an estuary at ebb tide.

Module 11. Wetland protection and wild river areas

11.1 Wetland protection area state code

11.1.1 Purpose

The purpose of the code is to ensure that development in wetland protection areas is planned, designed, constructed and operated to prevent the loss or degradation of wetland environmental values, or enhances the values of wetlands within these areas.

Editor's note: The purpose of the code will be achieved through the following overall outcomes in a wetland protection area:

(1) For development to which the code applies in a wetland protection area, other than in an urban area, the development—
  (a) is located outside of a wetland
  (b) enhances existing wetland environmental values or avoids adverse effects on wetland environmental values.
(2) For development to which the code applies in a wetland protection area, in an urban area, the development—
  (a) is located outside a wetland
  (b) enhances existing wetland environmental values or avoids adverse effects on wetland environmental values
(3) Where adverse effects on wetland environmental values cannot be avoided:
  (a) those effects are minimised
  (b) an environmental offset is provided for any remaining environmental impacts.
(4) For development listed in (5), the development—
  (a) achieves the outcomes in (1) and (2), where relevant, to the maximum extent practicable where this would not compromise the intrinsic characteristics of the development
  (b) provides an environmental offset for any adverse impacts on wetland environmental values that cannot be avoided, except where the development arises from and is necessary to give effect to a development approval.
(5) Development that does not have to fully achieve the outcomes in (1) and (2), but is acceptable if it achieves the outcome in (3), is development that—
  (a) provides for an overriding need in the public interest, or
  (b) is a development commitment, or
  (c) is for one or more of the following types of community infrastructure:
    (i) aeronautical facilities of State significance as defined in the *State Planning Policy*
    (ii) emergency services facilities
    (iii) wharves, public jetties, port facilities and navigational facilities
    (iv) domestic gas pipelines
    (v) storage and works depots and similar facilities, including administrative facilities associated with the provision or maintenance of the community infrastructure in (i) to (iv).

11.1.2 Criteria for assessment

Development mentioned in column 1 below must be assessed against the assessment criteria in the table mentioned in column 2.

Column 1	Column 2
Material change of use	Table 11.1.1
Operational work	Table 11.1.1
Reconfiguring a lot	Table 11.1.1

Table 11.1.1: All development

Performance outcomes	Acceptable outcomes
PO1 Development is not carried out in a wetland in a wetland protection area unless: (1) there is an overriding need in the public interest, or (2) the development is a development	**AO1.1** Development is located outside: (1) the mapped boundary of a wetland in a wetland protection area, or (2) an alternative mapped boundary of the wetland in a wetland protection area: (a) submitted as part of the development application, and

Performance outcomes	Acceptable outcomes
commitment, or (3) the development is for community infrastructure. Editor's note: There is an overriding need in the public interest only if the overall social, economic and environmental benefits of the development outweigh— (1) any detrimental effect upon the wetland (2) the development cannot be located elsewhere so as to avoid conflict with PO1. The following does not establish an overriding need in the public interest: (1) uses with relatively few location based requirements (2) interests in or options over land availability or ownership of land.	(b) supported by a site assessment and analysis of the wetland to delineate its extent, in accordance with the *Queensland wetland definition and delineation guidelines* (as updated from time to time) available on the Department of Environment and Heritage Protection website, if the chief executive is satisfied the alternative is a more accurate representation of the boundary. OR **AO1.2** Development in a wetland in a wetland protection area provides an environmental offset for any adverse impact that cannot be avoided, in accordance with PO13 (except where development arises from, and is necessary to give effect to a current development approval).
PO2 An adequate buffer to a wetland in a wetland protection area is provided and maintained.	**AO2.1** A buffer surrounding a wetland in a wetland protection area is provided and has a minimum width of: (1) 200 metres, where the wetland is located outside an urban area, or (2) 50 metres, where the wetland is located within an urban area. OR **AO2.2** An alternative buffer is provided, the width of which is supported by evaluation of the environmental values and functioning of, and threats to, the wetland in a wetland protection area. Editor's note: The *Queensland wetland buffer guideline*, Department of Environment and Heritage, 2011 should be referred to when planning detailed buffer design to position development, determine any alternative buffer widths, and establish operating measures that avoid adverse impacts on a wetland.
Hydrology	
PO3 The existing surface water hydrological regime of the wetland protection area (including the area of the wetland) is enhanced or maintained.	**AO3.1** Development must: (1) provide a net ecological benefit and improvement to the environmental values and functioning of a wetland in a wetland protection area (2) rehabilitate the existing hydrological regime, or restore the natural hydrological regime of the wetland in a wetland protection area to enhance the ecological functions and biodiversity values of the wetland. Editor's note: Refer to the *Wetland rehabilitation guidelines for the Great Barrier Reef catchment*, Department of Environment and Heritage, 2008. OR **AO3.2** Development does not change the existing surface water hydrological regime of a wetland in a wetland protection area, including through channelisation, redirection or interruption of flows. Editor's note: An assessment of the extent of change should take into account the natural variability of the hydrological regime of the wetland. OR **AO3.3** The extent of any change to the existing surface water hydrological regime is minimised to ensure wetland values and functioning are protected. The change is minimised if: (1) 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 (2) any relevant stream flows into the wetland comply with the relevant flow objectives of the applicable water resource plan for the area (3) for development resulting in an increase to the velocity or volume of

Performance outcomes	Acceptable outcomes
	stormwater flows into the wetland—the collection and re-use of stormwater occurs in accordance with (1) and (2).
PO4 The existing groundwater hydrological regime of the wetland protection area (including the area of the wetland) is enhanced or protected.	**AO4.1** The water table and hydrostatic pressure in the wetland protection area are returned to their natural state. OR **AO4.2** The water table and hydrostatic pressure in the wetland protection area is not lowered or raised outside the bounds of variability of existing pre-development conditions. AND **AO4.3** Development does not result in the ingress of saline water into freshwater aquifers.
In an urban area	
PO5 During construction and operation of development in a wetland in a wetland protection area: (1) a wetland in a wetland protection area is not used for stormwater treatment (2) the buffer for and water quality values of a wetland in a wetland protection area are protected from stormwater impacts.	**AO5.1** Development in an urban area does not result in any measurable change to the quantity or quality of stormwater entering a wetland in a wetland protection area during construction or operation. AND **AO5.2** Development in a wetland protection area in an urban area manages stormwater quantity and quality in accordance with best practice environmental management for erosion and sediment control in the *Queensland urban stormwater quality planning guidelines*, Department of Environment and Heritage Protection, 2010. AND **AO5.3** During the construction of development in a wetland protection area in an urban area, erosion and sediment control practices, including approved proprietary products, are designed, installed, constructed, maintained and monitored in accordance with local conditions and recommendations by suitably qualified persons or professionals. During construction, development also incorporates erosion and sediment control measures to achieve best practice design objectives. Editor's note: It is recommended that an erosion and sediment control plan should be prepared by a Registered Professional Engineer of Queensland (RPEQ) to demonstrate compliance with AO5.2 and AO5.3. AND **AO5.4** During construction of development in a wetland protection area in an urban area, release of sediment-laden stormwater is avoided for the nominated design storm, and minimised if the design storm is exceeded, consistent with an erosion and sediment control plan for the development which includes the following best practice principles: (1) stormwater run-off during any construction works is diverted or by-passed around a wetland (2) all stormwater run-off saved for dewatering flow from site catchments achieves a maximum concentration of 50 milligrams per litre of total suspended solids (3) all drainage lines, diversion and collection drains and bank, chutes and outlets are able to safely carry peak flow in accordance with the *Queensland urban stormwater quality planning guidelines*, Department of Environment and Heritage Protection, 2010. AND **AO5.5** During construction of development in a wetland protection area in an urban area, erosion and sediment control practices, including approved

Performance outcomes	Acceptable outcomes
	proprietary products, are designed, installed, constructed, maintained and monitored in accordance with local conditions and recommendations by suitably qualified persons or professionals. AND **AO5.6** During operation of development in a wetland protection area in an urban area, stormwater discharges are treated in accordance with best practice load reduction design objectives before stormwater flow enters the buffer for a wetland. Stormwater treatment should address pollutants including, but not limited to: (1) total suspended solids (2) total phosphorus (3) total nitrogen (4) gross pollutants ›5 millimetres. AND **AO5.7** During operation of development in a wetland protection area in an urban area, development incorporates stormwater flow control measures to achieve best practice design objectives.
Outside an urban area	
PO6 During construction and operation of development in a wetland protection area outside an urban area: (1) a wetland is not used for stormwater treatment (2) the buffer for and water quality values of a wetland are protected from stormwater impacts.	**AO6.1** Development in a wetland protection area outside an urban area does not result in any measurable change to the quantity or quality of stormwater entering a wetland during construction or operation.
Ecological values	
PO7 Development involving the clearing of vegetation protects the biodiversity, ecological values and processes, and hydrological functioning of a wetland in wetland protection area, including: (1) water quality values (2) aquatic habitat values (3) terrestrial habitat values (4) usage of the site by native wetland fauna species or communities.	**AO7.1** Vegetation clearing undertaken as a consequence of development does not occur: (1) in a wetland in a wetland protection area, or (2) in a buffer for a wetland in a wetland protection area. OR **AO7.2** Where development is in a wetland protection area in an urban area, development is located and designed to minimise the extent of vegetation clearing, and development is undertaken outside of a wetland and any buffer for the wetland to minimise the extent of vegetation clearing required.
PO8 Development avoids land degradation in a wetland protection area, including: (1) mass movement, gully erosion, rill erosion, sheet erosion, tunnel erosion, wind erosion or scalding (2) loss or modification or chemical, physical or biological properties or functions of soils.	**AO8.1** Development: (1) is located outside the wetland in a wetland protection area and buffer for the wetland (2) that involves clearing is undertaken in a way that avoids and minimises land degradation in accordance with a sediment and erosion control plan. AND **AO8.2** Mechanical clearing of vegetation within a wetland protection area: (1) is located outside of a wetland and any buffer for the wetland (2) is undertaken in a way that avoids and minimises land degradation in accordance with a sediment and erosion control plan. OR **AO8.3** The application is a development application where a local government is the assessment manager.
PO9 Development in a wetland protection area ensures that any existing ecological	**AO9.1** Development in a wetland protection area does not occur within an existing ecological corridor.

Performance outcomes	Acceptable outcomes
corridors are enhanced or protected, and have dimensions and characteristics that will: (1) effectively link habitats on or adjacent to the development (2) facilitate the effective movement of terrestrial and aquatic fauna accessing or using a wetland as habitat.	OR each of the following acceptable outcomes apply: **AO9.2** If an ecological corridor is required to facilitate fauna movement, access or use of a wetland in a wetland protection area, the ecological corridor: (1) has a minimum width of 100 metres, and is provided and maintained in accordance with the *Wetland rehabilitation guidelines for the Great Barrier Reef catchment*, Department of Environment and Heritage, 2008 or other relevant guidelines, or (2) is of sufficient width to facilitate fauna movement, access or use of a wetland in a wetland protection area, and is provided and maintained in accordance with the *Wetland rehabilitation guidelines for the Great Barrier Reef catchment*, Department of Environment and Heritage, 2008 or other relevant guidelines. AND **AO9.3** Unimpeded movement of fauna associated with or likely to use, a wetland in a wetland protection area as part of their normal life cycle is facilitated within and through the wetland protection area, particularly along identified ecological corridors, by: (1) ensuring that development (for example, roads, pedestrian access, in-stream structures) during both construction and operation does not create barriers to the movement of fauna along or within ecological corridors (2) providing wildlife movement infrastructure where necessary, and directing fauna to locations where wildlife movement infrastructure has been provided to enable fauna to safely negotiate a development area (3) separating fauna from potential hazards (for example, through fencing).
PO10 Development does not result in the introduction of non-native pest plants or animals that pose a risk to the ecological values and processes of a wetland in a wetland protection area.	**AO10.1** Existing non-native pest plants or animals are removed, or their threat is controlled by adopting pest management practices that provide for the long-term integrity of a wetland. OR all of the following acceptable outcomes apply: **AO10.2** Development does not result in the introduction of any non-native fauna or pest species. AND **AO10.3** Exclusion fencing or other pest dispersal control measures are provided in appropriate locations to manage the threat of pest species to a wetland in the wetland protection area of state environmental significance. AND **AO10.4** Exclusion fencing does not result in a barrier or hazard to the movement of wetland fauna in the wetland protection area.
PO11 During construction and operation of development in a wetland protection area, wetland fauna are protected from impacts associated with noise, light or visual disturbance.	**AO11.1** Development in a wetland protection area does not result in any measurable impact on wetland fauna from noise, light or visual disturbance during construction or operation. AND **AO11.2** Development in a wetland protection area minimises noise, light and visual disturbance in accordance with expert advice, to ensure it does not have an adverse effect on the wetland fauna of a wetland in a wetland protection area. Visual disturbance may be minimised by excluding activities in certain areas (for example, line of sight buffers, exclusion fencing), and using visual screens, or similar, during sensitive periods, such as when breeding or roosting.
PO12 During construction and operation of the development in a wetland protection area, ongoing management, maintenance and monitoring is undertaken to ensure	**AO12.1** Construction and operations related to the development in a wetland protection area are carried out in accordance with an operational management plan where appropriate.

Performance outcomes	Acceptable outcomes
adverse effects on hydrology, water quality and ecological processes of a wetland are avoided or minimised.	
PO13 Development in a wetland protection area in an urban area avoids adverse impacts on matters of state environmental significance, or where this is not reasonably possible, impacts are minimised and residual impacts are offset.	**AO13.1** Matters of state environmental significance likely to be affected by development in a wetland protection area in an urban area are identified and evaluated, and any adverse effects on the areas are avoided, or where this cannot be reasonably achieved, impacts are minimised and any residual impacts are offset. Editor's note: For offsets see the *Queensland wetland definition and delineation guidelines* (as updated from time to time) available on the Department of Environment and Heritage Protection website.
PO14 Acceptable circumstances for not fully achieving the policy outcome is development that: (1) provides for an overriding need in the public interest (2) is a development commitment (3) is for community infrastructure.	**AO14.1** The proposal achieves PO1 – PO13 to the maximum extent practicable, where this would not compromise the intrinsic characteristics of the development. AND **AO14.2** The proposal provides an environmental offset for any adverse impact on a wetland that cannot be avoided, except where the development arising from, and is necessary to give effect to, a development approval.

11.2 Agricultural or animal husbandry activities in a wild river area state code

11.2.1 Purpose

The purpose of this code is to ensure that any new or expanded agricultural activities and animal husbandry activities within a wild river preservation area occur in a way that preserves the wild river's natural values.

11.2.2 Criteria for assessment

Development mentioned in column 1 below must be assessed against the assessment criteria in the table mentioned in column 2.

Column 1	Column 2
Material change of use	Table 11.2.1
Operational work	Table 11.2.2

Criteria for assessment tables

Table 11.2.1: Material change of use

Performance outcomes	Acceptable outcomes
Riparian and wildlife corridor functions and water quality	
PO1 Riparian areas and wildlife corridors along nominated waterways are preserved, and pollutants from the development (for example, chemical spray drift or contaminated run-off) have a low probability of affecting water quality in adjacent waterways.	**AO1.1** The development is set back from a nominated waterway by at least the distance detailed in Schedule 3 of the relevant *wild river declaration,* available from the Department of Environment and Heritage website.
PO2 Contaminated wastewater, contaminated agricultural runoff and tailwater do not degrade the quality of any receiving waters (both surface and groundwater).	No acceptable outcome is prescribed.
Geomorphic processes	
PO3 The development will not result in the	**AO3.1** The slope of the land on which the development occurs is less than the

Performance outcomes	Acceptable outcomes
increased delivery of sediment to adjacent waterways.	value detailed in Schedule 3 of the relevant *wild river declaration*, available from the Department of Environment and Heritage website.

Table 11.2.2: Operational work

Performance outcomes	Acceptable outcomes
For agricultural activities	
Riparian and wildlife corridor functions and water quality	
PO1 For development involving an agricultural activity, the escape of moderate risk species into the river system is prevented.	**AO1.1** Development for an agricultural activity is set back from a nominated waterway by at least the distance detailed in Schedule 3 of the relevant *wild river declaration*, available from the Department of Environment and Heritage website.

11.3 Residential, commercial and industrial development in a wild river area state code

11.3.1 Purpose

The purpose of this code is to ensure that any new or expanded residential, commercial or industrial development within a wild river area occurs in a way that preserves the wild river's natural values.

Note: This code does not apply to development within a designated urban area as defined in the relevant wild river declaration.

11.3.2 Criteria for assessment

Development mentioned in column 1 below must be assessed against the assessment criteria in the table mentioned in column 2.

Column 1	Column 2
Material change of use	Table 11.3.1
Operational work	Table 11.3.2

Criteria for assessment tables

Table 11.3.1: Material change of use

Performance outcomes	Acceptable outcomes
Riparian and wildlife corridor functions	
PO1 Riparian areas and wildlife corridors along streams in high preservation areas or along nominated waterways are preserved.	**AO1.1** The development is set back from the outer banks of a stream in a high preservation area, or a nominated waterway by at least the distance detailed in Schedule 3 of the relevant *wild river declaration*, available from the Department of Environment and Heritage Protection website.

Table 11.3.2: Operational works associated with reconfiguring a lot

Performance outcomes	Acceptable outcomes
Hydrologic processes	
PO1 Development activities do not result in increased rainfall runoff.	**AO1.1** Permeable surfaces are used to maintain natural water infiltration rates and capacity.
Geomorphic processes	
PO2 The activity will not result in the increased delivery of sediment to adjacent waterways.	**AO2.1** The slope of the land on which the activity occurs is less than the value detailed in Schedule 3 of the relevant *wild river declaration*, available from the Department of Environment and Heritage Protection website.

Performance outcomes	Acceptable outcomes
	AND **AO2.2** Exposed areas are prepared to facilitate natural regeneration of native plant species.
Water quality	
PO3 No pollutants or wastewater are released from the development activity.	No acceptable outcome is prescribed.

11.4 Reference documents

Department of Environment and Heritage Protection 2010 *Queensland urban stormwater quality planning guidelines*

WetlandCare Australia 2008 *Wetland rehabilitation guidelines for the Great Barrier Reef catchment*

Queensland Government *Wild river declarations*

Department of Environment and Resource Management 2011 *Queensland wetland buffer guideline*

Department of Environment and Resource Management 2011 *Queensland wetland definition and delineation guideline*

Environmental Protection Agency 2008 Queensland Government Environmental Offsets Policy available from the Department of Environment and Heritage Protection *library catalogue*

11.5 Glossary of terms

Activity in relation to carrying out an activity in a wild river area, includes the construction of works.

Agricultural activities means:

(1) cultivating soil
(2) planting, irrigating, gathering or harvesting a crop, including a food or fibre crop
(3) disturbing the soil to establish non-indigenous grasses, legumes or forage cultivars, or
(4) using the land for horticulture or viticulture.

The term does not include:

(1) producing agricultural products for the domestic needs of the occupants of the land if the maximum area of the land on which the products are produced is—
    (a) for fewer than 10 occupants of the land—0.25 hectares
    (b) for 10 or more, but fewer than 50 occupants of the land—2 hectares
    (c) for 50 or more, but fewer than 100 occupants of the land—4 hectares
    (d) for 100 or more occupants of the land—6 hectares, or
(2) producing agricultural products in a market garden, if the maximum area of land on which the products are produced is not more than 4 hectares, or
(3) baling or cutting pasture, or
(4) broadcasting seed to establish an improved pasture, or
(5) planting, gathering or harvesting a crop of pasture or grain species in a preservation area, if the pasture or grain species is—
    (a) only for animal feed
    (b) neither a high risk species nor a moderate risk species for the wild river area of which the preservation area is a part, or
    (c) improving pasture using low impact soil disturbance, if the pasture species is neither a high risk species nor a moderate risk species for the wild river area, or
(6) forestry activities, or
(7) activities carried out for land rehabilitation or remediation.

Examples—

    (a) deep ripping, shallow ponding

(b) blade ploughing in an area that, under the *Vegetation Management Act 1999*, is a category X area or category C area on a property map of assessable vegetation.

Animal husbandry activities means:

(1) breeding, keeping, raising or caring for animals, for commercial purposes, that—
   (a) rely on prepared, packaged or manufactured feed or irrigated or ponded pastures
   (b) are kept in a pen, yard, enclosure, pond, cage, shed, stables or other confined area or structure, or
(2) establishing a feedlot, piggery or dairy.

The term does not include—

(1) grazing, or
(2) raising livestock for the domestic needs of the occupants of the land, or
(3) keeping livestock, for example, horses, necessary for working the land, or
(4) giving livestock supplementary feed, including, for example, by using roller drums, blocks, licks or protein meals—
   (a) to maintain the livestock's survival, or
   (b) to improve the livestock's fertility, or
   (c) for an activity associated with an animal husbandry activities (for example, weaning), or
   (d) if the livestock is predominantly reliant on native or improved pasture for feed—to prepare the livestock for sale, or
(5) aquaculture, or
(6) environmentally relevant activities.

Buffer means the transition zone between a wetland and any surrounding land use that supports the values and processes of the wetland and protects it from external threats.

Clear see the *Vegetation Management Act 1999*

Editor's note: To clear or clearing vegetation –

(1) means remove, cut down, ringbark, push over, poison or destroy in any way, including by burning, flooding or draining but
(2) does not include destroying standing vegetation by stock, or lopping a tree.

Community infrastructure means one or more of the following types of community infrastructure:

(1) aeronautical facilities of State significance
(2) emergency services facilities
(3) wharves, public jetties, port facilities and navigational facilities
(4) domestic gas pipelines
(5) storage and works depots and similar facilities, including administrative facilities associated with the provision or maintenance of the community infrastructure in (1) to (4).

Development approval see the *Sustainable Planning Act 2009*

Editor's note: Development approval means—

(1) a decision notice or a negotiated decision notice that—
   (a) approves, wholly or partially, development applied for in a development application (whether or not the approval has conditions attached to it)
   (b) is in the form of a preliminary approval, a development permit, or an approval combining both a preliminary approval and a development permit in the one approval, or
(2) a deemed approval, including any conditions applying to it.

Development commitment means any of the following:

(1) development that arises from, and is necessary to give effect to, a development approval
(2) development that is located within a state development area under the *State Development and Public Works Organisation Act 1971* and is consistent with the development scheme prepared for the state development area
(3) development for which the Coordinator-General has evaluated an environmental impact statement under the *State Development and Public Works Organisation Act 1971* if the report recommends the development be approved
(4) development that is consistent with a designation of land for community infrastructure under the *Sustainable Planning Act 2009*.

Ecological corridor means an area of land (typically vegetated), or water, including areas above and below ground, that is capable of providing fauna habitat in its own right, or has the potential to do so, while allowing fauna to move to and between other habitats.

Environmental offset see the *Sustainable Planning Act 2009*, section 346A.

Editor's note: Environmental offset means works or activities undertaken to counterbalance the impacts of a development on the natural environment.

Environmental values, for wetlands, are those values declared under the *Environmental Protection Regulation 2008*, section 81A to be the environmental values for wetlands.

High preservation area means the part of a wild river area described as the high preservation area in the wild river declaration for the area.

Hydrological regime means the surface and groundwater flows of water into and out of a wetland, and its associated natural wetting and drying cycle, over an appropriate temporal scale. It includes:

(1) peak flows
(2) volume of flows
(3) duration of flows
(4) frequency of flows
(5) seasonality of flows
(6) water depth (seasonal average)
(7) wetting and drying cycle.

Matters of state environmental significance see the *State Planning Policy*

Editor's note: Matters of state environmental significance means the following natural values and areas:

(1) protected areas (including all classes of protected area except coordinated conservation areas) under the *Nature Conservation Act 1992*
(2) marine parks and land within a 'marine conservation park', 'conservation park', 'scientific research', 'preservation' and 'buffer' zone under the *Marine Parks Act 2004*
(3) areas within declared fish habitat areas that are management A areas and management B areas under the Fisheries Regulation 2008
(4) threatened wildlife under the *Nature Conservation Act 1992* and special least concern animal under the Nature Conservation (Wildlife) Regulation 2008
(5) regulated vegetation under the *Vegetation Management Act 2009* that is:
    (a) Category B areas on the regulated vegetation management map, that are 'endangered' or 'of concern', regional ecosystems
    (b) Category C areas on the regulated vegetation management map that are 'endangered' or 'of concern' regional ecosystems
    (c) Category R areas on the regulated vegetation management map
    (d) areas of essential habitat on the essential habitat map for wildlife prescribed as 'endangered wildlife' or 'vulnerable wildlife' under the *Nature Conservation Act 1992*
    (e) regional ecosystems that intersect with watercourses identified on the vegetation management watercourse map
    (f) regional ecosystems that intersect with wetlands identified on the vegetation management wetlands map
(6) high preservation areas of wild river areas under the *Wild Rivers Act 2005*
(7) wetlands in a wetland protection area or wetlands of high ecological significance shown on the Map of Referable Wetlands under the Environmental Protection Regulation 2008
(8) wetlands and watercourses in high ecological value waters as defined in the Environmental Protection (Water) Policy 2009, schedule 2
(9) legally secured offset areas.

Mechanical clearing means clearing vegetation using machinery, which disturbs the soil surface or uproots woody vegetation.

Moderate risk species, for a wild river area, see the *Wild Rivers Act 2005*, schedule.

Editor's note: Moderate risk species for a wild river area means a plant species listed in the wild river declaration for the area as a plant species that has a moderate risk of having an adverse impact on the natural values of the wild river area that the declaration is intended to preserve.

Nominated waterway see the *Wild Rivers Act 2005*, section 6(1).

Editor's note: Nominated waterway for a wild river declaration is the part of a drainage channel in the preservation area that:

(1) is between the upstream and downstream limits, described in the wild river declaration, of the drainage channel
(2) extends laterally to the outer banks of the drainage channel.

Overriding need the factors for determining overriding need in the public interest are:

(1) There is an overriding need if the overall social, economic and environmental benefits of the development outweigh—
    (a) any detrimental effect upon the natural values of the land and adjacent areas
    (b) any conflicts it has with the outcome of *State Planning Policy*
    (c) the development cannot be located elsewhere so as to avoid conflicting with the *State Planning Policy*.
(2) The following do not establish an overriding need in the public interest:
    (a) uses with relatively few location-based requirements
    (b) interests in or options over land
    (c) availability or ownership of land.

Urban area see the *Sustainable Planning Act 2009*

Editor's note: Urban area means–

(1) an area identified in a gazette notice by the chief executive under the *Vegetation Management Act 1999* as an urban area, or

(2) if no gazette notice has been published—an area identified as an area intended specifically for urban purposes, including future urban purposes (but not rural residential or future rural residential purposes) on a map in a planning scheme that:

  (a) identifies the areas using cadastral boundaries and Schedule 26 Sustainable Planning Regulation 2009

  (b) is used exclusively or primarily to assess development applications.

Vegetation includes grass and non-woody herbage.

Visual disturbance means the disturbance of fauna by visual intrusions that could lead to a loss or diminishment of key life cycle functions (for example, nest abandonment, modified feeding patterns), or changes to usage patterns of a wetland by mobile fauna (such as birds). This term include disturbance by people, pets or vehicles.

Water means all or any of the following:

(1) water in a wetland, watercourse, lake or spring

(2) underground water

(3) overland flow water

(4) water that has been collected in a dam.

Wetland means an area shown as a wetland on the Map of referable wetlands as defined within the *Environmental Protection Regulation 2008*.

Wetland fauna means species that have adapted to living in wetlands and are dependant on them for:

(1) all of their life cycle, or

(2) a major part of their life, or

(3) critical stages of their life cycle, such as breeding and larval development.

Wetland protection area means an area shown as a wetland protection area on the Map of referable wetlands within the *Environmental Protection Regulation 2008*.

Wildlife movement infrastructure includes fauna underpasses under roads and sewage infrastructure, and fauna overpasses over roads.

Abbreviations

RPEQ – Registered Professional Engineer Queensland

Module 12. Contaminated land

12.1 Contaminated land state code

12.1.1 Purpose

The purpose of the code is to ensure that actually or potentially contaminated land, including land for which an area management advice has been given, is used in a way which is suitable for the site, and does not place another part of the environment, or human health, at risk.

12.1.2 Criteria for assessment

Development mentioned in column 1 below must be assessed against the assessment criteria in the table mentioned in column 2.

Column 1	Column 2
Material change of use	Table 12.1.1
Reconfiguring a lot	Table 12.1.1

Table 12.1.1: Material change of use and reconfiguring a lot

Performance outcomes	Acceptable outcomes
PO1 Contaminated land is used in a way which is suitable for the site, and does not place another part of the environment, or human health, at risk.	**AO1.1** A site investigation report or a validation report has been certified by an auditor under the *Environmental Protection Act* 1994 that the land is suitable for its intended use. OR **AO1.2** A draft site management plan has been certified by an auditor under the *Environmental Protection Act* 1994 and states that the land is suitable for the stipulated intended use. Editor's note: An auditor must be approved under the *Environmental Protection Act 1994* and must comply with the code of conduct for auditors.
PO2 The area for which an area management advice has been given for unexploded ordnance (UXO) is managed so that it does not place another part of the environment, or human health, at risk.	**AO2.1** A contractor approved by the Commonwealth Department of Defence has certified that the area for which an area management advice has been given for unexploded ordnance has been remediated or is managed to be suitable for the proposed use. Editor's note: A UXO search can be conducted through the Australian Department of Defence located at http://www.defence.gov.au/uxo

12.2 Reference documents

Department of Environment and Heritage Protection 2012 *Guideline for contaminated land professionals*

Department of Environment and Heritage Protection 2013 *Contaminated land website*

Department of Environment and Heritage Protection 2013 *Environmental Management and Contaminated Land Register search form*

Australian Government, Department of Defence *UXO Search – Australian Government*

12.3 Glossary of terms

Auditor see the Environmental Protection Act 1994, section 567

Editor's note: An auditor's certification means a certification by an auditor about specified matters:
(1) that includes a declaration that meets the requirements of section 574C(2) and (3) of the *Environmental Protection Act 1994*
(2) a copy of which has been provided to the administering authority.

Contaminated land see the Environmental Protection Act 1994

Editor's note: Contaminated land means land contaminated by a hazardous contaminant.

Hazardous contaminant see the Environmental Protection Act 1994

Editor's note: Hazardous contaminant means a contaminant, other than an item of explosive ordnance that, if improperly treated, stored, disposed of or otherwise managed, is likely to cause serious or material environmental harm because of:

(3) Its quantity, concentration, acute or chronic toxic effects, carcinogenicity, teratogenicity, mutagenicity, corrosiveness, explosiveness, radioactivity or flammability, or

(4) its physical, chemical or infectious characteristics.

Unexploded ordnance is ammunition such as artillery shells, mortar bombs and grenades that did not explode when used. Unexploded ordnance is considered a contaminant under section 11 of the *Environmental Protection Act 1994.*

12.4 Abbreviations

UXO – unexploded ordnance

Module 13. Major hazard facilities

13.1 Major hazard facilities state code

13.1.1 Purpose

The purpose of this code is to:

(1) assess off-site physical or chemical risks associated with developments involving a major hazard facility or proposed major hazard facility

(2) identify clear, concise and robust assessment criteria to assess any off-site risks a major hazard facility or proposed major hazard facility may have on its surrounding environment

(3) minimise the risk of knock-on effects between a major hazard facility or proposed major hazard facility and any adjacent buildings or structures, hazardous facilities or existing major hazard facilities.

Editor's note: It is a fundamental principle of this code that major hazard facilities and proposed major hazard facilities are designed taking into account of sound engineering principles, relevant Australian Standards and other good industry practice to reduce the risk so far as reasonably practicable (SFARP).

In addition to this, it is recommended that a hazard assessment of the proposed design should be conducted to identify any foreseeable hazard scenarios with the potential to create off-site physical or chemical effects. Any such hazard scenarios should be quantified using suitable software modelling.

Proponents of major hazard facilities and proposed major hazard facilities should demonstrate that they have taken all measures necessary to minimise the likelihood of any off-site hazards from materialising, and to limit their physical and chemical effects in the event they did occur. As a guiding principle, major hazard facilities should be designed so that the effects of any hazards are contained within its boundaries. Where a major hazard facility cannot be designed in accordance with this principle, it should be designed so that the risk to health and safety of persons is minimised SFARP.

13.1.2 Criteria for assessment

Development mentioned in column 1 below must be assessed against the assessment criteria in the table mentioned in column 2.

Column 1	Column 2
Material change of use	Table 13.1.1

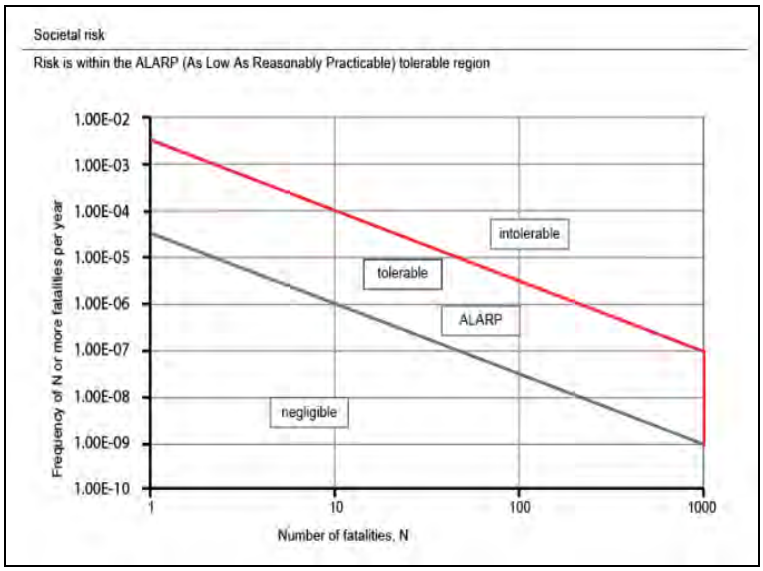
Table 13.1.1: Material change of use

Performance outcomes	Acceptable outcomes
PO1 The major hazard facility or proposed major hazard facility does not create a new risk at any property outside its boundaries that is not commensurate with the sensitivity of the surrounding land uses or zones.	**AO1.1** Any off-site impact from a foreseeable hazard scenario shall not exceed, at the boundary of any vulnerable land use or zone: (1) a dangerous dose to human health, or (2) if the above criteria cannot be achieved: (a) an individual fatality risk level >0.5 x 10^{-6}/year (b) the societal risk criteria in Figure 13.2.1. AND **AO1.2** Any off-site impact from a foreseeable hazard scenario shall not exceed, at the boundary of any sensitive land use or zone: (1) a dangerous dose to human health, or (2) if the above criteria cannot be achieved: (a) an individual fatality risk level >1 x 10^{-6}/year (b) the societal risk criteria in Figure 13.2.1 AND

Performance outcomes	Acceptable outcomes
	AO1.3 Any off-site impact from a foreseeable hazard scenario shall not exceed, at the boundary of any commercial or community activity land use or zone: (1) a dangerous dose to human health, or (2) if the above criteria cannot be achieved: (a) an individual fatality risk level >5 x 10^{-6}/year (b) the societal risk criteria in Figure 13.2.1 AND **AO1.4** Any off-site impact from a foreseeable hazard scenario shall not exceed, at the boundary of any industrial land use or zone: (1) a dangerous dose to the built environment, or (2) an individual fatality risk level >50 x 10^{-6}/year.

13.2 Reference documents

Figure 13.2.1: Societal risk criteria



American Industrial Hygiene Association 2006 *Emergency response planning guidelines*

National Transport Commission 2011 *Australian code for the transport of dangerous goods by road and rail*

13.3 Glossary of terms

AEGL means Acute Exposure Guidelines Level which identifies threshold exposure limits for the general public and are applicable to emergency exposure periods ranging from 10 minutes to 8 hours as published by the US Environmental Protection Agency.

AEGL2 means the airborne concentration (expressed as ppm or mg/m3) of a substance above which it is predicted that the general population, including susceptible individuals, could experience irreversible or other serious, long-lasting adverse health effects or an impaired ability to escape.

Commercial or community activity land use means any of the following:
(1) retail centre
(2) shop
(3) office
(4) entertainment building
(5) market
(6) showroom

(7) convention centre
(8) sporting stadium
(9) tourist attraction
(10) nightclub
(11) building for religious worship
(12) community hall
(13) theatre
(14) art gallery.

This term does not include a park, sporting field or open space.

Dangerous dose to human health means:

(1) for fire or explosion - an effect that equals or exceeds the following:
  (a) 4.7kilowatts per square metre for heat radiation, or
  (b) 7kilopascals for explosion overpressure
(2) for toxic or corrosive gases - an effect that equals or exceeds the following:
  (a) AEGL 2 (60 minutes)
  (b) where a corresponding AEGL is not available – ERPG2
  (c) where a corresponding ERGP2 is not available – a concentration that is likely to produce the following effects:
    (i) severe distress to almost all people
    (ii) a substantial proportion of people require medical attention
    (iii) some people are seriously injured, requiring prolonged treatment
    (iv) highly susceptible people might be fatally injured.

Dangerous dose to the built environment means an effect from fire or explosion that equals or exceeds the following:
  (a) 12.6kilowatts per square metre for heat radiation, or
  (b) 14kilopascals for explosion overpressure.

ERPG means the *Emergency Response Planning Guidelines* developed by the American Industrial Hygiene Association and includes ERPG-2.

ERPG-2 means the maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to 1 hour without experiencing or developing irreversible or other serious health effects or symptoms which could impair an individual's ability to take protective action.

Foreseeable hazard scenario means a scenario resulting in an uncontrolled fire, explosion, corrosive vapours or toxic gas release from the development based on the hazardous properties of its hazardous chemicals, their quantities, how they are to be stored or handled and any relevant historical incidents.

Individual fatality risk level means the risk of death to a person at a particular point.

Industrial land use see the standard planning scheme provisions.

Editor's note: Industrial land use means any of the following:

(1) warehouse
(2) low impact industry
(3) medium impact industry
(4) high impact industry
(5) special industry.

Major hazard facility see the Work Health and Safety Regulation 2011, schedule 19.

Editor's note: Major hazard facility means a facility:

(1) at which Schedule 15 chemicals are present or likely to be present in a quantity that exceeds their threshold quantity, or
(2) that is determined under Part 9.2 of the Work Health and Safety Regulation 2011 to be a major hazard facility.

Proposed major hazard facility see the Work Health and Safety Regulation 2011, schedule 19.

Editor's note: Proposed major hazard facility means:

(1) an existing facility or other workplace that is to become a major hazard facility due to the introduction of Schedule 15 chemicals or the addition of further Schedule 15 chemicals, or
(2) a major hazard facility that is being designed or constructed.

Sensitive land use means any of the following as defined in the standard planning scheme provisions:

(1) community residence
(2) dual occupancy
(3) dwelling house
(4) educational establishment
(5) multiple dwelling
(6) relocatable home park
(7) residential care facility
(8) rooming accommodation
(9) short-term accommodation
(10) tourist park.

Threshold quantity see the Work Health and Safety Regulation 2011, schedule 19.

Editor's note: Threshold quantity in relation to a Schedule 15 chemical, means:

(1) the threshold quantity of a specific hazardous chemicals determined under Schedule 15, section 3, or
(2) the aggregate threshold quantity of two or more hazardous chemicals as determined under Schedule 15, section 4.

Vulnerable land use means any of the following as defined in the standard planning scheme provisions:

(1) child care centre
(2) community care centre
(3) educational establishment
(4) health care services
(5) hospital
(6) retirement facility.

13.4 Abbreviations

AEGL – Acute Exposure Guidelines Level

ERPG – Emergency Response Planning Guidelines

SFARP – So far as reasonably practicable

Module 14. Maritime safety

14.1 Maritime safety state code

14.1.1 Purpose

The purpose of the code is to ensure development:

(1) supports the viable operation of aids to navigation
(2) supports the safe operation of vessels in navigable waterways
(3) supports equitable access to navigable waterways.

Editor's note: Guidance for achieving the performance outcomes and acceptable solutions for this state code is available in the *State Development Assessment Provisions Supporting Information – Marine Safety*, Department of Transport and Main Roads, 2013.

14.1.2 Criteria for assessment

Development mentioned in column 1 below must be assessed against the assessment criteria in the table mentioned in column 2.

Column 1	Column 2
Operational work	Table 14.1.1

Table 14.1.1: Operational work

Performance outcomes	Acceptable outcomes
Lighting	
PO1 Development avoids lighting that has the potential to interfere with aids to navigation.	**AO1.1** Development must ensure that at all times, all lights on or above the development site do not interfere with safe navigation in surrounding waterways by: (1) shielding lights to prevent glare or reflection (2) avoiding flood lighting which may reduce the visibility of aids to navigation (3) avoiding flashing or flickering lights which may be confused with aids to navigation (4) avoiding coloured lights such as green, blue or red lights, which may be confused with aids to navigation. AND **AO1.2** Lighting complies with section 3 of *AS 4282–1997 Control of the obtrusive effects of outdoor lighting.*
Aids to navigation	
PO2 Development does not interfere with aids to navigation.	**AO2.1** Development must not interfere with any aid to navigation on the development site. AND **AO2.2** Development must not create any temporary or permanent obstruction of aids to navigation. AND **AO2.3** Development must keep the sight line of any aids to navigation which cross the land clear of obstructions. AND **AO2.4** Development must allow ongoing access to aids to navigation for maintenance purposes. AND **AO2.5** Development does not result in significant electrical or electro-magnetic

Performance outcomes	Acceptable outcomes
	emissions which may impede the operation of aids to navigation. AND **AO2.6** Development: (1) is not within 40 metres of an existing aid to navigation, or (2) does not, within 40 metres of an existing aid to navigation, remove any material that may destabilise the aid to navigation (including ground tackle).
Protection of navigable waterways	
PO3 Development does not encroach on the navigable waterway in a way that impedes the safe passage of vessels.	**AO3.1** Development is to be carried out in a manner that ensures the navigable waterway is open to vessel traffic at all times. Editor's note: Where development proposes to temporarily or permanently limit the depth of a navigable waterway or the size of vessels which can navigate a waterway, it is recommended that a vessel traffic management plan be provided. It is also recommended a marine execution plan be submitted to the regional harbour master 30 days prior to the commencement of works. AND **AO3.2** Development: (1) does not extend beyond the quayline, or (2) if there is no quayline, any structures that are part of the development do not extend beyond that of approved neighbouring structures. AND **AO3.3** Development does not limit either the depth of a navigable waterway or the size of vessels which can safely navigate the waterway. Editor's note: Where development closes or impedes vessel traffic in a navigable channel, the applicant must prepare a vessel traffic management plan. It is also recommended a marine execution plan be submitted to the Regional Harbour Master 30 days prior to the commencement of works. AND **AO3.4** Development involving the demolition of structures in a navigable waterway, including piling, must ensure the entire structure is removed. AND **AO3.5** Structures, including all freestanding piles, must be appropriately lit and clearly visible to approaching vessels, and reflective tape must be fitted to all structures to enhance visibility during the hours of darkness. Editor's note: Where necessary, the Regional Harbour Master may require the installation of aids to navigation on structures.
PO4 Development does not adversely affect navigable access to neighbouring premises.	**AO4.1** Development, including structures and any vessel berthed at the structures: (1) if the development involves a finger pontoon, boat ramp or abuts a park or public area — has a setback area that maintains a safe navigable access to adjoining properties, or (2) otherwise — retains a 1.5 metre setback from the water allocation side boundaries.

14.2 Reference documents

Department of Transport and Main Roads 2013 State Development Assessment Provisions Supporting Information – Maritime Safety *State Development Assessment Provisions Supporting Information – Maritime Safety*

Standards Australia *AS 4282–1997 Control of the obtrusive effects of outdoor lighting*

14.3 Glossary of terms

Aid to navigation see the *Transport Operations (Marine Safety) Act 1994*, section 104.

Editor's note:

(1) An aid to navigation is a device designed to be used for navigation or the guidance or mariners, including a device to help in–
   (a) fixing a ship's position, or
   (b) deciding a safe course for a ship, or
   (c) warning a ship of dangers or obstructions.

Examples– beacon, buoy, light, lighthouse, marine mark, radio aid or signal.

(2) An aid to navigation includes any structure or equipment ancillary to the aid to navigation.

Examples–the battery house providing a lighthouse with power; lifesaving equipment that is part of an aid to navigation.

(3) However an aid to navigation does not include a device on board a ship.

Finger pontoon means a long, narrow, floating platform, which is normally positioned perpendicular to the shoreline. A finger pontoon is usually accessed by a gangway affixed to the shore and parallel to the pontoon. Finger pontoons provide vessel berthing arrangements that are usually perpendicular to the shoreline.

Marine execution plan includes detailed information about all development related vessels and their operations during each of the stages of construction, and the relevant impacts on the availability of the navigable waterway to vessel traffic.

Navigable access means access that is deep enough and wide enough to afford vessels safe passage to navigable waterways.

Navigable waterway means waters with a sufficient depth and width to allow safe passage by all vessel sizes and types that frequently use the area.

Quayline means a quayline established by a harbour master under the *Transport Operations (Marine Safety) Act 1994* to ensure clear navigable waterways and to define seaward limits for waterfront structures.

Vessel traffic management plan includes information on changes and increases to local vessel traffic resulting from the proposed development project and methods of cumulative vessel traffic management for all stages of the proposal lifecycle, to ensure safety of navigation at all times.

Water allocation means the area of a waterway in which a waterfront property owner could construct tidal works (subject to obtaining the required approval).

Module 15. Airports

15.1 Airport land use plans

15.1.1 Background

Cairns Airport Land Use Plan 2012

The *Cairns Airport Land Use Plan 2012* ensures that aeronautical and non-aeronautical on-airport development can continue to provide economic opportunities regionally and statewide.

Mackay Airport Land Use Plan 2008

The strategic vision for the Mackay Airport is influenced by the need to be competitive with the best practice of its airport competitors. The aim is to provide best practice services, safe and efficient operations, and appropriate environmentally sustainable development. The land use plan aims to continue to facilitate both growth and improved quality, while protecting buffer land from incompatible development or environmentally insensitive development.

15.1.2 Criteria for assessment

(1) *Cairns Airport Land Use Plan 2012.*

(2) *Mackay Airport Land Use Plan 2008*.

Editor's note: The *Cairns Airport Land Use Plan 2012* and *Mackay Airport Land Use Plan 2008* are prepared in accordance with the provisions of the *Airport Assets (Restructuring and Disposal) Act 2008*.

15.2 Reference documents

Cairns Airport *Cairns Airport Land Use Plan 2012*

Editor's note: Cairns Airport Land Use Plan document size 28mb.

Mackay Airport *Mackay Airport Land Use Plan 2008*

Module 16. Particular dams

16.1 Referable dams state code

16.1.1 Purpose

The purpose of the code is to ensure the safety and reliability of dams that have been failure impact assessed under the *Water Supply (Safety and Reliability) Act 2008* and determined to be a referable dam.

16.1.2 Criteria for assessment

Development mentioned in column 1 below must be assessed against the assessment criteria in the table mentioned in column 2.

Column 1	Column 2
Operational work	Table 16.1.1

Table 16.1.1: Operational work

Performance outcomes	Acceptable outcomes
PO1 The design of a referable dam meets currently acceptable standards which are appropriate for the site conditions for where the dam is to be constructed so as to minimise impacts on the population at risk.	No acceptable outcome is prescribed. Editor's note: A failure impact assessment must be completed for any dam that, after construction, will be greater than 10 metres in height and have: (1) a storage capacity of more than 1500 megalitres, or (2) a storage capacity of more than 750 megalitres and a catchment area that is more than three times maximum surface area at full supply level. Refer to section 343 of the *Water Supply (Safety and Reliability) Act 2008* for when a dam must be failure impact assessed.

16.2 Reference documents

Department of Energy and Water Supply 2012 *Guidelines for failure impact assessment of water dams*

Department of Energy and Water Supply 2013 *Guidelines on acceptable flood capacity for water dams*

Department of Natural Resources and Mines 2002 *Queensland dam safety management guidelines*

16.3 Glossary of terms

Failure impact assessment see the *Water Supply (Safety and Reliability) Act 2008*, section 342.

Editor's note: Failure impact assessment is an assessment certified under the *Water Supply (Safety and Reliability) Act 2008* Chapter 4, Part 1 about the safety of a dam, or a proposed dam, by a Registered Professional Engineer of Queensland (RPEQ) who is not, for the dam, or the proposed dam:

(1) the owner
(2) an employee of the owner
(3) the operator, or
(4) an employee of the operator

in accordance with the guidelines made by the chief executive of the *Water Supply (Safety and Reliability) Act 2008* for failure impact assessment of water dams (the failure impact assessment guidelines).

Failure impact rating see the *Water Supply (Safety and Reliability) Act 2008*, section 346(1)

Editor's note: An existing dam has, or a proposed dam after its construction will have, the following failure impact rating if a failure impact assessment, accepted by the chief executive under section 349 of the *Water Supply (Safety and Reliability) Act 2008*, for the dam, or the proposed dam after its construction, states that the population at risk is—

(1) for a category 1 failure impact rating—2 or more persons and not more than 100 persons;
(2) for a category 2 failure impact rating—more than 100 persons.

Population at risk see the *Water Supply (Safety and Reliability) Act 2008*, section 346(2).

Editor's note: Population at risk means the number of persons, calculated under the failure impact assessment guidelines, whose safety will be at risk if the dam, or the proposed dam after its construction, fails.

Referable dam see the *Water Supply (Safety and Reliability) Act 2008*, section 341.

Editor's note: A referable dam is a dam or a proposed dam that, after its construction, will be a referable dam if:

(1) a failure impact assessment of the dam, or the proposed dam, is required to be carried out under the *Water Supply (Safety and Reliability) Act* 2008 Chapter 4, Part 1
(2) the assessment states the dam has, or the proposed dam after its construction will have, a category 1 or category 2 failure impact rating
(3) the chief executive has, under section 349 of the *Water Supply (Safety and Reliability) Act 2008*, accepted the assessment.

Module 17. Public and active transport

17.1 Public passenger transport state code

17.1.1 Purpose

The purpose of the code is to ensure that development:

(1) supports the integration of land use with public passenger services and public passenger transport infrastructure

(2) does not have a significant adverse impact on existing or future public passenger transport and public passenger transport infrastructure

(3) promotes and maximises the use of public passenger transport as an attractive, efficient and accessible travel alternative to private transport in a way that reduces the overall economic, environmental and social costs of transport

(4) increases opportunities for people to access public passenger transport, including access by active transport

(5) provides, as far as practicable, public passenger transport infrastructure to support public passenger services.

Note: This code applies to all purposes listed under column 1 of Schedule 9 to the Sustainable Planning Regulation 2009 except the following items: 9, 18, 19, 20, 21, 22, 23, 24, 29 and 30.

Note: LGA (Local government area) population 1 and LGA population 2 are as defined in Schedule 26 to the Sustainable Planning Regulation 2009.

Editor's note: Guidance for achieving the performance outcomes and acceptable outcomes for this state code is available in the *State Development Assessment Provisions Supporting Information – Public Passenger Transport and Active Transport*, Department of Transport and Main Roads, 2013.

17.1.2 Criteria for assessment

Development mentioned in column 1 below must be assessed against the assessment criteria in the table mentioned in column 2.

Column 1	Column 2
Material change of use	Table 17.1.1
Reconfiguring a lot	Table 17.1.1

Table 17.1.1: Material change of use or reconfiguring a lot

Performance outcomes	Acceptable outcomes
Efficiency and connectivity	
PO1 Development is designed and constructed to accommodate safe, convenient and efficient access for buses, bus stops and public passenger transport facilities.	**AO1.1** Roads are designed to accommodate buses. Note: Road design is in accordance with Part 2 (Development standards) of the Schedule to the Transport Planning and Coordination Regulation 2005 and Disability standards for accessible public transport 2002 – section 31(1) of the *Disability Discrimination Act 1992 (Cth).* AND **AO1.2** Any new roads support bus routes that balance accessibility with the efficient running of bus services and minimise service diversions. AND **AO1.3** Bus stops are provided in accordance with the *TransLink public transport infrastructure manual,* Translink Transit Authority, 2012. AND **AO1.4** For educational establishments, bus facilities accommodating private coaches or buses are designed in accordance with the technical guideline *Planning for safe transport infrastructure at schools*, Department of Transport and Main Roads, 2011.

Performance outcomes	Acceptable outcomes
PO2 Development does not adversely impact on the operation of existing or proposed public passenger services setdown, layover and boarding arrangements.	**AO2.1** New roads, including verges and kerb alignments, are designed and managed to perform the designated traffic and parking functions without compromising or creating conflicts with setdown, layover or boarding arrangements for buses. AND **AO2.2** Provision is made for any bus stops to continue to function (including maintenance of associated pedestrian access) and for efficient travel times to be maintained during the construction phase of development.
PO3 Development does not adversely impact on the efficiency of bus routes.	**AO3.1** Any proposed new road layouts, including new intersections or vehicular accesses including driveways, are designed to avoid operational conflicts with existing bus routes. AND **AO3.2** Any impact from the development on the efficiency of a bus route is identified, and the application demonstrates how this impact will be minimised and mitigated against. Editor's note: A traffic impact assessment report will assist in addressing this acceptable outcome. AND **AO3.3** Any upgrading or provision of new public passenger transport facilities for public passenger services is in accordance with the *TransLink public transport infrastructure manual*, Translink Transit Authority, 2012.
Integration	
PO4 Development supports public passenger service integration and intermodal transfer.	**AO4.1** Any proposed new road network supports modal interchange by integrating with existing and future public passenger transport. AND **AO4.2** Development provides direct linkages and ease of interchange for passengers between existing and future public passenger transport, including other transport modes.
PO5 Development ensures buses can efficiently navigate through the proposed site.	**AO5.1** Development minimises conflict between buses, pedestrians, cars and other public passenger transport to minimise travel time and delay for public transport vehicles. AND **AO5.2** The design of pedestrian access ensures ease of movement and circulation patterns for public passenger transport. AND **AO5.3** Car parks for educational establishments are designed in accordance with the technical guideline *Planning for safe transport infrastructure at schools*, Department of Transport and Main Roads, 2011.
PO6 The development design allows for the progressive staging or extension of public passenger transport to the development.	**AO6.1** The proposed development layout and any new road network have the capability to be serviced by public passenger transport across all stages. Editor's note: A traffic impact assessment report will assist in addressing this acceptable outcome.
Public transport accessibility for users	
PO7 Development provides safe and convenient access to existing and future: (1) public passenger transport (2) public passenger transport facilities.	**AO7.1** Development locates public passenger transport to provide safe and convenient access for pedestrians, while avoiding conflicts with traffic. AND **AO7.2** The development demonstrates that safe and convenient access to existing and future public passenger transport facilities is accommodated. Editor's note: An active transport plan can demonstrate how this acceptable outcome

Performance outcomes	Acceptable outcomes
	is addressed. AND **AO7.3** Educational establishments provide for safe and convenient pedestrian access to public passenger services in accordance with the technical guideline *Planning for safe transport infrastructure at schools*, Department of Transport and Main Roads, 2011.
PO8 Development provides for the on-site setdown of private coaches, buses and minibuses to meet the anticipated capacity of the proposed development.	**AO8.1** Any requirement for on-site setdown areas for private buses, coaches and minibuses is identified, and the development has the capacity to accommodate manoeuvring and setdown facilities for the largest design vehicle to be accommodated on site. Editor's note: A traffic impact assessment can demonstrate how this acceptable outcome will be achieved.
Taxi facilities	
PO9 A dedicated taxi facility is provided to meet the anticipated need of the proposed development, and is located to provide convenient, safe and equitable access for all patrons seeking to use this transport service.	**AO9.1** Any requirement for a dedicated taxi facility is identified, and it is demonstrated how this requirement is addressed. Editor's note: A traffic impact assessment report will assist in addressing this acceptable outcome. AND **AO9.2** Taxi facilities are designed in accordance with: (1) *AS2890.5–1993 Parking facilities – on-street parking* and *AS1428.1–2009 Design for access and mobility – general requirements for access – new building work* (2) *AS1742.11–1999 Parking controls – manual of uniform traffic control devices* (3) *AS/NZS 2890.6–2009 Parking facilities – off-street parking for people with disabilities* (4) Disability standards for accessible public transport 2002 made under section 31(1) of the *Disability Discrimination Act 1992* (5) *Guide to traffic management – Part 11: Parking*. AND **AO9.3** A dedicated taxi facility is located within 100 metres of a main entrance to a building.

17.2 Active transport state code

17.2.1 Purpose

The purpose of the code is to ensure that development:

(1) supports active transport
(2) provides infrastructure to support active transport, as far as practicable.

This will be achieved through:

(1) providing safe, convenient and legible access to active transport infrastructure
(2) development that supports the provision of active transport infrastructure
(3) ensuring development avoids adversely impacting on the safety or operation of existing active transport infrastructure.

Editor's note: Guidance for achieving the performance outcomes and acceptable outcomes for this state code is available in the *State Development Assessment Provisions Supporting Information – Public Passenger Transport and Active Transport*, Department of Transport and Main Roads, 2013.

17.2.2 Criteria for assessment

Development mentioned in column 1 below must be assessed against the assessment criteria in the table mentioned in column 2.

Column 1	Column 2
Material change of use	Table 17.2.1
Reconfiguring a lot	Table 17.2.1

Table 17.2.1: Material change of use or reconfiguring a lot

Performance outcomes	Acceptable outcomes
Pedestrian and cycle access	
PO1 Development supports active transport by providing a safe, convenient and legible pedestrian and cycle network.	**AO1.1** The development demonstrates support of active transport by providing a safe, convenient and legible pedestrian and cycle network. Editor's note: An active transport plan can demonstrate how this acceptable outcome is addressed. AND **AO1.2** Pathways are planned and designed to be fit-for-purpose, including provision for shared cycle and pedestrian pathways, in accordance with the Austroads *Guide to road design – Part 6A: Pedestrian and cyclist paths* and *AS1742.9–2000 Bicycle facilities – manual of uniform traffic control devices.*
Existing and future active transport infrastructure and corridors	
PO2 Development does not impact on the safe and efficient operation of existing active transport infrastructure where co-located with an existing state transport corridor.	**AO2.1** Development minimises driveway crossovers. AND **AO2.2** Development does not impede sightlines for road users, including pedestrians and cyclists. AND **AO2.3** Development does not reduce levels of passive surveillance or reduce ambient light levels in public places used for active transport.
PO3 Development makes provision for future active transport infrastructure where it is a planned upgrade and co-located with an existing state transport corridor.	**AO3.1** Land required for future active transport infrastructure is kept clear of any permanent buildings, structures and improvements above or below ground.
Critical cycle corridors on the principal cycle network	
PO4 Development protects or makes provision for critical cycle corridors and provides the part of a planned upgrade to a critical cycle corridor that adjoins or is contained within the development.	**AO4.1** Land required for a critical cycle corridor is kept clear of any permanent buildings, structures and improvements above or below ground. Editor's note: The detailed site layout plan prepared in support of the development application should identify the provision of the critical cycle corridors, including any required land dedications. AND **AO4.2** The portion of a critical cycle corridor that runs along the frontage of the development or through the development site, as identified in the detailed design drawings for the critical cycle corridor, is constructed as part of the development.

17.3 Reference documents

Australian Government 2002 *Subsection 31(1) – Disability standards for accessible public transport 2002 of the Disability Discrimination Act 1992*

Austroads *Guide to road design – Part 6A: Pedestrian and cyclist paths*

Austroads 2008 *Guide to Traffic Management Part 11: Parking*

Queensland Government *Part 2 Code for IDAS – Development standards of the Transport Planning and Coordination Regulation 2005*

Department of Transport and Main Roads 2013 *State Development Assessment Provisions Supporting Information – Public passenger transport and active transport*

Standards Australia 2009 *AS1428.1-2009 Design for access and mobility – General requirements for access – New building work*

Standards Australia 2000 *AS1742.9—2000 Bicycle facilities— Manual of uniform traffic control devices*

Standards Australia 1999 *AS1742.11—1999 Parking controls—Manual of uniform traffic control devices*

Standards Australia 1993 *AS2890.5—1993 Parking facilities—On-street parking*

Standards Australia 2009 *AS/NZS 2890.6:2009 Parking facilities—Off-street parking for people with disabilities*

Department of Transport and Main Roads 2011 *Planning for safe transport infrastructure at schools*

Translink Transit Authority 2012 *TransLink public transport infrastructure manual*

17.4 Glossary of terms

Active transport see the *Transport Planning and Coordination Act 1994*, section 8A(3).

Editor's note: Active transport means physical activity undertaken as a means of transport from one place to another, including the following:

(1) cycling
(2) walking
(3) cycling or walking to a place to access public passenger transport, or from a place after public passenger transport has been used.

Active transport infrastructure see the *Transport Planning and Coordination Act 1994*, section 8A(3).

Editor's note: Active transport infrastructure means infrastructure used in connection with active transport, including, for example:

(1) a path or walkway for pedestrians
(2) a path, lane or other infrastructure for cyclists
(3) a device or facility designed and constructed for parking bicycles or
(4) an end-of-trip facility.

Critical cycle corridors are key sections of the principal cycle network which carry the largest volumes of cyclists. They are limited to the highest order connections.

Planned upgrade means any planned and approved extension, upgrade, augmentation or duplication of state transport infrastructure or transport networks where:

(1) described or reflected in a state or local government document which has been adopted, committed and published, or
(2) affected land holders have been consulted.

Public passenger service see the *Transport Operations (Passenger Transport) Act 1994*, schedule 3.

Editor's note: Public passenger service means a service for the carriage of passengers if:

(1) the service is provided for fare or other consideration
(2) the service is provided in the course of a trade or business (but not if it is provided by an employer solely for employees) or
(3) the service is a courtesy or community transport service
(4) and includes a driver service and a service for the administration of taxi services, but does not include a service excluded from the *Transport Operations (Passenger Transport) Act 1994* by a Regulation.

Public passenger transport see the *Transport Planning and Coordination Act 1994*, section 3.

Editor's note: Public passenger transport means the carriage of passengers by a public passenger service using a public passenger vehicle.

Public passenger transport corridor means land:

(1) on which any of the following transport infrastructure is situated, if the infrastructure is used for providing public passenger services—

(a) busway transport infrastructure
(b) light rail transport infrastructure
(c) rail transport infrastructure

(2) on which other services are provided for the maintenance or operation of transport infrastructure mentioned in (1).

Public passenger transport facility means any of the following:

(1) a busway station
(2) a railway passenger station
(3) a light rail station
(4) a passenger transport interchange facility identified in a guideline made under the *Transport Planning and Coordination Act 1994,* section 8E.

Public passenger transport infrastructure see the *Transport Planning and Coordination Act 1994*, section 3

Editor's note: Public passenger transport infrastructure means infrastructure for, or associated with, the provision of public passenger transport, including, but not limited to:

(1) a transit terminal for public passengers services (for example, an airport terminal, a coach terminal, a cruise ship terminal)
(2) a ferry terminal, jetty, pontoon or landing for ferry services
(3) a bus stop, bus shelter, bus station or bus lay-by
(4) a busway station
(5) a light rail station
(6) a taxi rank, limousine rank or limousine standing area
(7) a railway station
(8) vehicle parking and set-down facilities
(9) pedestrian and bicycle paths and bicycle facilities
(10) a road on which a public passenger transport service operates.

Railway means land on which railway transport infrastructure or other rail infrastructure is situated.

State-controlled road see the *Transport Infrastructure Act 1994*

Editor's note: State-controlled road means a road or land, or part of a road or land, declared under the *Transport Infrastructure Act 1994* to be a state-controlled road.

State transport corridor means any of the following terms (defined under the *Transport Infrastructure Act 1994*, *Transport Planning and Coordination Act 1994* and Sustainable Planning Regulation 2009):

(1) a state-controlled road
(2) a railway
(3) a public passenger transport corridor
(4) a state-controlled transport tunnel
(5) an active transport corridor.

State transport infrastructure means any of the following:

(1) state-controlled road
(2) busway transport infrastructure under the *Transport Infrastructure Act 1994*
(3) light rail transport infrastructure under the *Transport Infrastructure Act 1994*
(4) rail transport infrastructure under the *Transport Infrastructure Act 1994*
(5) other rail infrastructure under the *Transport Infrastructure Act 1994*
(6) active transport infrastructure under the *Transport Planning and Coordination Act 1994*.

Module 18. State transport infrastructure protection

18.1 Buildings and structures state code

18.1.1 Purpose

The purpose of the code is to ensure that buildings and structures located in, over or adjacent to existing or future state transport corridors or state transport infrastructure avoid or mitigate any adverse impacts on the operation and structural integrity of state transport infrastructure.

18.1.2 Criteria for assessment

Development mentioned in column 1 below must be assessed against the assessment criteria in the table mentioned in column 2.

Column 1	Column 2
All development	Table 18.1.1

Table 18.1.1: All development

Performance outcomes	Acceptable outcomes
PO1 Buildings, services, structures and utilities do not adversely impact on the safety or operation of existing and future state transport infrastructure and state transport corridors.	No acceptable outcome is prescribed.
PO2 Buildings and structures in or over an existing or future state transport corridor (including a buffer associated with a state-controlled transport tunnel): (1) are able to sustain impacts to their structural integrity in the event of an impact from state transport infrastructure (2) have no adverse impact on the structural integrity of the state transport infrastructure, including tunnels, retaining walls and viaducts or bridges during construction or thereafter (3) minimise the impacts of: (a) fire (b) explosion (c) chemical spill (d) liquid fuel spill (e) gas leak (f) any other emission or hazard generated from a dangerous goods incident.	No acceptable outcome is prescribed.
PO3 Parts of the development visible from state transport infrastructure on existing and future state transport corridors minimise potential to distract drivers and cause a safety hazard.	**AO3.1** Advertising devices proposed on a state-controlled road are designed to meet the standards outlined in the *Roadside advertising guide*, Department of Transport and Main Roads, 2009. AND **AO3.2** Landscaping on a state-controlled road is undertaken in accordance with the *Road landscape manual*, Department of Transport and Main roads, 2013. Editor's note: Works on a state-controlled road reserve require the applicant to obtain an ancillary works and encroachments permit under section 50 of the *Transport*

Performance outcomes	Acceptable outcomes
	Infrastructure Act 1994. AND **AO3.3** Development adjacent to a railway is in accordance with the *Guide for development in a railway environment*, Department of Infrastructure and Planning, 2009. Note: The *Guide for development in a railway environment* is part of the *Transit oriented development: Guide for practitioners*, Department of Infrastructure and Planning, 2009.

18.2 Filling and excavation state code

18.2.1 Purpose

The purpose of the code is to ensure filling and excavation associated with development does not create any adverse impacts on the condition or operation of an existing or future state transport corridor.

This will be achieved through:

(1) protection of the infrastructure asset from damage, reduction in asset life or increased maintenance costs (whole of life cycle costs)
(2) avoiding interference with and encroachment from with services and public utilities in state transport corridors
(3) maintaining a safe operation of state transport corridors
(4) avoiding adverse impacts from overland flows and stormwater events on the capacity of drainage systems
(5) preventing land instability and contamination impacts.

Editor's note: Guidance for achieving the performance outcomes and acceptable outcomes for this state code is available in the *State Development Assessment Provisions Supporting Information – Filling and Excavation*, Department of Transport and Main Roads, 2013.

18.2.2 Criteria for assessment

Development mentioned in column 1 below must be assessed against the assessment criteria in the table mentioned in column 2.

Column 1	**Column 2**
Material change of use	Table 18.2.1
Operational work	Table 18.2.1
Reconfiguring a lot	Table 18.2.1

Table 18.2.1: Material change of use, reconfiguring a lot and operational work

Performance outcomes	Acceptable outcomes
Filling and excavation	
PO1 Filling and excavation does not adversely impact on or compromise the safety or operation of an existing or future state-controlled road.	**AO1.1** Filling and excavation is undertaken to ensure no undermining, subsidence, groundwater seepage, drainage or stormwater impacts occur within an existing or future state-controlled road. Editor's note: To meet the above acceptable outcome, a filling and excavation report assessing the proposed filling and excavation should be prepared to demonstrate compliance with this code and the requirements of the *Road planning and design manual*, Department of Transport and Main Roads, 2013.
PO2 Filling and excavation on an existing or future state-controlled road is minimised through alternative design solutions, where	No acceptable outcome is prescribed. Editor's note: If a development involves filling and excavation within a state-controlled road, an approval issued by the Department of Transport and Main Roads under section 33 of the

Performance outcomes	Acceptable outcomes
practical and cost-effective. Editor's note: Where this applies to a future state-controlled road corridor, planning for the corridor must be sufficiently progressed for impacts from filling and excavation to be considered as part of the development application.	*Transport Infrastructure Act 1994* may be required.
Services and public utilities	
PO3 Filling and excavation does not interfere with or impact on existing or future planned services or public utilities on a state-controlled road.	**AO3.1** Any alternative service and public utility alignments must satisfy the standards and design specifications of the service or public utility provider, and with any costs of relocation being borne by the developer. Editor's note: An approval issued by the Department of Transport and Main Roads under section 33 of the *Transport Infrastructure Act 1994* may be required.
Retaining or reinforced soil structures	
PO4 Retaining or reinforced soil structures required to contain fill and excavation: (1) do not encroach on a state-controlled road (2) are capable of being constructed and maintained without adversely impacting a state-controlled road (3) are constructed of durable materials which maximise the life of the structure.	**AO4.1** Retaining or reinforced soil structures (including footings, rock anchors and soil nails) are sited outside an existing or future state-controlled road. AND **AO4.2** Retaining or reinforced soil structures in excess of an overall height of 1 metre are to be designed and certified by a structural Registered Professional Engineer of Queensland (RPEQ). AND **AO4.3** Retaining or reinforced soil structures that are set back less than 750 millimetres from a common boundary alignment with a state-controlled road are designed to achieve a low maintenance external finish, and are certified by a structural RPEQ. AND **AO4.4** Retaining or reinforced soil structures in excess of an overall height of 2 metres incorporate design treatments (such as terracing or planting) to reduce the overall height impact. AND **AO4.5** Construction materials of all retaining or reinforced soil structures have a design life exceeding 40 years, and comply with the specifications approved by a RPEQ.
Stormwater flows and infrastructure on state-controlled roads	
PO5 Upstream or downstream fill and excavation does not alter or create a worsening effect on the operation and capacity of existing drainage infrastructure, including culverts, floodway systems or overland flow paths within the state-controlled road network.	**AO5.1** Filling and excavation is undertaken with provision of suitable surface and sub-surface drainage to avoid adverse impacts from overland flow and stormwater events that exist prior to development up to a 1 per cent annual exceedance probability on a state-controlled road. AND **AO5.2** Surface and sub-surface drainage carried out as part of the filling and excavation works prevents water seepage; creating barriers to overland flow and ponding; or a concentration of run-off on state-controlled roads.
Compaction, stabilisation and erosion management	
PO6 Filling and excavation does not cause siltation and erosion run-off from the property, or wind blown dust nuisance onto a state-controlled road.	**AO6.1** Compaction of fill is carried out in accordance with the requirements of *AS 1289.0 2000 – Methods of testing soils for engineering purposes*. AND **AO6.2** Erosion and siltation control measures are managed and completed in accordance with Chapter 13 of the *Road drainage manual*, Department of Transport and Main Roads, 2010.

Performance outcomes	Acceptable outcomes
Transporting spoil on state-controlled roads	
PO7 Where the quantity of fill or excavated spoil material being imported or exported for a development exceeds 10 000 tonnes, and haulage will be on a state-controlled road, any impact on the infrastructure is identified and mitigation measures implemented.	**AO7.1** The impacts on the state-controlled road network are identified, and measures are implemented to avoid, reduce or compensate the effects on the asset life of the state-controlled road. Editor's note: It is recommended that a pavement impact assessment report be prepared to address this acceptable outcome. Guidance for preparing a pavement impact assessment is set out in *Guidelines for assessment of road impacts of development (GARID)*, Department of Transport and Main Roads, 2006.
Driveway crossover to a state-controlled road	
PO8 Filling and excavation associated with providing a driveway crossover to a state-controlled road does not compromise the operation or capacity of existing drainage infrastructure.	**AO8.1** Filling and excavation associated with the design of driveway crossovers complies with the relevant Institute of Public Works Engineering Australia Queensland (IPWEAQ) standards. Editor's note: The construction of any crossover requires the applicant to obtain a permit to work in the state-controlled road corridor under section 33 of the *Transport Infrastructure Act 1994* and a section 62 approval under the *Transport Infrastructure Act 1994* for the siting of the access and associated works.
Contamination	
PO9 Fill material does not cause contamination from the development site onto a state-controlled road.	**AO9.1** Fill material is free of contaminants including acid sulphate content, and achieves compliance with *AS 1289.0 – Methods of testing soils for engineering purposes* and *AS 4133.0-2005 – Methods of testing rocks for engineering purposes.*
Vibration through compaction	
PO10 Vibration generated through fill compaction does not result in damage or nuisance to a state-controlled road.	**AO10.1** Fill compaction does not result in any vibrations beyond the site boundary, and is in accordance with *AS 2436–2010 – Guide to noise and vibration control on construction, demolition and maintenance sites*.
All state transport corridors except state-controlled roads	
PO11 Excavation, retaining works and other ground disturbance works associated with a development, including retaining walls and reinforced soil structures, must not impact on the safety of state transport infrastructure on existing and future state transport corridors.	No acceptable outcome is prescribed.

18.3 Stormwater and drainage impacts on state transport infrastructure state code

18.3.1 Purpose

The purpose of the code is to ensure that stormwater events, including peak discharges, flood levels, frequency/duration of flooding, flow velocities, water quality, sedimentation and scour effects associated with development are minimised and managed to avoid creating any adverse impacts on a state transport corridor.

This will be achieved through:

(1) ensuring the protection of the infrastructure assets from damage, any reduction in asset life or increased maintenance costs (whole of life cycle costs)

(2) a no worsening of impacts or actionable nuisance on state transport infrastructure and state transport corridors

(3) maintaining the efficiency of the stormwater infrastructure in state transport corridors to manage water quality and natural overland flows

(4) ensuring stormwater discharge only occurs at a lawful point of discharge.

Editor's note: Guidance for achieving the performance outcomes and acceptable outcomes for this state code is available in the *State Development Assessment Provisions Supporting Information – Stormwater and Drainage*, Department of Transport and Main Roads, 2013.

18.3.2 Criteria for assessment

Development mentioned in column 1 below must be assessed against the assessment criteria in the table mentioned in column 2.

Column 1	Column 2
All development	Table 18.3.1

Table 18.3.1: All development

Performance outcomes	Acceptable outcomes
Stormwater and drainage management	
PO1 Stormwater management for the development must ensure there is no worsening of, and no actionable nuisance in relation to peak discharges, flood levels, frequency or duration of flooding, flow velocities, water quality, sedimentation and scour effects on an existing or future state transport corridor for all flood and stormwater events that exist prior to development, and up to a 1 per cent annual exceedance probability.	**AO1.1** The development does not result in stormwater or drainage impacts or actionable nuisance within an existing or future state transport corridor. Editor's note: It is recommended that basic stormwater information is to be prepared to demonstrate compliance with AO1.1. OR **AO1.2** A stormwater management statement certified by an RPEQ demonstrates that the development will achieve a no worsening impact or actionable nuisance on an existing or future state transport corridor. OR **AO1.3** A stormwater management plan certified by an RPEQ demonstrates that the development will achieve a no worsening impact or actionable nuisance on a state-controlled road. OR **AO1.4** For development on premises within 25 metres of a railway, a stormwater management plan certified by an RPEQ demonstrates that: (1) the development will achieve a no worsening impact or actionable nuisance on the railway (2) the development does not cause stormwater, roofwater, ponding, floodwater or any other drainage to be directed to, increased or concentrated on the railway (3) the development does not impede any drainage, stormwater or floodwater flows from the railway (4) stormwater or floodwater flows have been designed to: (a) maintain the structural integrity of the rail transport infrastructure (b) avoid scour or deposition (5) additional railway formation drainage necessitated by the development is located within the premises where the development is carried out (6) retaining structures for excavations abutting the railway corridor provide for drainage.
Lawful point of discharge	
PO2 Stormwater run-off and drainage are directed to a lawful point of discharge to avoid adverse impacts on a future or existing state transport corridor.	**AO2.1** Where stormwater run-off is discharged to a state transport corridor, the discharge is to a lawful point of discharge in accordance with section 1.4.3 of the *Road drainage manual*, Department of Transport and Main Roads, 2010 and section 3.02 of *Queensland urban drainage manual*, Department of Natural Resources and Mines, 2013.

Performance outcomes	Acceptable outcomes
	OR **AO2.2** For development on premises within 25 metres of a railway, approval from the relevant railway manager for the railway, as defined in the *Transport Infrastructure Act 1994,* schedule 6 has been gained to verify the lawful point of discharge for stormwater onto the railway. AND **AO2.3** Development does not cause a net increase in or concentration of stormwater or floodwater flows discharging onto the state transport corridor during construction or thereafter. AND **AO2.4** Development does not create any additional points of discharge or changes to the condition of an existing lawful point of discharge to the state transport corridor.
Sediment and erosion management	
PO3 Run-off from upstream development is managed to ensure that sedimentation and erosion do not cause siltation of stormwater infrastructure in the state transport corridor.	**AO3.1** Development with a moderate to high risk of erosion incorporates erosion and sediment control measures. Editor's note: For a state-controlled road where a development has a moderate to high risk of erosion as per section 13.5 of the *Road drainage manual*, Department of Transport and Main Roads, 2010, an erosion and sedimentation control plan should be provided to support either a stormwater management statement or stormwater management plan.

18.4 Reference documents

Department of Natural Resources and Mines 2013 *Queensland urban drainage manual*

Department of Infrastructure and Planning 2010 *Transit oriented development: Guide for practitioners*(includes the Guide for development in a railways corridor)

Institute of Public Works Engineering Australasia (Queensland) (IPWEAQ) standards

Standards Australia 2000 *AS1289.0-2000 – Methods of testing soils for engineering purposes*

Standards Australia 2010 *AS2436–2010 – Guide to noise and vibration control on construction, demolition and maintenance sites*

Standards Australia 2005 *AS4133.0–2005 – Methods of testing rocks for engineering purposes*

Department of Main Roads 2006 *Guidelines for assessment of road impacts of development (GARID)*

Department of Transport and Main Roads 2013 *State development assessment provisions supporting information – filling and excavation*

Department of Transport and Main Roads 2013 *State development assessment provisions supporting information – stormwater and drainage*

Department of Transport and Main Roads 2010 *Road drainage manual*

Department of Transport and Main Roads 2013 *Road planning and design manual*

Department of Transport and Main Roads 2013 *Roadside advertising guide*

Department of Transport and Main Roads 2013 *Road landscape manual*

18.5 Glossary of terms

Annual exceedance probability (AEP) means the probability of exceedance of a given discharge within a period of one year.

Editor's note: AEP is generally expressed as 1 in Y [years]. The terminology of AEP is generally used where the data and procedures are based on annual series analysis.

Future state-controlled road means a road or land that the chief executive administering the *Transport Infrastructure Act 1994* has, by written notice given to a local government and published in the gazette, indicated is intended to become a state-controlled road under that Act (section 42).

Lawful point of discharge means a point of discharge designated and controlled by DTMR, or at which discharge rights have been granted by registered easement in favour of DTMR.

Rail transport infrastructure see the *Transport Infrastructure Act 1994*, schedule 6.

Editor's note: Rail transport infrastructure means facilities necessary for operating a railway, including —

(1) railway track and works built for the railway, including for example —
  (a) cuttings
  (b) drainage works
  (c) excavations
  (d) land fill
  (e) track support earthworks
(2) any of the following things that are associated with the railway's operation—
  (a) bridges
  (b) communication systems
  (c) machinery and other equipment
  (d) marshalling yards
  (e) noticeboards, notice markers and signs
  (f) overhead electrical power supply systems
  (g) over-track structures
  (h) platforms
  (i) power and communication cables
  (j) service roads
  (k) signalling facilities and equipment
  (l) stations
  (m) survey stations, pegs and marks
  (n) train operation control facilities
  (o) tunnels
  (p) under-track structures
(3) vehicle parking and set down facilities for intending passengers for a railway that are controlled or owned by a railway manager or the chief executive
(4) pedestrian facilities, including footpath paving, for the railway that are controlled or owned by a railway manager or the chief executive,

but does not include other rail infrastructure.

Railway means land on which railway transport infrastructure or other rail infrastructure is situated.

State-controlled road see the *Transport Infrastructure Act 1994*

Editor's note: State-controlled road means a road or land, or part of a road or land, declared under the *Transport Infrastructure Act 1994* to be a state-controlled road.

State transport corridor means any of the following terms (defined under the *Transport Infrastructure Act 1994*, *Transport Planning and Coordination Act 1994* and Sustainable Planning Regulation 2009):

(1) a state-controlled road
(2) a railway
(3) a public passenger transport corridor
(4) a state-controlled transport tunnel
(5) an active transport corridor.

State transport infrastructure means any of the following terms (defined under the *Transport Infrastructure Act 1994*, the *Transport Planning and Coordination Act 1994* and the Sustainable Planning Regulation 2009)–

(1) state-controlled road
(2) busway transport infrastructure
(3) light rail transport infrastructure
(4) rail transport infrastructure
(5) other rail infrastructure
(6) active transport infrastructure

Upstream development means development located in the opposite direction of water flow from a state transport corridor, nearer to the source of the flow.

18.6 Abbreviations

AEP — Annual exceedance probability

DTMR — Department of Transport and Main Roads

RPEQ — Registered Professional Engineer of Queensland

Module 19. State transport network functionality

19.1 Access to state-controlled roads state code

19.1.1 Purpose

The purpose of this code is to ensure that development does not adversely impact the safety, function and operational efficiency of the state-controlled road network or a future state-controlled road.

Editor's note: The *Transport Infrastructure Act 1994* (TIA) provides the chief executive administering the TIA with the ability to control access to the state-controlled road network. The main provisions are:

(1) section 62 of the TIA — the chief executive administering the TIA can permit, amend, prohibit, or apply conditions to 'permitted road access' locations between a state-controlled road and adjacent land
(2) section 67(1) of the TIA — if a decision is made under section 62(1) of the TIA, the chief executive must provide written notice of the decision to the owner of the land, the occupier of the land and any persons who may have applied for the decision
(3) section 33 of the TIA — states no person is to carry out road works on, or interfere with, a state-controlled road or its operation without written approval from the chief executive administering the TIA
(4) section 33 of the TIA — an approval for road access works under this section may only be given if there is a permitted road access location under a decision in force under section 62(1) of the TIA in relation to the road access works
(5) section 33 of the TIA — a decision made under this section is provided in a written notice by the chief executive administering the TIA
(6) section 54 of the TIA — allows the chief executive administering the TIA to declare a road or section of a road as a limited access road. The declaration is supported by policy on how access to individual properties will be handled.

Editor's note: A 'permitted road access' location means a permitted road access location under a decision in force under section 62(1) of the TIA. All applicants proposing a road access location for the state-controlled road (including limited access roads) will be required to obtain a separate decision under section 62 of the TIA that is consistent with the development application as submitted.

Editor's note: An approval under section 33 of the TIA will still need to be obtained by the applicant from the chief executive administering the TIA prior to commencement of any works within the state-controlled road.

Editor's note: The chief executive administering the TIA will issue decisions under sections 62 and 33 of the TIA. Each DTMR regional office has maps showing sections of the state-controlled road that are declared as limited access roads.

Editor's note: The requirement to obtain a separate decision under section 62 of the TIA is a separate approval process to the process for seeking a development approval for a development application under the *Sustainable Planning Act 2009*. It is recommended that the applicant seek a decision under section 62 of the TIA prior to lodging a development application.

Editor's note: Guidance for achieving the performance outcomes and acceptable outcomes for this state code are available in the *State Development Assessment Provisions Supporting Information – Access to a state-controlled road*, Department of Transport and Main Roads, 2013.

19.1.2 Criteria for assessment

Development mentioned in column 1 below must be assessed against the assessment criteria in the table mentioned in column 2.

Column 1	Column 2
All development	Table 19.1.1

Table 19.1.1: All development

Performance outcomes	Acceptable outcomes
Location of the direct vehicular access to the state-controlled road	
PO1 Any road access location to the state-controlled road from adjacent land does not compromise the safety and efficiency of the state-controlled road.	**AO1.1** Any road access location to the state-controlled road from adjacent land complies with a decision under section 62 of the TIA. OR all of the following acceptable outcomes apply **AO1.2** Any road access location for the development is provided from a lower order road where an alternative to the state-controlled road exists.

Performance outcomes	Acceptable outcomes
	AND **AO1.3** A traffic impact assessment certified by a Registered Professional Engineer of Queensland (RPEQ) demonstrates that the development will maintain the safety and efficiency of the state-controlled road. AND **AO1.4** Any road access location meets the sight distance requirements outlined in Volume 3, Part 3 of the *Road planning and design manual*, 2nd edition, Department of Transport and Main Roads, 2013. AND **AO1.5** Any road access location is not located adjacent to an existing or planned functional area of an intersection in accordance with Volume 3, parts 4 and 4A of the *Road planning and design manual*, 2nd edition, Department of Transport and Main Roads, 2013. AND **AO1.6** Any road access location does not conflict with any adjacent lands' access location and operation. Editor's note: In order to demonstrate that the acceptable outcomes can be achieved, it is recommended that a traffic impact assessment, certified by an RPEQ, be provided. It should be prepared in accordance with the *Guidelines for assessment of road impacts of development (GARID)*, Department of Main Roads, 2006, and the requirements of Volume 3, parts 4 and 4A of the *Road planning and design manual*, 2nd edition, Department of Transport and Main Roads, 2013, SIDRA analysis or traffic modelling.
Direct access to a limited access road	
PO2 Access to a limited access road is in accordance with the approved limited access policy. Editor's note: Limited access roads are declared by the chief executive under section 54 of the TIA. Details can be accessed by contacting the appropriate DTMR regional office.	No acceptable outcome is prescribed.
Number of road accesses to the state-controlled road	
PO3 The number of road access locations to the state-controlled road maintains the safety and efficiency of the state-controlled road.	**AO3.1** Development does not increase the number of road access locations to the state-controlled road.
PO4 The number of road access locations to the state-controlled road is rationalised to maintain the safety and efficiency of the state-controlled road.	**AO4.1** Where multiple road access locations to the premises exist, access is rationalised to reduce the overall number of road access locations to the state-controlled road. AND **AO4.2** Shared or combined road access locations are provided for adjoining land having similar uses to rationalise the overall number of direct accesses to the state-controlled road. Editor's note: Shared road access locations may require easements to provide a legal point of access for adjacent lots. If this is required, then the applicant must register reciprocal access easements on the titles of both of the lots for the shared access.
Design vehicle and traffic volume	
PO5 Any road access location maintains the safety and efficiency of the state-controlled road.	**AO5.1** Any road access location meets the minimum standards associated with the design vehicle. Editor's note: The design vehicle to be considered is the same as the design vehicle set under the relevant local government planning scheme.

Performance outcomes	Acceptable outcomes
	AND **AO5.2** Any road access location is designed to accommodate the forecast volume of vehicle movements in the peak periods of operation or conducting the proposed use of the premises. AND **AO5.3** Any road access location is designed to accommodate 10 year traffic growth past completion of the final stage of development. AND **AO5.4** Any road access location, for an urban activity, is designed in accordance with the relevant local government standards or *IPWEAQ R-050, R-051* and *R-053 drawings*. AND **AO5.5** Any road access location for all other uses other than urban activities is designed in accordance with Volume 3, parts 4 and 4A of the *Road planning and design manual*, 2nd edition, Department of Transport and Main Roads, 2013.
Internal and external manoeuvring associated with direct vehicular access to the state-controlled road	
PO6 Turning movements for vehicles entering and exiting the premises via the road access location maintain the safety and efficiency of the state-controlled road.	**AO6.1** The road access location provides for left in and left out turning movements only. AND **AO6.2** Internal manoeuvring areas on the premises are designed so the design vehicle can enter and leave the premises in a forward gear. Editor's note: The design vehicle to be considered is the same as the design vehicle set under the relevant local government planning scheme.
PO7 On-site circulation is suitably designed to accommodate the design vehicle associated with the proposed land use, in order to ensure that there is no impact on the safety and efficiency of the state-controlled road.	**AO7.1** Provision of on-site vehicular manoeuvring space is provided to ensure the flow of traffic on the state-controlled road is not compromised by an overflow of traffic queuing to access the site in accordance with *AS2890 – Parking facilities*. AND **AO7.2** Mitigation measures are provided to ensure that the flow of traffic on the state-controlled road is not disturbed by traffic queuing to access the site.
Temporary vehicular road access location to the state-controlled road	
PO8 Any proposed temporary road access locations ensure that the safety and efficiency of the state-controlled road is maintained. Editor's note: Temporary road access locations may be conditioned to ensure the temporary nature of the access. Where appropriate, use of the temporary access may be restricted to the approved type and number of vehicles, and the times the temporary access is able to be used will also be limited.	No acceptable outcome is prescribed.
Vehicular access to local roads within 100 metres of an intersection with a state-controlled road	
PO9 Development having road access to a local road within 100 metres of an intersection with a state-controlled road maintains the safety and efficiency of the state-controlled road.	**AO9.1** The road access location to the local road is located as far as possible from where the road intersects with the state-controlled road and does not compromise the existing operation or any future upgrades to the intersection or state-controlled road. AND **AO9.2** The road access location to the local road network is in accordance

Performance outcomes	Acceptable outcomes
	with Volume 3, parts 4 and 4A of the *Road planning and design manual*, 2nd edition, Department of Transport and Main Roads, 2013, and is based on the volume of traffic and speed design of both the local road and intersecting state-controlled road for a period of 10 years past completion of the final stage of development. AND **AO9.3** Vehicular access to the local road and internal vehicle circulation is designed to remove or minimise the potential for vehicles entering the site to queue in the intersection with the state-controlled road or along the state-controlled road itself.

19.2 Development adjacent to railway, busway and light rail state code

19.2.1 Purpose

The purpose of this code is to ensure that any development within 25 metres of an existing or future railway, busway or light rail does not adversely affect the safety and operational integrity of the railway, busway or light rail.

19.2.2 Criteria for assessment

Development mentioned in column 1 below must be assessed against the assessment criteria in the table mentioned in column 2.

Column 1	**Column 2**
All development	Table 19.2.1

Table 19.2.1: All development

Performance outcomes	Acceptable outcomes
PO1 The operational integrity of railways, busways and light rail is not adversely affected by development.	**AO1.1** Existing authorised access points to railways, busways and light rail for maintenance and emergency works are maintained. Editor's note: For railways, access points are maintained in accordance with the *Guide for development in a railway environment,* Department of Infrastructure and Planning, 2010. AND **AO1.2** Pipe work, services and utilities associated with the development are not located in the state transport corridor and can be maintained without requiring access to the state transport corridor.
PO2 Development prevents unauthorised access to existing and future state transport corridors and state transport infrastructure by people, vehicles and projectiles.	**AO2.1** The design and layout of the development discourages unauthorised access to the railway, busway or light rail corridors. AND **AO2.2** Development includes throw protection measures to publicly accessible areas. Editor's note: Design of development over or near a railway is in accordance with Queensland Rail *Systems Capability Technical Requirements MCE-SR-005 Design of buildings over or near railways*, Queensland Rail, 2010 and *MCE-SR-008 Protection screens*, Queensland Rail, 2010.

19.3 Transport infrastructure and network design state code

19.3.1 Purpose

The purpose of this code is to ensure that:

(1) Development does not compromise the safe and efficient management and operations of state transport infrastructure and transport networks

(2) Development does not compromise planned upgrades of state transport infrastructure or the development of future state transport corridors

(3) Upgrade works proposed to mitigate adverse impacts of development on the operation and management of state transport infrastructure are:

  (a) consistent with applicable design standards

  (b) consistent with planned upgrades of the state transport infrastructure

(4) Development does not compromise the safe and efficient operation of the overall road hierarchy by imposing traffic loadings on state-controlled roads which could be accommodated on the local road network.

19.3.2 Criteria for assessment

Development mentioned in column 1 below must be assessed against the assessment criteria in the table mentioned in column 2.

Column 1	Column 2
All development	Table 19.3.1

Table 19.3.1: All development

Performance outcomes	Acceptable outcomes
All state transport infrastructure — except state-controlled roads	
PO1 Development does not compromise the safe and efficient management or operation of state transport infrastructure or transport networks.	**AO1.1** Any impact from the development on the safe and efficient management and operation of the state transport corridor or transport network is identified and mitigated. Editor's note: A traffic impact assessment will assist in addressing this acceptable outcome. A traffic impact assessment should identify any upgrade works required to mitigate impacts on the safe and efficient management and operation of the state transport corridor.
PO2 Development does not compromise planned upgrades to state transport infrastructure or the development of future state transport infrastructure in future state transport corridors.	**AO2.1** Written advice has been provided by DTMR that there are no planned upgrades of state transport infrastructure or future state transport corridors which will be compromised by the development. OR both of the following acceptable outcomes apply **AO2.2** The layout and design of the proposed development accommodates planned upgrades to adjacent state transport infrastructure in the state transport corridor. AND **AO2.3** The layout and design of the development does not compromise the delivery of state transport infrastructure in future state transport corridors. Editor's note: A traffic impact assessment will assist in addressing this acceptable outcome.
State-controlled roads	
PO3 Development does not compromise the safe and efficient management or operation of state-controlled roads.	**AO3.1** Any impact from the development on the safe and efficient management and operation of the state-controlled road is identified and mitigated.

Performance outcomes	Acceptable outcomes
Editor's note: A traffic impact assessment will assist in addressing this performance outcome.	Editor's note: A traffic impact assessment will assist in addressing this acceptable outcome.
PO4 Development does not compromise planned upgrades of the state-controlled road network or delivery of future state-controlled roads.	**AO4.1** Written advice has been provided by DTMR that there are no planned upgrades of state-controlled roads or future state-controlled roads which will be compromised by the development. OR **AO4.2** Any impact from the development does not compromise planned upgrades of the state-controlled road network or the delivery of future state-controlled roads. Editor's note: A traffic impact assessment will assist in addressing this acceptable outcome.
PO5 Upgrade works on, or associated with, the state-controlled road network are undertaken in accordance with applicable standards.	**AO5.1** Upgrade works for the development are consistent with the requirements of the *Road planning and design manual*, 2nd edition, Department of Transport and Main Roads, 2013. AND **AO5.2** The design and staging of upgrade works on or associated with the state-controlled road network are consistent with planned upgrades.
PO6 Development does not impose traffic loadings on the state-controlled road network which could be accommodated on the local road network.	**AO6.1** New roads proposed as part of the development are consistent with the road hierarchy adopted by the relevant local government, and new lower order roads do not connect directly to a state-controlled road. AND **AO6.2** Where the opportunity is available, development provides for road access locations to lower order roads. AND **AO6.3** Where possible, the layout and design of the development encourages traffic generated by the development to use lower order roads.

19.4 Reference documents

Department of Transport and Main Roads 2013 *State Development Assessment Provisions Supporting Information – Access to a state-controlled road*

Department of Infrastructure and Planning 2010 *Guide for development in a railway environment*

Queensland Rail 2010 *MCE-SR-008 Protection screens*

Standards Australia *AS2890 – Parking facilities*

Department of Main Roads 2006 *Guidelines for assessment of road impacts of development* (*GARID*)

Department of Transport and Main Roads 2013 *Road planning and design manual, 2nd edition*

19.5 Glossary of terms

Busway see the *Transport Infrastructure Act 1994*, schedule 6.

Editor's note: Busway means:

(1) a route especially designed and constructed for, and dedicated to, the priority movement of buses for passenger transport purposes
(2) places for the taking on and letting off of bus passengers using the route.

Future railway land see the *Transport Infrastructure Act 1994*

Editor's note: Future railway land means land that the chief executive administering the *Transport Infrastructure Act 1994* has, by written notice given to a local government and published in the gazette, indicated is intended to be used for a railway under that Act (section 242).

Future state-controlled road see the *Transport Infrastructure Act 1994*, section 42

Editor's note: Future state-controlled road means a road or land that the chief executive administering the *Transport Infrastructure Act 1994* has, by written notice given to a local government and published in the gazette, indicated is intended to become a state-controlled road under that Act (section 42).

Future state transport corridor means any of the following:

(1) a future state-controlled road
(2) future railway land
(3) a future public passenger transport corridor
(4) a future state-controlled transport tunnel
(5) a future active transport corridor.

Light rail see the *Transport Infrastructure Act 1994*, schedule 6.

Editor's note: Light rail means:

(1) a route wholly or partly dedicated to the priority movement of light rail vehicles for passenger transport purposes, whether or not the route was designed and constructed for those purposes as well as other purposes
(2) places for the taking on and letting off of light rail vehicle passengers using the route.

Limited access road see the *Transport Infrastructure Act 1994*

Editor's note: Limited access road means a state-controlled road, or part of a state-controlled road, declared to be a limited access road under the *Transport Infrastructure Act 1994*, section 54.

Limited access policy see the *Transport Infrastructure Act 1994*

Editor's note: Limited access policy means a policy for a limited access road prepared under the *Transport Infrastructure Act 1994,* section 54(4)

Local road means a road controlled by a local government authority.

Lower order road means a road of a lower order in the road hierarchy than another road within the road hierarchy.

Planned upgrade means any planned and approved extension, upgrade, augmentation or duplication of state transport infrastructure or transport networks where:

(1) described or reflected in a state or local government document which has been adopted, committed and published, or
(2) affected land holders have been consulted.

Public passenger transport see the *Transport Planning and Coordination Act 1994*, section 3.

Editor's note: Public passenger transport means the carriage of passengers by a public passenger servicing using a public passenger vehicle.

Railway means land on which railway transport infrastructure or other rail infrastructure is situated. Railway does not include a light rail or light rail transport infrastructure.

Road access location means a location on a property boundary between land and a road for the entry or exit of traffic.

Road hierarchy is a system of ranking in which roads are ranked in terms of their function, type and capacity to support different types of vehicles and volumes of traffic.

State-controlled road see the Transport Infrastructure Act 1994

Editor's note: State-controlled road means a road or land, or part of a road or land, declared under section 24 of the *Transport Infrastructure Act 1994* to be a state-controlled road.

State-controlled transport tunnel see the Sustainable Planning Regulation 2009, schedule 24.

Editor's note: State-controlled transport tunnel means:

(1) a tunnel that forms part of a—
    (a) state-controlled road, or
    (b) railway, or
    (c) public passenger transport corridor, or
(2) a railway tunnel easement.

State transport corridor means any of the following terms (defined under the *Transport Infrastructure Act 1994*, *Transport Planning and Coordination Act 1994* and Sustainable Planning Regulation 2009):

(1) a state-controlled road

(2) a railway
(3) a public passenger transport corridor
(4) a state-controlled transport tunnel
(5) an active transport corridor.

State transport infrastructure means any of the following terms (defined under the *Transport Infrastructure Act 1994*, the *Transport Planning and Coordination Act 1994* and the Sustainable Planning Regulation 2009)–

(1) state-controlled road
(2) busway transport infrastructure
(3) light rail transport infrastructure
(4) rail transport infrastructure
(5) other rail infrastructure
(6) active transport infrastructure

Transport network means the series of connected routes, corridors and transport facilities required to move goods and passengers and includes roads, railways, public transport routes for example, bus routes), active transport routes (for example, cycleways), freight routes and local, state and privately owned infrastructure.

19.6 Abbreviations

DTMR — Department of Transport and Main Roads

GARID — *Guidelines for Assessment of Road Impacts of Development*

IDAS — Integrated Development Assessment System

IPWEAQ — Institute of Public Works Engineering Australia (Queensland)

RPEQ — Registered Professional Engineer of Queensland

TIA — *Transport Infrastructure Act 1994*