



Australian Government

Department of Climate Change, Energy,
the Environment and Water

Significant impact guidelines

1.3

Coal seam gas and large coal mining
developments — impacts on water
resources



Significant impact guidelines 1.3: Coal seam gas and large coal mining developments—impacts on water resources

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Department of Climate Change, Energy, the Environment and Water
GPO Box 3090 Canberra ACT 2601

Telephone 1800 803 772

Web dcceew.gov.au

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Acknowledgement of Country

We acknowledge the Traditional Custodians of Australia and their continuing connection to land and sea, waters, environment and community. We pay our respects to the Traditional Custodians of the lands we live and work on, their culture, and their Elders past and present.

Contents

1	Introduction.....	1
1.1	About the EPBC Act	1
2	Activities covered by the water trigger.....	3
2.1	Definitions	3
2.2	Size and purpose of the development	3
2.3	Type of proponent.....	3
2.4	Extraction of CSG or coal	4
2.5	Associated infrastructure	4
2.6	Expansions or modifications.....	5
3	Exemptions from the water trigger	6
3.1	Overview.....	6
3.2	When exemptions may not apply	7
4	Significant impact criteria	9
4.1	Introduction.....	9
4.2	General criteria.....	10
4.3	Guidance on changes to hydrological characteristics	11
4.4	Guidance on changes to water quality.....	12
4.5	Other important considerations.....	14
4.6	Information and data requirements.....	15
5	The referral, assessment and approval process	16
5.1	Referral process.....	16
5.2	Assessment and approval process	16
6	Further information	18
	Appendix A – prior authorisation exemption.....	19
	Overview.....	19
	Criterion 1 – The action involves large coal mining or coal seam gas development.....	20
	Criterion 2 – The action was authorised by a specific environmental authorisation.....	20
	Criterion 3 – No further specific environmental authorisation was needed	21
	Criterion 4 – The specific environmental authorisation is in operation, at the time the action is taken.....	22
	Appendix B - General EPBC Act exemptions.....	24
	Glossary.....	25
	References.....	27

1 Introduction

1.1 About the EPBC Act

The *Environment Protection and Biodiversity Conservation Act 1999* (the EPBC Act) is the Australian Government's central piece of environmental legislation. It provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places, amongst other things – referred to in this guidance as 'protected matters'.

These protected matters are 9 matters of national environmental significance:

- world heritage properties
- national heritage places
- wetlands of international importance
- nationally threatened species and ecological communities
- migratory species
- Commonwealth marine areas
- the Great Barrier Reef Marine Park
- nuclear actions (including uranium mining)
- a water resource in relation to a coal seam gas or large coal mining development (the water trigger)

as well as:

- the protection of the environment from actions on or impacting on, Commonwealth land or by Commonwealth agencies, and Commonwealth heritage places outside Australia.

These guidelines relate to the last matter of national environmental significance (the water trigger).

1.1.1 The 'water trigger'

An amendment was made by the *Environment Protection and Biodiversity Conservation Amendment Act 2013* to provide that water resources are a matter of national environmental significance in relation to coal seam gas (CSG) and large coal mining development. The amendment passed the Parliament on 19 June 2013 and came into effect on 22 June 2013.

Under the EPBC Act, an action which involves a CSG or a large coal mining development requires approval from the Australian Government Environment Minister (the minister) if the action has, will have, or is likely to have a significant impact on a water resource. Whether a particular action can be described as involving a CSG or large coal mining development will be determined based on whether that action is so closely associated with the extraction of CSG or the mining of coal as to be integral to that extraction or mining (as relevant) (*Australian Conservation Foundation Incorporated v Minister for the Environment* (2021)).

The core purpose of these guidelines is to assist any person who proposes to take an action which involves a CSG development or a large coal mining development to decide whether the action has or is likely to have a significant impact on a water resource.

If the action is likely to have such an impact, the proponent must submit a referral to the Australian Government Department of Climate Change, Energy, the Environment and Water for a decision by the minister on whether assessment and approval is required under the EPBC Act.

These guidelines outline a 'self-assessment' process, including detailed criteria, to assist persons in deciding whether or not referral may be required. These guidelines may also assist members of the public or interest groups who wish to comment on actions which have been referred under the EPBC Act.

These guidelines should be read in conjunction with [EPBC Act Policy Statement 1.1 Significant Impact Guidelines – Matters of National Environmental Significance](#).

A range of other EPBC Act policy statements [is available](#) to assist proponents in determining whether a proposed action is likely to have a significant impact on a matter of national environmental significance. These policy statements can also be obtained from the department's community information unit on 1800 803 772.

1.1.2 Referral of an action

Referral of an action involves filling out a referral form and sending it to the department. A referral identifies the person proposing to take the action and includes a brief description of the proposal, the project location, the nature and extent of any potential impacts to protected matters, and any proposed avoidance and mitigation measures. The EPBC Act referral process is outlined in more detail at the end of these guidelines.

As previously stated, an action will involve a CSG or large coal mining development if the action is so closely associated with the extraction of CSG or coal as to be integral to it. If a proponent plans to undertake an action which involves a CSG development or large coal mining development which has, will have, or is likely to have, a significant impact on a water resource they must refer the proposal to the minister before starting. The minister (or the minister's delegate) will then decide within 20 business days whether assessment is required under the EPBC Act.

The potential significance of each action is judged on a case-by-case basis and decision makers will have regard to these guidelines. Substantial penalties may apply for undertaking an action, to which the EPBC Act applies, without approval. The department's website provides more information on [referral, assessment and compliance under the Act](#).

Proponents can also refer their proposed action if they are uncertain about whether the EPBC Act applies. Proponents can contact the department with any question about referrals, including whether a proposed action needs to be referred at epbc.referrals@environment.gov.au.

2 Activities covered by the water trigger

2.1 Definitions

A ‘coal seam gas development’ is defined under the EPBC Act (section 528) as:

- any activity involving coal seam gas extraction that has, or is likely to have, a significant impact on water resources (including any impacts of associated salt production and/or salinity):
 - in its own right; or
 - when considered with other developments, whether past, present or reasonably foreseeable developments.

A ‘large coal mining development’ is defined under the EPBC Act (section 528) as:

- any coal mining activity that has, or is likely to have, a significant impact on water resources (including any impacts of associated salt production and/or salinity):
 - in its own right; or
 - when considered with other developments, whether past, present or reasonably foreseeable developments.

2.2 Size and purpose of the development

The application of the water trigger relates to a development’s likely impact on a water resource, and not the size of the proposed CSG or coal mining activity per se.

The definitions are not limited to commercial operations. Therefore, actions involved in exploration, appraisal and pilot developments may be captured by the definition where they involve extraction of CSG or coal, (i.e., are activities integral to the mining of coal or extraction of CSG). Exploration, appraisal and pilot activities are however less likely to have a significant impact on a water resource, given the usually small scale of that activity ([chapter 4.5.3](#))

2.3 Type of proponent

The water trigger only applies to CSG or large coal mining actions that are undertaken by:

- a constitutional corporation
- the Commonwealth
- a Commonwealth agency
- a person who is doing the action for the purpose of domestic (between state or territory jurisdictions) or international trade.

This reflects the limits placed on the Commonwealth’s legislative power by the Australian Constitution.

2.4 Extraction of CSG or coal

The definitions of ‘CSG development’ and ‘large coal mining development’ relate to CSG extraction and coal mining activities (including activities that are so closely associated with extracting CSG or coal as to be integral to those activities, or without which the relevant extraction could not be undertaken) that have, or are likely to have, significant impacts on a water resource. This means that infrastructure that is an integral part of the extraction of CSG or coal is likely to be included in the definition of CSG development or large coal mining development (as relevant), as are all whole-of-life activities (including CSG development and mine closure and completion activities).

While proposals will be considered by the department on a case-by-case basis, the following are examples of activities that are likely to be considered an integral part of the extractive process:

- construction, operation and decommissioning of open-cut and underground coal mines or CSG wells
- construction, operation and decommissioning of infrastructure to provide water supply for use in the extraction of CSG or coal, including the use of water in activities such as cooling cutting surfaces and mining equipment, or dust suppression
- management of water generated as a result of extraction of CSG or coal, such as holding dams or water treatment facilities
- disposal of water produced from coal mining or CSG extraction into streams/rivers
- management of waste generated as a result of extraction of CSG or coal, such as spoil heaps
- construction of infrastructure to provide power necessary for the operation of a mine, including relocated power lines
- construction of infrastructure to enable mining or CSG operation inputs which are integral to coal or CSG extraction to be received, and product, equipment or waste which are integral to coal or CSG extraction to be taken off the mine-site.

In deciding whether water trigger controlling provisions apply, proposed activities should be considered in terms of their relationship to the extraction of CSG or coal (see [Example 1](#)). Where a proposed project is referred separately from a CSG development or large coal mining development, whether or not actions need to be considered under the water trigger will be determined by whether they are integral to the extraction of CSG or coal (see [Example 2](#)).

2.5 Associated infrastructure

An action involving the construction of infrastructure that is associated with a CSG or large coal mining development, but which is not integral to the extraction of CSG or coal, is unlikely to be subject to the water trigger (see [Example 3](#)). Note that the action will nevertheless need to be referred to the department if it may be a controlled action (including if it impacts on other protected matters).

Where an action referred to the department includes both extraction of CSG or coal and associated infrastructure, then the significance of the whole of the referred action on water resources would be considered at the assessment stage.

2.5.1 Examples

Example 1

Coal Mining Company (CMC) is developing a new coal mine, which will include an open-cut mine, a holding dam for water generated through mine de-watering, a coal washing facility, a rail line and some office buildings.

In assessing whether the water trigger applies to the action, CMC should consider the impacts on water from the mine void, the holding dam and the coal washing facility.

If a referral is made, incorporating all aspects of the operations, and the action is determined to be a controlled action (that is, a significant impact on a water resource is likely), the department will assess the impacts on water resources of the whole of the action, including the rail line and office buildings.

Example 2 – Separate referral for associated infrastructure

Company Coal operates an existing coal mine approved for operation under the EPBC Act. After one year of operation, they have submitted a separate referral to build new water pipelines and a water holding facility, having been approved for an annual water allocation from a nearby dam. Company Coal indicates in their referral that they do not believe this action should be referred under the water trigger because the water will not be used in the extraction of coal. However, because the water will be used for cleaning tools used in the extraction of coal, and for dust suppression resulting from extraction, these activities are likely to be considered integral to the extraction of coal.

Therefore, the proposal is likely to be characterised as a ‘large coal mining development’ for the purposes of the water trigger.

Example 3 – Associated infrastructure that is less likely to have the water trigger applied

CSG company is operating an approved CSG field and is now proposing to construct infrastructure to support an associated research and education centre at the approved field. As these activities are not integral to CSG extraction, it is unlikely that any part of the action would fall within the water trigger controlling provisions. However, any activity associated with the new infrastructure will need to be assessed for its potential significant impact on a protected matter.

2.6 Expansions or modifications

An expansion or modification to existing facilities may be within the definition of ‘CSG development’ or ‘large coal mining development’ if the expansion or modification involves extractive CSG or coal mining actions which are likely to have a significant impact on a water resource. Whether a particular action can be described as involving a CSG or large coal mining development will be determined based on whether that action is so closely associated with the extraction of CSG or the mining of coal as to be integral to that extraction or mining.

See [chapter 3.2.1](#) for further detail on determining whether the water trigger may apply to an expansion or modification.

A referral may still be required if the action, including non-extractive components, is likely to have a significant impact on any other matter of national environmental significance.

3 Exemptions from the water trigger

The Amendment Act, which introduced the water trigger, includes some exemptions to the assessment and approval provisions under the EPBC Act. Item 22 of the Schedule to the Amendment Act allows certain authorised actions (detailed further [in chapter 3.1](#)) to continue without further EPBC Act approval in relation to the water trigger.

In other words, if an action is exempt under item 22 then there is no need for assessment or approval under the EPBC Act regarding impacts on water resources, even if the action would have a significant impact on a water resource. In addition, taking the action would not constitute an offence under the EPBC Act.

Please note that the provisions of the Amendment Act only provide an exemption from requirements relating to the water trigger. They do not negate the need for assessment and approval that may be required for any other relevant matter of national environmental significance. Broader exemptions from the EPBC Act (including the water trigger) are contained in Part 4 of the EPBC Act.

Where an action is exempt under other provisions of the EPBC Act, including Part 4 and s 160(2), there is no need for assessment and approval in relation to any matter of national environmental significance. Taking the action would not constitute an offence under the EPBC Act.

The purpose of this section is to provide an overview of exemptions that may apply.

3.1 Overview

The water trigger will not apply to a person taking an action involving a CSG development or large coal mining development which has a significant impact on a water resource if the action is exempt under the Amendment Act or the broader exemptions in the EPBC Act.

The Amendment Act contains exemptions for actions where:

- before 22 June 2013, the action was approved by the minister under Part 9 of the EPBC Act
- before 22 June 2013, the minister decided under Part 7 of the EPBC Act that the action was not a controlled action or not a controlled action if taken in a particular manner 1 (and the action is taken in that manner)
- before 22 June 2013, the relevant person had been notified of a proposed approval decision under the EPBC Act in relation to the action and the minister had received advice from the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development (IESC) on the action (noting that the IESC primarily provides scientific advice to decision makers on the impact that CSG and large coal mining development may have on Australia's water resources)
- before 13 March 2013, both
 - the action was not required to be assessed and approved under the EPBC Act
 - a state or territory minister had received advice from the IESC on the action
- before 22 June 2013, the action held a prior authorisation.

Note that only one of these exemptions need be established for an exemption to apply. See [Appendix A](#) for further guidance on prior authorisation exemptions.

The EPBC Act also establishes exemptions for actions where:

- Part 4 of the EPBC Act allows a person to take the action without approval under Part 9
- the action is an action described in section 160(2) of the EPBC Act (actions whose authorisation is subject to a special Commonwealth environmental authorisation process).

See [Appendix B](#) for further guidance on the general exemptions under the EPBC Act.

3.2 When exemptions may not apply

The exemptions under the Amendment Act may not apply if the action being undertaken is substantially different from the action that was originally authorised or otherwise exempt.

Whether the action being undertaken is substantially the same as the action that was originally authorised or otherwise exempt will depend on:

- the purpose of the action
- the nature of the activities being undertaken
- the significant impacts that occur as a result of the action.

An expansion or modification that substantially changes the extraction of CSG or coal may no longer be covered by an exemption (see [chapter 3.2.1](#) on expansions and modifications for further information).

Where an authorisation allows a particular action to occur at a particular intensity, and the action occurs at a lower intensity, the action will be covered by the specific environmental authorisation. For example, if an approval (a 'specific environmental authorisation') is given to extract 10 million tonnes of coal annually but the activity only extracts 8 million tonnes, then the activity will continue to be within the scope of the specific authorisation.

3.2.1 Expansions and modifications

If a referral for a proposed expansion or modification to a project does not involve extraction of CSG or coal, or activities integral to those processes, then the water trigger is unlikely to apply. Subject to this qualification, if an expansion or modification involves activities that are likely to have a significant impact on a water resource, the water trigger may apply (see [Example 4](#)). Note however that where an expansion or modification is referred as part of a broader action that involves the extraction of CSG or coal or activities integral to those processes, the water trigger may apply to the expansion or modification.

In the case of a proposal to intensify the extraction of CSG or coal beyond that authorised by existing approvals, the water trigger may apply to the whole of the project, including existing approved extractive activities, if the impacts of the intensification cannot be identified separately from the existing extractive activities (see [Example 5](#)). If a proposal raises this issue, further advice should be sought from the department.

3.2.2 Examples

Example 4 – Expansion of extractive activities

CSG Company has an authorisation for, and is already operating, CSG Field D which currently involves 1,000 wells. CSG Company proposes to increase the extraction from CSG Field D, by developing an additional 300 wells.

As the action involves extraction of CSG, the water trigger may be applied if there are likely to be significant impacts on a water resource.

If the action is determined to be a controlled action and the impacts of the additional 300 wells can be distinguished from the existing operations, the water trigger will apply only to the expansion (that is, the additional 300 wells). The existing operations may be taken into account in considering cumulative impacts; however, a new approval for the existing operations will not be required. CSG Company will be able to continue operating the existing 1,000 wells while the expansion involving the additional 300 wells is being assessed

Example 5 – Intensification of extractive activities

Coal Mining Company (CMC) is currently authorised under their state approval to mine coal from Coal Mine C at a rate of 10 million tonnes per annum (Mtpa). After commencing operation, CMC finds that they are in fact able to extract coal at a rate of 13 Mtpa, without increasing the size or footprint of the mine void. They are therefore seeking an amendment to their approval to allow extraction at a faster rate, while maintaining the same mine footprint.

As the action involves extraction of coal, and the impacts of the intensification cannot be identified separately from the existing extractive activities, the water trigger may be applied if there are likely to be significant impacts on a water resource.

If the action is determined to be a controlled action, the water trigger will apply to the whole of the activities (that is, the total extraction of 13 Mtpa). CMC can continue to mine at the rate of 10 Mtpa while the intensified action is assessed, provided the original state approval remains in place.

4 Significant impact criteria

4.1 Introduction

The significant impact criteria, set out on the following pages, are intended to assist in determining whether the impacts on a water resource from a proposed action involving a CSG development or a large coal mining development are likely to be significant, and therefore whether the action will require referral, assessment and approval.

These criteria are intended as a guide. If a proponent is still unsure whether a CSG development or large coal mining development is likely to have a significant impact on a water resource, they should refer the action to the department for a binding decision on whether assessment and approval is required.

The particular facts and circumstances of a proposed action will need to be considered in determining whether that action is likely to have a significant impact on a water resource. For example, the timing of water discharges into the system could make an impact more or less significant (see [chapter 4.5.2](#)).

The significance of an impact may also depend upon the context of other developments: an apparently small impact may still be a significant impact if there are substantial cumulative effects, factoring in existing and reasonably foreseeable prospective actions (see [chapter 4.5.1](#))

4.1.1 What is a significant impact?

A ‘significant impact’ is an impact which is important, notable, or of consequence, having regard to its context or intensity (Booth v Bosworth, 2001). Whether or not an action is likely to have a significant impact depends upon the sensitivity, value, and quality of the water resource which is impacted, and upon the intensity, duration, magnitude and geographic extent of the impacts. All these factors should be considered when determining whether an action is likely to have a significant impact. The [Significant Impact Guidelines 1.1: Matters of National Environmental Significance](#) contain more information about assessing the significance of impacts on protected matters. The [Glossary](#) provides more clarity on what is considered to be a water resource.

4.1.2 When is a significant impact likely?

To be ‘likely’, it is not necessary for there to be a greater than 50% chance of a significant impact; it is sufficient if there is a real or not remote chance or possibility of a significant impact on a water resource (Booth v Bosworth, 2001).

4.1.3 The precautionary principle

Under section 391 of the EPBC Act, the minister must take into consideration the precautionary principle when deciding whether an action is a controlled action. This principle states that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

In some cases relating to CSG developments and large coal mining developments the potential impacts of an action may be uncertain, because baseline information is unavailable. For example, information may not be available about connectivity and flows between different systems.

Where limited information is available on which to make an assessment of the impacts of a particular action, the department recommends referring the action so that potential issues can be assessed if necessary, through the EPBC Act assessment process.

4.1.4 Avoidance and mitigation measures

Avoidance and mitigation measures may be used to reduce potential adverse impacts on a water resource. Such measures may include the construction of ‘protective mechanisms’ for water resources, such as low permeability barriers to avoid interaction with groundwater flows, and surface water diversion which is immaterial to catchment drainage patterns. Where properly and reliably implemented, such measures may avoid significant impacts on a water resource.

4.1.5 Beneficial impacts

An action may have both adverse and beneficial impacts on a water resource; however, under the EPBC Act only adverse impacts are relevant when determining whether the action should be referred. For example, the following beneficial impacts are not relevant to a referral decision:

- supply of water to towns for drinking water
- supply of water for irrigation
- on-supply of excess water to other mines.

However, if there are likely to be adverse impacts associated with these activities, such impacts should be considered in determining whether the action is likely to have a significant impact on a water resource.

It is important to note that beneficial impacts differ from avoidance and mitigation measures in that the beneficial impacts are not measures designed to reduce potential adverse impacts on a water resource.

4.2 General criteria

An action is likely to have a significant impact on a water resource if there is a real or not remote chance or possibility that it will directly or indirectly result in a change to:

- the hydrology of a water resource
- the water quality of a water resource

that is of sufficient scale or intensity as to reduce the current or future utility of the water resource for third party users, including environmental and other public benefit outcomes, or to create a material risk of such reduction in utility occurring.

4.2.1 Value of a water resource

It is important to consider the value of the water resource in determining whether the impacts of a proposed action on a water resource are likely to be significant. The key factor that will be relevant in determining the value of a water resource will be its utility for all third party uses, including environmental and other public benefit outcomes (see [Example 6](#)). Such outcomes include:

- provisioning services (for example, use by other industries and use as drinking water)

- regulating services (such as the climate regulation or the stabilisation of coastal systems)
- cultural services (including recreation and tourism, science and education)
- supporting services (for example, maintenance of ecosystem function).

The ecosystem function of a water resource includes the ecosystem components, processes and benefits or services that characterise the water resource, including support for the biological diversity or species composition of the water resource.

If there is evidence, based on data, modelling and engagement with potentially affected stakeholders, that the action would not materially affect (either by increasing or decreasing) the availability and quality of water for all third-party users, including environmental and other public benefit outcomes and including at a future time or in another place, then the likelihood of the action having a significant impact may be reduced.

4.2.2 Example

Example 6 – Large coal mine that would have a significant impact on a water resource

Coal Mining Company is developing a new coal mine which will include an open-cut mine void, railroad tracks and roads for a transport corridor and water management infrastructure, including storage dams for mine affected water. The proposed mine site is located in a large catchment with one large river and several smaller tributaries intersecting the site. The catchment is low lying and subject to periodic flooding. The nearby river supports a high degree of biological diversity and is an important water resource for a number of industries downstream of the action (including agriculture).

The extraction activities that are part of Coal Mining Company's proposed operation are likely to impact on nearby water resources as a result of mine affected water releases, and the nearby river supports existing third party uses. Therefore, there may be significant impacts on a water resource, and the action is likely to require referral.

4.3 Guidance on changes to hydrological characteristics

A significant impact on the hydrological characteristics of a water resource may occur where there are, as a result of the action:

- changes in the water quantity, including the timing of variations in water quantity
- changes in the integrity of hydrological or hydrogeological connections, including structural damage (for example, large scale subsidence)
- changes in the area or extent of a water resource.

where these changes are of sufficient scale or intensity as to significantly reduce the current or future utility of the water resource for third party users, including environmental and other public benefit outcomes.

The following aspects may need to be considered when assessing changes in hydrological characteristics:

- flow regimes (volume, timing, duration and frequency of surface water flows)

- recharge rates to groundwater
- aquifer pressure or pressure relationships between aquifers
- groundwater table and potentiometric surface levels
- groundwater-surface water interactions
- river-floodplain connectivity
- inter-aquifer connectivity
- coastal processes including changes to sediment movement or accretion, water circulation patterns, permanent alterations in tidal patterns, or substantial changes to water flows or water quality in estuaries.

Unless the proponent can establish otherwise, the department will assume that there is a connection between surface water and groundwater. The proponent should also consider the potential impact of drilling, excavating or hydraulic stimulation on connectivity between surface water and groundwater, and whether this is likely to impact on the hydrology of the system beyond the life of the proposed action.

4.3.1 State water resource plans

The National Water Initiative (NWI) is the national blueprint for water reform, agreed in 2004 by the Council of Australian Governments. Through the NWI, governments across Australia agreed on actions to achieve a more cohesive national approach to the way Australia manages, measures, plans for, prices, and trades water. One of the key elements of the NWI is a framework for water access entitlements and planning.

A proponent may obtain entitlements to extract water under a state water plan which has been prepared in accordance with the requirements of the NWI.

If a proponent can demonstrate that all of the water used by a proposed action is authorised through such entitlements, the action is less likely to require a referral due to significant impacts on the hydrological characteristics of a water resource.

However, there may be situations where the water used by the proponent in a particular location at a given time exceeds the environmentally sustainable level of extraction for that location, or for another hydrologically connected location. In these cases, the action is more likely to have a significant impact on a water resource.

It is important to note that the impact on water resources from the disposal or release of extracted water and from changes to the physical environment will need to be considered separately from any consideration of the entitlements held. The relevance of state water quality management plans is discussed in [chapter 4.4](#).

4.4 Guidance on changes to water quality

A significant impact on a water resource may occur where, as a result of the action:

- there is a risk that the ability to achieve relevant local or regional water quality objectives would be materially compromised, and as a result the action:

Significant impact guidelines 1.3: Coal seam gas and large coal mining developments—impacts on water resources

- creates risks to human or animal health or to the condition of the natural environment as a result of the change in water quality
 - substantially reduces the amount of water available for human consumptive uses or for other uses, including environmental uses, which are dependent on water of the appropriate quality
 - causes persistent organic chemicals, heavy metals, salt or other potentially harmful substances to accumulate in the environment
 - seriously affects the habitat or lifecycle of a native species dependent on a water resource, or
 - causes the establishment of an invasive species (or the spread of an existing invasive species) that is harmful to the ecosystem function of the water resource, or
- there is a significant worsening of local water quality (where current local water quality is superior to local or regional water quality objectives), or
 - high quality water is released into an ecosystem which is adapted to a lower quality of water.

For water-dependent ecosystems, a significant impact is likely if the predicted change in water quality is greater than that required for ‘moderately to slightly disturbed’ systems as described in the relevant local or regional water quality objectives (typically the 80% to 95% ecosystem protection guideline values listed in the [Australian Water Quality Guidelines](#)). Note that other thresholds may apply where changes in water quality may impact on other matters of national environmental significance, such as threatened species or ecological communities.

Local or regional water quality objectives may include:

- for locations within the Murray Darling Basin, the water quality targets of the [Murray Darling Basin Plan](#)
- for Queensland, other than the Murray Darling Basin, the [Queensland Water Quality Guidelines 2009](#)
- for Victoria, other than the Murray Darling Basin, the [State Environment Protection Policy \(Waters of Victoria\)](#)
- for South Australia, other than the Murray Darling Basin, the [Environment Protection \(Water Quality\) Policy 2015](#)

Other water quality objectives can be found in the ‘Australian and New Zealand Guidelines for Fresh and Marine Water Quality’, outlined in the [National Water Quality Management Strategy](#).

Where an action may impact on a water resource for which there are no relevant local or regional water quality objectives, the proponent may propose water quality objectives for the impacted water resource in accordance with the appropriate guidelines under the *National Water Quality Management Strategy* and in consultation with a relevant local authority. Relevant guidelines may include:

- [Australian and New Zealand Guidelines for Fresh and Marine Water Quality](#)
- [Guidelines for groundwater protection](#)

- [Australian drinking water guidelines](#)
- [Australian Guidelines for Water Recycling: Managed Aquifer Recharge](#).

A proponent may also influence water quality within a surface water catchment or groundwater resource under the provisions of a state water quality management plan (for example, a salinity trading scheme). Where water quality impacts from an action are managed through a management scheme that accounts for all other third party uses, including at a future time or another place, compliance with such management schemes may reduce the likelihood of a significant impact on a water resource.

4.5 Other important considerations

4.5.1 Cumulative impacts

The definitions of CSG development and large coal mining development refer to the action having a significant impact ‘when considered with other developments, whether past, present or reasonably foreseeable developments’. This means that a significant impact on water resources may be caused by one CSG development or large coal mining development, or the cumulative impact of other developments in the area.

The consideration of cumulative impacts is not limited to impacts from CSG and large coal mining development, nor is it limited to the immediate project area or only those developments that occur upstream from the proposed action. Cumulative impacts should be considered at the local, aquifer or catchment, and regional scale.

The term ‘cumulative impacts’ refers to the impacts of a number of different actions or other broader influences on a matter of national environmental significance which, when considered together, have a greater impact on that matter than each action or broader influence considered individually. Therefore, in considering whether an action has, or is likely to have, a significant impact, the seriousness or intensity of the relevant impacts should be considered in context.

This context may include existing developments that have an impact on particular water resources, reasonably foreseeable developments which may have an impact on particular water resources and/or the overall development of a region. Therefore, the potential for the impact of an action to be significant is likely to be greater in a more developed system, or where a number of existing or proposed developments are or will be using or impacting upon a water resource.

At the referral stage, cumulative impacts should be assessed qualitatively on the basis of potential risks, and only existing and reasonably foreseeable future uses should be considered (see [chapter 4.6](#) on information and data requirements for further information).

4.5.2 Timing

The significance of impacts must be assessed in both the short and the long term. Given the length of time that impacts may take to become observable in groundwater systems, the ‘long term’ may be beyond the life of the action.

The timing of particular actions may also increase or decrease the significance of an action’s impacts. For example, steady water releases changing an ephemeral watercourse or intermittently flooded wetland into a continuous flow or permanent wetland would be likely to increase the significance of

an action's impacts. Releasing water during a flood event within, or marginally outside water quality guidelines and for a short period may be less likely to be significant.

4.5.3 Scale

The significance of impacts on a water resource should be considered on each of a local, aquifer or catchment, and regional scale (including in connected or potentially connected hydrological systems). For example, extracting water from a confined aquifer may have no effect on the local groundwater table in an overlying unconfined aquifer, or on surface water flow. However, if at some distance the drawn-down confined aquifer approaches the surface and becomes unconfined such that it connects to more shallow aquifers or surface water systems, or is accessed more readily as a water resource, there may be important regional scale impacts to surface water flows and the water table associated with the localised development.

Small scale development may be less likely to have a significant impact on a water resource. For example, exploration, appraisal and pilot developments, due to their scale and short duration of activity may be less likely to have a significant impact on a water resource.

4.6 Information and data requirements

The level of information and data provided to the department at the referral stage should be sufficient to allow a decision to be made as to whether an action is a 'controlled action' under the EPBC Act. Where the minister decides that an action requires assessment and approval, additional, more detailed information and data may be required to fully assess the impacts of the action.

Information provided to the department at the referral stage should include:

- the characteristics of the potentially impacted water resource(s)
- known baseline conditions of the water resource(s), including existing third party uses, including environmental and other public benefit outcomes
- reasonably foreseeable future use of the water resource(s)
- the likely impact of the action on the water resource(s), including consideration of impacts in the context of existing impacts
- proposed avoidance, monitoring and mitigation measures
- the alignment of the action with any relevant water resource and/or water quality plans.

The level of detail and information included in a referral to the department would also reflect the proponent's approvals strategy. For example, where a proponent is seeking a 'not controlled action' or 'not controlled action – particular manner' decision under the EPBC Act, the level of information and detail relating to the action, its impacts (including consideration of cumulative impacts) and proposed mitigation measures should be sufficient to satisfy the minister that all likely impacts have been considered and (where appropriate) quantified, and that action will not have a significant impact on a water resource. If the information provided by a proponent is not sufficient to enable the minister to make a decision, the department may make additional requests to the proponent for more information.

5 The referral, assessment and approval process

5.1 Referral process

If after undertaking a self-assessment a proponent concludes that their action is likely to have a significant impact on a matter of national environmental significance, or if they are unsure, they must refer the action to the minister. Substantial penalties may apply for taking an action that has, will have or is likely to have a significant impact on a matter of national environmental significance without approval.

The department's website contains an [assessment process guide](#) and a link to the online portal for referral submissions. Proponents can also contact the department for advice on whether a proposed action should be referred by emailing epbc.referrals@awe.gov.au.

After receiving a referral, the minister will decide whether the action is likely to have a significant impact on a matter of national environmental significance:

- if the minister decides that the action is likely to have a significant impact on a matter of national environmental significance, then the action requires approval under the EPBC Act (it is a controlled action)
- if the minister decides that the action is not likely to have a significant impact on a matter of national environmental significance, then the action does not require approval under the EPBC Act (it is a not controlled action)
- if the minister decides that the action would have clearly unacceptable impacts on a matter of national environmental significance, then the action will be refused

The minister may also decide that an action is not likely to have a significant impact on a matter of national environmental significance, and does not require approval under the EPBC Act, because it will be taken in a '[particular manner](#)'. However, the action must be undertaken in a way that is consistent with the manner specified in this decision, or penalties apply.

The minister is generally required to make a binding decision on whether an action requires approval within 20 business days of receiving a referral. If the minister's decision is that an action does not require approval, a person will not contravene the Act if the action is taken in accordance with that decision.

5.2 Assessment and approval process

If the minister decides that an action requires approval, then an environmental assessment of the action must be carried out. If a bilateral agreement is in place, the action may be assessed by the state or territory in which the action is to be undertaken, using the processes accredited under the bilateral agreement. If a ministerial declaration is in place accrediting another Australian Government assessment process, the action may be assessed by the process accredited under that declaration.

Otherwise, the assessment will be undertaken by one of a range of assessment approaches outlined under the EPBC Act. An environmental assessment report will then be prepared.

Under the EPBC Act the Australian Government Environment Minister must seek and consider the advice of the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development (IESC) before deciding whether or not to approve a proposed coal seam gas or large coal mine development that may have a significant impact on a water resource.

After considering the environmental assessment report and advice of the IESC, the Australian Government Environment Minister decides whether to approve the action, and what conditions (if any) to impose.

Assessments will rely as much as possible on information that has already been collected in the existing state or territory assessment processes, to ensure assessments proceed efficiently.

Regardless of whether approval is required under the EPBC Act, separate environmental assessment and approval may also be required under state/territory and/or local government legislation.

6 Further information

- [Exemptions from requiring assessment and approval under the EPBC Act](#)
- [National Water Quality Management Strategy](#)
- [Atlas of groundwater dependent ecosystems](#)
- [Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development](#)

Appendix A – prior authorisation exemption

Overview

Item 22 in the Schedule to the Amendment Act exempts certain actions from assessment and approval under the EPBC Act where the action was fully approved for environmental purposes as necessary by the Commonwealth, and/or a state or territory before the Amendment Act came into force (prior authorisation).

Section 22 of the Amendment Act provides in part that:

- 3) A person may take an action described in section 24D or 24E of the new law without an approval under Part 9 of the new law for the purposes of that section if
 - a) the action involves:
 - i) coal seam gas development; or
 - ii) large coal mining development; and
 - b) before the day this item commences, the action was authorised by a specific environmental authorisation; and
 - c) immediately before the day this item commences, no further specific environmental authorisation was necessary to allow the action to be taken lawfully; and
 - d) at the time the action is taken, the specific environmental authorisation continues to be in force.
- 4) For the purposes of paragraphs (3)(c) and (d), a renewal or extension of a specific environmental authorisation is taken to be a new specific environmental authorisation unless:
 - a) the action that is authorised by the authorisation following the renewal or extension is the same as the action that was authorised by the authorisation before the day this item commences; and
 - b) the renewal or extension could properly be made or given without any further consideration of the environmental impacts of the action.

Note that the number of activities covered by these exemptions may diminish over time as the relevant activities cease or the relevant authorisations expire.

The following 4 criteria must be met for an action to have prior authorisation:

- 1) the action involves a large coal mining development or a CSG development
- 2) the action was authorised by a specific environmental authorisation before commencement of the Amendment Act
- 3) no further specific environmental authorisation was needed for the action to be lawfully taken before commencement of the Amendment Act on 22 June 2013
- 4) the specific environmental authorisation is in operation at the time the action is taken.

Criterion 1 – The action involves large coal mining or coal seam gas development

The definitions of ‘CSG development’ and ‘large coal mining development’ are set out in section 528 of the EPBC Act. Those definitions relate to activities that form part of the extraction process. This is because the definitions refer to ‘extraction’ and ‘mining’ respectively.

See [chapter 2](#) for further information on actions that are within the definitions of large coal mining or coal seam gas development (including in respect of activities that are integral to the extraction process for coal or CSG).

Criterion 2 – The action was authorised by a specific environmental authorisation

An environmental authorisation

An environmental authorisation means an authorisation under a law of the Commonwealth, a state or a self-governing territory that has either or both of the following objects (whether express or implied):

- to protect the environment, and/or
- to promote the conservation and ecologically sustainable use of natural resources.

An environmental authorisation must be made under Commonwealth or state or territory legislation.

The legislation must give the power to grant the authorisation in the form of a permit, licence or authority.

The purpose of the legislation under which the authorisation is granted must be to protect the environment and/or to promote the conservation and ecologically sustainable use of natural resources. The purpose of the legislation may be explicit, or it may be implied from the legislation.

A specific authorisation

The prior authorisation must also be a ‘specific environmental authorisation’, which means the authorisation must:

- identify the particular action to be undertaken by referring to unique aspects of the action
- have been issued or granted following a consideration of the particular action to be undertaken by referring to unique aspects of the action.

Generally, to be a specific environmental authorisation, the authorisation must:

- authorise a specific action to be undertaken, rather than referring to types, groups or classes of actions
- grant authority to take the action, and not just identify that there are no environmental constraints associated with an action.

If the person or organisation undertaking the action changes, then the continuing use exemption may still apply to the action. However, the action must be substantially the same and must not be terminated and restarted by the new person or organisation.

Examples of documents that would not be specific environmental authorisations include:

- a management plan that permits the disposal by any person of a certain amount of waste in a waterway
- a statement that identifies that there are no environmental impacts associated with the construction of a holding dam for water produced in dewatering a coal mine or depressurising a coal seam associated with CSG extraction, but does not authorise that activity.

An approval that is subsidiary to the primary environmental authorisation and which the regulator cannot refuse to grant (although they may require certain standards to be met), such as approval of a management plan, is less likely to be a specific environmental authorisation. This is because the subsidiary approval relates to the way the action must be conducted, rather than whether the action may be undertaken. Whether or not a subsidiary approval is a specific environmental authorisation will depend on the circumstances of each case.

An action must be covered by a specific environmental authorisation

The action being undertaken must fall within the scope of the authorisation. The prior authorisation exemption will not apply if the action being undertaken is substantially different from the action that was originally authorised. See [section 3.2](#) for guidance in determining whether the action is still the same action that was authorised by the specific environmental authorisation.

The authorisation will also not apply if the original authorisation is renewed or extended, unless the extension or renewal is for the same action and there is no assessment of the environmental impacts of the action (see criterion 4 for further information on extensions and renewals).

Criterion 3 – No further specific environmental authorisation was needed

If there are any outstanding specific environmental authorisations needed on commencement of the Amendment Act for the action to be lawfully undertaken, the exemption in section 22 of the Amendment Act will not apply.

This requirement includes any outstanding authorisations under the laws that existed immediately before commencement of the Amendment Act. However, if new legislation requiring further environmental authorisations (other than the EPBC Act) was introduced after that date, the exemption will apply even if the action does not yet have those authorisations (see [Example 7](#)). In other words, whether any further authorisations were required is to be determined at the date that the Amendment Act commenced (22 June 2013).

As outlined in relation to criterion 2, a subsidiary approval (such as a management plan) is not a specific environmental authorisation. Therefore, a project may be exempt despite an outstanding requirement to obtain such an approval.

Example

Example 7 – Operations that would not have the water trigger applied

CSG Company is currently operating CSG Field E. They hold all the necessary environmental authorisations to lawfully commence mining activities in a state before 22 June 2013. After 22 June 2013, a state introduces the *Development Approvals Act 2013*, which changes the regime for approving CSG operations.

In this case, subject to criterion 4, the action will continue to be exempt under the prior authorisation exemption because there were no outstanding environmental authorisations needed for the action to be undertaken lawfully before commencement of the Amendment Act on 22 June 2013. Therefore, CSG Field E is covered by the prior authorisation exemption.

Criterion 4 – The specific environmental authorisation is in operation, at the time the action is taken

Many environmental approvals specify the dates within which an action must have occurred. If this timeframe has not been met, then it is possible that the environmental authorisation has expired.

An extension or renewal of an authorisation is considered to be a new environmental authorisation where:

- further specific environmental considerations are required
- extension or renewal is not for the same action as previously approved.

In these cases, the exemption in section 22 of the Amendment Act will not apply, either to the whole or part of the operations, and the action may require assessment and approval (see [Example 8](#)).

However, the prior authorisation exemption would continue to be valid where an extension or renewal is granted for the same action as previously approved and is properly made without any further assessment of environmental impacts (see [Example 9](#)).

As outlined in relation to criterion 2, a subsidiary approval (such as a management plan) is not a specific environmental authorisation. Therefore, a change to, or renewal of such an approval will not change the application of the prior authorisation exemption to a project.

Examples

Example 8— Operations that may have the water trigger applied

Coal Mine D is an existing operation with prior authorisation from the relevant state authority. The state authorisation allowed the extraction of 30 million tonnes of coal, but the authorisation expires on 1 July 2020. At that time, Coal Mining Company has only extracted 20 million tonnes of coal from Coal Mine D. Before 1 July 2020, Coal Mining Company applies to the state authority for approval to continue extracting the remaining 10 million tonnes of coal. The state authority assesses the environmental impacts of the action and decides to grant the authorisation to extract the remaining 10 million tonnes of coal.

In this case, the prior authorisation exemption will not apply. Even though a new authorisation has been obtained, the extraction of coal after the expiry of the authorisation is not covered by a specific environmental authorisation that was issued before commencement of the Amendment Act, and a further environmental assessment was required before reissuing the approval. Therefore, the water trigger would apply if the additional extraction of coal is likely to have a significant impact on a water resource.

In determining whether the action is likely to have a significant impact on a water resource, the department will consider only the impacts of the extraction of coal that remains to be undertaken, i.e., the action that is now proposed. The extraction that was originally authorised and undertaken prior to the lapse of the original authorisation will not be regarded as part of the action.

Example 9 – Operations to which the water trigger does not apply

Coal Mining Company has an authorisation for construction of Coal Mine E under the *Assessment of Coal Mines Act 2010* (A state) before 22 June 2013. In addition to this approval, Coal Mining Company also needs a water licence under the *Water Licence Act 2005* (A state). CMC held a water licence at 22 June 2013, however, it lapses on 1 July 2015. Before 1 July 2015, Coal Mining Company applies to the state authority for a renewal of the water licence. The renewal of the licence is an administrative process only, so the state authority does not consider the environmental impacts of the action. The water licence is renewed for an additional 10 years.

In this case, the prior authorisation exemption will continue to apply for the further 10-year period because the renewal is for the same action and does not require consideration of environmental impacts of the approved coal mining extraction. Therefore, Coal Mine E will not need to be referred in relation to the water trigger because it is covered by the prior authorisation exemption.

Appendix B - General EPBC Act exemptions

The EPBC Act also contains a number of exemptions that apply generally to all protected matters. In particular, sections 43A and 43B of the EPBC Act exempt certain actions from the assessment and approval provisions of the EPBC Act. These exemptions allow for:

- the continuation of activities that were fully approved by the Commonwealth, or a state or territory before the EPBC Act came into force on 16 July 2000 (section 43A of the EPBC Act)
- otherwise lawful activities, which commenced before the Act commenced on 16 July 2000, and which have continued without substantial interruption (continuing uses) (section 43B of the EPBC Act).

When determining whether section 43A or 43B might apply to an action, a person will need to consider whether section 43A applies first. This is because section 43B may only apply if the ‘action’ is not exempt under section 43A.

Actions described in section 160(2) of the EPBC Act are subject to a special environmental authorisation process and are therefore exempt from assessment and approval under Chapter 4 of the EPBC Act.

There are [a number of criteria](#) that must be satisfied for the minister to make any exemptions in the EPBC Act.

Glossary

Term	Definition
Action	A project, development, undertaking, activity, or series of activities, or an alteration to any of those things. The terms ‘project’, ‘development’, ‘undertaking’ and ‘activity’ have their ordinary meaning in the context of the EPBC Act.
Affected area	The area likely to be affected by the action. This includes the project site and any additional areas likely to be affected, either directly or indirectly.
Decommissioning	Begins with the cessation of production, when infrastructure, plant and equipment are isolated from services such as power and water. Commonly includes the removal (deconstruction or demolition) of unwanted plant and equipment. Individual facilities may be decommissioned and removed if no longer required, while mining and processing operations continue.
Environment	1) ecosystems and their constituent parts, including people and communities 2) natural and physical resources 3) the qualities and characteristics of locations, places and areas 4) heritage values of places 5) the social, economic and cultural aspects of a thing mentioned in paragraph (1), (2), (3) or (4).
Environmentally sustainable level of extraction	The level of water extraction from a particular system which, if exceeded, would compromise key environmental assets, or ecosystem functions and the productive base of the resource (National Water Commission 2004).
Extraction	The extraction of coal seam gas or coal (through the construction and operation of CSG wells or mine voids) and may also include the following, where referred along with new or modified extraction of CSG or coal: • construction of infrastructure to provide water supply for use in the extraction of CSG or coal, including the use of water in activities such as cooling cutting surfaces and mining equipment, or dust suppression • management of water generated as a result of extraction of CSG or coal, such as holding dams or water treatment facilities • management of waste generated as a result of extraction of CSG or coal, such as spoil heaps • construction of infrastructure to provide power necessary for the operation of a mine.
Groundwater	• water occurring naturally below ground level (whether in an aquifer or otherwise); or • water occurring at a place below ground that has been pumped, diverted or released to that place for the purpose of being stored there; but does not include water held in underground tanks, pipes or other works.
Lake	• a natural lake, pond or lagoon (whether modified or not) • includes a part of such a lake, pond or lagoon (<i>Water Act 2007</i>).
Local or regional water quality objectives	A set of numbers or guidelines which satisfy all of the environmental and other public benefit outcomes associated with the water resource, and are contained within a relevant plan which sets out the proposed water quality objectives and the implications of adopting them for particular catchments, coastal waters or aquifers (Australian and New Zealand Environment and Conservation Council 1998).
Not a controlled action – particular manner decision	A decision by the Minister for the Environment under s 75 of the EPBC Act that an action is not a controlled action under the EPBC Act if it is taken in a particular manner. The minister’s notice of the decision includes a description of the prescribed particular manner. Section 77A of the EPBC Act prohibits a person from taking the action in a way that is inconsistent with the manner prescribed in the notice.
Significant impact	An impact which is important, notable, or of consequence, having regard to its context or intensity.

Significant impact guidelines 1.3: Coal seam gas and large coal mining developments—impacts on water resources

Term	Definition
Surface water	• water in a watercourse, lake or wetland • any water flowing over or lying on land – after having precipitated naturally; or – after having risen to the surface naturally from underground (<i>Water Act 2007</i>)
Utility	The use of a water resource for any third party use, including environmental and other public benefit outcomes.
Watercourse	• a river, creek or other natural watercourse (whether modified or not) in which water is contained or flows (whether permanently or from time to time) and includes: – a dam or reservoir that collects water flowing in a watercourse – a lake or wetland through which water flows – a channel into which the water of a watercourse has been diverted – part of a watercourse – an estuary through which water flows (<i>Water Act 2007</i>).
Water-dependent ecosystem	A surface water ecosystem or a groundwater ecosystem, and its natural components and processes, that depends on periodic or sustained inundation, waterlogging or significant inputs of water for its ecological integrity and includes an ecosystem associated with: • a wetland • a stream and its floodplain • a lake or a body of water (whether fresh or saline) • a salt marsh • an estuary • a karst system • a groundwater system • a reference to a water-dependent ecosystem includes a reference to the biodiversity of the ecosystem (<i>Water Act 2007</i>).
Water plan	A statutory plan for surface and/or groundwater systems, consistent with the Regional Natural Resource Management Plans, developed in consultation with all relevant stakeholders on the basis of best scientific and socio-economic assessment, to provide secure ecological outcomes and resource security for users (National Water Commission 2004)
Water resource	• surface water or groundwater • a watercourse, lake, wetland or aquifer (whether or not it currently has water in it); and includes all aspects of the water resource (including water, organisms and other components and ecosystems that contribute to the physical state and environmental value of the water resource) (<i>Water Act 2007</i>).
Wetland	The same meaning as in the Ramsar Convention which is: ‘areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed 6 metres.’

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