NSW GOVERNMENT

NSW Resources Regulator

EXPLORATION CODE OF PRACTICE

ENVIRONMENTAL MANAGEMENT

EXPLORATION CODE OF PRACTICE
Environmental management

Document control

Published by NSW Resources Regulator

Title: Exploration Code of Practice: Environmental Management

First published: July 2015

Authorised by: NSW Resources Regulator, Department of Regional NSW

CM9 reference: MEG/INT17/185149

AMENDMENT SCHEDULE		
Date	**Version**	**Amendment**
July 2015	1.0	First published
April 2017	2.0	First scheduled review
September 2017	3.0	Clarified when the Code applies to the transfer of petroleum prospecting titles – refer to “When this Code applies”
June 2021	4.0	Updated department names to refer to the NSW Resources Regulator within the Department of Regional NSW. Updated references to legislation and guideline documents that have been updated/changed since September 2017. Document template updated.
March 2022	5.0	Updated to enable the Code to apply to exploration on mining leases (to cater for new Assessable Prospecting Operations condition on mining leases from 1 July 2022).

© State of New South Wales through Regional NSW 2022. You may copy, distribute, display, download and otherwise freely deal with this publication for any purpose, provided that you attribute Regional NSW as the owner. However, you must obtain permission if you wish to charge others for access to the publication (other than at cost); include the publication in advertising or a product for sale; modify the publication; or republish the publication on a website. You may freely link to the publication on a departmental website.

Disclaimer: The information contained in this publication is based on knowledge and understanding at the time of writing (March 2022) and may not be accurate, current or complete. The State of New South Wales (including Regional NSW), the author and the publisher take no responsibility, and will accept no liability, for the accuracy, currency, reliability or correctness of any information included in the document (including material provided by third parties). Readers should make their own inquiries and rely on their own advice when making decisions related to material contained in this publication.

Contents

Part A: Introduction

Regulatory purpose

Exploration licences, assessment leases, special prospecting authorities and mining leases for all resources (referred to in this Code as 'prospecting titles') are granted with the objective of encouraging ecologically sustainable development, social responsibility and building economic wealth for the people of NSW. Active and continuous management of environmental performance by a title holder is a critical element of resource exploration as it underpins competent and effective exploration.

This Code of Practice (this Code) sets out **mandatory requirements** (**Part B**) and provides title holders with related guidance (**Appendix 1**) about ensuring that exploration manages and minimises risks to the environment.

This Code serves 3 purposes. It:

1. provides upfront information to the industry and the community
2. facilitates the assessment of exploration activities consistent with Part 5 of the *Environmental Planning and Assessment Act 1979*
3. sets out enforceable mandatory requirements related to environmental management.

This Code enables industry to:

- adopt a risk-based approach to ensure compliance with mandatory requirements related to impacts upon the environment
- commit to measurable performance
- monitor performance and take corrective action if these outcomes are not being achieved
- keep and maintain relevant records of activities and/or actions.

This approach allows title holders to adopt innovative solutions and best practice techniques to meet the expected performance.

When this Code applies

This Code only applies if imposed as a term of an activity approval. Title holders should refer to the terms imposed by the NSW Resources Regulator on the grant of an activity approval or renewal or transfer of a prospecting title to determine whether this Code applies.

Compliance requirements

This Code applies to the extent provided for under the conditions of a prospecting title or the terms of an activity approval.

The guidance outlined in **Appendix 1** provides context to the mandatory requirements and options for the type of controls that could be used by title holders, where relevant, to meet these requirements. The type of controls the title holder applies to achieve the mandatory requirements should be developed, implemented and monitored as part of a risk assessment (e.g. AS/NZS ISO 31000:2018 Risk Management – Guidelines) that is continuously evaluated over the term of a prospecting title.

Based on the likely risk, type and scale, phase and duration of exploration activities, this guidance and any updates or new standards related to environmental management, may be used to measure and assess environmental performance during the term of a prospecting title.

If compliance with this Code is required by the conditions of a prospecting title or the terms of an activity approval, then a breach of this Code will be an offence under section 378D of the *Mining Act 1992* or section 125E of the *Petroleum (Onshore) Act 1991* (as relevant).

From 1 July 2015, under the NSW Gas Plan, the Environment Protection Authority is the lead authority to regulate compliance with and enforcement of all conditions (excluding work health and safety) contained within petroleum titles. This includes any terms imposed in relation to specific activity approvals.

The NSW Resources Regulator is responsible for regulating compliance for all matters relating to prospecting titles under the *Mining Act 1992*. The NSW Resources Regulator's approach to compliance and enforcement is set out in the Compliance and Enforcement Policy available on the website.

Compliance with this Code is not a defence to actions taken under any legislation or statutory instrument.

Compliance with the mandatory requirements within this Code will not be required where they duplicate or are consistent with the conditions of an Environment Protection Licence or the provisions of the *Protection of the Environment Operations Act 1997*[1].

[1] The intention of this provision is to not require compliance with a mandatory requirement of this Code if the matter regulated by that mandatory requirement is already regulated by an Environment Protection Licence.

Interaction of this Code with other regulation

Approvals

Certain approvals issued by other regulators are not required for activities carried out under prospecting titles. However, depending on the nature of an exploration activity or its location, the following subsequent approvals may be required:

- an environment protection licence (EPL) under the *Protection of the Environment Operations Act 1997* for petroleum exploration, regulating noise, air, water and waste pollution (NSW Environment Protection Authority)
- approvals under the *Water Management Act 2000* or the *Water Act 1912*, for activities that involve the taking or use of water (Natural Resources Access Regulator and/or WaterNSW)
- development consent for development to which the *State Environmental Planning Policy No 14—Coastal Wetlands* or *State Environmental Planning Policy No 26—Littoral Rainforests* applies
- approvals under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth Department of Agriculture, Water and the Environment).

Land access arrangements

Under section 140 of the *Mining Act 1992* and section 69C of the *Petroleum (Onshore) Act 1991*, the holders of exploration licences, assessment leases and special prospecting authorities may not carry out any prospecting operations other than in accordance with an access arrangement with the landholder or landholders of the land. Section 141 of the *Mining Act 1992* and section 69(D) of the *Petroleum (Onshore) Act 1991* set out the matters that the access arrangement may make provision for, including conditions to be observed during prospecting.

Some mandatory requirements of this Code require the title holder to notify or obtain the consent of relevant landholders prior to carrying out certain activities. The Mining, Exploration and Geoscience website (www.regional.nsw.gov.au/meg) sets out information which may assist landholders and title holders negotiate and agree access arrangements to facilitate compliance with this Code, including the following:

- *Exploration Code of Practice: Petroleum Land Access,* (Department of Industry, December 2016)
- *Guideline: Land Access Arbitration Procedure* (Department of Industry, December 2016)
- *Exploration Guideline: Petroleum Land Access* (Department of Industry, July 2015)

Public disclosure

Prospecting title decisions will be publicly disclosed consistent with the *Government Information (Public Access) Act 2009*. However, geological information will be kept confidential in accordance with the provisions of, and regulations made under, the *Mining Act 1992* and *Petroleum (Onshore) Act 1991*.

Contact details

NSW Resources Regulator

516 High Street Maitland NSW 2320

PO Box 344, Hunter Region Mail Centre NSW 2310

Telephone 1300 814 609

Email nswresourcesregulator@service-now.com

Website resourcesregulator.nsw.gov.au

Review

This Code will be reviewed after the first year of publication, and then every five years. The effectiveness of the Code will be monitored on an ongoing basis.

Part B: Mandatory requirements

Objective

It is essential that exploration for all resources is conducted with sound and ongoing environmental management practices to prevent, minimise (where prevention is not practical) harm or disruption to the environment.

What are the risks?

Without adequate controls, exploration activities have the potential to cause impacts upon the environment. The risk of these impacts must be assessed; controls must be planned for, implemented, and evaluated for their effectiveness; and the potential for impacts must be monitored to actively and continuously manage environmental performance during the term of a prospecting title.

Potential impacts will depend on the likely risk, type, scale and duration of exploration activities. Potential impacts may include:

- pollution of, or mobilisation of pollutants in, soils (such as hydrocarbons), surface water or aquifers
- adverse impacts on water quality and quantity, including from interception, cross contamination and depressurisation of groundwater systems
- unacceptable noise, air quality (such as dust) and visual impacts to nearby sensitive receivers such as residences
- fugitive emissions of gases or vapour from drilling operations and the operation of flares
- damage to flora, fauna and habitat
- soil erosion and sediment laden run-off from disturbed areas that could lead to soil or water contamination or land degradation
- acid drainage due to exposure of acid sulfate soils or sulfidic ores
- riverbed disturbance from use of poorly constructed or maintained river crossings
- spread of weeds, pest animals and animal/plant diseases
- disruption to farming operations
- damage to structures and sensitive features, such as places of Aboriginal significance, Aboriginal objects and items of heritage significance.

To prevent or mitigate the risk of these potential impacts occurring, the following mandatory requirements apply to NSW exploration activities.

Mandatory requirements

1. Use of chemicals, fuels and lubricants

1.1 The title holder **must** implement all measures to prevent, so far as is practicable, causing contamination of the environment by the release of chemicals, fuels, lubricants and other potential pollutants.

1.2 The title holder **must** ensure that all chemicals, fuels and lubricants, excluding those contained within plant and equipment, are:

a. stored and handled in accordance with any relevant Safety Data Sheet and Australian Standards for the material, and

b. stored in appropriate containers that are in good condition and labelled to clearly identify the stored product, and

c. kept in a facility or area which is capable of containing at least 110% of the largest container capacity stored within that area.

1.3 The title holder **must**:

a. ensure that adequate spill prevention and absorbent materials required to manage spills and leaks for all potential pollutants which are on site are readily available at all times, and

b. use appropriate equipment and materials to capture any drips and spills which occur during the transfer of potential pollutants, and when carrying out maintenance of hydrocarbon filled plant and equipment.

The title holder **must** ensure that spills of potential pollutants are contained and cleaned up as quickly as practicable. Such spillage **must** not be cleaned up by hosing, sweeping, or otherwise releasing contaminants to any watercourse, waterway, groundwater, wetland, or lake.

2. Water

2.1 The title holder **must** implement all measures to prevent, so far as practicable, causing adverse impacts on water quality and quantity, including groundwater levels and pressure.

2.2 Prior to the construction and use of any borehole or petroleum well, the holder of a coal or petroleum prospecting title **must** prepare a Groundwater Monitoring and

Modelling Plan in consultation with the Water Division of the NSW Department of Planning, Industry and Environment.

3. Noise and vibration

3.1 The title holder **must** implement all practicable noise management measures to ensure that noise levels meet acceptable noise criteria for sensitive receivers.

3.2 Unless otherwise agreed with relevant landholders, the title holder **must** notify any potentially affected landholders at least 24 hours prior to detonating explosives.

4. Air quality

4.1 The title holder **must** implement all measures to prevent, so far as practicable, pollution caused by dust and other air pollutants.

5. Waste management

5.1 The title holder **must** manage all waste in a manner which does not, as far as practicable, cause harm to the environment.

6. Vegetation clearing and surface disturbance

6.1 The title holder **must**:

a. minimise the extent of any vegetation clearing and surface disturbance to as low as practicable, and

b. demarcate the boundaries of any areas for vegetation clearing and surface disturbance.

6.2 The title holder **must**:

a. implement all measures to prevent, so far as practicable, adverse impacts to fauna caused by vegetation clearing or surface disturbance, and

b. inspect trees and canopy branches for fauna prior to felling or branch removal, and clearly demarcate any hollows or active bird nests, and

c. not proceed with tree felling or branch removal until any resident fauna have been relocated by an ecologist or other competent party.

6.3 The title holder **must** implement all measures to prevent, so far as is practicable, causing any land degradation or pollution of land or water.

6.4 The title holder **must** implement all practicable measures to prevent harm to the environment when disturbing land in areas of potential acid sulfate soils and actual acid sulfate soils.

7. Roads and tracks

7.1 The title holder **must** consult with relevant landholders prior to establishing any new roads or tracks.

7.2 The title holder **must** plan, design, construct, maintain and use roads and tracks in a manner which minimises the area and duration of disturbance to the environment and landholders to as low as practicable.

7.3 The title holder **must** construct any crossings of rivers, permanent and intermittent water lands and wetlands to prevent, so far as practicable, impacts on fish habitats.

7.4 The title holder **must** refrain from using any unsealed road or track during wet conditions to prevent damage to that road or track, unless the road or track has been designed and constructed for use in wet conditions, or the landholder expressly consented to the use of that road or track in wet conditions.

7.5 Unless otherwise agreed with the relevant landholder, the title holder **must** repair all damage to existing roads and tracks resulting from exploration activities.

8. Weeds, pest animals and diseases

8.1 The title holder **must** implement all practicable measures to prevent the introduction and spread of weeds, pest animals and animal and plant diseases.

9. Livestock protection

9.1 The title holder **must** implement all measures to prevent, so far as practicable, causing adverse impacts to livestock.

10. Culture and heritage

10.1 The title holder **must** implement all measures to prevent, so far as practicable, harm to Aboriginal cultural heritage and non-indigenous cultural heritage.

11. Fire prevention

11.1 The title holder **must** implement all measures to prevent, as far as practicable, the ignition and spread of fire.

12. Risk assessments

12.1 The title holder **must** monitor the risks associated with activities and, if the risk associated with an activity changes, implement revised environmental management controls.

13. Record keeping

13.1 The title holder **must** keep and maintain the records set out in the following table (as applicable).[2]

[2] The records required to be kept and maintained according to this Code should be kept from the time this Code applies as a term imposed on an activity approval. Records are to be kept in a legible form for production to any inspector for a period of four years following the expiry or termination of a prospecting title (sections 163D and 163E of the *Mining Act 1992* and sections 97D and 97E of the *Petroleum (Onshore) Act 1991)*.
Other records associated with surface disturbing activities may be required under other Codes of Practice, including the *Exploration Code of Practice: Rehabilitation* and *Exploration Code of Practice: Produced Water Management, Storage and Transfer*.

MANDATORY REQUIREMENT	RECORD TYPE
Use of chemicals, fuels and lubricants	
1.1 – 1.4	Records which demonstrate compliance with requirements regarding: a. the storage, use and disposal of chemicals, fuels, lubricants and other potential pollutants used during exploration activities (excluding those contained within plant and equipment), and b. the storage, use and disposal of all drilling by-products contaminated by potential pollutants
Water	
2.1	Outcomes of water management measures and monitoring programs (if any)
2.2	Groundwater Monitoring and Modelling Plan (if required)
Noise and vibration	
3.1	Outcomes of noise management measures and monitoring programs (if any)
3.2	Records of notification to affected landholders or other agreement (as relevant)
Air quality	
4.1	Outcomes of air quality management measures and monitoring programs (if any)
Waste management	
5.1	Records specifying the types and quantity of all wastes generated, excluding personal waste, and the method of their disposal
Vegetation clearing and surface disturbance[3]	
6.2	Records (including photos where relevant) of fauna habitat inspections, fauna habitat demarcation and any fauna relocation

[3] Other records associated with surface disturbing activities may be required under other Codes of Practice, including the *Exploration Code of Practice: Rehabilitation*.

MANDATORY REQUIREMENT	RECORD TYPE
6.4	Acid Sulfate Soil Management Plan if PASS or AASS are present and if required by the Acid Sulfate Soil Manual (NSW Acid Sulfate Soil Management Advisory Committee, 1998)
Roads and tracks	
7.1, 7.4, 7.5	Written documentation demonstrating landholder consultation
7.2 – 7.5	Records of road and track construction and maintenance (including before and after photographs)
Culture and Heritage	
10.1	Records (including photos where relevant) of actions and decisions taken in exercising due diligence to protect Aboriginal cultural heritage and non-indigenous cultural heritage
Fire prevention	
11.1	Records of measures and actions taken to prevent fire, including a fire response and readiness plan
Risk assessments	
12.1	Records of risks assessments, and updates to those risk assessments, that result in a significant change to controls required to mitigate impacts to the environment

Note: Guidance for each mandatory requirement is provided in **Appendix 1**. The interpretation and definitions used for this Code are provided in **Appendix 2**.

Appendix 1: Guidance

This Appendix provides assistance to title holders on how they may achieve compliance with mandatory requirements. The information in this Appendix should be used as a guide only and should not be interpreted as imposing any additional mandatory requirements. The applicability of certain parts of this guidance will vary depending on the likely risk, type and scale, phase and duration of exploration activities.

Title holders should note that the standards and guidelines outlined below (as amended or replaced from time to time), in addition to any new published standards taken to set out best practice relating to environmental management, may be used to measure and assess environmental performance for compliance and enforcement purposes during the term of a prospecting title.

Use of chemicals, fuels and lubricants

Title holders **should** refer to the AS 1940-2004 – The Storage and Handling of Flammable and Combustible Liquids: Section 2 Minor Storage when managing all flammable and combustible liquids, excluding those contained within plant and equipment.

The title holder may be required to comply with additional obligations regarding potential pollutants under work health and safety legislation (e.g. for the management of spills).

Water

The title holder **should** have a clear understanding of the groundwater and surface water sources which may be impacted by the proposed exploration activities.

The Water Management (General) Regulation 2018 provides an exemption that permits a title holder to take up to 3 megalitres (ML) of groundwater per year without the need to hold a water access licence. Where it will be necessary to extract more than this amount, a valid access licence must be held.

The title holder **should** implement all practicable measures to minimise any:

- harm or pollution to surface water resources
- contamination or cross-connection of aquifers or groundwater sources, including through the use of suitable drilling techniques and fluids
- depressurisation of aquifers or groundwater sources as a result of water moving from one aquifer or groundwater source to another, or water being removed from an aquifer or groundwater source (including changes to surface water flows where there is connectivity between surface and groundwater systems).

Title holders **should** construct, maintain and decommission all boreholes and petroleum wells which encounter groundwater in accordance with standards equivalent to or exceeding the Minimum Construction Requirements for Water Bores in Australia (National Uniform Drillers Committee, 2020).

The title holder **should** note that engineering requirements in the Exploration Code of Practice: Produced Water Management, Storage and Transfer (NSW Resources Regulator, July 2015) may also be relevant to managing water impacts, if the title holder is separately required to comply with that Code.

The title holder **should** contain all drill cuttings, fluids and groundwater returned to the surface as part of the drilling process in above-ground tanks or in-ground sumps pending re-circulation or disposal. In-ground sumps must be lined with an impermeable barrier where there is a potential risk of contamination from drill cuttings or fluids.

Prior to the construction and use of boreholes or petroleum wells, coal and petroleum title holders will be required to prepare a Groundwater Monitoring and Modelling Plan in consultation with the Water Division of the Department of Planning, Industry and Environment. Reference **should** be made to Groundwater Monitoring and Modelling Plans – Information for prospective mining and petroleum exploration activities (NSW Department of Primary Industries - Office of Water, 2014). Title holders **should** then implement that plan to demonstrate compliance with the requirement to implement all measures to prevent, so far as practicable, causing adverse impacts on water quality and quantity (as per the mandatory requirement in clause 2.1).

Noise and vibration

Interim Construction Noise Guideline

Appropriate noise management measures are set out in the Interim Construction Noise Guidelines (DECC, 2009) (ICNG).

The ICNG will not apply if:

a. the operations are the subject of an Environment Protection Licence (EPL), or

b. the title holder has negotiated different limits in a written agreement with:

   i. the relevant landholder, or

   ii. the resident of a dwelling or occupier of a sensitive receiver in the case of a prospecting operation that may result in an exceedance of the ICNG at that dwelling or other sensitive receiver.

All feasible and reasonable measures **should** be applied so that noise levels generated by a proposed activity during standard work hours do not exceed acceptable noise criteria, being the Rating Background Level (RBL) +10dB(A)(15min) at any occupied residence or other sensitive receiver.

Standard work hours are defined by the ICNG as being:

- Monday to Friday — 7.00 am to 6.00 pm
- Saturday — 8.00 am to 1.00 pm

No work on Sundays or public holidays.

The Rating Background Level (RBL) is defined by, and is to be calculated in accordance with, the NSW Industrial Noise Policy (NSW EPA, 2000) (INP). The RBL is the overall single-figure background noise level for each assessment period (the assessment periods being day/evening/night) over an entire monitoring period (as opposed to each 24 hour period). It is defined as the median value of:

- all the day assessment background levels over the monitoring period for the day
- all the evening assessment background levels over the monitoring period for the evening
- all the night assessment background levels over the monitoring period for the night.

Where the RBL is less than 30dB(A), the RBL is to be set at 30dB(A).

The RBL +10dB(A)(15min) measured at a sensitive receiver represents the noise affected level where there may be some community reaction to the noise.

Table 1 lists common sounds and their typical noise level. Whilst these are not RBLs, the noise levels have been provided to enable a title holder to estimate the likely RBL.

Noise impacts generated by the proposed activities **should** be managed to ensure the noise criteria for the site is not exceeded as a result of the activities. They **should** be managed by:

- identifying sensitive land uses
- identifying the hours during which the proposed activities will be undertaken
- identifying the potential noise impacts at sensitive land uses
- selecting and applying the best measures to minimise noise impacts.

Sensitive receivers with the potential to be affected by noise include:

- residences
- classrooms
- hospitals
- places of worship
- passive recreation areas such as outdoor grounds used for teaching

- active recreation areas such as parks and sports grounds
- intensive livestock operations
- at certain times, commercial and industrial premises.

Table 1: Common sounds and their typical noise level. Source: NSW EPA 2013

NOISE ENVIRONMENT	INDICATIVE A-WEIGHTED DECIBEL (DB(A)) NOISE LEVEL
Threshold of hearing	0
Inside bedroom — windows closed	20
Quiet countryside	30
Quiet suburban area	40–45
Busy office	60
Busy city street at kerbside	75
Jackhammer near operator	95
Rock concert	110
Jet take-off at 100 m	125
Threshold of pain	140

Further details relating to sensitive land uses can be found in the ICNG.

Monitoring of noise during operations is not generally required. However, the NSW Resources Regulator may impose the requirement to monitor noise if concerns are raised in relation to compliance with the above criteria. A title holder may also decide to undertake noise monitoring to ensure the required noise levels are achieved.

Works outside standard working hours

The title holder **should** apply all feasible and reasonable measures to ensure any works undertaken outside of standard working hours do not exceed acceptable noise criteria, being the RBL +5dB(A)(15 min) at any residence or sensitive receiver. The title holder is able to determine this using the process outlined above for standard working hours.

Vibration and overpressure thresholds

The title holder **should** implement all reasonable measures to ensure airblast overpressure as a result of blasting (e.g. seismic surveys) does not exceed 115dB(linear peak) at a sensitive receiver. Shots **should** not be detonated any closer than 500 metres from residences or other occupied sensitive receivers without the written approval of the occupants. At distances of 500 metres or more, overpressure and vibration impacts are unlikely to be exceeded.

The title holder **should** implement all reasonable measures to ensure ground vibration from exploration activities (e.g. seismic shots, vibroseis machinery, rock hammers) does not exceed:

a. 5 mm/s (peak particle velocity) at any residence or other sensitive receiver, or

b. 3 mm/s for any item of heritage significance, Aboriginal grinding groove site, rock feature of Aboriginal cultural significance or cliff line greater than four metres in height.

The title holder **should** not use vibroseis (seismic sources) or hydraulic hammers/rock breaker attachments on excavators within 200 metres of a sensitive receiver (without the written approval of the occupants), item of heritage significance, Aboriginal grinding groove site, rock feature of Aboriginal cultural significance, or any cliff line greater than four metres in height.

The above setbacks have been identified for vibration and overpressure impacts only. Additional separation distance from sensitive receivers may be required to ensure that noise criteria are satisfied.

Management of vibration and overpressure impacts

The ANZECC Technical Basis for Guidelines to Minimise Annoyance Due to Blasting Overpressure and Ground Vibration (ANZECC, 1990) details standard limits for blasting in Australia. The criteria provide for both amenity and structural integrity criteria.

In the absence of any Australian Standards for items of heritage significance, the 3mm/s peak particle velocity PPV for heritage items is based on *European Standard BS7385: Part 2: 1993 for the Evaluation and Measurement for Vibration in Buildings.*

The title holder **should** determine whether the airblast and ground vibration criteria are likely to be exceeded as a result of the proposed activities. Where blasting is to be undertaken, the title holder **should** consider:

- the location of sensitive receivers
- the activity to be conducted which will generate potential blast impacts
- methods which can be used to minimise blast impacts

- the potential of the activity to generate airblast and ground vibration levels which exceed the criteria outlined above.

Should the title holder identify that there is a reasonable possibility that the criteria could be exceeded, further assessment may be required. Further assessment may include a qualitative or quantitative vibration/overpressure impact assessment, depending on the scale of the proposed activities.

Potential overpressure and vibration impacts at items of heritage significance and potentially sensitive Aboriginal objects, such as grinding grooves, **should** be calculated to ensure the relevant criteria are not exceeded at these potentially sensitive locations.

Air quality

Dust controls

The title holder **should** determine whether the proposed activities are likely to generate dust, which has the potential to exceed the cumulative thresholds below. Where the title holder determines that the activity is likely to generate dust, management controls **should** be designed to reduce the potential dust impacts of the proposed activity.

The title holder **should** utilise dust suppression for air drilling techniques (other than small bore tractor mounted drills used for shallow (less than 50 metre) seismic shot holes).

To prevent causing an unreasonable release of dust, the following measures or similar measures may be used:

- installing pollution control equipment (e.g. fitting bag filters or a cyclone to dust-generating equipment)
- altering work practices to avoid or minimise the generation of dust, including reducing vehicle speeds
- scheduling activities for times when they will have least impact
- spraying water on roads and tracks as necessary
- revegetating disturbed areas as soon as practicable
- leaving or creating wind breaks or screening.

Dust thresholds

The title holder **should** implement all reasonable measures to ensure the activity does not result in cumulative PM10 emissions exceeding 50 µg/m3 (24 hours) or 30 µg/m3 (annual average) at any occupied residence (5 exceedances of 50 µg/m3 (24 hours) permitted per year).

The title holder **should** implement all reasonable measures to ensure the activity does not result in cumulative PM2.5 emissions exceeding 25 µg/m3 (24 hours) or 8 µg/m3 (annual average) at any residence.

The National Environment Protection Measure (NEPM) for Ambient Air Quality (National Environment Protection Council, 1998) provides ambient air quality standards, which are the basis for the above air quality impact criteria.

Monitoring of air quality is not required, however, the NSW Resources Regulator may impose a requirement to monitor air quality if concerns are raised in relation to compliance with the above criteria. A title holder may also decide to undertake air quality monitoring to ensure the required air quality criteria are achieved.

Diesel emissions

All reasonable measures **should** be implemented to ensure machinery and equipment is properly maintained to minimise diesel particulate emissions.

Waste management

The title holder **should** ensure that all wastes (including drilling by-products contaminated by chemicals, contaminated residues, chemicals, oils or fuels) are collected, segregated and securely deposited in properly constructed containers and disposed of lawfully.

The *Protection of the Environment Operations Act 1997* regulates the disposal of waste. It is illegal to deposit waste, as defined by the Waste Classification Guidelines (EPA, 2014), on land, unless it is an appropriately licensed waste facility or the material is subject to an exemption issued in relation to the Protection of the Environment Operations (Waste) Regulation 2014.

Any material that may be classified as a waste under the *Protection of the Environment Operations Act 1997* must be classified under the Waste Classification Guidelines (EPA, 2014) and disposed of at an appropriately licensed facility.

The NSW Environment Protection Authority has issued resource recovery exemptions for both excavated natural material and treated drilling mud[4].

If the exemption criteria are met, then waste may be applied to land within the confines of the exemption.

[4] This does not include drilling mud that has been generated by deep drilling for mineral, gas or coal exploration.

Vegetation clearing and surface disturbance

General

When drilling, excavating or sampling, the following or similar measures **should** be used to minimise the area and duration of disturbance to land and vegetation:

- design and operate excavations to minimise the risks associated with overflow or spill events
- consider seasonal influences such as rainfall before excavating or establishing a site
- construct drilling pads no larger than necessary to safely accommodate the drilling rigs and ancillary equipment.

When constructing gridlines and geophysical lines, the following measures or similar measures can be used to ensure that the area and duration of disturbance to land and vegetation is minimised:

- use existing gates, tracks, roads and survey lines
- before deciding on the location of new survey lines, record the location of all underground or surface pipelines, cables, power lines, etc., and avoid these areas
- construct survey lines that do not exceed the width necessary to safely undertake the survey
- use global positioning systems (GPS), radio communications or other techniques, to reduce the need for line of sight clearing.

To enhance rehabilitation, vegetation clearing and topsoil management **should** be undertaken in accordance with the Exploration Code of Practice: Rehabilitation (NSW Resources Regulator, July 2015).

Vegetation clearing

The clearing of native vegetation in rural areas[5] ordinarily requires approval under either the *Local Land Services Act 2013* or the *Biodiversity Conservation Act 2016*, with certain exemptions.

However, the *Local Land Services Act 2013* and the *Biodiversity Conservation Act 2016* provide that vegetation clearing authorised under the *Mining Act 1992* or *Petroleum (Onshore) Act 1991* (such as an exploration activity approval) does not require separate approval under either the *Local Land Services Act 2013* or the *Biodiversity Conservation Act 2016*. This also means that vegetation clearing that has not been approved is an offence under these Acts, unless some other exemption applies.

[5] Clearing of native vegetation in urban areas is legislated by the *State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017*

To minimise the area of disturbance to vegetation and fauna, the following or similar measures **should** be used:

- avoid disturbing large and/or mature trees
- avoid disturbing habitat trees
- select specific trees to be cleared and avoid causing damage to surrounding vegetation
- avoid vegetation removal in windbreaks and shelter belts
- where practical, leave the rootstock intact to promote regeneration and regrowth.

Fauna protection

Vegetation clearing and surface disturbance **should** be conducted in a manner so as not to cause danger to fauna. The following or similar measures **should** be used where necessary:

- the installation of temporary fencing around work sites
- preventing fauna from accessing open and unattended excavation pits of a depth greater than 1 metre
- sloping excavations at one end to allow for the egress of any fauna.

Threatened flora and fauna

Threatened species and ecological communities are protected by the *Biodiversity Conservation Act 2016* and Part 7A of the *Fisheries Management Act 1994*.

All known threatened species and threatened ecological communities located inside the disturbance area and within approximately 50 metres of the disturbance area **should** be noted and appropriate measures put in place to prevent harm. This could include demarcation with flagging tape or fencing with adequate curtilage.

Steep slopes

Vegetation removal and surface disturbance on steep slopes can contribute to slope instability or erosion. The title holder **should** implement all reasonable measures to avoid clearing on slopes greater than 18 degrees from horizontal.

Sediment and erosion control

In all instances of surface disturbance (other than that associated with road or track construction), the title holder **should** implement erosion and sediment controls in accordance with Managing Urban Stormwater: Soils and Construction Volume 2E, Mines and Quarries (DECC 2008b).

The key principles to be considered in the design and implementation of erosion and sediment controls include:

- assess the soil and water implications of the activity at the planning stage
- plan for erosion and sediment control during the design of the activity before any surface disturbance occurs
- minimise the area of soil disturbed and exposed to erosion
- control water flow from the top of and through the site by diverting up-slope clean water away from disturbed areas and ensuring that concentrated flows are below erosive levels and sediment is retained within disturbed areas
- rehabilitate disturbed lands quickly
- maintain erosion and control measures effectively

Acid sulfate soils

Acid sulfate soils include potential acid sulfate soils (PASS) and actual acid sulfate soils (AASS). The sulfides in acid sulfate soils mix with oxygen when exposed to air to produce sulfuric acid.

Acid sulfate soil risk maps for NSW are available on the NSW Government's Sharing and Enabling Environmental Data (SEED) central resource (www.seed.nsw.gov.au).

The title holder **should** determine whether acid sulfate soils are likely to be present within the exploration licence area and whether the proposed exploration activities are to be undertaken within these areas. All proposed activities within these areas **should** be undertaken in accordance with the Acid Sulfate Soil Manual (NSW Acid Sulfate Soil Management Advisory Committee, 1998). This may include the need to prepare and implement an Acid Sulfate soils management plan.

Biophysical strategic agricultural land

Biophysical strategic agricultural land (BSAL) is land with high quality soil and water resources capable of sustaining high levels of productivity. *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007* provides maps relating to the location of BSAL. Further information regarding BSAL is available on the NSW Department of Planning, Industry and Environment website (www.planning.nsw.gov.au)

The title holder **should** determine whether BSAL is likely to be present within the exploration licence area and whether the proposed exploration activities are to be undertaken within these areas. All proposed drilling activities within these areas **should** use above-ground sumps to manage drilling fluids.

Roads and tracks

When planning and constructing new roads and tracks, the following measures or similar measures **should** be used to minimise the extent and duration of impacts:

- do not disadvantage other users of existing public roads and tracks
- wherever possible use or (if needed) upgrade existing roads and tracks
- minimise the width and length of roads and tracks
- construct roads and tracks to follow the contour of the land to minimise the amount of cut and fill
- avoid the importation of fill material
- minimise the number of river crossings
- regularly clean out culverts, bridges and causeways to prevent flow being impeded or redirected.

The construction or upgrading of roads or tracks **should** meet the requirements set out in Managing Urban Stormwater: Soils and Construction, Volume 2C, Unsealed Roads (DECC 2008a). The construction of any crossings of rivers, permanent and intermittent water lands and wetlands **should** be constructed in accordance with the requirements of the Policy and Guidelines for Fish Habitat Conservation and Management (NSW DPI, update 2013).

Weeds, pest animals and diseases

Exploration activities **should** be conducted in a manner so as to minimise the spread of weeds, pest animals and animal and plant diseases. A 'come clean — go clean' protocol **should** be implemented when moving from property to property to ensure the exploration licence area is kept free of disease, soil pathogens, seeds, weeds and pest animals. The following or similar measures **should** be used:

- ensuring that any soil and material imported into the exploration licence area is free of disease, soil pathogens, seeds and weeds
- thoroughly inspecting and cleaning machinery, vehicles, equipment and work boots prior to moving to a new property.

Livestock protection

Exploration activities **should** be conducted in a manner so as not to cause danger to livestock with the following or similar measures used where necessary:

- installation of temporary fencing around work sites

- preventing livestock from accessing open and unattended excavation pits of a depth greater than 1 metre
- sloping excavations at one end to allow for the egress of any livestock
- minimising activities in consultation with the landholder which have the potential (by way of noise, vibration, lighting, vehicle speed, etc) to impact livestock operations
- permitting the access of livestock to any watering places
- leaving gates as found, or as directed by the landholder
- preventing access to water which is a by-product of exploration.

When using explosives or high electrical currents, the title holder **should** implement all measures to prevent, so far as practicable, causing harm or disturbance to domestic animals and livestock.

The *Mining Act 1992* also protects the right to access water. Under these provisions, a landholder who is entitled to use the land for livestock watering or water drainage purposes is entitled to free and uninterrupted access (for those purposes), to the water in any stream, lagoon or swamp on or adjacent to the land. Disturbance or interference with livestock could also result in a loss for which compensation is payable under the *Mining Act 1992* and the *Petroleum (Onshore) Act 1991*.

Culture and heritage

Aboriginal heritage

The title holder **should** undertake an Aboriginal heritage due diligence assessment in accordance with the requirements of the NSW Minerals Industry Due Diligence Code of Practice for the Protection of Aboriginal Objects (NSW Minerals Council Ltd, 2010).

Part of the due diligence process is checking the NSW Government's online Aboriginal Heritage Information Management System (AHIMS).

An Aboriginal object is defined under the *National Parks and Wildlife Act 1974* as:

> *any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains.*

Aboriginal objects include artefacts, culturally modified trees, grinding grooves and artwork sites.

The due diligence assessment **should** consider all activities, including the upgrade of existing tracks.

All known Aboriginal objects, places or sensitive sites located inside the disturbance area and within approximately 50 metres of the disturbance area **should** be noted and appropriate measures put in place to prevent harm. This could include demarcation with flagging tape or fencing.

Other heritage places and items of heritage significance

The title holder **should** avoid any impacts to an item of heritage significance. An item means a place, building, work, relic, moveable object or precinct.

The presence of an item of heritage significance can be identified by checking the following registers and instruments:

- World Heritage List (UNESCO)
- Australia's Commonwealth Heritage List (Australian Government)
- Australia's National Heritage List (Australian Government)
- NSW State Heritage Inventory (NSW Government)
- relevant environmental planning instruments, such as a local council's environmental plan.

All known items of heritage significance located within 50 metres of the disturbance area **should** be noted and appropriate measures put in place to prevent harm. This could include demarcation with flagging tape or fencing.

Fire prevention

The title holder **should** implement all measures to prevent, so far as practicable, any outbreak of fire. The title holder **should** not burn off any grass, foliage or vegetation without the consent of the land holder and the local fire authority. Each site **should** develop and implement a relevant and up-to-date fire response and readiness plan.

The title holder **should** ensure that the relevant staff are informed and fully trained with respect to local fire hazard conditions, fire susceptibility and emergency procedures. Appropriate fire-fighting equipment **should** be maintained at the site and fitted to all exploration vehicles and machinery.

Exploration activities **should** not be undertaken during periods of Extreme or Catastrophic fire danger ratings as declared by the Bureau of Meteorology. Information on fire danger ratings can be obtained from the NSW Rural Fire Service and the Australian Government's Bureau of Meteorology.

Risk assessments

The type of controls the title holder applies to achieve the mandatory requirements **should** be developed and implemented based upon a risk assessment. This risk assessment **should** be used to not only establish a basis for managing risk when planning an activity, but it **should** also be used and updated (as required) to continuously evaluate risk and the effectiveness of controls used to prevent or minimise impacts to the environment.

An environmental impact assessment (such as a Review of Environmental Factors, Environmental Impact Statement or Species Impact Statement), and, more specifically, the Part 5 environmental assessment process under the *Environmental Planning and Assessment Act 1979* is a form of risk assessment.

Title holders may choose to carry out risk assessments on a broad basis, considering a wide range of factors conducted for the proposed exploration activities (e.g. environmental management, drilling, community consultation, rehabilitation).

Alternatively, separate risk assessment can be undertaken in consideration of individual factors.

Title holders **should** use AS/NZS ISO 31000:2018 Risk Management – Guidelines to support risk assessments.

Appendix 2: Interpretation and definitions

In this Code:

1. A duty imposed on a title holder to prevent causing adverse impacts requires the title holder:
    a. to prevent adverse impacts from occurring as a result of the title holder's activities, so far as is practicable
    b. if it is not practicable to prevent any adverse impacts from occurring, to minimise those adverse impacts to as low as is practicable.
2. Practicable, in relation to a requirement to prevent or minimise the occurrence of an adverse impact to the environment, means that which is, or was at a particular time, able to be done in relation to ensuring the protection of the environment, taking into account and weighing up all relevant matters, including:
    a. the likelihood of the hazard or the risk concerned occurring
    b. the degree of harm that might result from the hazard or the risk
    c. what the person concerned knows, or ought to know, about:
        i. the hazard or the risk
        ii. ways of eliminating or minimising the risk
    d. the availability and suitability of ways to eliminate or minimise the risk
    e. after assessing the extent of the risk and the available ways of eliminating or minimising the risk, the cost associated with available ways of eliminating or minimising the risk, including whether the cost is grossly disproportionate to the risk.
3. Reference to a document is a reference to that document as amended or replaced from time to time.
4. Words have the meaning given to those terms in a prospecting title, unless otherwise defined in the table below.
5. Terms in column 1 of the following table have the meaning set out in column 2

COLUMN 1 (TERM)	COLUMN 2 (MEANING)
Aboriginal object	Has the same meaning as it has in the *National Parks and Wildlife Act 1974*
Aboriginal place	Has the same meaning as it has in the *National Parks and Wildlife Act 1974*
Acid sulfate soils	Sediments and soils containing iron sulfides which, when exposed to oxygen, generate sulfuric acid. Acid sulfate soils include actual acid sulfate soils (AASS) or potential acid sulfate soils (PASS)
Activity	Any activity carried out in connection with exploration including: ■ the use of land ■ means of accessing land ■ the carrying out of a work
Activity approval	An approval to carry out assessable prospecting operations granted under the *Mining Act 1992* or the *Petroleum (Onshore) Act 1991*
Actual acid sulfate soils (AASS)	Sediments and soils containing highly acidic soil horizons or layers resulting from the aeration of sediments and soils that are rich in iron sulfides, primarily sulfide
Aquifer	Has the same meaning as it has in the *Water Management Act 2000*.
Assessable prospecting operation	Any prospecting operation that is not exempt development within the meaning of clause 10 of *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007*
Australian Standard	A standard published by Standards Australia
Background noise level	The underlying level of noise present in the ambient noise when extraneous noise is removed and excluding noise from the activity under consideration. This is described using the LA90 descriptor.
Borehole	A hole made by drilling or boring, but excludes sampling and coring using hand-held equipment; and petroleum wells
Canopy cover	The upper tree canopy where the upper canopy is greater than 1.5 metres in height above ground level
Clearing	Any one or more of the following: ■ cutting down, felling, thinning, lopping, logging or removing vegetation

COLUMN 1 (TERM)	COLUMN 2 (MEANING)
	■ killing, destroying, poisoning, ringbarking, uprooting or burning vegetation
dB(A)	A measure of A-weighted sound levels
Decibel (dB)	A measure of sound equivalent to 20 times the logarithm (to base 10) of the ratio of a given sound pressure to a reference pressure, and 10 times the logarithm (to base 10) of the ratio of a given sound power to a reference power
Department	The Department of Regional NSW
Drilling	The perforation of the earth's surface crust by mechanical means to form a hole, whether the hole caused by the perforation is vertical, inclined or horizontal, and includes all operations for preventing collapse of the sides of any such hole or for preventing it from being filled with extraneous materials including water
Drilling fluid	Any liquid or gaseous fluid, or mixture of fluids and solids (as solid suspensions, mixtures and emulsions of liquids, gases and solids) used in operations to drill boreholes into the earth
Drilling mud	Liquid-based drilling fluid
Excavation	The removal of the surface layer of land to a depth greater than 500 mm from the natural surface level of that land
Exempt development	Has the same meaning as it has in *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007*
Exploration	Has the same meaning as it has in the *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007*
Fauna	Has the same meaning as it has in the *National Parks and Wildlife Act 1974*
Feasible	Relates to engineering considerations and what is practical to build or implement
Groundwater	Water that occurs beneath the ground surface in the saturated zone
Habitat	Has the same meaning as it has in the *Biodiversity Conservation Act 2016* or *Fisheries Management Act 1994*, as relevant
Harm	In relation to matters of national environmental significance, has the same meaning as 'significant impact' as provided by the 'Significant Impact Guidelines' used to determine whether assessment and approval is

COLUMN 1 (TERM)	COLUMN 2 (MEANING)
	required under the Commonwealth *Environment Protection & Biodiversity Conservation Act 1999* In relation to the environment, has the same meaning as it has in the *Protection of the Environment Operations Act 1997* In relation to threatened species or threatened ecological communities, has the same meaning as: ■ 'harm an animal' in the *Biodiversity Conservation Act 2016* ■ 'pick' a plant in the *Biodiversity Conservation Act 2016* ■ 'damage habitat' in the *Biodiversity Conservation Act 2016* ■ 'harm' in the *Fisheries Management Act 1994* In relation to an aquifer or waterfront land, has the same meaning as it has in the *Water Management Act 2000* In relation to Aboriginal places or Aboriginal objects has the same meaning as it has in the *National Parks and Wildlife Act 1974* In relation to items of heritage significance, has the same meaning as it has in the *Heritage Act 1977* In relation to protected marine vegetation, has the same meaning as it has in the *Fisheries Management Act 1994*
Item of heritage significance	Means: ■ any heritage items listed in one or more of the following: ○ World Heritage List (UNESCO) ○ Commonwealth Heritage List (Australian Government) ○ National Heritage List (Australian Government) ○ NSW State Heritage Inventory (NSW Government) ○ an environmental planning instrument ■ any relic (being any deposit, object or material evidence which relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and which is 50 or more years old) ■ within State Conservation Areas:

COLUMN 1 (TERM)	COLUMN 2 (MEANING)
	○ items that are listed on the NSW Government's Historic Heritage Information Management System ○ in all other circumstances, any deposit, object or material evidence relating to the settlement or occupation of New South Wales or a part of New South Wales (not being Aboriginal settlement or occupation) if the deposit, object or material evidence is more than 25 years old at the date of the interference or removal
Land	Includes: ■ the sea or an arm of the sea ■ a bay, inlet, lagoon, lake or body of water, whether inland or not and whether tidal or non-tidal ■ a river, stream or watercourse, whether tidal or non-tidal ■ a building erected on the land
Mining, Exploration and Geoscience	A division within the Department of Regional NSW.
Native vegetation	Has the same meaning as it has in the *Local Land Services Act 2013*
Petroleum well	A hole made by drilling or boring in connection with prospecting for petroleum or operations for the recovery of petroleum, but excludes: ■ sampling and coring using hand-held equipment ■ a hole constructed and operated for the following purposes where the operation of that hole does not involve fracture stimulation or the recovery of petroleum: ○ stratigraphic definition ○ seismic (for example shot holes, geophone, tilt meters bores) ○ water monitoring ○ environmental assessment
Potential acid sulfate soils (PASS)	Sediments and soils which contain iron sulfides or sulfidic material which have not been exposed to air and oxidised

COLUMN 1 (TERM)	COLUMN 2 (MEANING)
Potential pollutants	Any substance, whether solid, liquid or gaseous, that causes, or is likely to cause, degradation of the land or water, resulting in actual or potential harm to the health or safety of human beings, animals or other terrestrial life or ecosystems, or actual or potential loss or property damage, that is not trivial
Produced water	Any form of groundwater that is actively extracted from a borehole, petroleum well or excavation, excluding incidental groundwater mixed with drilling fluids
Prospect	Has the same meaning as it has in the *Mining Act 1992* and the *Petroleum (Onshore) Act 1991* (as relevant)
Prospecting title	An exploration licence, assessment lease, mining lease or special prospecting authority granted under the *Mining Act 1992* or the *Petroleum (Onshore) Act 1991*
Regrowth	Has the same meaning as it has in the *Local Land Services Act 2013*
Rehabilitation	Has the same meaning as it has in the *Mining Act 1992*
River	Has the same meaning as it has in the *Water Management Act 2000*
Safety Data Sheet	Has the same meaning as it has in the Work Health and Safety Regulation 2011
Secretary	The Secretary of the Department of Regional NSW
Seismic survey	The use of shock waves (generated in the ground using either small explosive charges detonated below the surface, hand-held mechanical hammers or vehicle-mounted hammers) and an array of geophones, which are connected to measuring instruments to differentiate the geophysical properties of the subsurface of the earth
Sensitive receiver	Includes: ■ dwellings ■ libraries ■ educational and research institutions (including schools, colleges and universities) ■ childcare centres ■ kindergartens ■ hospitals, surgeries and other medical institutions ■ places of worship

COLUMN 1 (TERM)	COLUMN 2 (MEANING)
	■ milking sheds and holding yards associated with dairies ■ animal boarding or training establishments ■ aquaculture ■ intensive livestock agriculture, and ■ declared areas of Outstanding Biodiversity Value under the *Biodiversity Conservation Act 2016*
Site	The land on which an activity is located
Standard hours of work	Has the same meaning as it has in the Interim Construction Noise Guidelines (DECC, 2009)
State conservation area	Has the same meaning as it has in the *National Parks and Wildlife Act 1974*
Sump	Storage location for fluids commonly required during drilling This is usually in a hole dug for the purpose but may be an above ground storage unit
Surface disturbance	Means: ■ disturbance or exposure of the soil or surface rock layer, or ■ degradation or deterioration in any manner of the physical surface of land
Terms	In relation to activity approvals, means the terms imposed by the decision-maker on the grant of an activity approval
Threatened species and threatened ecological communities	Has the same meaning as it has in the *Biodiversity Conservation Act 2016* or *Fisheries Management Act 1994*, as relevant
Title holder	A person or company to whom a prospecting title has been issued
Track	All unsealed routes that will be traversed multiple times, but does not include single pass (ingress and egress) routes or seismic shot and receiver lines
Understorey	A layer of vegetation located beneath the main canopy of a stand of vegetation
Upper canopy	The layer of vegetation that is formed by the tree crowns
Vegetation	Any native vegetation other than re-growth

COLUMN 1 (TERM)	COLUMN 2 (MEANING)
Waste	Has the same meaning as it has in the *Protection of the Environment Operations Act 1997*
Watercourse	A river, estuary or lake as defined in the *Water Management Act 2000*
Water land	Has the same meaning as it has in the *Fisheries Management Act 1994*
Waterfront land	Has the same meaning as it has in the *Water Management Act 2000*
Well	Has the same meaning as it has in the *Petroleum (Onshore) Act 1991*
Wetlands	Has the same meaning as it has in the *Fisheries Management Act 1994*