
D Summary of environmental and heritage requirements

D.1 Principles of environmental regulation

The potential environmental impacts arising from petroleum activities are diverse and depend on the nature of the activity (including its scale, location and management). The environmental impacts of petroleum activities that are likely to be considered as part of an environmental management plan or assessment include:

- potential impact on marine species, including disturbance to fisheries and cetaceans (cetaceans include whales and dolphins)
- discharges to land or water — including ‘drilling muds’ and fluids, formation water, domestic water, and other discharges
- emissions to air — such as gas flaring, venting and fugitive gas emissions
- waste disposal and management
- noise pollution
- land and vegetation clearance, including disturbance to native flora and fauna and ecological processes — such as clearance for construction of production facilities and pipelines
- social and economic impacts — environmental impacts can affect local tourist and recreational activity, visual amenity and wilderness values
- impact on sites with cultural or natural heritage value.

Most jurisdictions through their environmental protection legislation have adopted ecologically sustainable development (ESD) principles. Some key ESD principles commonly adopted in environmental protection legislation include the:

- precautionary principle — 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. Decision making should be guided by careful evaluation to avoid serious or irreversible damage to the environment wherever practicable, and by an assessment of the risk-weighted consequences of various options

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- principle of intergenerational equity — the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations
 - principle of conservation of biological diversity and ecological integrity
 - principles of improved valuation, pricing and incentive mechanisms — persons who generate pollution and waste should bear the cost of containment, avoidance and abatement. In addition, users of goods and services should pay prices based on the full life-cycle costs of providing the goods and services. Established environmental goals should be pursued in the most cost-effective way by establishing incentive structures, including market mechanisms.

D.2 Requirements under the EPBC Act

The *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth) (EPBC Act) is the Australian Government's main legislation dealing with environmental impacts. It provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage sites — defined in the Act as matters of National Environmental Significance (NES). Actions that are likely to significantly impact on those matters are prohibited, without the Commonwealth Environment Minister's approval under the EPBC Act.

The objectives of the EPBC Act are to:

- provide for the protection of the environment, especially matters of NES
- conserve Australian biodiversity
- provide a streamlined national environmental assessment and approval process
- enhance the protection and management of important natural and cultural places
- control the international movement of plants and animals (wildlife), wildlife specimens and products made or derived from wildlife
- promote ESD through the conservation and ecologically sustainable use of natural resources.

Under the EPBC Act, certain actions — projects, development, undertakings, activities or a series of activities, or an alteration to any of these — require an assessment under the EPBC Act and an approval from the Commonwealth Environment Minister.

Actions that may trigger assessment and approval processes under the EPBC Act include those that have, will have or are likely to have a significant impact on:

- a matter of NES
- the environment of Commonwealth land even if the action is taken outside Commonwealth land, and on the environment in general if the action is taken on Commonwealth land
- the environment, inside or outside of Australian jurisdiction, where the actions are undertaken by the Australian Government or its agencies.

Matters of National Environmental Significance

Matters of NES include (EPBC Act, Chapter 2):

- World Heritage properties
- National Heritage places
- wetlands of international importance
- listed threatened species and ecological communities
- listed migratory species
- Commonwealth marine areas
- nuclear actions (including uranium mining).

A proponent can refer the proposed activity to the Environment Minister through the Department of Environment, Water, Heritage and the Arts (DEWHA) if they are unsure as to whether an approval is required. If a referred action is likely to have a significant impact on a matter of NES, it will be considered a ‘controlled action’, and require approval by the Commonwealth Environment Minister under the EPBC Act, otherwise it cannot proceed. The proponent will be required to submit an environmental assessment for approval by the Environment Minister (box D.1).

There are five main forms of assessment (EPBC Act, Chapter 4):

- Accredited assessment — State and Territory or other assessment processes accredited under bilateral agreements with the Commonwealth.
- Assessment on referral information — decision based on the proponent’s referral application.
- Assessment on preliminary documentation — decision based on the referral application form and additional information provided by the proponent.

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- Assessment by Environmental Impact Statement or Public Environmental Report.
 - Assessment by public inquiry.

Box D.1 Approval processes under the EPBC Act

There are three potential main stages in considering a matter of National Environmental Significance (NES) under the *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth) (EPBC Act) — a ‘referral decision’ stage, an ‘assessment’ stage and a ‘decision whether to approve’ stage.

Referral decision stage

Before taking an action that may have a significant impact on a matter of NES, the proponent must submit a referral form to the Commonwealth Environment Minister via the department. The referral will then be processed according to the following steps:

- Following receipt of a valid referral the Minister has 20 business days to decide if the proposed action will require assessment and approval under the EPBC Act, including a 10 day period for public comment.
- If a significant impact is likely, the action is deemed to be a ‘controlled action’ and it will require assessment and approval under the EPBC Act. The proponent is informed of the referral decision and, if an assessment is required, the proposed method of assessment.

Assessment and approval stage

An assessment is prepared and submitted by the proponent. Depending on the assessment approach, the Minister will make a decision on the action in accordance with the following timeframes after receiving a completed report:

- Accredited assessment report — within 30 days of receiving a completed report.
- Assessment by referral information — the Department of Environment, Water, Heritage and the Arts has 30 days after the ‘assessment approach’ decision to finalise a recommendation report. A decision must be made within 20 days of receiving a recommendation report.
- For assessment by public inquiry, Environment Impact Statement, Public Environment Report or preliminary documentation — within 40 days of receiving the finalised documentation from the proponent.

The decision of the Minister will be either the approval of the controlled action, approval with conditions (including environmental offset conditions), or not to approve the controlled action.

Source: DEWHA (2007a).

An accredited assessment may be undertaken where there is a bilateral ‘assessment’ agreement in place between the Commonwealth and a State or Territory. In this

situation certain actions that require approval under the EPBC Act can be assessed under accredited State or Territory environmental assessment processes. At the completion of the assessment process, the State or Territory provides the Commonwealth Environment Minister with a report on the relevant impacts of the proposed action.

Definition of significant impact

The requirement to undergo assessment and approval under the EPBC Act applies when an action has a ‘significant impact’. DEWHA has produced *EPBC Act Policy Statement 1.1 Significant Impact Guidelines*, which set criteria for judging whether the impact is likely to be significant. While the guidelines provide examples of actions that are, and are not, likely to have a significant impact, they are not exhaustive or definitive. For example, the guidelines state that an action is likely to have a significant impact on a ‘critically endangered’ or ‘endangered species’ when it:

- leads to a long-term decrease in the size of a population
- reduces the area of occupancy of the species
- fragments an existing population into two or more populations
- adversely affects habitat critical to the survival of a species
- disrupts the breeding cycle of a population.

Strategic assessments

Under section 146 of the EPBC Act, the Commonwealth Environment Minister may agree to conduct a strategic assessment of potential actions under a policy, program or plan. These may include, but are not limited to (DEWHA 2008e):

- regional-scale development plans and policies
- district structure plans
- local environmental plans
- large-scale industrial development
- fire, vegetation or pest management policies, plans or programs
- water extraction and use policies
- infrastructure plans and policies.

A strategic assessment happens early in the assessment process and is separate from the conventional approval process under the EPBC Act. A strategic assessment may

examine the potential cumulative impacts of actions in accordance with one or more policies, programs or plans. The main objective of strategic assessments is to streamline the approval process under the areas covered by providing:

- early consideration of national environmental matters in planning processes
- greater certainty to the local communities and developers over future development
- reduced administrative burden for proponents taking actions consistent with a policy, plan or program approved under a strategic assessment
- capacity to achieve better environmental outcomes and address cumulative impacts at the landscape level
- flexible timeframes commencing early in the planning process.

Commonwealth marine reserves and bioregional plans

There are currently 13 Marine Protected Areas in Commonwealth waters under the EPBC Act. Approval is required if an action is to be undertaken within an Marine Protected Area. In addition, the South-east Commonwealth Marine Reserve Network, comprising 13 individual reserves, was established in September 2007. All Marine Protected Areas are managed primarily for biodiversity conservation. Specific zoning and management arrangements allow for uses that are consistent with the management plan in operation for the area.

Further, the Australian Government has embarked on a program of bioregional marine planning that falls directly under the EPBC Act (DEWHA, sub. 8). Under this program, Marine Bioregional Plans will be developed in each of the five marine regions in Commonwealth waters by 2012. These plans will include the identification and establishment of representative Marine Protected Areas. Once in place, these marine regional plans will provide information to marine industries that will assist them to understand their obligations under the EPBC Act. It is intended that petroleum exploration and production activities will be allowed within some Marine Protected Areas subject to approvals under the *Offshore Petroleum Act 2006* (Cwlth) and the provisions of the EPBC Act (RET 2008b).

Seismic activities and cetaceans

Under Chapter 5 of the EPBC Act there is a process for obtaining a permit for any activity likely to impact on cetaceans, incidentally or otherwise, in offshore waters. Cetaceans include whales, dolphins and porpoises. The 2008 offshore petroleum

acreage release includes areas that are in recognised whale migration corridors and important aggregation areas (RET 2008b).

A policy statement on the interaction between offshore seismic exploration and whales has been developed by DEWHA — *EPBC Policy Statement 2.1 — Interaction between offshore seismic exploration and whales*. This document provides guidance on a proponent's obligations. Seismic surveys proposed in areas where there is a moderate to high likelihood of encountering whales are obliged to employ a range of mitigation measures, in addition to the standard management procedures under the policy.

A key component of the standard management procedure is a sequential 'ramp-up' of the acoustic source. This is considered to be industry best practice, as the slow increase in acoustic energy may alert whales in the area to the presence of the seismic activity. Additional mitigation measures may include:

- marine mammal observers
- whale spotting surveys during daylight — if undertaking seismic activity at night or in poor visibility
- spotter vessels and aircraft
- increased safety and buffer zones
- passive acoustic monitoring.

D.3 State and Territory environmental regulation

State and Territory environmental regulation of petroleum activities includes petroleum-specific regulation applying to both offshore and onshore activities. It also includes requirements under general State and Territory environmental and planning legislation — especially impact assessment requirements under environmental protection or planning Acts.

Specific requirements for onshore petroleum activities

A range of petroleum-specific environmental requirements exist for onshore petroleum activities regulated under onshore petroleum Acts, subordinate regulations and departmental guidelines. In Victoria, Western Australia, South Australia and the Northern Territory, detail on environmental impacts and risks of petroleum activities must be provided to the department responsible for petroleum regulation. In Queensland, and in associated coastal waters, a petroleum-specific environmental submission to the Environmental Protection Agency is required

under the *Environmental Protection Act 1994* (Qld). See box D.2 for specific requirements.

Box D.2 State and Territory requirements for onshore activities

- In Victoria, an operation plan covering environmental risks is required for onshore petroleum operations, and is provided to the Department of Primary Industries. This is required under the provisions of the *Petroleum Regulations 2000* (Vic). Pipelines require an Environment Management Plan, and a rehabilitation bond, under the *Pipeline Regulations 2007* (Vic).
- In Queensland, a proponent is required to submit an application for an ‘environment authority’ and, for medium-to high-risk activities, an Environment Management Plan to the Department of Mines and Energy, which is then forwarded to the Environmental Protection Agency for approval. The petroleum-specific environmental requirements are detailed under the *Environmental Protection Act 1994* (Qld).
- In Western Australia, an Environment Management Plan is required for petroleum activities, including pipelines, and is provided to the Department of Mines and Petroleum. The specific requirements for these plans are outlined under departmental guidelines only. The *Pipeline Act 1969* (WA) and *Petroleum Pipeline Regulations 1970* (WA) do not contain specific environmental provisions.
- In South Australia, a proponent prepares an Environmental Impact Report and a draft Statement of Environmental Objectives for petroleum activities, including pipelines, and provides them to Primary Industries and Resources South Australia. These requirements are specified under the *Petroleum Act 2000* (SA) and the *Petroleum Regulations 2000* (SA).
- In the Northern Territory, an Environment Management Plan is provided for production activities to the Department of Regional Development, Primary Industry, Fisheries and Resources. The requirements are set out in guidelines. As specified in the relevant guidelines, pipelines require the submission of an Environment Plan, as part of a Pipeline Management Plan under the *Energy Pipeline Regulations* (NT) or, for pipeline licence applications, a Notice of Intent.

Sources: DoIR (2006); RDPIFR (2008a, 2008b, 2008c).

Environmental assessment and referral arrangements

Box D.3 outlines environmental approval requirements in a number of States and Territories. Further, an environmental or planning agency, and community members in general, may also ‘call in’ or refer activities for consideration under environmental legislation.

Box D.3 State and Territory environmental approval requirements

The following is an overview of the key environmental approval requirements in the main petroleum-producing States and Territories.

New South Wales

All petroleum production projects, and most exploration activities, require environmental assessment under the *Environmental Planning and Assessment Act 1979* (NSW). The approval authority depends on the type and scale of the proposal. Although the NSW Department of Primary Industries is the assessment and approval authority for some exploration activities, in the majority of cases the authority will be the Minister for Planning under Part 3A of the Act. There is also major project legislation that allows a more coordinated and streamlined approach to approvals.

Victoria

An Environmental Effects Statement for petroleum activities may be undertaken by the environmental agency under the *Environmental Effects Act 1978* (Vic). Typically the Minister administering this Act will require a Statement to be undertaken when:

- there is a likelihood of regionally or State significant adverse effects on the environment
- there is a need for integrated assessment of potential environmental effects of a project and relevant alternatives
- normal statutory processes would not provide a sufficiently comprehensive, integrated and transparent assessment.

Petroleum exploration activities in coastal waters, unless in a marine sanctuary, are unlikely to require an Environmental Effects Statement. However, most petroleum production activities in coastal waters would generally require one. The Primary Industries Minister will receive advice from the Environment Minister in relation to the completed statement, and must consider their views in making a decision.

Queensland

The Environmental Protection Agency will assess all applications for petroleum-specific environmental approvals under the *Environmental Protection Act 1994* (Qld). There are two different assessment processes:

- 'Level 1' petroleum activities have a medium to high risk of causing serious environmental harm. Assessment is based on an application accompanied by an Environmental Management Plan. After receipt of the application, the Environmental Protection Agency may decide that the proponent is required to prepare an Environmental Impact Statement under the Act.
- 'Level 2' petroleum activities have a low risk of serious environmental harm. The assessment process for level 2 is based on whether the applicant can comply with the standard environmental conditions in the relevant code of environmental compliance in the case of a code-compliant authority.

(Continued next page)

Box D.3 (continued)

Western Australia

The Department of Mines and Petroleum will refer all offshore petroleum proposals that occur in coastal waters to the Environment Protection Authority for possible assessment under the *Environmental Protection Act 1986* (WA).

Onshore petroleum proposals will be referred to the Environmental Protection Authority depending on the location of the activity (for instance, if it located near a 'protected area', a 'Red Book' area, or a declared town-site or private reserve) whether it has the potential for a significant impact or if it involves clearing of native vegetation. Proposals are assessed formally where environmental effects are perceived to be 'significant' or where there is a high degree of public interest. There are five levels of formal assessment available to the Environmental Protection Authority.

Proposals that are considered not to warrant assessment under the Act are referred back to the department who assess and assign environmental conditions to the proposal upon approval of the environmental documentation.

South Australia

Primary Industries and Resources South Australia (PIRSA) will consult with relevant environmental agencies to decide on the required level of assessment for specific petroleum activities:

- A 'low risk' activity will be assessed internally by government between PIRSA, the Department of Environment and Heritage, the Department of Planning and Local Government and other relevant agencies, such as the Environmental Protection Authority. The Resources Minister will decide on the approval of the Environmental Impact Report and Statement of Environmental Objectives, on the advice of PIRSA.
- 'Medium risk' activities will be assessed under equivalent requirements of the public environmental report process under the *Development Act 1993* (SA). PIRSA will also seek comments from the Environmental Protection Authority and other relevant agencies on the Environmental Impact Report and the Statement of Environmental Objectives during the public consultation process. PIRSA will consider the assessment and advise their Minister whether to approve the activity.
- Only 'high risk' activities will be formally referred to the Department of Planning and Local Government for assessment under the Development Act. The Petroleum Minister will then make a decision based on the advice of the Planning Minister.

Northern Territory

The Environmental Management Plan will require review for referral to the Environmental Protection Agency for possible assessment under the *Environmental Assessment Act* (NT). If the proposed project is assessed under the Act, the proponent will also be instructed to prepare either an Environmental Impact Statement or a Public Environmental Report.

D.4 Heritage regulation

Heritage regulation includes Commonwealth heritage legislation — specifically, the EPBC Act, the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (Cwlth) and the *Historic Shipwrecks Act 1976* (Cwlth) — and State and Territory Indigenous heritage Acts.

Commonwealth heritage requirements

The EPBC Act protects three types of listed values — World, National and Commonwealth List places. Anyone can recommend a place for National and Commonwealth listing, however there is an ‘assessment cycle’, which is defined in the EPBC Act (usually over a 12 month period). A delegate for the Minister decides whether the application meets the regulations and is in good faith (vexatious or frivolous applications may not be considered). There are emergency procedures under each section that are at the Minister’s discretion where the heritage values are ‘under threat’.

A referral must be made under the EPBC Act for actions that are likely to have a significant impact on the following matters protected by Part 3 of the Act:

- World Heritage properties (sections 12 and 15A)
- National Heritage places (sections 15B and 15C)
- the environment, if the action involves Commonwealth land (sections 26 and 27A).

The Aboriginal and Torres Strait Islander Heritage Protection Act applies in all States and Territories:

- Section 9 of the Act allows for the Minister to make an emergency declaration to preserve or protect an area from injury or desecration if satisfied that ‘the area is a significant Aboriginal area’ and there is a ‘serious and immediate threat’.
- Section 10 of the Act allows for the Minister to make a declaration to preserve or protect an area from injury or desecration if satisfied that ‘the area is a significant Aboriginal area’ and that it is under threat. A declaration under section 10 has added requirements such as a written report must be submitted and the application must be published.

The Historic Shipwrecks Act protects shipwrecks and associated relics that are older than 75 years. The Minister for the Environment, Heritage and the Arts can also make a declaration to protect any historically significant wrecks or articles and relics that are less than 75 years old. The Act applies in Commonwealth waters and

State and Territory waters to the low water mark. Currently, 19 historic shipwrecks lie within protected or no-entry zones (DEWHA, sub. DR35, p. 3). These zones may cover an area up to a radius of 800 metres around a wreck site, and may be declared where circumstances place it at particular risk of interference. This declaration prohibits all entry into this zone in the absence of a permit.

The Historic Shipwrecks Act is mirrored in State legislation in Western Australia, Victoria, New South Wales and South Australia (DEWHA, sub. DR35, p. 3).

State and Territory heritage requirements

Each State and Territory has their own Indigenous heritage Act. These acts generally protect sites of Aboriginal cultural significance — these include archaeological, anthropological and historical sites. In general, it is an offence to alter a site in any way without the consent of the Minister. As a result, each State and Territory Act will contain ‘emergency declaration’ procedures to prevent proposed activities causing damage or interference with potential sites.

For example, under the *Aboriginal Heritage Act 1972* (WA) the owner of the land (which includes the holder of any right or privilege under the *Petroleum and Geothermal Energy Resources Act 1967* (WA)) wishing to undertake any activities that may damage, alter, destroy, or excavate a place or object must report to the Aboriginal Cultural Material Committee in writing:

- The Committee then (as soon as practicable) evaluates the significance of the site and gives a recommendation to the Minister.
- The Minister then makes a decision in the interest of the community and can give approval (with or without conditions), or decline consent.
- If the Committee does not submit the initial notice from the owner of the land with its recommendation, the Minister can require the committee to do so, as well as other actions, in order to expedite the procedure.
- The owner may apply to the State Administrative Tribunal for a review of any decision by the Minister.
- If the Committee is satisfied that it is practicable to do so, any objects can be removed from the land to a ‘place of safe custody’.

The Committee can recommend to the Minister that an Aboriginal site should be declared to be a ‘protected area’ if it is considered to be of outstanding importance. The Minister must provide notice of this to anyone likely to be affected. Anyone aggrieved by the declaration can make a complaint in writing to the Minister, who

can then ask the Committee to consider their complaint. The Minister can then ask the Governor (by Order in Council) to declare it a protected area.

D.5 Environmental offsets

Although all jurisdictions may require proponents to undertake environmental offsets, there is no standard definition of an environmental offset across jurisdictions. For example:

- the Australian Government defines environmental offsets as actions taken outside a development site that compensate for the impacts of that development — including direct, indirect or consequential offsets (DEWHA 2007b)
- the Victorian Government defines an environmental offset as an action (or actions) to address an adverse environmental impact of resource use, a discharge, emission or other activity at another location to deliver net environmental benefit (EPA Victoria 2008)
- the WA Government defines environmental offsets as environmentally beneficial activities undertaken to counterbalance an adverse environmental impact, aspiring to achieve ‘no net environmental loss’ or a ‘net environmental benefit’ outcome — including *direct offsets* and *contributing offsets* (EPA WA 2006).

Direct offsets, as defined by the Environmental Protection Authority in Western Australia, are at least one of the following activities:

- Restoration (off-site) — includes restoring natural or historic functions, appearance and other characteristics of an existing ecosystem to near pre-impact condition.
- Rehabilitation (off-site) — may include increasing native vegetation, enhancing habitat value, weed or feral fauna eradication, or establishing buffers.
- Re-establishment — may involve forming a biodiversity corridor between two important ecosystems, or re-establishing ecosystems in areas of low representation.
- Acquisition of land for conservation — consists of purchasing the offset and transferring the land title into the conservation estate or establishing covenants with an approved organisation or legal tenure agreements.
- Sequestration — involves offsetting pollutant emissions by removing or locking up pollutants in the environment. It may be linked to activities associated with restoration, rehabilitation or re-establishment, or the use of banking or credit

trading mechanisms, deep well injection and capping, soil amendment or using other sequestration methods (EPA WA 2006).

Contributing offsets, as defined by the Environmental Protection Authority in Western Australia, are complementary activities that can improve knowledge, understanding and management leading to improved conservation outcomes. They may include:

- implementation of recovery plan actions — including surveys
- contributions to relevant research or education programs
- removal of threats — such as the eradication of feral animals, or exotic flora, removing pollutants, removing livestock or controlling the spread of disease such as dieback
- contributions to appropriate trust funds or banking schemes that can deliver direct offsets through a consolidation of funds and investment in priority areas
- on-going management activities such as monitoring, maintenance, preparation and implementation of management plans.

The majority of offset activities to date have addressed impacts on biodiversity and the natural environment. For example:

- the proposed Gorgon development on Barrow Island is subject to environmental offsets to protect its high environmental and unique biodiversity conservation values. In addition, under the *Barrow Island Act 2003* (WA) there was also an agreement to undertake the sequestration of carbon dioxide
- the Pluto liquefied natural gas development on Burrup Peninsula is also subject to an offset package covering native vegetation, heritage and carbon dioxide emissions (box D.4).

Policy documents

Offsets can be imposed as conditions of regulatory approval or by legislative requirement. Many Australian jurisdictions have implemented, or are in the process of implementing, environmental offset policies and some have enshrined offset schemes into legislation (such as New South Wales and Western Australia) (table D.1). However, very few jurisdictions have specific environmental offset policies for the upstream petroleum sector.

Box D.4 Pluto liquefied natural gas development

The Pluto gas field was discovered by Woodside in 2005. It is located in the Carnarvon Basin about 190 km north-west of Karratha in Western Australia. Woodside plans to develop the field by constructing offshore production facilities and the onshore Burrup Liquefied Natural Gas (LNG) park to process gas into LNG for export.

In August 2007, the Minister for the Environment approved the \$12 billion Pluto project, with offsets for marine, native vegetation, heritage and carbon dioxide emissions.

Marine offsets

To offset the potential impact on coral during the dredging process, Woodside have contributed \$7 million to support research that could be targeted to strengthen knowledge of the Mermaid Sound region to better predict and manage impacts from dredging on tropical coral reef communities.

Native vegetation offset

Woodside will commit \$250 000 towards:

- rehabilitating previously disturbed areas that lie outside the proposed disturbance area, including the rehabilitation of weed infested areas in coastal sand dunes and drainage lines
- research (botanical surveys or taxonomic studies) on a number of flora species.

Woodside will also commit \$100 000 to research into the taxonomy of *Rhagada* snail species.

Heritage offset

Located in the Dampier Archipelago, an area known for its rock art engravings, the Burrup LNG Park is being built in an industrial estate, established in 2003 by an agreement between the WA Government and the local Ngarluma, Yindjibarndi, Yaburara, Mardudhunera and Wong-Go-Tt-Oo Indigenous Groups.

Although the LNG plant was designed to avoid 95 per cent of all rock art engravings on the estate, 170 boulders with engravings had to be relocated to a nearby site. Heritage approvals were granted by the WA Government in February 2007, and a Cultural Heritage Management Plan is in place for the Pluto leases. In July 2007, Woodside signed a Conservation Agreement with the Australian Government. As part of the agreement Woodside will commit up to \$34 million to identify, research and display the National Heritage Values of the Dampier Archipelago.

Woodside is also supporting studies on the potential impact of industrial emissions on rock art. CSIRO is leading this research.

Carbon dioxide emissions offset

Woodside is investing \$100 million in a program to offset reservoir emissions from the Pluto gas field. The program involves a \$25 million investment for mallee tree plantings in 2008 and 2009 with an option to undertake additional plantings for another three consecutive years.

Source: Woodside (pers. comm., 16 October 2008).

Table D.1 **Commonwealth, State and Territory offset policies**

<i>Jurisdiction</i>	<i>Policy/approach</i>
Commonwealth	The Australian Government has released a Draft Policy Statement: Use of environmental offsets under the <i>Environmental Protection and Biodiversity Conservation Act 1999</i> for comment in August 2007.
NSW	The NSW Department of Environment and Climate Change, has established the Biodiversity Banking and Offsets Scheme (BioBanking) under Part 7A of the <i>Threatened Species Conservation Act 1995</i> . BioBanking: <ul style="list-style-type: none"> • provides a systematic and quantitative approach for offsetting the impacts of development to achieve an 'improve or maintain' outcome for biodiversity values • involves developers purchasing offset (or biodiversity) credits produced by offset bankers.
VIC	The Environmental Protection Authority released a Discussion Paper on Environmental Offsets for comment in April 2008. The Department of Sustainability and Environment released Native Vegetation Management: A Framework for Action , in 2002. It was developed to implement the objectives of Victoria's Biodiversity Strategy and the National Strategy for the Conservation of Australia's Biological Diversity. The action plan: <ul style="list-style-type: none"> • establishes 'net gain' as the primary goal for native vegetation management in Victoria and incorporates the principle of offsetting as an option to achieve that goal • offsets are based on ratios that relate to the quantity and quality (habitat hectares) of the vegetation type to be cleared • applied in part through the Bushbroker scheme, which provides for the registration and trading of native vegetation credits.
QLD	Natural Resources and Water Queensland has released a Policy for Vegetation Management Offsets in September 2007, and ClimateSmart 2050 strategy (includes reference to Carbon Offsets Policy and Green Invest).
WA	The EPA released an Environmental Offsets Position Statement No. 9 , in January 2006 and Guidance for the Assessment of Environmental Factors No. 19 , in June 2007 (to complement the position statement). These documents establish the EPA's policy on offsets focusing on the goal of achieving a 'net environmental benefit'. The <i>Barrow Island Act 2003</i> specifies environmental offset requirements for the Gorgon project.
SA	The Department of Water, Land and Biodiversity Conservation released Guidelines for a Native Vegetation Significant Environmental benefit policy for the clearance of native vegetation associated with the minerals and petroleum industry , in September 2005.
TAS	As reported by the Australian Government Department of the Environment and Water Resources, the Department of Primary Industry and Water have a draft offset policy.
NT	No offset policy.

Source: DEWHA (2007b).