

Petroleum exploration and development: safeguarding the environment

Dr. Joan Squelch
School of Business Law
Curtin University of Technology

Abstract

The petroleum industry is one of the most significant resource industries in Western Australia. Petroleum production accounts for more than one third of the value of Western Australia's mineral and energy production. However, petroleum exploration and development activities have the potential to have a significant impact on the environment. In order to provide for both beneficial economic development and responsible environmental protection, environmental law provides a complex legislative framework for the environmental assessment and approval of new and existing petroleum activities. This article explains aspects of Commonwealth law and Western Australian law pertaining to the nature and scope of environmental management plans and environmental impact assessments in relation to petroleum activities.

Introduction

The petroleum industry is one of the most significant resource industries in Western Australia. There are 58 producing oil reserves and fields and a range of petroleum producing activities in Western Australia which produce products worth in the region of A\$10 billion annually.¹ In 2004 the total value of petroleum sales alone amounted to A\$10 385 million.² Unfortunately, oil reserves and fields are not necessarily located in the most environmentally convenient or suitable places. Many oil fields and petroleum sites are located in or near environmentally sensitive and protected areas.³ There are various environmental risks associated with petroleum activities. Perhaps the greatest environmental risks are oil spills and greenhouse gas emissions. However, there are other activities such as land clearing, dredging and drilling, laying pipelines, ship movements, seismic surveys and production activities that may impact on terrestrial and marine environments. It is, therefore, essential for the petroleum industry to identify and assess the impact of such activities on the environment before engaging in petroleum exploration and development. To this end, petroleum exploration and development has to take place in an environmentally responsible manner and within an environmental law framework in order to safeguard the environment. This article provides an overview of some aspects of key environmental legislation that regulates petroleum exploration and production with regards to environmental impact assessment in Western Australia. The article first explains fundamental environmental principles on which environmental assessment is based. This is followed by an overview of important Commonwealth legislation that pertains to the States and an explanation of relevant Western Australian legislation.

Environmental principles

¹ Department of Industry and Resources (WA)
<<http://www.doir.wa.gov.au/mineralsandpetroleum/FE8148FC177649D8B0DB6716BEF6E6CA.asp>> at 18 April 2006.

² Department of Industry and Resources (WA), *Western Australia Mineral and Petroleum Statistics Digest* (2004)
<<http://www.doir.wa.gov.au/documents/mineralsandpetroleum/statsdigest04.pdf>> at 19 April 2006.

³ In Western Australia, for instance, major oil and gas fields are situated off Barrow Island, a Class A Reserve, and within the Shark Bay World Heritage Area.

Environmental assessment is based on and guided by a number of fundamental environmental principles, in particular, the principle of ecologically sustainable development, the precautionary principle, the principle of intergenerational equity and the principle of the conservation of biological diversity and ecological integrity.

The principle of ecologically sustainable development provides for the balance between environmental protection and development.⁴ Australia's *National Strategy for Ecologically Sustainable Development* (1992) (NSED)⁵ defines ecologically sustainable development as 'using, conserving and enhancing the community's resources so that ecological processes, on which life depends, are maintained, and the total quality of life, now and in the future, can be increased'. Essentially, ecologically sustainable development is about meeting the needs of today while conserving ecosystems for future generations. This is an important principle that should be taken into consideration by decision-makers. In determining the environmental integrity and acceptability of petroleum exploration and development projects/activities, it is essential to give due consideration to both economic development benefits on the one hand, and environmental protection considerations on the other.

The precautionary principle holds that 'if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation'.⁶ In the application of the precautionary principle, decisions should be guided by careful evaluation to avoid serious or irreversible damage and an assessment of risk-weighted consequences of various options.⁷ The trigger for the application of the precautionary principle is a threat of serious or irreversible environmental damage, and such a threat will depend on scientific evaluation. The second aspect of the precautionary principle is based on the premise that where 'uncertainty or ignorance exists concerning the nature or scope of environmental harm, decision-makers should be cautious'.⁸ In making decisions about petroleum exploration and development activities, decision-making authorities should be guided by this principle to ensure that proponents carry out adequate and appropriate scientific investigations, and provide sufficient information to address potential environmental impacts that will enable decision-makers to make environmentally sound decisions.

The principle of intergenerational equity requires that the 'present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations'.⁹ The application of this principle is particularly relevant to decisions about long-term emissions and greenhouse gas emissions that may impact on future generations.

The conservation of biological diversity and ecological integrity is another important environmental principle that is to be a 'fundamental consideration in decision-making'.¹⁰ This principle would find particular application where

⁴ *Environmental Protection and Biodiversity Act 1999* (Cth) ('EPBC Act'), section 3A(a) and *Environmental Protection Act 1986* (WA) ('EP Act'), section 4A. The principle is based on *the Report of the World Commission on Environment and Development* (WCED) (1983), which dealt with sustainable development on a global level.

⁵ Department of Environment and Heritage (Cth), *National Strategy for Ecologically Sustainable Development* (1992) <<http://www.deh.gov.au/esd/national/nsesd/strategy/index.html>> at 20 April 2006.

⁶ EPBC Act, section 3A(b) and EP Act, section 4A.

⁷ EP Act, section 4A. The term 'risk-weighted consequences' has been described as 'an attempt to undertake semi-quantitative analysis, and determine the likelihood of irreparable damage or an undesired or adverse outcome arising from a particular development activity'. See G. Bates, *Environmental Law in Australia* (5th Ed, 2002) 129.

⁸ *Leatch v Director General of National Parks and Wildlife Services* (1993) 81 LGERA 270 at 282.

⁹ EPBC Act, section 3A(c).

¹⁰ *Ibid*, section 3A(d).

petroleum exploration and development activities may impact on protected fauna and flora. In this regard, proponents may be required to undertake fauna and flora surveys and provide fauna and flora impact statements.¹¹

Environmental jurisdiction

Ownership of petroleum resources vests in the Crown;¹² the Commonwealth and State governments allow operators to carry out petroleum activities within a strict legislative framework. Both the Commonwealth and States have adopted environmental legislation that governs petroleum exploration and development onshore and offshore. Onshore activities fall under State jurisdiction; in Western Australia the primary legislation is the *Petroleum Act 1967*. Offshore oil and gas activities are administered by a Joint Authority comprising the Commonwealth Minister and the relevant State Minister for energy and resources. However, the State and Territory governments are primarily responsible for environmental assessment and management.¹³

The jurisdiction over offshore petroleum activities is defined by their distance from the land. The Commonwealth has jurisdiction over offshore petroleum activities within Commonwealth territorial waters that extend 3 to 200 nautical miles off the coast. Western Australia has jurisdiction over petroleum activities within coastal waters, which is a 3 nautical mile zone off the coast, and internal waters, which consist of ports, harbours, rivers and canals.¹⁴

Commonwealth legislative framework – offshore activities

There are a number of important pieces of environmental legislation and regulations that govern petroleum activities with a view to safeguarding the environment. Most of the petroleum exploration and development activities take place offshore so the focus of the discussion in this section relates to offshore activities. The primary legislation and regulations dealing with environmental issues are the *Petroleum (Submerged Lands) (Management of Environment) Regulations 1999* (Cth) and the *Environmental Protection and Biodiversity Conservation Act 1999* (Cth). These important statutes and regulations provide for the application, assessment, management and monitoring of petroleum activities within Commonwealth territorial waters.

Definition of petroleum activities

Petroleum exploration and development involves a range of diverse activities. Regulation 4 of the *Petroleum (Submerged Lands) (Management of Environment) Regulations 1999* (Cth) (the '*PSL Regulations*'), defines 'petroleum activity' as any operations or works in an adjacent area carried out under a petroleum instrument¹⁵ and any activity relating to petroleum exploration or development that may have an impact on the environment. An activity includes but is not limited to:

¹¹ For example, in a proposal involving a 3D seismic survey within the Shire of Irwin (WA) clearing of vegetation had the potential to impact on significant portions of the Beekeepers, Yardanogo and Dongara Nature Reserves. Fauna and flora impact assessments were required and a condition recommended by the EPA was for the proponent to prepare and implement a significant flora and communities management plan. See *Denison 3D Seismic Survey – Shire of Irwin* (2004) Report and Recommendations of the Environmental Protection Authority, Bulletin 1147

<<http://www.epa.wa.gov.au/template.asp?ID=16&area=EIA&Cat=EPA+Bulletins>> at 27 April 2006.

¹² Section 9 *Petroleum Act 1967* (WA).

¹³ The *Offshore Constitutional Settlement* (OSC) between the Commonwealth and the States established the Joint authority

<<http://www.industry.gov.au/assets/documents/itrinternet/OffshoreConstitutionalSettlement20051222152659.pdf>> at 27 April 2006.

¹⁴ Department of Industry, Tourism and Resources (Cth). *Australia's offshore jurisdiction: explanation of terminology in relation to petroleum exploration and development*

<<http://www.industry.gov.au/assets/documents/itrinternet/AustraliasOffshoreJurisdiction20060119145144.pdf>> at 20 April 2006.

¹⁵ Regulation 4 of the *Petroleum (Submerged Lands) (Management of Environment) Regulations 1999* (Cth) defines 'petroleum instrument' as an authority grant by [an] instrument under the Act for the carrying out of petroleum activity and includes a permit, lease, licence, pipeline licence, access authority or special prospecting authority.

- seismic or other surveys;
- drilling;
- construction and installation of a facility;
- operation of a facility;
- significant modification of a facility;
- decommissioning, dismantling or removing a facility;
- construction and installation of a pipeline;
- operation of a pipeline;
- significant modification of a pipeline;
- decommissioning, dismantling or removing a pipeline; and
- storage, processing or transport of petroleum.

Requirements for carrying out petroleum activities

Petroleum exploration and development may not take place without a permit or licence.¹⁶ Proponents (operators) who wish to carry out petroleum activities in Commonwealth waters are required to submit an application in the prescribed manner to a Designated Authority in the respective State who is responsible for administering petroleum exploration and development activities. In Western Australia the Designated Authority for assessing petroleum activities is the Department of Industry and Resources: Petroleum Division. Applications are forwarded to the Commonwealth Department for Industry, Tourism and Resources for joint approval.¹⁷

Environment plans

An environment plan is the primary legal instrument through which petroleum activities are conducted and managed in an environmentally responsible and sustainable manner. The *PSL Regulations* which apply to offshore petroleum activities in Commonwealth waters require that applications to carry out petroleum activities must be accompanied by an environment plan. The objective of the *PSL Regulations* is to ensure that petroleum activities are carried out in a way that is consistent with the principles of ecologically sustainable development and in accordance with an environment plan and appropriate environmental performance objectives.¹⁸ An environment plan is a written document through which an operator identifies and assesses potential significant environmental risks and effects of the proposed operation. An accepted environment plan sets out legally binding environmental conditions.

Under Division 2.2 of the *PSL Regulations* an environment plan must include a detailed description of the activity, a detailed description of the environment, a description of environmental aspects and risks, a list of environmental performance objectives and standards,¹⁹ against which to measure environmental risks, and a list of all legal,

¹⁶ The *Offshore Petroleum Act 2006* (Cth) regulates offshore petroleum activities and provides for various grants of title.

¹⁷ The *Offshore Constitutional Settlement* resulted in the formation of a Joint Authority between the Commonwealth Minister for Industry, Tourism and Resources and the Western Australian Department of Industry and Resources. See above n 13.

¹⁸ *PSL Regulations*, reg 3.

¹⁹ 'Environmental Standard' is defined in the AS/NZ Standard ISO 14001 as the overall environmental goal, arising from environmental policy, that an organisation sets itself to achieve, which is quantifiable, where practicable. 'Environmental performance' is defined in AS/NZ Standard ISO 14001 as the measurable results of the environmental management system, related to an organisation's control of its environmental aspects, based on policy, objectives and targets. Department of Industry, Tourism and Resources (Cth), *Guidelines for preparation and submission of an environment plan* (2003) <http://www1.industry.gov.au/library/content_library/ep_guidelines.pdf> at 21 April 2006. See also *PSL Regulations*, reg 4.

environmental and other requirements that apply to the activity.²⁰ The environment plan must also contain an implementation strategy and measures that indicate how the environmental performance objectives and standards set out in the environment plan will be met.²¹ The implementation strategy must:

- identify systems, practices and procedures to ensure that environmental impacts and risks are reduced;
- set out the roles and responsibilities of personnel in relation to the implementation, management and review of the environment plan;
- provide for training and development;
- include measures to ensure that employees and contractors are fully aware of their responsibilities in relation to the environment plan;
- provide for the monitoring, audit, management of non-conformance and review of the operator's environmental performance and implementation;
- provide for the maintenance of a quantitative record of emissions and discharges into the air, seabed and sub-seabed environment (including an oil spill contingency plan);
- provide for the maintenance of an up-to-date emergency response manual; and
- provide for appropriate consultation with relevant Commonwealth, State and Territory authorities.

The environment plan must also include arrangements for recording, monitoring and reporting information about an activity that is sufficient for the Designated Authority to determine whether the environmental objectives and standards in the environment plan are met.²² Furthermore, an environment plan must contain a statement of the operator's corporate environmental policy, a report on all consultations with relevant authorities and organisations involved in the development of the environment plan and details of all reportable incidents in relation to the proposed activity.

Environment plans are only effective if they are properly implemented and reviewed to meet ongoing activities and new activities. Division 2.4 of the *PSL Regulations* requires operators to submit a revised environment plan before the start of any new activity or if there is a significant change or modification to an existing activity.²³ A Designated Authority may also request an operator to submit a revised environment plan.²⁴ If a proposed revision is not accepted, the provisions of the existing environment plan that is in force for the activity remains in force.²⁵ The operator of a petroleum activity is also required to submit a proposed revision to the environment plan at the end of each five year period commencing on the date when the environment plan was first accepted or from the most recent date of a revised plan.²⁶

Compliance

An operator may not carry out petroleum activities without approval. Under the *PSL Regulations* it is an offence for an operator to carry out activities if there is no environment plan in place.²⁷ Operators are also required to comply with an

²⁰ *PSL Regulations*, reg 13.

²¹ *Ibid*, reg 14.

²² *Ibid*, reg 15.

²³ *Ibid*, reg 17.

²⁴ *Ibid*, reg 18.

²⁵ *Ibid*, reg 22.

²⁶ *Ibid*, reg 19.

²⁷ *Ibid*, reg 6.

approved environment plan; failure to do so is also an offence.²⁸ An offence in both situations attracts 80 penalty points, which is a monetary penalty. Failure to comply with an accepted environment plan is a strict liability offence. It is also a strict liability offence to continue with an activity if a new or increased environmental risk arises.²⁹

Environmental impact assessment

An important component of environmental planning and management is an environmental impact assessment. Bates³⁰ notes that the purpose of environmental impact assessment is the production of an environmental impact statement, which is used to inform decision-makers, and the general public about predicted environmental, social and economic impacts of a proposal and what will be done to manage environmental effects. Onshore and offshore petroleum activities may be subject to environmental impact assessment. Proponents (operators) are responsible for identifying environmental impacts and risks, which are contained in the environment plan.

The *Environmental Protection and Biodiversity Conservation Act 1999* (Cth) ('the EPBC Act') regulates the assessment and approval of proposed activities that may have a significant impact on the environment that is of national importance. The assessment and approval of activities is undertaken by the Commonwealth Minister for the Environment. An environmental assessment under Part 3 Division 1 of the EPBC Act does not replace an environment plan under the PSL Regulations. The EPBC process is an independent process; it is another layer of assessment that is triggered in certain circumstances. The onus is placed on the proponent (operator) to assess whether or not the proposal should be submitted for assessment under the EPBC Act.

Matters that may trigger an environmental impact assessment under the EPBC Act are set out in Part 3 Division 1. Under the EPBC Act environmental approval is required for activities that relate to 'matters of national environmental significance'.³¹ Matters of national environmental significance are:

- World Heritage properties;³²
- Natural Heritage properties;
- Ramsar wetlands (i.e. wetlands of international importance);³³
- nationally threatened species and communities;
- migratory species;
- nuclear actions; and
- the Commonwealth marine environment (that is, Australian waters beyond the three nautical mile limit of State waters).³⁴

²⁸ Ibid, reg 7.

²⁹ Ibid, reg 8. In terms of strict liability a person or organisation is legally responsible for damage and there is no need to prove fault or negligence on their part.

³⁰ G. Bates, *Environmental Law in Australia* (5th ed, 2002) 275-276.

³¹ EPBC Act, Part 3 Division 1.

³² Australia has a number of World Heritage properties that are protected under the *Convention for the Protection of the World Cultural and Natural Heritage* (1972). Under section 13 of the EPBC Act, a World Heritage property is either an Australian property on the World Heritage List kept under the World Heritage Convention, or a property declared to be a World Heritage property by the Commonwealth Environment Minister.

³³ Wetlands of international significance are designated and protected under the *Ramsar Convention on Wetlands* (1971).

³⁴ A general environmental approval under the EPBC Act does not cover activities that impact on cetaceans (whales). Proponents are required to obtain a separate permit for an activity that may interfere with whales, and for an activity within a Commonwealth marine reserve. The Great Australian Bight is an example of a protected Commonwealth marine reserve, which is an important habitat for

If an activity is likely to have a 'significant impact' it must be referred to the Commonwealth Minister for the Environment.³⁵ The EPBC Act does not define 'significant impact'.³⁶ However, the Minister will consider a range of factors including the environmental principles explained above. An example of a proposal that might be subject to the EPBC Act is a proposal to carry out petroleum activities in the Shark Bay area of Western Australia, which is a World Heritage property. The EPBC Act specifies a World Heritage property as a matter of national environmental significance and any activity that is likely to have a significant impact on its world heritage values requires approval from the Minister for the Environment.³⁷ Likewise, marine seismic activities that may affect migrating whales, and geotechnical drilling activities or the construction of pipelines that disturb nationally threatened species or communities may require approval. For example, petroleum exploration activities in the Cape Range Peninsula that may impact on protected subterranean fauna.

A referral to the Commonwealth Minister for the Environment is the first step in the environmental assessment and approval process. The Minister will determine whether or not an action will, or is likely to have, a significant impact on a matter of national environmental significance. If the decision is affirmative then the action requires approval under the EPBC Act. The Minister is required to make a decision within 20 business days of receiving the proposal whether the proposal must be environmentally assessed.³⁸

The second step is the assessment stage, which involves gathering information and obtaining public comment. Part 8 of the EPBC Act provides for the assessment of actions.³⁹ The Minister may choose one of the following methods of assessment:⁴⁰

- assessment on preliminary documentation (Division 4);
- a public environment report (Division 5);
- an environmental impact statement (Division 6);
- a public enquiry (Division 7); or
- assessment by means of an accredited process.

Each of the methods varies and the selection of a particular method will largely depend on the nature, circumstances and complexity of the petroleum activity. The Minister can only decide on a method of assessment when the proponent has provided all the information in the prescribed manner.⁴¹ The information that must be provided is set out in the *Environment Protection and Biodiversity Conservation Regulations 2000* (Cth) ('the EPBC Regulations').

Assessment on preliminary documentation

the endangered Australian sea-lion and a vital calving area for the Southern Right Whale. Petroleum activities are generally prohibited in the Bight.

³⁵ For example, EPBC Act, sections 12, 16, 18 21 and 23.

³⁶ Not all activities that affect a matter of NES will necessarily have a significant impact on the environment. The Department of the Environment and Heritage provides a document on *Administrative Guidelines on Significance* to assist applicants: <<http://www.deh.gov.au/epbc/policy/administrative/index.html>>.

³⁷ EPBC Act, section 12.

³⁸ Ibid, section 88.

³⁹ This Part does not apply to actions that a bilateral agreement or Ministerial declaration says are to be assessed in another way.

⁴⁰ EPBC Act, section 80.

⁴¹ Ibid, section 86. It is an offence to provide false and misleading information in order to secure an approval: section 489.

Assessment on preliminary documentation is likely to be used when the potential environmental impacts are low and can be predicted with a high degree of confidence.⁴² This method may be chosen if the Minister is satisfied that this approach will enable him or her to make an informed decision.⁴³

Public environment report

Assessment by a public environment report is likely to be used when an assessment is expected to focus on a small number of key environmental issues and these issues will require the collection of new information or a further analysis of existing information.⁴⁴ If the Minister decides that a public environment report is required, written guidelines for the content of the report must be prepared by the Minister within 20 days of the decision to assess the action by a public environment report.⁴⁵ In preparing the guidelines the Minister must ensure that the draft report will contain sufficient information to enable him or her to make an informed decision whether or not to approve the proposal, and whether the report addresses matters prescribed by the EPBC Regulations. The proponent must prepare a report about relevant and other impacts and obtain approval from the Minister, which is based on compliance with the guidelines, to advertise the proposal for public comment.⁴⁶ The proponent must give the Minister a copy of the comments received. The proponent must then finalise the report and give a copy of the final report to the Minister.⁴⁷ If the report is accepted it must be published by the Minister.

Environmental impact statement

An assessment by means of an environmental impact statement is likely to be chosen when the relevant impacts are complex. The proponent will be required to adopt the same procedures as for a public environment report.⁴⁸

Public enquiry

A public enquiry is likely to be adopted when the relevant impacts are likely to be high or a public enquiry is necessary to ensure efficient and effective involvement in the assessment process.⁴⁹ If the Minister decides on a public enquiry, commissioners are appointed to conduct the enquiry and report to the Minister.⁵⁰ The Minister must provide the terms of reference for the enquiry. Generally, hearings and submissions are conducted in public or made available to the public. The final report must also be published.⁵¹

Accredited assessment process

Assessment by an accredited assessment process allows the Minister to accredit State, Territory or other Commonwealth assessment processes on a case-by-case basis. An assessment process can only be accredited if it is carried out under State, Territory or Commonwealth legislation.⁵²

⁴² Department of Environment and Heritage (Cth). *Environmental Assessment and Approval Process* (Fact Sheet 3) <<http://www.deh.gov.au/epbc/publications/assessment.html>> at 21 April 2006.

⁴³ EPBC Act, section 87(5).

⁴⁴ Above n 39 at 2.

⁴⁵ EPBC Act, section 97.

⁴⁶ Ibid, section 98.

⁴⁷ Ibid, section 99.

⁴⁸ Ibid, sections 102-105.

⁴⁹ Above n 42 at 2.

⁵⁰ EPBC Act, section 107.

⁵¹ Ibid, section 122.

⁵² Above n 42 at 3.

The third stage in the environmental assessment process is the approval of actions under Part 9 of the EPBC Act. Within 30 days of receiving an assessment report, or 40 days following a public enquiry report, the Minister must decide whether or not to approve the action.⁵³ Before making a decision the Minister must invite any other minister who has administrative responsibilities relating to the proposal to comment on economic and social matters, for example, the Minister for Industry, Tourism and Resources.⁵⁴ If the Minister believes on reasonable grounds that he or she does not have adequate information to make an informed decision, the Minister may request additional information from the proponent.⁵⁵ If the proposal is approved, the Minister must issue a notice of approval to the proponent and any person who requests a copy. The approval must be in writing and specify the action to be taken, the name of the person who may take the action, each provision of Part 3 (the matters of national environmental significance) for which the approval has effect, the period for which the approval has effect and any conditions that are attached to the approval.⁵⁶

Western Australian legislative framework

Petroleum activities in Western Australia are regulated primarily by the *Petroleum Act 1967* (WA) (onshore activities), the *Petroleum (Submerged Lands) Act 1982* WA ('P(SL)A 1982') (offshore activities), which mirror Commonwealth legislation,⁵⁷ and the *Petroleum Pipelines Act 1967* (WA). In addition, an important piece of environmental legislation is the *Environmental Protection Act 1986* (WA), which provides for environmental impact assessment.

Environmental management plan

To carry out offshore and onshore petroleum activities within Western Australian jurisdiction, proponents are required to submit an application in the prescribed manner to the Petroleum Division of the Department of Industry and Resources accompanied by supporting environmental documentation. Applications must be accompanied by an environmental management plan, which is similar to an environment plan under Commonwealth legislation.⁵⁸ For offshore areas, an Oil Spill Contingency Plan must also be submitted for exploration or production drilling.⁵⁹ The environmental management plan is required to be sufficiently comprehensive to enable the Department of Industry and Resources to make a decision whether or not to grant approval. The content and structure of the environmental management plan is similar to an environmental plan under the EPBC Act.⁶⁰ The main components of an environmental management plan include a detailed description of the proposed activity, a description of the receiving environment, a discussion of the identification of environmental impacts and risks, environmental performance objects and standards, procedures for managing and minimising risks, monitoring and reporting obligations, emergency plans, consultations and environmental commitments.⁶¹ The level of detail required will depend primarily on the complexity of the proposed petroleum activity.

Environmental impact assessment

⁵³ EPBC Act, section 130.

⁵⁴ Ibid, section 131.

⁵⁵ Ibid, section 132.

⁵⁶ Ibid, section 133.

⁵⁷ The *Petroleum (Submerged Lands) Acts Schedule Specific Requirements as to Offshore Petroleum Exploration and Production 1995* was produced to regulate Commonwealth and States offshore activities.

⁵⁸ Department of Industry and Resources (WA). *Environmental Assessment Processes for Petroleum Activities in Western Australia* (2005) <<http://www.doir.wa.gov.au/environment/866DCCB5FA154336951CB11D305F61DA.asp>> at 25 April 2006.

⁵⁹ Ibid

⁶⁰ In future it is envisaged that an environmental plan and an environmental management plan will be the same, pending new legislation.

⁶¹ Above n 42.

A proponent seeking to carry out petroleum activities may also require additional approval from the Environmental Protection Agency (WA) for activities carried out within Western Australian jurisdiction and under the EPBC Act which is triggered when activities impact on ‘matters of national environmental significance’ (discussed above). The Environmental Protection Agency (‘EPA’), an independent body, is responsible for assessing proposals that are referred to it by the Department of Industry and Resources. This is an additional and separate assessment process to that carried out by the Department of Industry and Resources. The Department of Industry and Resources will decide whether or not a proposal needs to be assessed based on the nature of the proposal, the location of the activity and the environmental impacts. It may request additional information before making a decision to refer a proposal to the EPA and may seek advice from other agencies, such as the Department of Conservation and Land Management, where there are particular environmental issues to be addressed.

A referral may be made under section 38 of the *Environmental Protection Act 1986* (WA) (‘EP Act’). All proposals that are referred to the EPA are assessed on a case-by-case basis according to the levels of assessment and procedures set out in the *Environmental Impact Assessment (Part IV Division 1) Administrative Procedures 2002* (WA) (the ‘Administrative Procedures’).⁶²

Environmental impact assessment is an important strategy for managing, assessing and monitoring environmental impacts and for decision-making. Environmental impact assessment means ‘an orderly and systematic process for evaluating a proposal including its alternatives and its effect on the environment including the mitigation and management of those effects’.⁶³ The objectives for environmental impact assessment are to:⁶⁴

- ensure that proponents take responsibility for the protection of the environment;
- ensure that best practicable measures are taken to minimise adverse impacts on the environment;
- provide opportunities for community and public participation;
- encourage proponents to implement continuous improvement in environmental performance; and
- ensure that reliable and independent advice is provided to Government before decisions are made.

An environmental impact assessment is triggered when proposals are ‘likely, if implemented, to have a significant impact on the environment’.⁶⁵ The concept ‘significant impact’ is not defined and few guidelines are provided in the EP Act.⁶⁶ However, the EPA will consider a number of factors when determining the environmental significance of a proposal.⁶⁷

The Administrative Procedures provides for different levels of assessment and procedures. The formal levels of assessment are: Assessment on Referral Information (ARI); an Environmental Protection Statement (EPS); a Public Environmental Review (PER), an Environmental Review and Management Programme (ERPM) and a procedure for a

⁶² Part IV of the *Environmental Protection Act 1986* (WA) establishes provisions for the EPA to carry out environmental impact assessment in Western Australia. The Administrative Procedures set out the procedures adopted by the EPA for dealing with referrals and in the assessment of proposals.

⁶³ *Environmental Impact Assessment Administrative Procedures 2002* (WA) (‘Administrative Procedures’) cl 1.3.

⁶⁴ *Ibid*, cl 2.1.

⁶⁵ *Ibid*, cl 3.

⁶⁶ Bates notes that the term ‘likely’ means a ‘real chance’ or ‘possibility’ and that a ‘significant effect’ must be ‘an important or notable effect of the environment, something that is weighty or more than ordinary’. Above n 30 at 297-298.

⁶⁷ *Administrative Procedures*, cl 4.1.2.

Proposal Unlikely to be Environmentally Acceptable (PUEA). The EPA, with the approval of the Minister for Environment, may also conduct a Public Enquiry.⁶⁸ When an environmental impact assessment is deemed necessary for a proposal, the *level of assessment* that the EPA decides upon will mainly depend on the nature of the environmental impacts and the degree of public interest in the activity. A brief explanation of the legal requirements for each level of assessment is provided.

Assessment on Referral Information

Assessment on Referral Information (ARI) is generally applied to proposals that raise only a few significant environmental factors which can be easily managed, but where it is considered that environmental conditions are required to ensure that the proposal is implemented and managed in an environmentally acceptable manner. When deciding on this level of assessment, the EPA will consider information provided in the referral documentation and it may seek additional information from the proponent, or any decision-making authority or relevant stakeholder group. When the EPA sets the level of assessment it will submit a report to the Minister setting out the conditions which it considers should be applied to the proposal.⁶⁹

Environmental Protection Statement

An Environmental Protection Statement (EPS) is generally required by the EPA when the proposal is of local interest and it raises a number of significant environmental factors which can be managed. Many petroleum exploration and development activities are likely to fall within this level of assessment. If the EPA decides to assess the proposal through the EPS process the Chairperson of the EPA will first discuss the process with the proponent and provide guidance on the information required in an EPS. The EPA will usually advertise its *intention* to set an EPA level of assessment and invite anyone interested in the proposal to contact the proponent.⁷⁰ The proponent is then required to prepare an EPS document in consultation with stakeholders. The proponent submits the final EPS to the EPA. Only then does the EPA set the level of assessment as an EPS and release the EPA report. The EPA advertises the EPS level of assessment and the availability of the EPS report. Proponents make the EPS document available for inspection as required by the EPA.⁷¹

Public Environmental Review

A Public Environmental Review (PER) is generally applied to proposals of local or regional significance that raise a number of significant environmental factors, some of which are considered complex and require detailed assessment to determine how they can be managed. The proponent is required to submit an Environmental Scoping document and a PER document in accordance with the Environmental Scoping document.⁷² The Environmental Scoping document sets out the environmental factor raised by the proposal and the environmental studies that the proponent intends to carry out in order to assess the factors. An Environmental Scoping document is a comprehensive document that must include a:⁷³

- summary of the project;

⁶⁸ Ibid, cl 5.

⁶⁹ Ibid, cl 5.1.

⁷⁰ Information regarding current proposals and invitations for public comment can be found on the EPA website <<http://www.epa.wa.gov.au/index.asp>>.

⁷¹ *Administrative Procedures*, cl 5.3.

⁷² Ibid, cl 5.4.

⁷³ Ibid, cl 6.1.2.

- description of the environment which places the proposal in a regional biophysical and social context;⁷⁴
- preliminary impact assessment that identifies the environmental factors⁷⁵ that arise from the project and their relative significance;
- Scope of Works setting out the proposed environmental surveys and investigations to be carried out;
- proposed timetable for carrying out the environmental surveys and investigations;
- list of people, if any, proposed to provide a peer review of findings and conclusions of the environment surveys and investigations; and
- program of consultation with the public, key stakeholders and relevant government agencies.

The EPA may require the proponent to make the Environmental Scoping document available for public review for two weeks. After the Environmental Scoping document has been prepared and revised, a PER document (the environmental review document) is prepared based on the Environmental Scoping document. The PER document is prepared in accordance with the EPA's generic guidelines for the form and content of environmental reviews.⁷⁶ The document must include inter alia:⁷⁷

- a description of the proposal and any alternatives considered with a view to minimising environmental impacts;
- a description of the environment and key ecosystem processes and a discussion of their significance in a regional setting;
- an identification of key issues, and the environmental factors associated with these issues, and their relative significance;
- a discussion of the impacts of the proposal and a discussion of the management arrangements to minimise the impacts;
- information with regards to best practices for implementing the proposal and how the principles of sustainability have been incorporated;
- details of public and government agency consultation and how comments received have been responded to;
- a synthesis of the environmental costs and benefits of the proposal with the aim of achieving an overall net environment benefit; and
- a position statement as to why the EPA should find the proposal environmentally acceptable.

The PER is released for public review for 4 to 8 weeks and the proponent is required to respond to any submissions. The proponent is required to compile and submit to the EPA a summary of the issues raised in the submissions.⁷⁸ The EPA will then submit a report to the Minister on the proposal. The EPA report will generally consist of a summary and discussion of the key environmental issues and factors, an assessment of the environmental acceptability of the proposal, conditions and procedures required if the proposal is implemented and any other advice and recommendations

⁷⁴ Information provided of the location of a project may include certificates of title, charts, plans and maps.

⁷⁵ Environmental factors include matters such as fauna, flora, water quality, air quality, soil quality, noise, waste disposal, and social surroundings.

⁷⁶ The EPA has prepared a number of documents to assist proponents and decision-making authorities to comply with the requirement of environmental impact assessment. These can be found at <http://www.epa.wa.gov.au/template.asp?ID=3&area=EIA&Cat=Referral+of+Proposals%2C+Scoping+Document+%26+Environmental+Review+Document+Information+%28s38%29>>.

⁷⁷ *Administrative Procedures*, cl 6.3.5.

⁷⁸ *Ibid*, cl 5.4.5.

considered relevant by the EPA.⁷⁹ The Minister will publish the report and any person may lodge an appeal with the Minister within 14 days of the publication of the report.⁸⁰ After consultation with relevant ministers and agencies, the Minister issues his or her decision about whether or not the proposal may proceed. An approved proposal becomes a legally binding agreement.

Environmental Review and Management Programme

An Environmental Review and Management Programme (ERMP) is usually applied to proposals of State interest that raise a number of significant environmental issues, many of which are complex or of a strategic nature that require substantial environmental assessment.⁸¹ Many large scale petroleum exploration and development projects will fall within this level of assessment.⁸² The assessment process for an ERMP is similar to the PER process in that an Environmental Scoping document and an ERMP document (the environmental review document) must be prepared by the proponent. When the EPA is satisfied that the ERMP has addressed all the environmental factors and studies addressed in the Environmental Scoping document, the ERMP will be released by the proponent for public review for a period of 10 to 12 weeks. An environmental review document (a PER or ERMP) is released for public review if the EPA is satisfied that the document adequately addresses environmental factors, it is technically sound and understandable, the format, content and style are appropriate and it is acceptable to relevant decision-making authorities and government agencies.⁸³

The proponent is required to prepare a summary of issues raised by the submissions and respond to the submissions. The EPA will then assess the ERMP document, the submissions, the proponent's response to the submissions and obtain advice from relevant persons.⁸⁴ The EPA report, as described above, is then sent to the Minister. The Minister is required to publish the report and any person may lodge an appeal with the Minister within 14 days of the publication of the report.⁸⁵ After consultation with relevant ministers and agencies, the Minister issues his or her decision about whether or not the proposal may proceed. An approved proposal becomes a legally binding agreement.

Proposal is Unlikely to be Environmentally Acceptable

A further level of assessment that is available is where a Proposal is Unlikely to be Environmentally Acceptable (PUEA). This level of assessment is applied when it is clear from the proposal that it cannot meet the EPA's environmental objectives. It will apply to proposals that are in contravention of established environmental policy, standards or procedures, and which could not be modified to meet environmental objectives.⁸⁶ If a proposal falls within this level of assessment, the EPA Chairperson may discuss the proposal with the proponent to try and encourage the proponent to find a more suitable location for the project and to submit a revised proposal. If the proponent chooses to proceed with the original proposal, the EPA may set the level of assessment as a PUEA. When the level of assessment is advertised, the EPA will also publish its reasons why the proposal is unlikely to be found environmentally

⁷⁹ Ibid, cl 9.5 and EP Act, section 44(2).

⁸⁰ EP Act, sections 44(3) and 100.

⁸¹ *Administrative Procedures*, cl 5.5.1.

⁸² For an example of a project subject to this level of assessment and assessment under the EPBC Act see the Gorgon Gas Project, *Guidelines for an environmental impact assessment statement and environmental scoping document for an environmental review and management programme* <http://www.epa.wa.gov.au/docs/1744_Gorgon_EIS_ERMP.pdf> at 26 April 2006.

⁸³ *Administrative Procedures*, cl 7.4.

⁸⁴ Ibid, cl 5.5.6.

⁸⁵ Above n 80.

⁸⁶ *Administrative Procedure*, cl 5.2.

acceptable.⁸⁷ If the proponent appeals the level of assessment and the appeal is upheld, the proposal is referred back to the EPA for further assessment. In this case, the EPA would require a PER or ERMP, which provides for a comprehensive assessment and public participation.⁸⁸

Public inquiry

A final level of assessment is by means of public inquiry that may be chosen by the EPA for proposals that are very complex and are likely to be of intense public interest. The EPA can seek approval from the Minister to conduct a public inquiry and to set out the powers of such a public enquiry. Commissioners conducting the public enquiry have the powers of a Royal Commission.⁸⁹ The EPA will compile a report based on the public submissions which is submitted to the Minister for publication and approval.⁹⁰

Conclusion

Petroleum exploration and development activities have the potential to have a significant impact on the environment. In order to provide for both beneficial economic development and responsible environmental protection and conservation, environmental law provides a complex legislative framework for the assessment, approval, management and monitoring of new and existing petroleum activities. In addition to the complex general legal requirements for engaging in petroleum exploration and development under the relevant Commonwealth and State legislation, provision is made for environmental impact assessment of petroleum activities at Commonwealth and State level. The nature and level of environmental impact assessment will depend on the nature and complexity of the proposed activity. The environmental law requirements relating to environmental impact assessment are onerous and require proponents to provide thorough and comprehensive data on the potential environmental impacts of an activity and strategies for managing the impacts. This hopefully ensures that decision-makers are able to make environmentally sound and responsible decisions that will give effect to the principles of ecologically sustainable development, intergenerational equity and the conservation of biological diversity and ecological diversity so that the environment is maintained for future generations.

⁸⁷ Ibid, cl 5.2.3.

⁸⁸ Ibid, cl 5.2.4.

⁸⁹ EP Act, section 42.

⁹⁰ *Administrative Procedures*, cl 5.6.