

Chapter 2

Regulatory framework

2.1 This chapter provides an overview of the environmental and heritage protection legislation which applies to industrial development on the Burrup Peninsula.

2.2 The Burrup Peninsula as a place of both cultural and historical significance is also the site of a number significant industrial complexes including a major iron ore port, liquefied natural gas production, salt production, and the Yara Pilbara nitrate facilities. As such, industrial facilities on the Burrup Peninsula operate under both Western Australian and Commonwealth legislation. This includes the *Aboriginal Heritage Act 1972* (WA), the *Environmental Protection Act 1986* (WA), the *Environment Protection and Biodiversity Conservation Act 1999* (Cth), and the *National Environment Protection Council Act 1994* (Cth).¹

State regulation and monitoring

2.3 A number of pieces of state legislation are utilised to manage and preserve the cultural, archaeological and natural values of the Burrup Peninsula.

2.4 The *Aboriginal Heritage Act 1972* (WA) provides for the protection and preservation of Aboriginal heritage and culture throughout Western Australia. Under the *Aboriginal Heritage Act 1972* (WA) a number of locations on the Burrup Peninsula have been declared Protected Places and consent is required from the Western Australian Minister for Aboriginal Affairs for any activity which may have negative consequences for Aboriginal heritage sites.²

2.5 The *Environmental Protection Act 1986* (WA) (EP Act) requires ministerial approval of any industrial development that is likely to have a significant effect on the environment. The Western Australian Department of Water and Environmental Regulation (previously known as the Department of Environmental Regulation) is responsible for the control of pollution and for enforcement under the EP Act. This includes responsibility for licensing, compliance and enforcement of emissions and discharges.³ The Environmental Protection Authority of Western Australia (EPA WA) is responsible for the development of environmental protection policies; assessment of

1 The Chamber of Minerals and Energy of Western Australia, *Submission 2*, p. 2.

2 Department of Water and Environmental Regulation, *Draft Burrup Rock Art Strategy*, 2017, p. 4. See also The Chamber of Minerals and Energy of Western Australia, *Submission 3*, p. 2.

3 The Chamber of Minerals and Energy of Western Australia, *Submission 3*, p. 2.

environmental impact of proposals and schemes; and overseeing the implementation of proposals.⁴

2.6 In 2003, the Western Australian Government entered into the Burrup and Maitland Industrial Estates Agreement with three Aboriginal groups: the Narluma-Yindjibarndi, the Yaburara-Mardudhunera, and the Wong-Goo-Tt-Oo. This agreement allowed the WA Government to compulsorily acquire native title rights and interests in the area of the Burrup Peninsula, and some areas of land near Karratha. The agreement allowed for industrial development across the southern area of the Burrup Peninsula, created a conservation estate (which later became the Murujuga National Park) and ensured the protection of Aboriginal heritage.⁵

2.7 In 2003, the Burrup Maitland Industrial Estates Agreement Additional Deed committed the WA Government to organising and funding a minimum four-year study into the effects of industrial emissions on rock art within and near the industrial estate established on the Burrup Peninsula. This included:

- the monitoring of ambient concentrations of air pollutants and microclimate and deposition undertaken by CSIRO Atmospheric Research; and
- the artificial fumigation of rock surfaces and fieldwork on rock surface colour undertaken by CSIRO Manufacturing and Infrastructure Technology.⁶

2.8 In 2009, following the completion of these studies, the Burrup Rock Art Monitoring Management Committee (BRAMMC) recommended that the study of ambient air quality and rock microbiology monitoring be suspended and only recommenced if warranted by a major increase in emissions, or if new evidence makes further monitoring warranted.⁷

2.9 In 2013, the Western Australian Government established the Murujuga National Park which covers the Northern Burrup Peninsula. The focus of the Murujuga National Park Management Plan (2013) is to ensure protection and awareness of the cultural and natural values of area. Increased protection of the rock art is also achieved through the application of provisions of the *Conservation and Land Management Act 1984* (WA) (CALM Act).⁸

4 Western Australian Environmental Protection Authority, <http://www.epa.wa.gov.au/legislation>, (accessed 17 January 2017).

5 Department of Water and Environmental Regulation, *Draft Burrup Rock Art Strategy*, 2017, p. 4.

6 Department of Water and Environmental Regulation, *Draft Burrup Rock Art Strategy*, 2017, p. 5.

7 Department of Water and Environmental Regulation, *Draft Burrup Rock Art Strategy*, 2017, p. 4.

8 Department of Water and Environmental Regulation, *Draft Burrup Rock Art Strategy*, 2017, p. 4.

2.10 The management of the Murujuga National Park is administered by the Western Australian Department of Biodiversity, Conservation and Attractions (DBCA) in accordance with policy directions provided by the Murujuga Park Council (MPC). The MPC is comprised of representatives from the Murujuga Aboriginal Corporation (MAC), the DBCA, and a representative appointed by the Minister for Aboriginal Affairs. The Rangers of the Murujuga Land and Sea Unit (MLSU) conduct the practical management of park alongside DBCA staff.⁹

Burrup rock art monitoring program

2.11 As noted above, monitoring of the rock art was commissioned and reviewed by BRAMMC. The Western Australian Government established the BRAMMC in 2002 in response to concerns about possible adverse impacts on the rock art from industrial air emissions.

2.12 The BRAMMC commissioned a number of investigations to identify whether industrial emissions were having or could have adverse effects on the rock art of the Burrup Peninsula. A number of studies were initiated including:

- annual independent monitoring of colour change and spectral mineralogy of rock art, conducted by CSIRO;
- air quality monitoring conducted in 2004–2005 and 2007–2008 by CSIRO to assess the likelihood that air pollution from industrial activities in the area would damage rock art;
- air dispersion modelling atmospheric pollutants occurred in 2009 to provide a better understanding of the potential for emissions from local industry to have an impact on rock art;
- a study conducted between 2004–2008 by Murdoch University into the possibility that microbial activity stimulated by air pollutants could accelerate surface corrosion;
- accelerated erosion tests conducted between 2004–2007 by CSIRO utilising fumigation chambers to investigate the impact of pollutant scenarios and the role of dust in rock surface modification.¹⁰

2.13 The BRAMMC provided the results of CSIRO's and other studies to the Western Australian Minister for Environment in 2009. It concluded that 'there was no

9 Department of Water and Environmental Regulation, *Draft Burrup Rock Art Strategy*, 2017, p. 4.

10 Yara Pilbara, *Submission 9*, pp. 10–11.

scientific evidence that indicates measurable impacts to rock art from industrial emissions on the Burrup Peninsula'.¹¹

2.14 Based on the recommendations of the BRAMMC, the Western Australian Minister for Environment established the Burrup Rock Art Technical Working Group (BRATWG) in September 2010. The BRATWG was established as an independent technical body tasked with managing and coordinating the continued monitoring of the rock art of the Burrup Peninsula. It was funded by existing industries on the Burrup Peninsula with Yara Pilbara being a major financial contributor since Yara assumed control of the Ammonia Plant in 2012.¹²

2.15 In 2016, the BRATWG completed its five year term of engagement, and provided a draft report to the Western Australian Minister for Environment. According to Yara Pilbara, the draft report:

... concluded, consistent with the earlier findings of BRAMMC, that there is no scientific evidence that indicates any measurable impact of industrial emissions on the rock art on the Burrup over the period 2004 to 2014. The report also contains a recommendation that the monitoring of rock art continue on an annual basis to provide an early warning of any possible impacts to rock art from industrial emissions and recommended that the function of BRATWG continue for another five year term.¹³

2.16 Yara Pilbara submitted that it supports the recommendations contained in the draft report and the 'ongoing operation of BRATWG as an effective independent group to facilitate the monitoring and analysis efforts'.¹⁴

2.17 The Chamber of Minerals and Energy of Western Australia similarly stated that it supports 'the continuation of BRATWG in its role of overseeing the Burrup rock art monitoring program to assist in the protection and preservation of petroglyphs on the Burrup Peninsula'.¹⁵

11 Yara Pilbara, *Submission 9*, p. 11. See also Burrup Rock Art Monitoring Committee, *Report and Recommendations to the Minister for State Development*, April 2009, [http://pandora.nla.gov.au/pan/103684/20090805-1626/www.dsd.wa.gov.au/documents/090115_Burrup_Rock_Report_\(1\).pdf](http://pandora.nla.gov.au/pan/103684/20090805-1626/www.dsd.wa.gov.au/documents/090115_Burrup_Rock_Report_(1).pdf), (accessed 1 June 2017).

12 Yara Pilbara, *Submission 9*, p. 11.

13 Yara Pilbara, *Submission 9*, p. 12. See also The Chamber of Minerals and Energy of Western Australia, *Submission 2*, p. 5.

14 Yara Pilbara, *Submission 9*, p. 12.

15 The Chamber of Minerals and Energy of Western Australia, *Submission 2*, p. 4.

Commonwealth regulation

2.18 The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) provides a legal framework for the management and protection of nationally important, flora, fauna, ecological communities and heritage places which are defined in the Act as matters of national environmental significance. Matters of national environmental significance relating to cultural heritage include National Heritage Places.¹⁶

2.19 The principles of ecologically sustainable development, as established in section 3A of the EPBC Act, are required to be followed in relation to areas listed as National Heritage Places. These principles are as follows:

- (a) decision-making processes should effectively integrate both long-term and short-term economic, environmental, social and equitable considerations;
- (b) if there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation;
- (c) the principle of intergenerational equity—that the present generation should ensure the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations;
- (d) the conservation of biological diversity and ecological integrity should be a fundamental consideration in decision-making; and
- (e) improved valuation, pricing and incentive mechanisms should be promoted.¹⁷

2.20 Under the EPBC Act, the Department of the Environment and Energy has responsibility for listing new National Heritage Places, and regulating the impact of development actions that are likely to have a significant impact on National Heritage Places.¹⁸ The Minister for the Environment and Energy, on behalf of the Commonwealth, under section 45 of the EPBC Act, has a bilateral agreement with the State of Western Australia in relation to accreditation of the state's Environmental Impact Assessment processes.¹⁹

2.21 In 2007, the Dampier Archipelago, including the Burrup Peninsula, was added to the Heritage List. The Australian Heritage Council found that the Dampier

16 Department of the Environment and Energy, *Submission 8*, p. 1.

17 *Environment Protection and Biodiversity Conservation Act 1999*, s 3A. See also, Law Council of Australia, *Submission 3*, pp. 1–2.

18 Department of the Environment and Energy, *Submission 8*, p. 1.

19 Law Council of Australia, *Submission 3*, p. 2.

Archipelago met five of the eight criteria for National Heritage Listing under the EPBC Act. These criteria are:

- the place has outstanding heritage value to the nation because of the place's importance in the course, or pattern, of Australia's natural or cultural history;
- the place has outstanding heritage value to the nation because of the place's possession of uncommon, rare or endangered aspects of Australia's natural or cultural history;
- the place has outstanding heritage value to the nation because of the place's potential to yield information that will contribute to an understanding of Australia's natural or cultural history;
- the place has outstanding heritage value to the nation because of the place's importance in demonstrating the principal characteristics of:
 - a class of Australia's natural or cultural places; or
 - a class of Australia's natural or cultural environments; and
- the place has outstanding heritage value to the nation because of the place's importance in demonstrating a high degree of creative or technical achievement at a particular period.²⁰

2.22 The listing of the Dampier Archipelago 'recognised the extraordinary extent, diversity and significance of petroglyphs, standing stones and circular stone arrangements of the place'.²¹

2.23 At the time of listing, EPBC Act Conservation Agreements were signed by the then Minister for the Environment and Water Resources, the Hon Malcolm Turnbull, with Woodside Energy Ltd, Hamersley Iron Pty Ltd, and Dampier Salt Ltd (Rio Tinto). Under the Conservation Agreements, these companies provide funding for research, management and monitoring of the National Heritage values of the place. The Murujuga Rangers are supported by the Conservation Agreements to manage the National Heritage values in cooperation with the Australian and Western Australian governments.²²

2.24 As a consequence of its listing as a National Heritage Place, the provisions of the EPBC Act and the *National Environment Protection Council Act 1994* apply to developments on the Burrup Peninsula. However, the application of the EPBC Act is limited to actions commenced after 16 July 2000 (the commencement date of the EPBC Act). Action which commenced prior to that date and was either legally authorised, or is a lawful continuation of a use of land, the sea or the sea bed that

20 Commonwealth of Australia, *Commonwealth of Australia Gazette*, No. S127, 3 July 2007, <http://www.environment.gov.au/system/files/pages/d53ee213-2f1e-481e-b0f6-85d861a52de2/files/10572701.pdf>, (accessed 3 April 2017).

21 Department of the Environment and Energy, *Submission 8*, p. 1.

22 Department of the Environment and Energy, *Submission 8*, p. 1.

commenced prior to July 2000 is exempt from the assessment and approval provisions of the EPBC Act. The Department of the Environment and Energy (the department) stated that much of the industrial development on the Burrup Peninsula is subject to the exemption provisions of the EPBC.²³

EPBC Act assessment of the liquid ammonia plant

2.25 In 2001, the proposed liquid ammonia plant was referred to the Commonwealth for a decision under the EPBC Act as to whether it required approval. The Commonwealth Minister decided that the proposal was not a controlled action (i.e. it was not likely to have a significant impact on matters of national environmental significance).²⁴

2.26 At the time of this decision, national heritage had not been added to the EPBC Act as a matter of national environmental significance. The provisions of the EPBC Act which relate to national heritage were added in 2003, and commenced operation in 2004. Similarly, the listing of the Dampier Archipelago (including Burrup Peninsula) as a National Heritage Place did not occur until 2007. As neither the EPBC Act nor the heritage listing operate retrospectively, existing activities such as the liquid ammonia plant are permitted to continue unless there is a significant alteration to the nature of those activities.²⁵

EPBC assessment and approval of the TANPF

2.27 In 2008, the environmental approvals process commenced for the construction and operation of the TANPF. The Commonwealth Minister determined that the proposal for the construction of the TANPF was a controlled action under the EPBC Act for likely impacts to National Heritage places, listed threatened species and listed migratory species. Pursuant to the bilateral agreement between the Commonwealth and the State of Western Australia, the proposal was referred for assessment by the EPA WA. This assessment process included an eight week public review period.²⁶

23 Department of the Environment and Energy, *Submission 8*, pp. 1–2.

24 Law Council of Australia, *Submission 3*, p. 2.

25 Law Council of Australia, *Submission 3*, p. 2.

26 Department of the Environment and Energy, *Submission 8*, p. 2. See also Law Council of Australia, *Submission 3*, p. 3.

2.28 The EPA WA provided a report and recommendations to the Commonwealth Minister. This report stated that it was considered that it:

...is unlikely that the relatively small quantities of NO₂ [nitrogen dioxide] and NH₃ [ammonia] that would be emitted from the TANPF would have a significant impact on rock art in the surrounding areas.²⁷

2.29 The EPA WA based its decision on the 'results obtained from the Pluto LNG Development Cumulative Air Quality Study, the CSIRO study on the impact of industrial air emissions on rock art located on the Burrup Peninsula, and the Burrup Peninsula Air Pollution Study: Report for 2004/2005 and 2007/2008'.²⁸

2.30 The EPA WA also expressed the view that

...the proposal could be managed to meet the EPA's environmental objectives and recommended conditions including what it described as "the adoption and implementation of best practice pollution control technology to minimise ammonia emissions and particulate emissions from the drilling plant common stack".²⁹

2.31 The WA Government approved the construction of the TANPF on 11 July 2011.

2.32 Twenty seven environmental conditions were set by the Western Australian Government under relevant state legislation. These include the requirement to prepare and implement an ambient air monitoring programme, and the requirement to submit an annual Compliance Assessment Report.³⁰

Commonwealth environmental conditions

2.33 The Commonwealth Minister for the Environment approved the proposed action, with 15 conditions, on 14 September 2011. Conditions 7, 8, 9 and 10 relate to the protection of the Dampier Archipelago (including the Burrup Peninsula) National Heritage place.³¹

27 Western Australian Environmental Protection Authority, *Technical Ammonium Nitrate Production Facility, Burrup Peninsula Report and Recommendations*, January 2011, p. iii.

28 Western Australian Environmental Protection Authority, *Technical Ammonium Nitrate Production Facility, Burrup Peninsula Report and Recommendations*, January 2011, p. iii.

29 Law Council of Australia, *Submission 3*, p. 3.

30 Ministerial Statement No. 870, Technical Ammonium Nitrate Production Facility, Burrup Peninsula, Shire of Roebourne, 11 July 2011.

31 Department of the Environment and Energy, *Submission 8*, p. 2. See *Submission 8*, Attachment 1 for a complete list of conditions.

2.34 Condition 7 required the submission and implementation of the following plans:

- Construction Environment Management Plan—approved by a delegate of the Minister for the Environment in November 2012;
- Operational Environment Management Plan—currently being considered by the department and relates to air quality and dust, water quality, erosion control and storm water, waste and traffic. The plant cannot commence operation until the plan is approved;
- Aboriginal Heritage Management Plan—approved by the department in October 2012;
- Hazardous Materials Management Plan—approved by the department in November 2012; and
- Emergency Response Management Plan—approved by the department in November 2012.³²

2.35 Condition 8 required avoidance measures relating to the rock art sites, including fencing, signage and personnel access to the National Heritage place. The department conducted a site inspection in September 2016 and 'verified that the management measures required under condition 8 were being implemented'.³³

2.36 Condition 9 required air quality monitoring at three sites used in the Burrup Rock Art Monitoring Program. Emissions of ammonia, nitrogen oxides, sulphur oxides and total suspended particles would have to be monitored, and form the baseline of air quality data. The baseline air quality monitoring was to be reported to the department by 21 February 2017 with annual air quality monitoring at the rock art sites occurring for at least five years after operations commence.³⁴

2.37 Condition 10 required spectral mineralogy monitoring of rock art sites adjacent to the site, consistent with the Burrup Rock Art Monitoring Program. Monitoring must continue for at least five years after commencement of operations and until the approval holder has demonstrated that operation of the facility is not having an unacceptable impacts on the rock art sites. The approval holder is also required to provide results to the department and to publish them on the internet.³⁵

2.38 Condition 10 also required the engagement of a heritage monitor or other suitably qualified person to survey rock art sites within a two kilometre radius of the

32 Department of the Environment and Energy, *Submission 8*, pp 2–3; p. 4.

33 Department of the Environment and Energy, *Submission 8*, p. 3.

34 Department of the Environment and Energy, *Submission 8*, p. 3.

35 Department of the Environment and Energy, *Submission 8*, p. 3.

project. This heritage monitor is required to provide advice on any changes to the appearance, or cultural value of rock art sites within the examined area.³⁶

Issue of licence to operate

2.39 Following the decision by the Commonwealth Minister, Yara Pilbara obtained a licence to operate under the EP Act (WA). An application to amend the licence was advertised on 11 July 2016.³⁷

Variation of Commonwealth conditions

2.40 Following application by Yara Pilbara, the Commonwealth's environmental approval conditions were varied on 18 December 2013, which deleted condition 8(d) and amended conditions 10 and 11.³⁸

2.41 Condition 8(d), which was deleted, referred to the annual survey of rock art sites within a 2 kilometre radius of the project site by a heritage monitor or other suitably qualified person and the reporting requirements of that survey.³⁹

2.42 New condition 10(c) included the monitoring requirements for additional monitoring of rock art sites in a manner that is consistent with the Burrup Rock Art Monitoring Program. Six requirements were set for this condition including that the monitoring be undertaken at least annually and that the Murujuga Aboriginal Corporation be engaged in the planning and reporting associated with the annual survey of rock art sites required under condition 10(c).⁴⁰

2.43 Condition 11 was amended to require the proponent to notify the department within 72 hours of any results of the state government managed monitoring program

36 Department of the Environment and Energy, *Submission 8*, Attachment 1, p. 4.

37 Law Council of Australia, *Submission 3*, p. 3.

38 Department of the Sustainability, Environment, Water, Population and Communities, EPBC Act public notices, Proposed technical ammonium nitrate production facility (EPBC 2008/4546), 18 December 2013, http://epbcnotices.environment.gov.au/_entity/annotation/1a62b8f0-3168-e511-9099-005056ba00a8/a71d58ad-4cba-48b6-8dab-f3091fc31cd5?t=1486528464989 (accessed 16 January 2017).

39 Department of the Environment and Energy, *Submission 8*, Attachment 1, p. 3.

40 Department of the Sustainability, Environment, Water, Population and Communities, EPBC Act public notices, Proposed technical ammonium nitrate production facility (EPBC 2008/4546), 18 December 2013, http://epbcnotices.environment.gov.au/_entity/annotation/1a62b8f0-3168-e511-9099-005056ba00a8/a71d58ad-4cba-48b6-8dab-f3091fc31cd5?t=1486528464989 (accessed 16 January 2017).

or additional monitoring, as required under condition 10(c) that show there is evidence of changes in the surface of rock art motif or surrounding rock surface.⁴¹

2.44 A further variation to the Commonwealth's approval conditions was approved on 10 February 2014. Condition 10(c) (iv) was amended, which changed the timing of the first rock art monitoring event from within 12 months of the commencement of construction to 16 months.⁴²

2.45 The Yara Pilbara compliance report of 2016 stated that Yara Pilbara would seek a further variation regarding assessment of rock art.⁴³

Directed variation to approval

2.46 On 12 September 2017, the Department of the Environment and Energy (the department) issued a directed variation to the approval for the TANPF. A directed variation to approval conditions to require stricter regulatory controls of an action may be put in place for 'repetitive non compliances, where a non-compliance has led to environmental harm or where an approval holder does not engage with the Department in relation to a breach of approval conditions'.⁴⁴

2.47 The directed variation replaced 11 conditions, added 7 further conditions and replaced a number of definitions. The directed variation includes measures that (amongst others):

- impose new reporting requirements (Condition 3, Condition 3A and Condition 14);
- impose new air quality monitoring and reporting requirements (Condition 9A and Condition 9B); and
- require that the approval holder ensure that there is no measurable impact from air pollution to any rock art sites within two kilometres, for the life of the approval (Condition 11). And further, if the Minister is not satisfied that this is being met, then a Rock Art Impact Mitigation Review (RAIMR) must be submitted for approval by the Minister (Condition 11A). If an RAIMR is not submitted to the satisfaction of the Minister, or Condition 11 is not met,

41 Department of the Sustainability, Environment, Water, Population and Communities, EPBC Act public notices, Proposed technical ammonium nitrate production facility (EPBC 2008/4546), 18 December 2013, <http://epbcnotices.environment.gov.au/entity/annotation/1a62b8f0-3168-e511-9099-005056ba00a8/a71d58ad-4cba-48b6-8dab-f3091fc31cd5?t=1486528464989> (accessed 16 January 2017).

42 Department of the Environment and Energy, EPBC Act public notices, Proposed technical ammonium nitrate production facility (EPBC 2008/4546), 10 February 2014, <http://epbcnotices.environment.gov.au/publicnoticesreferrals/>.

43 Law Council of Australia, *Submission 3*, p. 5.

44 Department of the Environment, *Compliance Monitoring Program 2015–16*, p. 9.

then the Minister may order a reduction in air emissions for a specified period of time (Condition 11B).⁴⁵

2.48 Ms Monica Collins, Chief Compliance Officer, Department of the Environment and Energy, told the committee that the variation was issued because the department had:

...found noncompliance with the full set of conditions in relation to the air quality monitoring in that they [Yara Pilbara] didn't have the full set of monitoring data for the total suspended particulates.⁴⁶

2.49 Ms Collins explained that the intent of the directed variation was 'to make very clear the need for ongoing monitoring and, specifically, what parameters they were required to monitor'. Ms Collins also told the committee that the department was 'making it very clear that the purpose of the license is to ensure the protection of the rock art in the national heritage place'.⁴⁷

45 Department of the Environment and Energy, 'Variation to Conditions Attached to Approval', 12 September 2017, <http://epbcnotices.environment.gov.au/entity/annotation/cd15cb17-289c-e711-994c-005056ba00a8/a71d58ad-4cba-48b6-8dab-f3091fc31cd5?t=1506573061985>.

46 Ms Monica Collins, Department of the Environment and Energy, *Committee Hansard*, 17 November 2017, p. 3.

47 Ms Monica Collins, Department of the Environment and Energy, *Committee Hansard*, 17 November 2017, p. 3.