



# **Inquiry into the Protection of Aboriginal rock art of the Burrup Peninsula**

**Senate Environment and Communications References Committee**

**Contact**  
Kane Moyle  
[k.moyle@cmewa.com](mailto:k.moyle@cmewa.com)

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## About CME

The Chamber of Minerals and Energy of Western Australia (CME) is the peak resources sector representative body in Western Australia. CME is funded by its member companies who are responsible for most of the State's mineral and energy production and are major employers of the resources sector workforce in the State.

In 2014-15, the value of Western Australia's mineral and petroleum production was \$99.5 billion. Iron ore is currently the State's most valuable commodity, accounting for more than half the State's production value at \$54 billion. Petroleum products (including LNG, crude oil and condensate) follow at \$24 billion, with gold third at \$9 billion.

The sector is a major contributor to the state and the Australian economy. The estimated value of royalties the state received from the resources sector composed almost 15 per cent of estimated total state revenue in 2015-16, or around \$3.8 billion.

## Recommendations

### Inquiry Terms of Reference

- CME rejects the prejudicial terms of reference of this inquiry towards Yara Pilbara Operations.

### Petroglyphs Monitoring – Yara Pilbara Operations

- CME considers the independent CSIRO petroglyphs monitoring demonstrates the industrial emissions from Yara Pilbara Operations has not adversely affected the Burrup Peninsula rock art.
- CME support the continuation of BRATWG in its role of overseeing the Burrup rock art monitoring program to assist in the ongoing protection and preservation of petroglyphs on the Burrup Peninsula.

## Context

CME welcomes the opportunity to provide this submission to the Senate Environment and Communications Reference Committee inquiry into the protection of Aboriginal rock art of the Burrup Peninsula.

The Burrup Peninsula in the Pilbara region of Western Australia is the location of rock art (petroglyphs) of major archaeological and cultural significance. This culturally significant site also shares its location with several industrial complexes including a major iron ore port, liquefied natural gas production, salt production, ammonia nitrate plant (fertiliser production) and a technical ammonia nitrate plant (TAN Plant).

The economic contribution of this region to the Australian economy is significant and the industrial emissions associated with these operations are managed by a rigorous state-based approvals system.

The industrial facilities on the Burrup Peninsula operate under a myriad of different state and federal approvals, including and not limited to:

- Environmental Protection Act 1986 Part IV
- Environmental Protection Act 1986 (EP Act) Part V
- Aboriginal Heritage Act 1972
- Environment Protection and Biodiversity Conservation Act 1999 (Clth) (EPBC Act)
- National Environment Protection Council Act 1994 (Clth)

The Western Australian Department of Environmental Regulation (DER) undertakes environment regulation functions under Part V of the EP Act. This agency has principal responsibility for licensing, approvals, compliance and enforcement in relation to emissions and discharges.

In August 2002 the Western Australian Government established the independent Burrup Rock Art Monitoring Management Committee (BRAMMC). In 2003 the BRAMMC commissioned a number of studies to monitor the petroglyphs on the Burrup Peninsula. They included air dispersion modelling studies, air quality and microclimate; colour change, dust deposition and accelerated weathering study and mineral spectroscopy carried out by CSIRO.

In 2009, BRAMMC reported to the Minister for the Environment that concentrations of air pollutants on the Burrup Peninsula were generally very low with the exception of atmospheric dust. It is important to note natural sources of emissions in the Pilbara region are also substantial. In the case of the Burrup Peninsula these natural sources include the land surface dust as a result of the semiarid environment and marine salts from the adjacent coast.

BRAMMC concluded from these studies there was no scientific evidence to indicate there was any measurable impact of emissions on the rate of deterioration of the petroglyphs. BRAMMC recommended monitoring of the colour contrast and spectral mineralogy be continued on an annual basis for ten years and be reviewed after five years. The Minister for the Environment accepted these recommendations and subsequently this committee was replaced by the Burrup Rock Art Technical Working Group (BRATWG) in 2010.

BRATWG is chaired by an independent air quality expert, currently Associate Professor Frank Murray, and comprises members from the following organisations:

- An expert in the Rock Art monitoring field (Bill Carr);
- Western Australian Museum (Dr Alex Bevan);
- Woodside Energy Ltd as representing industry on the Burrup (John Litchfield);
- Department of Aboriginal Affairs (Jeremy Elliot); and

- Department of Parks and Wildlife (Allisdair MacDonald)

Executive Support is provided by the Department of Environmental Regulation.

BRATWG has overseen ongoing studies to establish whether industrial emissions could affect the petroglyphs. Through BRATWG, air quality monitoring has been undertaken co-operatively by all industries operating on the Burrup Peninsula.

The studies have been based on the monitoring of seven sites with two control sites located on the northern Burrup area and the other five located further south on the lower Burrup Peninsula, closer to the industrial areas. Petroglyphs at the seven specially selected sites (chosen under the guidance of indigenous elders) in the Burrup Peninsula have been measured using colour and reflectance spectroscopy measurements.

This work conducted by CSIRO represents over 10 years of continuous monitoring and an important source of information for regulators, industry and traditional owners.

### **Inquiry Terms of Reference**

CME consider the terms of reference of this inquiry unfairly challenge the rigorous approvals obtained by Yara Pilbara Operations and the integrity of the Western Australian Government approvals system.

The lines for inquiry outlined in terms of reference (e), (f) and (g) are particularly prejudicial to Yara Pilbara Operations. CME considers inquiry into impacts on petroglyphs as a result of highly unlikely catastrophic scenarios as being unnecessary for the Senate Committee. Furthermore, risk assessments outlined in the Public Environmental Review (PER) and other statutory approvals obtained by Yara Pilbara Operations have already demonstrate these to be of very low-risk.

Yara Pilbara Operations has operated legally and within their current approvals. Independent air quality monitoring has indicated no significant impacts on surrounding petroglyphs. The other industrial facilities on the Burrup Peninsula also all operate under rigorous approvals and have worked cooperatively to monitor the petroglyphs.

CME considers the terms of reference for the inquiry do not represent a balanced approach to the significant work industry, government and traditional owners have contributed to carefully manage the rock art of the Burrup Peninsula.

**CME rejects the prejudicial terms of reference of this inquiry towards Yara Pilbara Operations.**

### **Petroglyphs Monitoring – Yara Pilbara Operations**

In September 2011, Yara Pilbara Operations received approval under the EPBC Act for the construction of their TAN Plant. Under this approval, Yara Pilbara Operations is required to conduct annual surveying of rock art sites within a two kilometre radius of the project site. Selected sites were determined in consultation with members of Murujuga Aboriginal Corporation to respect the cultural laws of the traditional owners for the entitlement of access.

CSIRO, who has conducted petroglyphs monitoring for BRAMMC and then BRATWG was selected to conduct annual surveying of petroglyphs for Yara Pilbara Operations.

The selected sites were evaluated for their appropriateness for scientific study, including petroglyph size and quality, direction of exposure, elevation, dominant winds direction within the TAN project location. From the six selected monitoring sites; three were already part of the decade-old and ongoing BRATWG monitoring program and an additional three sites were also selected.

In July 2014, the three new sites became part of the BRATWG monitoring program. On each monitored petroglyph panel, eight (8) sampling areas or “spots” were selected; four (4) areas classified as ‘engraving’ – defined by the pecking marks that constitute the image and four (4) area classified as ‘background’ – a section of the adjacent rock surface unmarked by the petroglyph.

Three types of measurements were carried out for the monitoring and included (1) colour contrast monitoring, (2) spectral mineralogy and (3) 3D visual imaging to assess the surface of the petroglyphs. Based on the two years of monitoring, no significant change has been detected.<sup>12</sup>

CME urges the Senate Environment and Communications Reference Committee to take into full consideration the independent research conducted by CSIRO in relation to Yara Pilbara Operations as well as CSIRO’s decade of continuous monitoring into the impacts of industrial emissions on the Burrup Peninsula.

**CME considers the independent CSIRO petroglyphs monitoring demonstrates the industrial emissions from Yara Pilbara Operations has not adversely affected the Burrup Peninsula rock art.**

BRATWG completed its five-year term of engagement in 2016 and has drafted its findings and recommendations to the WA Minister for Environment. BRATWG concluded there is no scientific evidence indicating any measurable impact of industrial emissions on the rock art on the Burrup over the period 2004 to 2014. It was recommended monitoring of rock art using the CSIRO developed method continue on an annual basis to provide an early warning of any possible impacts to rock art from industrial emissions and BRATWG continue for another five-year term.

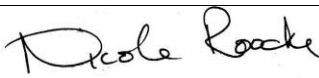
Following the consideration of the BRATWG report by the WA Minister for Environment, **CME support the continuation of BRATWG in its role of overseeing the Burrup rock art monitoring program to assist in the ongoing protection and preservation of petroglyphs on the Burrup Peninsula.**

Federal and State Governments should be supporting collaborative programs involving industry, scientists and traditional owners to monitor and preserve the petroglyphs on the Burrup Peninsula. CME considers this inquiry as currently directed by its terms of reference will only disrupt and delay future collaborative work by these stakeholders.

**Conclusion**

CME looks forward to further opportunity to provide additional input in the Senate inquiry.

If you have any further queries regarding the above matters, please contact Kane Moyle, Manager – Natural Resources, on (08) 9220 8511 or [k.moyle@cmewa.com](mailto:k.moyle@cmewa.com).

Authorised by	Position	Date	Signed
Nicole Roocke	Deputy Chief Executive	23/01/2017	
<b>Document reference</b>	<a href="K:\Land Access\Projects &amp; Issues\Heritage\Aboriginal Heritage\Burrup Senate Inquiry\161216-LA- Senate Burrup Peninsula Rock Art Inquiry-v1.0.docx">K:\Land Access\Projects &amp; Issues\Heritage\Aboriginal Heritage\Burrup Senate Inquiry\161216-LA- Senate Burrup Peninsula Rock Art Inquiry-v1.0.docx</a>		

<sup>1</sup> Heritage Monitoring of 6 sites within 2 km of the Yara Pilbara Nitrates Pty Ltd plant site (Western Australia) 2015

<sup>2</sup> Heritage Monitoring of 6 sites within 2 km of the Yara Pilbara Nitrates Pty Ltd plant site (Western Australia) 2014