

## **The Senate Environment and Communications References Committee Inquiry into the protection of Aboriginal rock art of the Burrup Peninsula**

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Friends of Australian Rock Art (FARA)

FARA is a non-profit voluntary organisation established in 2006 to protect, preserve and promote the ancient petroglyphs of the Dampier Archipelago, particularly the Burrup Peninsula. Since 2007 we have conducted lecture series and annual tours to the Burrup to raise public awareness of the rock art. In that time we have witnessed the bulldozing of rocks for industrial development, as well as the steady increase of vandalism and graffiti by the FiFo workforce.

From 2010 we have directly lobbied the Federal and Western Australian governments, and industry on the Burrup (Woodside and Yara Pilbara) through meetings and submissions in order to –

- 1) prevent further industrialisation of the Burrup
- 2) appeal to industry to respect the heritage values of the rock art by reducing their industrial emissions
- 3) propose the Dampier Archipelago for Tentative nomination on the UNESCO World Heritage List – all to no avail.

In 2011 we persuaded Environment Minister Tony Burke to call for an emergency Australian Heritage Commission review on *The Potential Outstanding Universal Values of the Dampier Archipelago Site and Threats to that Site*.

Its 2012 report found that:

- *There is adequate existing research and data to justify that the heritage values of the Dampier Archipelago meet the threshold of Outstanding Universal Value against World Heritage criterion (i) i.e. The Dampier Archipelago represents a masterpiece of human creative genius.*
- *The heritage values of the Dampier Archipelago may also meet the threshold of Outstanding Universal Value against criterion (iii) i.e. The Dampier Archipelago bears a unique or at least exceptional testimony to a cultural tradition or to a civilisation which is living.*

In August 2016 FARA submitted the attached appeal to the WA Department of Environmental Regulation (DER) against the granting of a variation to Yara Pilbara's operating license (still no response from DER). We ask that the Senate Inquiry also take that submission into consideration in its deliberations.

### **Inquiry into the protection of Aboriginal rock art of the Burrup Peninsula TERMS OF REFERENCE**

The Commonwealth's responsibility under the *Environment Protection and Biodiversity Conservation Act 1999* to protect the globally significant and National Heritage listed Aboriginal rock art of the Burrup Peninsula in Western Australia, with particular reference to:

- (a) the total industrial pollution load from existing industrial activities and port zone on the Burrup Peninsula in Western Australia, and its existing impacts on Aboriginal rock art;

To date, measurements of industrial emissions have been undertaken by CSIRO and the WA Department of Environment's BRATWG (Burrup Rock Art Monitoring Technical Working Group, now disbanded). However, this data has been found to be seriously flawed by Emeritus Professor John Black, an eminent scientist and member of FARA, who was given permission to re-examine the raw data.

Unfortunately the WA Department of Environmental Regulation has refused to allow his subsequent 'confidential' report to be published, even though we understand that serious negative changes to the surface of the rock art is being caused by industrial emissions, especially since the start up of the NW Shelf Venture and Woodside LNG plants.

In fact, the impact of industrial emissions on the concrete pavers outside the Woodside Visitor Centre in just 10 years (see attached Figs 1 & 2) reveals further the inevitable damage being done to the fragile patina of the rock art.

It is interesting to note here that Woodside's monitoring is kept internal and not posted on its website, and that the company has been experiencing difficulties in controlling the size of its main flare, which is visible up to 30 km away.

Importantly, there has also been no specific measurement or monitoring of the toxic fumes emitted by ships burning cheap bunker oil in Dampier port; the low-quality oil results in a higher percentage of damaging sulfur emissions and particulates than refined oil.

(b) the projected additional pollution load from the Yara Pilbara Fertilisers Pty Ltd ammonium nitrate plant, including the likely impacts on the Aboriginal rock art, human health and the environment;

Yara Pilbara has stated on its website that its TAN plant will be emitting 25 tonnes a year of ammonium nitrate particles, size p10. This will be equivalent to sprinkling fertiliser over the rock art landscape, which in turn, thanks to the perfect conditions of heat, dew/rain and humidity, will encourage unprecedented growth of the microbes on the rock surfaces. These burrowing microbes break down the rock surface and progressively degrade the petroglyphs. It has been suggested that the rock art could thus be destroyed within a generation.

With regard to **human health**, serious ammonia leakages from the parent plant Burrup Fertilisers (some unreported to the authorities), have apparently resulted in some staff being hospitalized – and there is ongoing anxiety regarding (invisible) ammonia leaks affecting residents and tourists using Hearsons Cove beach.

Furthermore, at meetings with the Circle of Elders of Murujuga Aboriginal Corporation, FARA has heard their concerns that their **water** has become undrinkable, , and that they have had to resort to filtered water. (Attached are Figs 3 & 4 taken in 2010 & 2016 showing the staggering increase in algal bloom in the rock pools.)

There is always the fear of **fire** on the Burrup, either due to natural causes or the result of industrial activity (see attached Fig 5, a 2015 photo of a scrub burnout adjacent to Woodside's ever-present giant flare). However, this threat will increase in magnitude and ferocity when the spread of fertiliser from Yara's TAN plant encourages unprecedented growth of the vegetation– thus potentially destroying much of the 45,000 year old rock art and seriously endangering plant infrastructure and the lives and health of the workers and residents of Dampier, Karratha and Roebourne.

(c) the accuracy and adequacy of reports used by the Western Australian and Commonwealth governments when setting the relevant technical, environmental and cultural conditions regulating the construction and operation of the Yara Pilbara Fertilisers Pty Ltd ammonium nitrate plant in an area of highly significant Aboriginal rock art;

Using seriously flawed CSIRO reports, stating that no harm will occur to the rock art from industrial emissions (more detailed information is available from Professor Black), the Commonwealth and WA governments were particularly lenient in the **technical and environmental** conditions they imposed on the original company Burrup Fertilisers; this leniency may have resulted in neglect/inattention and the countless ammonia leaks (see above).

Ironically, Yara Pilbara's TAN plant is now seeking to have these lenient conditions amended still further before it is awarded its production license, so that potential environmental damage and destruction of the rock art will be so much worse.

We understand that there are strict international regulations that two plants of such a volatile nature should not be less than 1.7 km apart, whereas these two plants are less than 10 metres apart!

With regard to **cultural** conditions, Yara Pilbara was required to conduct a survey of the rock art within a 2km radius of the plant before production could begin. We understand that it sought amendment of the Commonwealth conditions to only require a sample survey.

(d) the rigour and adequacy of the monitoring, analysis, compliance and enforcement performed by the Western Australian and Commonwealth government agencies in carrying out their legislated responsibilities in overseeing industries on the Burrup Peninsula;

See above (response to c) and submission by Prof John Black. FARA believes that the WA government has placed short term revenue gain over appropriate protection for the Burrup's world class cultural heritage, irrespective of our numerous formal delegations and submissions.

The Commonwealth government has likewise not been receptive to alarm calls from FARA – e.g. on 25 July 2016 Prof John Black and I met in Karratha with the Federal Dept of Environment's Heritage branch

We alerted them to the harmful levels of emissions soon to be discharged from Yara Pilbara and they undertook to look into this when they met with Yara the next day; however, we still have had no response to our request.

(e) the projected level of fugitive gas and nitric acid leaks from the Yara Pilbara fertiliser and ammonium nitrate plants, their effects on human health, likely effects on rock art and the general environment, and the adequacy of the company responses;

Refer to (b) above.

(f) the failure by Yara Pilbara Fertilisers Pty Ltd, the Western Australian Government or the Federal Government to include risk analysis of establishing an ammonium nitrate plant in close proximity to the rock art, a gas hub and major port and in a cyclone surge zone;

The WA government has pursued a long-term vision of inappropriately transforming the

Burrup peninsula into the largest industrial precinct in the Southern Hemisphere as a magnet for foreign investment and huge royalties, without carrying out proper risk analysis.

However, there had been an alternative: the locating of industry on the purposely cleared Maitland Industrial Estate just south of Karratha – but as the ammonia-based industry was reluctant to spend extra money on piping the gas there, the WA government declared that the expense of establishing the infrastructure made it unviable.

In spite of Yara Pilbara's ridiculously close proximity to the rock art, gas hub and major port, it is also in a cyclone surge zone and only 5.5m above sea level: uncontrollable winds and rising water could damage infrastructure, soak chemicals and result in spontaneous explosion...

(g) the adequacy of the Yara Pilbara plans to protect the communities of Dampier and Karratha and the rock art sites from the consequences of any explosion caused by 'sympathetic detonation' or other factors, including the ability to douse the nitrate stores with sufficient water to prevent a spontaneous explosion;

Yara Pilbara claims that its safety standards are world class but recent and ongoing ammonia leaks and staff casualties do not bear this out. In the event of a spontaneous explosion, FARA is not confident that the company has the necessary strategies in place, and we have the following questions:

- What is the risk of explosion from the YARA plant and what is their emergency plan for extinguishing a blaze? Note: their risk analysis and contingency plan must consider the combined risk of the TAN and ammonia plants.
- Why have the Commonwealth and WA Governments failed to seriously address the possibility of a major explosion?
- Has the threat of significant flooding of one or both plants, due either to a cyclone surge or a tsunami, been included in the risk analysis?
- Did Woodside or the NW Shelf Joint Venture operators object to the ammonium nitrate plant given the proximity to their facilities?
- Given Dampier is the second biggest freight port in the world, and its lights are easily visible from the air, was the risk of terrorism examined?

(h) any related matters.

On its website Yara Pilbara claims, in the 'Cleaner Air / NOx Abatement' section of its Sustainability statement, that -

Yara is a leading producer of complete NOx and SOx abatement solutions including: Green Tech Marine SOx Scrubbers, along with SCR technology for marine vessels; and SCR, SNCR and Hybrid NOx reduction systems for Industrial plants. These can be new installations, rebuilds, refits or upgrades, along with servicing and maintenance packages, and the urea or ammonia reagents which are needed to provide the reduction in NOx emissions.

If Yara is such a leading provider of scrubbers and other reduction systems for industrial plants, why did they not include them in the original design for the TAN plant? Was it just easier to cut corners and save money knowing that the Australian governments, Federal and State, would accommodate their wishes in their eagerness for foreign financial investment?

In our meetings with YARA, they repeatedly expressed their desire to respect our ancient cultural heritage, and yet their actions and inactions clearly indicate a lack of regard for the Burrup rock art.

**FARA strongly recommends that our combined Australian governments refuse to issue an operating license to Yara Pilbara's TAN plant until they can demonstrate that they have done everything possible to reduce their industrial emissions to near zero. Then, we anticipate that other industries on the Burrup can be made to follow suit.**

WA Premier Colin Barnett has repeatedly stated, since 2006, that the Dampier Archipelago deserves World Heritage listing, and yet he never puts it forward to the Federal government for Tentative listing (his most recent opportunity was between Dec 2015 – Dec 2016).

Is it not time that the Premier declares what the WA Government's intentions are for protecting the rock art of the Burrup from industrial emissions?

Has the Government already had discussions with Yara Pilbara about expansion, even beyond the current TAN plant?

There are substantiated reports that Yara is seeking to establish a solar ammonia plant and a solar food growing facility. If approved, should these not be located on the Maitland Industrial Estate, far away from the rock art and further potential damage to culturally significant areas?

Given these plans for potential expansion and previous concerns about the effect of their ammonia leakages, has Yara Pilbara been complicit in forcing the Aboriginal custodians to have their Living Knowledge Centre built, not in Hearson's Cove as they wish, but in Conzinc Bay way up in the northern Burrup?? - conveniently out of sight of the ugly polluting industrial landscape just to the south but also less accessible to the majority of visitors wishing to learn about the cultural significance of this unique rock art precinct.

**List of attachments:**

1. FARA submission to DER, August 2016
2. Listed illustrations 1-5