



22 November 2023

To

Dr Paul Vogel
Chair
Northern Territory Environment Protection Authority
By Email: eia.ntepa@nt.gov.au

Copy to:

Minister Kate Worden: Minister.Worden@nt.gov.au
Northern Territory Environment Protection Authority: NTEPA@nt.gov.au

Dear Dr Vogel,

Proposed expansion of the Arnhem Space Centre – submission on referral

The Environment Centre NT (ECNT) is the peak community sector environment organisation in the Northern Territory of Australia, raising awareness among community, government, business, and industry about environmental issues. We assist people to reduce their environmental impact and support community members to participate in decision-making processes and action.

Thank you for the opportunity to provide a comment on the referral under the *Environment Protection Act* of Equatorial Launch Australia's (ELA) proposed expansion of the Arnhem Space Centre (**Project**).

ECNT submits that the Project clearly has the potential to have a significant impact on the environment, and should be assessed at the level of environmental impact statement (Tier 3), because of the high risk nature of the Project, the high level of complexity, and significant uncertainty requiring further investigation, assessment and review. The reasons for this are set out below.

ECNT notes that this Project comprises a complex industrial rocket launching operation, with a large range of environmental impacts spanning multiple jurisdictions, on a scale unprecedented in Australia.

It also represents the potential militarisation of a remote and precious part of Australia, and could increase the risk of the area becoming a military target. In this regard, ECNT notes the comments by ELA's CEO on Darwin ABC radio recently that the Project could be used to test missile capabilities via contracts with the Australian Department of Defence and the US Department of Defense. ECNT notes the association of Gove historically with a previous weapons testing site, Woomera. A facility at served as a tracking station for rockets launched at the Woomera range by the European Launcher Development Corporation (ELDO) in the 1960s. The ELDO also had plans to develop a launch site at Darwin that were never realised, with the Darwin



site losing out in a battle between European powers to secure an equatorial launch site in their colonial diaspora. French Guiana, offered by France, won instead. The ELDO moved out of Australia altogether, and closed the Gove tracking facility. The Guiana Space Centre is still today the European Space Agency's main spaceport. Noting the devastating impacts of previous weapons testing by Australia and its allies at places like Maralinga and Woomera, particularly on Aboriginal lands and communities, it is paramount that such an operation is subject to the highest degree of scrutiny, with the public – and particularly First Nations communities - fully informed about its impacts and able to have input about them. ECNT disagrees with ELA's alarming self-assessment that the potential impacts of the Project are low, and can be managed through compliance with regulatory approvals and an approved Environmental Management Plan. It is unclear under what legal framework ELA proposes the Environmental Management Plan would be approved and monitored. It is manifestly inadequate for ELA's operations to be managed via a section 19 lease under the *Aboriginal Land Rights (Northern Territory) Act*, which appears to have been the primary approval and regulatory process to date. In ECNT's view, the referral represents a slipshod effort to identify and address environmental impacts of this proposed industry, which could be very significant and far reaching, potentially impacting precious places like the Great Barrier Reef.

1. Secrecy regarding the Project to date

Importantly, the referral of the Project represents the first time that the public has had the opportunity to comment on the Arnhem Space Centre.

ECNT notes that there has been a troubling degree of secrecy attending the approval of the existing facility. Of note, despite the existing facility's potentially significant environmental impact, the NTEPA decided it did not require any environmental impact assessment at all. In order to understand the basis of that decision, ECNT sought a number of documents via freedom of information on 23 October 2019, including:

- (a) The notice of intent provided by ELA to the NTEPA, including the proposed environmental management plan;
- (b) The advice provided by the NTEPA to ELA to ensure that potential impacts and risks to the environment are minimized; and
- (c) Comments from NT Government advisory bodies.

The documents have never been released to ECNT. ECNT was advised that ELA lodged a complaint about the NT Government's decision to release information in March 2021, but has heard nothing since that date, including about the outcome of that complaint to the Information Commissioner. It appears that the release of basic information about the facility to the public was resisted by ELA, for reasons which remain unclear. Such secrecy impacts ELA's social licence to operate.

2. Summary of Project

The Project involves a very significant expansion of the existing Arnhem Space Centre at Gulkula in North East Arnhem Land on the Arnhem Land Aboriginal Land Trust. This facility currently occupies 60 hectares pursuant to a 40 year lease with the Northern Land Council, and three rocket launches took place in June and July 2022.

The Project is located in remote north-east Arnhem land, part of the Dhimurru Indigenous Protected Area. It is also located within the Gove Peninsula and North-east Arnhem Coast Site of Conservation significance, with

18 threatened species, several endemic plant and animal species, and a largely intact savanna woodland ecosystem. It is less than 40km by road from Nhulunbuy.

If approved, the Project's footprint will increase 10-fold, to 630 hectares. There will be an additional 14 rocket launch pads (instead of only one). Per the referral report:

“It is projected that there will be eight to twenty overlapping launch campaigns per year of about three weeks' duration, with one to three launches per campaign. Consequently, there will be between 16 and 60 launches per year when Phase 2 of the ASC is fully operational.”

This would mean that there would be a rocket launch more than once a week on average, an extraordinary increase from current operations with probable significant impacts. Research undertaken by the [New Zealand Government](#) identified seven possible threats from rocket debris, including (1) direct strike causing mortality (2) noise disturbance (3) toxic contaminants (4) ingestion of debris (5) smothering of seafloor organisms, preventing normal feeding and/or respiration (6) Provision of biota attachment site and (7) floating debris. While they assessed the risk to be low in the case of 10 repeated launches, the authors stated that at 100 launches the risks could be moderate, and with 1000 could become high. There is little analysis of, or even acknowledgement of, these risks in the referral report.

The possible trajectories for the launched missiles are alarmingly expansive, and span multiple jurisdictions (NT, Qld, Papua New Guinea, South Australia) and areas of high ecological significance, including the Great Barrier Reef. While assertions are made in the referral that national parks and marine parks will be avoided, it is unclear how this will be achieved. There could be risks to marine and terrestrial life and ecosystems from such debris, but also potentially to unwitting humans, from prawn trawlers in the Gulf of Carpentaria, to Torres Strait Islander fishers, to tourists in the Great Barrier Reef.

Table 9 Proposed recovery zones¹⁸

Zone	Area	Frequency
A	Mainland Australia and within 3km of mainland Australia's coastline	Plan to recover after every launch (where practicable)
B	Gulf of Carpentaria (marine only)	Plan to recover after every launch. (where practicable)
C	Waters >3km off mainland Australia and within 200 nautical miles (EEZ boundary) of Australia's coastline	Plan to recover after every launch. (Where practicable)
D	Great Barrier Reef / PNG Waters	Plan to avoid
E	International waters outside of Australia's EEZ	Not recovered

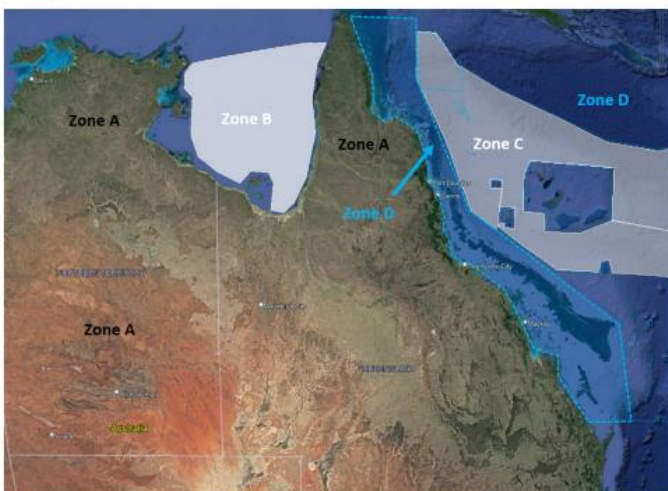


Figure 8 Proposed Recovery Zones

3. Risks associated with the Project

The risks associated with the Project have been minimized, with scant or absent reasoning or substantiation of this assessment provided.

There is a distinct lack of information in the referral, and considerable knowledge gaps that must be filled, including:

- (a) There has been inadequate stakeholder engagement, with selective engagement with corporate entities including Gumatj Aboriginal Corporation, Dhimurru Aboriginal Corporation, Laynhapuy Aboriginal Corporation and the Northern Land Council. There does not appear to have been any wider consultation with First Nations and other communities on the Gove Peninsula. While there are a number of organisations listed at Table 11, it is not clear that ELA has discussed the actual Project and its environmental impacts with them. The stakeholder engagement appears to breach the NTEPA's [stakeholder engagement guidance](#);
- (b) There is no information provided about the purpose of the rockets which will be launched from the site, their capacities, connections to defence and/or weaponry, and associated risks;
- (c) There is no information about noise and light pollution from weekly rocket launches, and the potential impacts on human and animal life, and the environmental and cultural values of the area;
- (d) There is inadequate information provided about the risks to climate and the Earth's protective ozone layer from the cumulative impacts of increased rocket launches, which the [US National Oceanic and Atmospheric Administration](#) found could be considerable due to the increase in the amount of soot injected into the stratosphere. This could lead to an annual temperature increase in that layer of 1 to 4 degrees Fahrenheit, slow down tropical jet streams, and degrade the protective ozone layer.
- (e) There is no information about national security risks that could be posed by the potential militarization of this area of Arnhem Land, including the risk of this area becoming a military target;
- (f) There is no information about the potential environmental, cultural and social impacts of the Project on Yirrkala, Nhulunbuy, outstations and other areas of residence on the Gove Peninsula;
- (g) Scant information is provided about the risk of explosion of rocket fuel or other hazard materials at the site, apart from brief dot points (see page 15 of referral);
- (h) Inadequate information is provided about the potential risks to human, animal and plant life in the case of launch failure, and management systems designed to mitigate these risks. While ELA characterizes launch failure as uncommon, they note that BBIX rockets have a launch failure rate of approximately 2%, which in ECNT's view represents a moderate to high risk;
- (i) Inadequate information is provided about the trajectory of launched missiles, or the risks of fallen debris across multiple jurisdictions and how these will be mitigated (eg (1) direct strike causing mortality (2) noise disturbance (3) toxic contaminants (4) ingestion of debris (5) smothering of seafloor organisms, preventing normal feeding and/or respiration (6) Provision of biota attachment site and (7) floating debris)
- (j) No information about impacts on threatened species including green turtles, flatback, hawksbill and olive ridley turtles;
- (k) No biodiversity surveys appear to have been undertaken, with ELA relying on out of date ecological studies prepared for a mine on the site that are not fit for assessing the risks of the Project (eg see reliance on vegetation study by Mitchell 2015);
- (l) No information has been given regarding the potential impacts of vegetation clearing at the site, with the information requirements falling far short of the NT Planning Guidelines.

To reiterate, the Project should be assessed at the level of environmental impact statement.

Yours faithfully,



Kirsty Howey
Executive Director