

Submission on Additional information on the Draft SER

Equatorial Launch Australia Pty Ltd – Phase 2 Expansion of the Arnhem Space Centre

This submission is made under regulation 126 of the Environment Protection Regulations 2020

Government authority: Heritage Branch – Department of Lands, Planning and Environment

Summary: Heritage Branch and ELA have worked closely to address concerns raised by the first submission, and these have been addressed in detail. The comments here are primarily small revisions to documents to ensure ongoing heritage management strategies and documents are clear and fit for purpose.

Section of Referral	Theme or issue	Comment
Attachment A-Additional Information to the SER, Section 3 Attachment C-Mission Optimisation Process	Describe the process to define and identify the inhabited areas that would be avoided (in NT jurisdiction)	This comment does not explicitly refer to Heritage Branch concerns, though we are included in the response. Heritage Branch are satisfied that the assessment process referred to in Attachment C-Mission Optimisation Process addresses raised concerns for archaeological places and objects. It should be retained in its current form as part of the ongoing heritage management commitments.
Attachment A-Additional Information to the SER, Section 5 Attachment C-Mission Optimisation Process	Describe the action ELA will take where consultation and analysis of spatial information indicates physical surveys need to be undertaken in order to identify environmentally important areas	Heritage Branch are satisfied that the assessment process referred to in Attachment C-Mission Optimisation Process addresses raised concerns for archaeological places and objects. It should be retained in its current form as part of the ongoing heritage management commitments.

<p>Attachment A-Additional Information to the SER, Sections 6, 7 and 8</p>	<p>Describe how relevant stakeholders (e.g. Aboriginal landholders, pastoral lessees) (particularly down range) will be identified, contacted and informed that they may be potentially impacted land managers</p>	<p>Both sections reference Attachment D-ASC Stakeholder Engagement Plan for meeting these comments. Heritage Branch is not currently included in the Stakeholder List and Engagement Commitments and should be contacted as part of planning to advise on known archaeological places and objects in proposed booster landing sites (this has been detailed elsewhere in the submission). Our inclusion should be considered in Annex A to C, as appropriate.</p>
<p>Attachment D-ASC Stakeholder Engagement Plan</p>	<p>Provide supporting evidence that potentially affected stakeholders (particularly down range) have already been consulted and/or involved rather than informed only</p> <p><i>and</i></p> <p>Describe the process, regulatory framework (e.g. access or permits required under other NT or Commonwealth legislation) and timeframe that may be required to permit access to potentially impact land managers</p>	<p>Additional to this, the Heritage Council's inclusion on the ASC Master Contact List in Attachment D, Annex D, should be replaced by the Heritage Branch, and our contact details of (08) 8999 5039 and Heritage.Branch@nt.gov.au included.</p>
<p>Attachment A-Additional Information to the SER, Section 13</p>	<p>Describe and map the area of potential air quality impacts resulting from the four potential pollutants of concern at each of the 14 proposed launch pads (particularly the launch pads 2-9 and 2-11 (pink launch pads shown on Figure 5 of the referral) (or provide the sensitivity of modelled concentrations for all launch pad locations)</p>	<p>Heritage Branch are satisfied that the response has addressed our concerns.</p>
<p>Attachment A-Additional Information</p>	<p>Demonstrate there is no potential significant impact from sulphur compound emissions</p>	<p>Heritage Branch are satisfied that the ELA commitment to undertake a systematic archaeological survey will appropriately address emission impact concerns for undiscovered archaeological places and objects within the project area.</p>

to the SER, Section 16		
Attachment A-Additional Information to the SER, Section 17d	Using the new maps requested in item 13 above, to be able to visually compare ground level concentrations in proximity to values, show: d. location of environmental values such as sacred site, culturally significant sites, sensitive vegetation/high biodiversity and water bodies.	Impacts to protected archaeological places and objects have not been considered as part of this response. However, we are satisfied that the ELA commitment to an archaeological survey scope developed by Heritage Branch is sufficient to address concerns raised, and provide sufficient data to manage potential impacts appropriately,
Attachment A-Additional Information to the SER, Section 21	Confirm the area (in hectares, on a map and shp files), and vegetation types proposed to be: a. Cleared for the Proposed Action b. Affected / impacted (but not by clearing)	Heritage Branch are satisfied that the response has addressed our concerns.
Attachment A-Additional Information to the SER, Section 30	In consultation with the Heritage Branch, (formerly Department of Territory Families, Housing and Communities, now Department of Lands, Planning and Environment), provide evidence that ELA has: a-f	The Heritage Branch have worked closely with ELA to address these concerns, and together developed an appropriate scope of works and processes to assess and manage risks to archaeological sites and objects. ELA agreed to these scopes and processes, which have been reproduced in a condensed form in Attachment A. The Heritage Branch understands that the archaeological survey component of this response is being undertaken at time of writing. We are satisfied that concerns have been appropriately addressed, and that the ongoing management of risks to archaeological places detailed is appropriate for this project. The Heritage Branch response to ELA can be found as Attachment O-ELA-NTHeritage-RFI Response, with the agreed survey area found as Attachment P-NT Heritage Agreed Archaeological Survey Areas.
Attachment A-Additional Information to the SER, Section 31	Provide further information that identifies potential impacts, including cumulative impacts, from rocket emissions on potential archaeological sites (and if these impacts differ in the	Heritage Branch are satisfied that the pending results of the archaeological survey coupled with the ELA response should address concerns raised during the initial responses to the SER.

	wet season and the dry season). Identify measures that will be implemented to avoid, or mitigate these impacts.	
Attachment A-Additional Information to the SER, Section 32	Provide the process to ensure potential impacts on underwater heritage will be avoided	Heritage Branch are satisfied that the assessment process referred to in Attachment C-Mission Optimisation Process addresses raised concerns for underwater archaeological places and objects. It should be retained in its current form as part of the ongoing heritage management commitments.
Attachment A-Additional Information to the SER, Section 33	In the event of a failed launch, demonstrate how impacts to cultural heritage are addressed	Heritage Branch are satisfied in the response, and note that the unexpected finds and stop work procedures referenced by ELA have been reviewed and revised by us to be fit for purpose and reflect good practice. The response should be retained in its current form as part of the ongoing heritage management commitments. We note that the referenced sections of Attachment C are also suitable in addressing our raised concerns.

Ms Lisa Bradley
Department of Lands, Planning and Environment
PO Box 3675
DARWIN NT 0801

Dear Ms Bradley

Re: Invitation to comment – Supplementary Environmental Report - Equatorial Launch Australia Pty Ltd - Phase 2 Expansion of the Arnhem Space Centre

The Department of Lands, Planning and Environment (DLPE) has assessed the additional information provided in relation to the Supplementary Environment Report (SER) and provides the following comments.

Flora and Fauna Division

The Flora and Fauna Division have reviewed the additional information and have provided comments in **Attachment 1**.

Most of the biodiversity-related request for information has been adequately addressed. The Flora and Fauna Division considers the expansion of the Arnhem Space Centre to pose a low risk to regional populations of threatened species.

Additional analysis by the Flora and Fauna Division shows that there are likely to be some impacts to wet Monsoon vine thickets, but these impacts would be unlikely to be considered significant at a regional or even local scale due to the small areas affected. Management measures should be implemented to ensure the remaining Monsoon vine thicket patches are protected from all relevant threats.

Environment Division

The Environment Division has assessed the additional information provided and has no further comment in relation to the SER.

Rangelands Division

Land Assessment Branch

The Land Assessment Branch has reviewed the additional information and has no further comment at this time, further comment will be provided when a land clearing application is lodged.

Vegetation Assessment Unit

Pursuant to the *Planning Act 1999*, consent is required for the clearing of native vegetation of more than one hectare in aggregate of land, on land subject to the Clearing of Native Vegetation Overlay. Applications for permits to clear native vegetation on unzoned land are assessed against the requirements of the Northern Territory Planning Scheme 2020.

Equatorial Launch Australia Pty Ltd (ELA) is in the process of lodging a land clearing application to clear approximately 115.1ha of native vegetation as part of the Phase 2 Expansion of the Arnhem Space Centre. It is noted that the clearing area proposed in the 'Additional information to the SER - Equatorial Launch Phase 2 Expansion ASC Ref. EP2023/031' has altered. Before lodgement, the land clearing application will need to be updated to reflect these changes.

Weed Management Branch

The Weed Management Branch has reviewed the additional information provided and has no further comment.

Water Resources Division

Groundwater

There are no comments to provide in addition to previous comments, as no groundwater extraction has been proposed. Groundwater has been proposed as a potential future water supply, however, no initial investigations/assessments have been made at this stage.

Licensing and Regulation

The additional information has been reviewed regarding the proposed water extraction for the proponent's operation. The construction of the dam to facilitate the estimated 15ML/year required for the operation may require a permit to interfere with a waterway and a surface water extraction licence. The guidance to the proponent remains unchanged based on the updated information. It is recommended that the proponent engage with the Water Resources Division to initiate preliminary meetings to effectively tailor the supporting information needed for their permit and licence applications.

Surface water

The Water Assessment Team have no further comment in relation to the additional information provided.

Further information can be obtained from the DLPE website¹ and by contacting water.licensing@nt.gov.au or call 08 8999 4455.

Should you have any further queries regarding these comments, please contact the Development Coordination Branch by email DevelopmentAssessment.DEPWS@nt.gov.au or phone (08) 8999 4446.

Yours sincerely



Maria Wauchope
Executive Director Rangelands

11 October 2024

¹ <https://nt.gov.au/environment/water>

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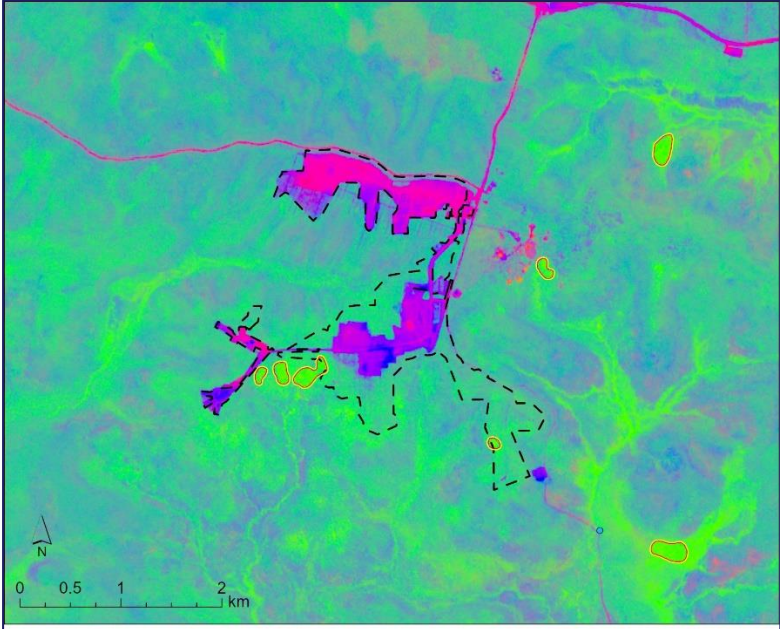
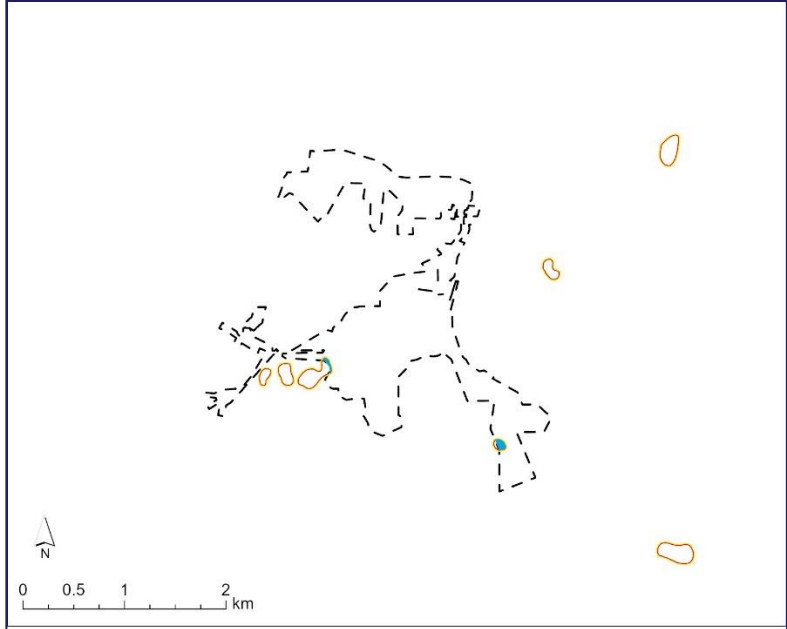
Attachment 1

Equatorial Launch Australia Pty Ltd – Phase 2 Expansion of the Arnhem Space Centre

This submission is made under regulation 123 of the Environment Protection Regulations 2020

Government authority: Department of Lands, Planning and Environment – Flora and Fauna Division

Section of Referral	Theme / issue	Comment
Attachment A - Additional Information to the SER (p.9)	Land - Terrestrial ecosystems	<p>The NT EPA direction required the proponent to define the methodology for identifying areas of high ecological value in down range locations and the actions the proponent will take when this analysis indicates physical on-ground surveys are required.</p> <p>The proponent has provided details in an updated Mission Optimisation Process (Attachment C) which the Flora and Fauna Division consider to be adequate.</p>
Attachment A - Additional Information to the SER (p.19)	Land - Terrestrial ecosystems	<p>The NT EPA direction required the proponent to confirm the area and vegetation types proposed to be cleared.</p> <p>The proponent has provided a map (Attachment L) and spatial data (Attachment Q) indicating that the total area proposed for clearing is approximately 120ha.</p> <p>The Flora and Fauna Division notes that the 'proposed fire trail' spatial file is incorrect (shown as being in the Sea of Japan).</p>
Attachment A - Additional Information to the SER (p.19-20)	Land - Terrestrial ecosystems	<p>The NT EPA direction required the proponent to identify, value and map areas of monsoon vine forest/thicket.</p> <p>The proponent has provided maps showing significant vegetation and weeds (Attachment M and Attachment S), a Map of Significant Vegetation (Attachment N), and a map of the project area showing the clearing footprint (Attachment L).</p> <p>The Flora and Fauna Division notes that the maps at Attachments L, M and S appear to show the patches of monsoon vine forest/thicket in a different location to the updated Vegetation and Habitat Assessment (Attachment N).</p>

Section of Referral	Theme / issue	Comment
		<p>Staff from the Flora and Fauna Division have reviewed the information provided, along with interpretation of aerial imagery from Sentinel-2 (Dry Season fractional cover composite 2022 - B, NIR, SWIR) and identified patches of wet Monsoon vine thicket which are bright green and highlighted at Figure 1.</p> <p>Riparian rainforest and dry Monsoon vine thicket are not delineated in Figure 1 but are likely shown in green in Figure 1 and appear to be extensive across the local area.</p> <div style="display: flex; justify-content: space-around;"> <div>  <p> <ul style="list-style-type: none"> • NT Springs Spring rainforest Area of interest <p>Sentinel-2 Dry Season fractional cover composite 2022 [B, NIR, SWIR] - bright green/yellow areas indicate persistent green veg</p> </p></div> <div>  <p> <ul style="list-style-type: none"> Spring rainforest Area of interest Overlap <p>Approx. 6% of the spring rainforest polygons area overlaps with the Area of interest.</p> </p></div> </div> <p> Figure 1 (left) Spring rainforest identified through Sentinel-2 Dry Season fractional cover composite imagery Figure 2 (right) Areas of interest overlapping with identified spring rainforest patches. </p>

Section of Referral	Theme / issue	Comment
		<p>Figure 1 suggest that small areas of wet Monsoon vine thicket (c. 6% of the mapped local extent of this vegetation) overlap the area of interest and would be cleared for the proposal. The overlap occurs in polygon data labelled “1) Heritage Assessment Zone”; and “ii) Tree Removal – Native 2”. It is noted that the proponent has committed to not clear Monsoon vine thicket and to protect patches with a non-clearing buffer of at least 50m in most areas (Response 23). The location of the patches in Figure 1 suggests that the commitment to implement buffers would not be achieved and that a small area of wet Monsoon vine thicket will be directly impacted by the proposal (Figure 2).</p> <p>While some impacts to wet Monsoon vine thickets are likely, the area impacted will be a small percentage (6%) of the local patches identified in Figure 1. This is not likely to represent a significant impact at a regional or even local scale, particularly if the proponent implements effective measures to ensure the remaining patches of Monsoon vine thicket (dry and wet) adjacent to the proposal are protected from edge effects and threatening processes.</p> <p><u>Flora and Fauna Division recommendation:</u></p> <ul style="list-style-type: none"> • An approval condition is considered, requiring the proponent to revise and update the Vegetation and Weed Management Plan (Appendix S) for the site. The Plan should include information on the baseline condition of the vegetation and include measures to manage all relevant threats to the vegetation (including invasive flora, fire, dust, altered hydrology, introduced herbivores).
Attachment A - Additional Information to the SER (p.20)	Land - Terrestrial ecosystems	<p>The NT EPA direction required the proponent to review and revise the conservation status and risks to species classified as threatened under the <i>Territory Parks and Wildlife Conservation Act 1976</i> and the <i>Environment Protection and Biodiversity Conservation Act 1999</i>.</p> <p>The proponent has provided this in an updated Vegetation and Habitat Assessment (Attachment N). The Flora and Fauna Division considers that the proponent has adequately addressed this part of the direction.</p>