



ARNHEM SPACE CENTRE PRINCIPLES AND PROTOCOLS FOR LAND/SEA ACCESS AND VEHICLE RECOVERY

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1 PURPOSE

Equatorial Launch Australia acknowledge that the land the Arnhem Space Centre sits upon and the lands over which rockets will be launched and some come to rest are Aboriginal as well as inter-state lands or waters. We recognise the continuing connection of the Aboriginal people to the land and waters, and thank them for protecting this country, coastline and its ecosystems since time immemorial. We pay our respects to their Elders past and present, and extend that respect to all First Nations people who participate in our launch activities.

Land and water access will be required to facilitate the recovery of ELA and/or Client rocket vehicle assets following some launches from Arnhem Space Centre (ASC). ELA wants to ensure that this process is undertaken in genuine partnership and cooperation with Land Owners, Land Managers (including Ranger groups) as well as land/sea Protected Area Management Agencies (e.g. Marine Parks) in the most respectful and appropriate way possible.

Recovery will be managed in accordance with the ASC Operations Manual procedures and the ELA Recovery Plan and specific requirements and instructions as required for each launch. ELA will also assure adherence to the set of principles in this document which are aimed to ensure the appropriate steps are taken when ELA and Launch Clients are accessing land/water for retrieval purposes.

The principles covered in this document include:

- Communication to Land Managers & Protected Area Management agencies
- Access processes to up-range and down-range recovery sites
- Site impact remediation
- Recovery operations safety and emergency

2 PRINCIPLES FOR RECOVERY FROM RANGE AREAS

2.1 COMMUNICATION TO LAND MANAGERS & PROTECTED AREA MANAGEMENT AGENCIES

- a. Impacted Land Managers (where Traditional Owners' land has been identified as likely landing zone of vehicle assets) and/or Protected Area Management Agencies will aim to be identified as early as possible during a launch campaign through access consultation with the State Governments and State Environmental agencies.
- b. ELA will engage with impacted Land Managers, the Aboriginal Areas Protection Authority (AAPA) and Protected Area Management Agencies through direct briefing on the launch campaign including all available information on launch dates and probable landing locations.
- c. ELA will invite impacted Land/Water Managers to attend ELA's community Safety and Retrieval Committee (SRC) leading into each launch campaign for ongoing engagement and communications related to the launch including identifying any particularly sensitive areas in the probable recovery zone.
- d. ELA will arrange for the assembly/prepositioning of nominated Land/Water Managers (likely senior Rangers for the probable recovery areas) at the Arnhem Space Centre or in an appropriate location as agreed prior with the impacted stakeholder group prior to the rocket launch.



- e. Once landing location/s have been identified, the SRC, including the impacted Land/Water Manager/s will be notified by ELA.
- f. ELA and the relevant Land/Water Manager/s may be required to meet swiftly to discuss the landing location and proposed retrieval activities including the correct protocols to addressing or accessing sensitive/sacred sites should these areas be impacted. ELA's retrieval activities will be guided by the Land Managers, in particular to gain an understanding of any cultural sensitivities or geographical characteristics of the landing location that could impact upon retrieval activities.
- g. Once retrieval has been completed, the appropriate Land Manager/s will be notified by ELA and documentary evidence of the retrieval activities and the landing location will be provided to the Land Managers and environmental agencies if required.

2.2 ACCESS TO UP-RANGE AND DOWN-RANGE RECOVERY SITES

- a. Recovery activities will aim to take place within 48hrs of launch (or the contracted term with ELA Client)
- b. A helicopter (for land) and boat (for water) will be the preferred method of recovery and may involve down-range re-fuelling and land transport aspects at agreed locations.
- c. ELA will aim for there to be sufficient capacity in the helicopter/boat for a nominated senior representative of the Land/Water Manager and/or Traditional Owners of the recovery area to be invited to participate in recovery activities. However, some flights will have more cargo than others and may have additional critical personnel to support retrieval. Space will therefore be determined where weight and balance can accommodate. In circumstances where cargo weight prevents the carriage of traditional Aboriginal owners or representative rangers on the retrieval flight, ELA facilitates a reconnaissance flight with TOs and rangers so they may inspect the landing site and provide advice on retrieval.
- d. For Land recovery, Living vegetation such as small shrubs may be required to be trimmed to improve helicopter landing zone in the interest of safety, but living shrubs where possible are not to be removed completely, and living trees not cut unless it would be impossible to safely recover a component without doing so. Standing dead wood can be cut to improve landing zone and prevent sling gear from snagging during lifting operations.
- e. All recovery activities undertaken which impact upon the land and water environments will be documented with photos and videos and shared with the relevant Land/Water Manager at the conclusion of recovery activities.
- f. The hardware may either be transported directly from its staging site to ASC, or be transported to previously agreed and permitted nearby road- or airstrip-accessible rally point, loaded into a truck or airplane, then transported to ASC.
- g. ELA will conduct a de-brief following the recovery activities with the SRC (including AAPA where required) to identify improvement of these protocols for future launches which involve land or water-based retrievals.

2.3 LAND SITE RECOVERY

To ensure compliance with the Northern Territory and Queensland Environmental Protection Authority guidelines, and in accordance with the ELA Recovery Plan, site remediation work (where required) will be undertaken during the recovery process.

Site remediation work with respect to a potentially impacted sacred site is not endorsed or recommended by the Land Council. Such work may be a criminal offence under the Sacred Site Act. Instead, if ELA becomes aware (through the Land Council, AAPA, SRC, cultural monitors, rangers engaged to assist with the recovery activity or otherwise) of a potential sacred site disturbance, it will:

- a. notify both the Land Council and AAPA; and



- b. cease retrieval activity until such time as guidance from the Land Council and AAPA is given.

Where remediation work can be undertaken, it will include:

- c. All impact sites remediated to pre-disturbance visual character
- d. Filling any depression formed by the component's landing
- e. Distribution of vegetative matter, such as leaf litter from the surrounding area, over disturbed soils
- f. All tools used for remediation cleaned of soil and plant material, before attending and leaving the site, to prevent the spread of invasive species
- g. Personnel attending the site will practice Leave-No-Trace Australia¹ guidelines with regards to environmental disturbance, gear, trash, and body waste
- h. Wherever possible, trees involved in the entanglement of parachutes are not to be damaged more than is necessary to extract the chute, with minor limb removal being preferred to major limb removal or cutting of entire trees
- i. ELA will record the retrieval and remediated area location for review in 12 months, working with local relevant rangers

2.4 WATER SITE RECOVERY

To ensure compliance with the EPBC Matters of National Environmental Significance (MNES), ELA conducts impacts assessments prior to launch and from this includes any specific requirements into the recovery plan for that launch.

ELA will ensure all members taking part in recovery are briefed on any particular MNES considerations prior to conducting recovery operations.

In some cases, ELA may engage in subject matter experts to assist in recovery planning to ensure best approaches are undertaken.

Recovery personnel attending the site will practice Leave-No-Trace Australia² guidelines with regards to environmental disturbance, gear, trash, and body waste

2.5 RECOVERY OPERATIONS SAFETY AND EMERGENCY

Safety and emergency procedures are addressed under ELA Operations Manual. The safety of all individuals engaged in the recovery process will be paramount, therefore anyone undertaking support in recovery operations must:

- a. Undergo appropriate ASC site induction
- b. As required, attend recovery operations planning
- c. Complete any specific training required to sport the method of recovery - e.g. Helicopter or marine vessel training as arranged by ELA
- d. As required, be available to join recovery team for recovery operations

ELA and relevant SRC groups will put in place appropriate commercial arrangements to support these activities.

¹ <https://www.Int.org.au/programs/7-principles/>

² <https://www.Int.org.au/programs/7-principles/>