2. Legal and Governance

Legal Considerations

Legislation and Treaties

1. Space safety obligations are imposed on Defence by the Commonwealth *Space (Launches and Returns) Act 2018* (SLR Act) and supporting Rules, other Commonwealth legislations, and international space treaties that have been ratified by Australia. Each of these sources is explored below.

2. ***Space (Launches and Returns) Act 2018*.** The primary Commonwealth legislation for Australian space activities is the SLR Act. The SLR Act establishes a system for the regulation of Australian space activities and implements certain of Australia's obligations under the United Nations space treaties.

3. The Act:

a. requires persons undertaking certain space activities in Australia and Australians undertaking the same outside Australia to have these activities approved by the Minister

b. has provisions regarding liability for damage caused by space objects

c. requires registration of orbital space objects

d. details when accidents or incidents are to be investigated and by whom.

4. However, the offence and civil penalty provisions of the SLR Act do not apply to the Commonwealth, or a person acting as an employee or agent of the Commonwealth, or as a member of the Defence Force.

> ***Note**: An agent is a person who is authorised by the Commonwealth to conduct space activities on behalf of the Commonwealth and who has consented to perform that role*

5. As a consequence of the offence and civil penalty provisions not applying generally to Defence space activities, there is no requirement for Defence to obtain licences/permits from the Minister for the following Defence activities:

a. operating a launch facility in Australia, or doing anything directly connected with operating a launch facility in Australia

b. launching a space object (from a launch facility in Australia, an Australian aircraft that is in flight, or from a foreign aircraft in the airspace over Australian territory)

c. launching a space object from a facility outside Australia, where Defence is a responsible party for the launch

d. returning a space object to a place or area in Australia

e. returning a space object to a place or area outside Australia, where Defence is a responsible party for the return.

***Note**: Whilst Defence is not required to gain these approvals from the Minister, it is likely that the Minister's rules, standards and methods would be used as one benchmark to determine Defence's liability in the event of an accident*

6. However, the Commonwealth (including Defence) is still bound by the remainder of the Act, which includes:

a. liability for damage caused by space objects

b. registering of orbital space objects

c. investigation of accidents or incident.

7. Collaborations between Defence and commercial entities, foreign militaries or other organisations may result in an agent of Defence conducting space object launch, operation or return. When activities are authorised to be carried out by an agent, Defence is liable for damage caused by the activity. It is incumbent on the Defence to ensure space safety obligations are carried out by an agent.

8. **Other relevant Commonwealth legislation**. In addition to the SLR Act, other legislative requirements may impact Defence space activities. Requirements may be specific to different stages of a space activity, for example, specific to launch or return, or specific to payload operation. Defence must comply with all applicable domestic legislative requirements, including but not limited to the legislation below:

a. *Defence Act 1903, Defence Regulation 2016, Woomera Prohibited Area Rule 2014.* The Defence Act and subordinate regulations were established to allow for the Naval and Military Defence of Australia and governs how the Australian Defence Force operates. The Woomera Prohibited Area Rule details the requirements for access and activities within the area

b. *Work Health and Safety Act 2011.* The Act aims to protect workers and other persons against harm to their health, safety and welfare through the elimination or minimisation of risks arising from work, promoting improvements in work health and safety (WHS) practices, promoting the provision of advice, information and training in WHS and providing a framework for continuous improvements. Defence must meet the requirements of the Act, noting the specific provisions outlined within, in relation to the Defence of Australia. Defence must also ensure WHS obligations are met when leveraging agents of Defence

c. *Explosives Act 1961*. The Act, and regulations, provide for the handling and transport of Defence explosives and Explosive Ordnance. Defence's Explosive Safety Regulatory Framework has been establish to assist Defence with meeting these legislated requirements. Defence must comply with the Explosives Act

d. *Australian Radiation Protection and Nuclear Safety Act 1998.* The Act aims to protect the health and safety of people and protect the environment from the harmful effects of radiation. Defence must comply with the Act noting the provision stating that the Act is not to prejudice Australia's Defence or national security

e. *Airspace Act 2007*. The Act allows the Civil Aviation Safety Authority (CASA) to determine the volume of airspace from ground or water, to a specified altitude, to be controlled airspace and to designate an area of the Australian territory as restricted, dangerous or prohibited. Defence must work with CASA to minimise the risk to civil aviation presented by Defence space activities

f. *Radiocommunications Act 1992*. The Act provides for management of the radio spectrum to allow for commercial purposes, and defence, national security and non-commercial purposes. This includes planning for spectrum use and allocation; licensing requirements for usage of parts of the spectrum, usage of particular apparatus, or usage for specified purposes; and prevention of interference with radio emissions (particularly where doing so may impact the safety of persons). The Act is administered by the Australian Communications and Media Authority (ACMA), which liaises with the Defence Spectrum Office where relevant to Defence spectrum matters. ACMA also coordinates Australian 'filings' with the International Telecommunications Union (ITU).

***Note**: Defence may have exemptions to the application of certain provisions, and legal advice should always be sought on the application of legislation in particular circumstances.*

9. **International Treaty obligations.** Australia has signed and/or ratified six international Treaties that have the potential to affect Defence's space activities, as follows:

a. *Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and other Celestial Bodies 1967*. The Treaty provides the principles governing the activities of states in the exploration and use of outer space, including the moon and other celestial bodies. It sets out guidelines for the peaceful use of space, and prohibits the placement of weapons of mass destruction in orbit around the earth or their installation on other bodies in outer space. The Treaty also prohibits military activities on celestial bodies but allows military presence in space, as long as it is for peaceful purposes

b. *Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space 1968.* The Agreement requires states, upon request, to provide assistance to the launching states in recovering personnel and space objects that return to earth outside the territory of the launching state

c. *Convention on International Liability for Damage Caused by Space Objects 1972.* The Convention outlines the requirements associated with international liability for damage caused by space objects. It states that the launching state is absolutely liable for damage on earth (people or property on the ground), or to aircraft in flight. However, liability associated with space objects in space is determined on a fault basis

d. *Convention on Registration of Objects Launched into Outer Space 1976.* The Convention sets the requirement for the content and maintenance of a register of space objects

e. *Agreement Governing the Activities of States on the Moon and other Celestial Bodies 1979.* The Agreement governs the activities of states on the Moon and other celestial bodies. The agreement prohibits the placement of nuclear and other weapons of mass destruction on the Moon or other celestial bodies and the establishment of military bases, installations, and fortifications on the Moon

f. *Convention and Constitution of the International Telecommunications Union 1994.* The Convention establishes and provides for the functioning of the ITU, the United Nations specialised agency for information and communication technologies. Relevant to space activities, the ITU allocates global radio spectrum and satellite orbits, known as 'filings', and seeks to ensure an interference-controlled environment and equitable access to use of the electromagnetic spectrum and geostationary orbits for states.

10. In addition to these treaties, the safe and responsible use of space is a topic that continues to be explored by international bodies, such as the United Nations. For example, the *UN Committee on the Peaceful Uses of Outer Space, Guidelines for the Long-Term Sustainability of Outer Space Activities* advocates for the development of national and international practices and safety frameworks for conducting outer space activities, while allowing for flexibility in adapting such practices and frameworks to specific national circumstances. Some space-faring states have also issued national policy; such as the United States Department of Defence (DoD) *Tenets of Responsible Behaviour in Space*, a non-binding instrument that provides direction to the DoD as to professional military behaviour in space. As such, there is an evolving body of international opinion and practice regarding both civil and military space activities. While the Australian Government has not yet adopted specific guidelines or standards, its commitment to being a responsible actor in space is clear. Defence will align with the policies and practices of the Australian Space Agency where practicable to promote a consistent approach across Government.

The Defence Instruction

11. By Accountable Officer Instrument of Appointment, the Chief of Joint Capabilities (CJC) is appointed as the Defence Spaceworthiness Authority. The *Defence Instruction, Military Command Support Provision 3* (MCS3), requires the Defence Spaceworthiness Authority to establish, manage and review the effectiveness of the Defence Space Safety Program (DSSP) encompassing:

a. launch of Defence space objects from Australian launch facilities

b. launch of space objects containing Defence payloads from a facility located outside Australia

c. return of Defence space objects to a place or area in or outside Australia

d. space safety assurance aspects of on-orbit operations between launch and return

e. independent investigation of accidents involving Defence space objects

f. the appointment of an authorised person(s) for the issue and revocation of space safety authorisations (SSAs)

g. imposition, variation or removal of conditions on the SSAs referred to in paragraph 11f.

***Note**: SSA is the generic term for any formal notification document/artefact issued in response to an application from the regulated community in accordance with the regulations. SSAs include, but are not limited to, launch, return and payload permits, and launch facility licences.*

Governance Considerations

The Defence Aviation Safety Authority and the Australian Space Agency

12. Within Australia, the Defence Aviation Safety Authority (DASA) and the Australian Space Agency (ASA) perform similar regulatory roles in their respective space sectors. Both regulatory authorities have frameworks for the assurance and management of space safety, and both are responsible for the promulgation of effective regulations to support their respective frameworks. While it is intended that the two regulatory organisations work similarly to each other, they operate under different legal authorities.

13. DASA maintains the Memorandum of Understanding (MoU) on *Efforts to Enhance and Promote Space Safety* with the ASA which sets out a framework for the two organisations to work together in a complementary fashion, to maintain and improve civil and Defence space safety.

The Authority of the Defence Space Safety Regulator

14. The ASA administers the SLR Act and its subordinate Rules, which are legislated instruments. Director General (DG) DASA, on the other hand, is appointed as the Defence Space Safety Regulator by the Secretary and the Chief of the Defence Force via the *Defence Instruction*, MCS3*,* noting that the Defence Spaceworthiness Authority must establish functions for that position.

15. The Defence Space Safety Regulator is responsible for promulgating non-legislative regulations called the Defence Space Safety Regulations (DSSR). The DSSR recognise and support compliance with Defence's statutory and internal safety requirements, and the Commonwealth's international space Treaty obligations.

16. The Defence Space Safety Regulator is delegated authority by the Defence Spaceworthiness Authority to:

a. approve and provide authoritative interpretation of:

   (1) DSSP Manual Volume 2, inclusive of all DSSR

   (2) DSSP Manual Volume 3

   (3) standards and supporting material

b. issue all SSAs, including permits, licences, and similar artefacts, as necessary for implementation of the DSSR

c. amend, suspend or revoke any SSA.

17. In the event of an accident involving a Defence space object, an independent space safety investigation may be convened to identify causes and prevent further accidents.

Accountabilities and responsibilities within the DSSP

18. The *Defence Instruction*, MCS3 states that the DSSP contains policies, responsibilities, directions, regulations, processes and definitions relating to the DSSP activities. Furthermore, Defence personnel to whom an SSA is issued, must comply with, and

ensure Defence personnel whom they command or control comply with, any condition of the SSA.

19. The DSSR are to be applied to parties acting as agents of the Commonwealth for any aspect of the design, construction, maintenance or operation associated with the launch/operation/return of space objects or space launch facilities. The requirement to comply with relevant parts of this manual and subordinate space safety policy must be formalised with the agent via a contract or other means.

20. Where Defence space activities are outsourced to entities not acting as agents of the Commonwealth, the contractual documentation must consider the nature of the activity, and regulation applicable to that activity. If the activity is subject to regulation by the Defence Space Safety Regulator, contractual documentation must require compliance with relevant parts of this manual and subordinate space safety policy. If the activity is subject to regulation by the ASA, the contractual documentation may consider whether there are specific requirements under this manual and subordinate space safety policy that will be required in addition to the concurrent civil regulation, and must identify those requirements.

Support for Commanders and Managers

21. Implementation of the DSSP supports commanders and managers in meeting their legal and policy obligations on behalf of the Commonwealth. This is achieved through the promulgation of regulations for space safety, including for risk management. Regulatory guidance and promotion material issued by the Defence Space Safety Regulator further supports commanders and managers in meeting their obligations.

22. The DSSP also contains flexibility provisions to assist commanders faced with compelling operational imperatives to make informed judgements regarding compliance with their statutory and internal to Defence safety obligations. Such judgements must be made at the appropriate command level to ensure that any decision is made cognisant of strategic, operational, safety and legal requirements.

23. Importantly, no decision, or absence of a decision, by the Defence Space Safety Regulator is to be construed as fulfilling, in whole or in part, the due diligence requirements of commanders and managers to meet their legal and policy obligations on behalf of the Commonwealth. This includes the review of evidence demonstrating compliance with DSSR and decisions by the Defence Space Safety Regulator to issue, amend, suspend or revoke an SSA.

Governance and Oversight

24. The Defence Spaceworthiness Authority is required to review the effectiveness of the DSSP, including:

a. the status of current Defence space safety activities (who is being regulated, their activities, status of any permit applications being submitted/reviewed)

b. the DSSP implementation status

c. Defence Space Safety Regulator initiated space safety assurance activities and outcomes

d. the outcomes or status of any space safety investigations.

25. While conducting this review, the DSA should ensure the DSSP continues to align with Australian Government guidelines for regulation as promulgated by the Department of the Prime Minister and Cabinet, and continues to promote a generative space safety culture.

Safety Performance Assessment

26. In support of the above Defence Spaceworthiness Authority obligations, a periodic safety assessment must be published by the Defence Space Safety Regulator. This safety assessment must contain analyses of all relevant information received through space safety reporting systems and space safety assurance activities. The safety assessment will include:

a. an assessment of the safety performance of the regulated community, including an analysis of related safety metrics

b. identification of key space safety issues for commanders and managers

c. an assessment of the effectiveness of the Defence Space Safety Regulator's space safety assurance

d. analysis of space safety intelligence data with trends identified where applicable

e. identification of actions and activities taken to address issues and trends of concern in space safety.