



## PERMITTING DECISION SUMMARY

### R3D2

#### United States Defense Advanced Research Projects Agency

1. The Defense Advanced Research Projects Agency is an agency within the United States Department of Defense (DoD). While its work focuses on technologies with national security applications, these often have civil use.
2. The R3D2 payload is an approximately 150 kg microsatellite. The R3D2 satellite is designed to test a new type of space antenna, a paper-thin membrane reflect array antenna, which will extend to 2.3 metres once it reaches low Earth orbit.
3. The R3D2 payload has two objectives. The first is to test this antenna as a means of enhancing the capabilities of small satellites by allowing them to deploy a larger antenna than would normally be possible. The second objective is for the DoD to test its ability to rapidly develop and launch satellites.
4. Payloads are permitted in line with the [Outer Space and High-altitude Activities Act 2017](#) (OSHAA) and the [Outer Space and High-altitude Activities \(Licences and Permits\) Regulations 2017](#).
5. Each payload has been approved by the Minister for Economic Development, on advice from officials across agencies. When approving payloads, the Minister needs to be satisfied that:
  - a. The applicant has taken and will continue to take all reasonable steps to safely manage the operation of the payload;
  - b. The proposed operation of the payload is consistent with New Zealand's international obligations; and
  - c. The applicant has an orbital debris mitigation plan that meets prescribed requirements.
  - d. Despite being satisfied of these matters, the Minister may nevertheless decline a permit if he is not satisfied that the proposed operation of the payload is in New Zealand's national interest.
6. Prior to the OSHAA, the [contract with Rocket Lab](#) allowed the Government to veto the launch of any payload that it determined was contrary to New Zealand law, regulations or policy, was contrary to New Zealand's international obligations or would prejudice New Zealand's national security or other national interests. Every payload launched by Rocket Lab under the contract was assessed against these interests.

Date Granted	Authorisation Number	Payload Name	Owner or Operator	Country of Origin
21 December 2018	180052-PPT	R3D2	Defense Advanced Research Projects Agency	United States



**NEW ZEALAND  
SPACE AGENCY**



## PAYLOAD PERMIT

180052-PPT

I, Hon David Parker, as Minister of Economic Development, acting pursuant to section 17 of the Outer Space and High-altitude Activities Act 2017 grant a Payload Permit to:

### Defence Advanced Research Projects Agency

Defence Advanced Research Projects Agency is authorised to launch and operate a payload, 'RF Risk Reduction Deployment Demonstration', for the purpose of technology demonstration.

This permit will take effect immediately, and will expire when the payload is no longer in the Earth's orbit.

This permit is granted subject to the Outer Space and High-altitude Activities Act 2017 and all regulations under the act, and the conditions of the permit.

21 DEC 2018

Dated

Hon David Parker  
Minister for Economic Development