



Application Guidance – High-altitude Licence

Section A – Overview

1. Purpose of this document

The [Outer Space and High-altitude Activities Act 2017](#) (the Act) introduces a licencing regime for the launch and operation of high-altitude vehicles. The New Zealand Space Agency (the Space Agency) is the lead government agency for policy, regulation and business development relating to space and high-altitude activities in New Zealand.

If you are intending to launch a high-altitude vehicle, this guidance note is intended to help you understand whether you will need a license, how to apply, and what information should be provided along with your application.

You should familiarise yourself with the Act and the [Outer Space and High-altitude Activities \(Licences and Permits\) Regulations 2017](#) (the **Licences and Permits Regulations**) before making an application.

2. Do I need a High-altitude Licence?

High Altitude is defined in the Act as an altitude above the higher of:

- + Flight level 600 (approximately 18,288 metres/60,000 feet) and
- + The highest upper limit of controlled airspace under the Civil Aviation Act 1990

High-altitude licences (see [section 45](#) of the Act) are required in order to launch high altitude vehicles (HAVs), that is, vehicles that are capable of or intended to travel at high altitude but below outer space.

If your vehicle is not capable of or intended to travel at high altitude, then you do not need a licence under the Act. You will need to comply with Civil Aviation law. Refer to www.caa.govt.nz for more information.

If, however, your vehicle is intended to travel to outer space, or carries a payload that will be launched into outer space, then you will require a launch licence (and the launch must occur at a licenced facility) rather than a high-altitude licence. More information on this can be found at <http://www.mbie.govt.nz/space/new-zealand-space-agency/launching>

4. Exemptions

The following things are excluded from the definition of a High-altitude Vehicle for the purposes of the Act and as such do not require a high-altitude licence:

- + Balloons (non-power-driven lighter-than-air aircraft) launched with only the following sondes: radiosondes, ozone sondes, frost point sondes, and/or backscatter sondes, and the payload is used for the sole purpose of measuring any combination of the following atmospheric profiles: pressure, temperature, humidity, wind speed and direction, ozone concentration, and aerosols (including dust, smoke and volcanic ash).
- + Balloons launched for educational purposes by or under the supervision of
 - a teacher at a school established under section 146 of the Education Act 1989 or a teacher at a school registered under section 35A of that Act; or
 - a member of the teaching staff at an institution within the meaning of section 159 of the Education Act 1989 that is established under that Act; and
 - where the payload carried by the balloon can only be used to describe or illustrate the progress of the balloon and the payload device is an unmodified commercial off-the-shelf product.
- + Rockets launched by a registered member of the New Zealand Rocketry Association at a launch site authorised by the Civil Aviation Authority of New Zealand that is:
 - a non-guided rocket using for propulsion, only components of a type that are readily available to members of the public through retail sale in New Zealand;
 - only the electronic equipment that is needed for basic functionality as a rocket. The Rocket must also have no payload other than either or both of the following:
 - a parachute or other similar recovery support system (which may include for that purpose GPS or radio frequency trackers for recovery);
 - a payload that is to be used solely for the purpose of describing or illustrating the progress of the rocket and is of a type that is readily available to members of the public through retail sale in New Zealand.

The Space Agency is available to help you understand whether you meet the requirements for an exemption. Please contact 0508 THESPACEAGENCY (0508 843 697) to discuss your activity.

5. Do I need a payload permit?

No. If your high-altitude vehicle will be carrying a high-altitude payload, the high-altitude payload will be assessed as part of this application.

6. Scope and duration of licence

The Minister has the ability, under the Act, to grant licenses that allow for:

- + multiple launches over a period of time; and
- + launches from multiple launch locations; and
- + differences in the composition of the high-altitude vehicle payload; and
- + variations in the capability or flight characteristics of the high-altitude vehicle.

If you'd like a licence that gives you flexibility across these areas this should be clearly set out in your application.

7. What if my information changes?

If, at any time before the application has been granted or declined, the applicant becomes aware of any new information that is relevant to the application, or, if there is a change to the information already provided that means the information held by the Space Agency is no longer accurate or complete, the applicant must notify the Space Agency.

8. How do I apply for a high-altitude licence?

You apply for a licence by filling out the [High-altitude Licence Application Form \[PDF, 536 KB\]](#). Once completed, send it to the Space Agency by post or by email. Section B below provides detailed guidance to help you complete the Application Form.

Information or evidence referenced within the application form is information typically required for the Minister responsible for the Act to make a determination on the application. The Space Agency may require additional information to complete its assessment.

9. How much does it cost?

There is no application fee for a high-altitude licence and there are no fees associated with holding a high-altitude licence.

10. How will my application be assessed?

The Act sets out what the Minister must be satisfied of to grant a high-altitude licence. These are:

- + Where the high-altitude vehicle is an aircraft: that the aircraft or (where appropriate) the operator of the aircraft has any necessary permits, certificates or other documents; required by the Civil Aviation Act 1990
- + Where the high-altitude vehicle is not an aircraft: that the applicant is technically capable of conducting a safe launch and will appropriately manage any risks to public safety; and
- + That the proposed launch is consistent with New Zealand's international obligations.

Where those tests are satisfied, the Minister may still decline to grant a high-altitude licence if the Minister is **not** satisfied:

- + the applicant or a person who will have control over the exercise of rights under the licence is a fit and proper person; or
- + the proposed launch is in the national interest.

11. How long will it take to process my application?

Application processing time will depend on the complexity of your activity, and the completeness of information provided in support of your application. We encourage you to contact the Space Agency before making an application to discuss the intended activity.

There is no statutory timeframe for processing applications made under the Act.

12. Other regimes that may impact your activity

New Zealand has a range of legislation that may impact your licence. Any high-altitude licence granted under the Act will have a condition that the licensee must conduct the launch and operation in a manner that complies with the Civil Aviation Act 1990 and any regulations and rules made under that Act.

13. Collection and use of information

Information provided with your application is treated confidentially but may be subject to release under the provisions of the Official Information Act 1982. If this is the case, we may consult with you before the material is considered for public release.

The personal information you must include in your application is needed to process your application under the Act. You have the right under the Privacy Act 1993 and/or the Official Information Act 1982 to access information held about you by the Ministry of Business Innovation and Employment and request that this information be corrected if necessary.

The Act allows the sharing of information both from the Ministry of Business Innovation and Employment to other agencies, and from other agencies to the Ministry of Business Innovation and Employment in order to assist the minister in the performance or exercise of its functions, duties, or powers under the Outer Space and High-altitude Activities Act 2017.

Information required from applicants that are entities other than body corporates

Entity Name: The legal name of the entity is the name as it appears in the state of organisation, or its constituting documents (such as the constitution). If the entity trades under a different name, the trade name should also be included.

Form of Organisation: The form of organisation is the legal form the organisation takes. This could be unincorporated bodies, partnerships, government agencies, crown research institutes or any other form of organisation other than a body corporate or natural person.

Country of Jurisdiction: The country of jurisdiction in which the entity is organised is the country or department thereof (such as a state or territory) under the laws of which the entity was lawfully organised.

Unique Number: The Unique Number is any official number or designated identifier that uniquely identifies the entity in the official records of its place of formation. In New Zealand, this is the New Zealand Business Number (NZBN).

Ownership and control interests

10% ownership or control is defined in the [Regulation 3](#) of the Licences and Permits Regulations as:

“a person has a 10% or more ownership or control interest in an applicant, if the person has—

- a) a beneficial entitlement to, or a beneficial interest in, 10% or more of the applicant’s securities; or*
- b) the power to control the composition of 10% or more of the governing body of the applicant; or*
- c) the right to exercise or control the exercise of 10% or more of the voting power at a meeting of the applicant.”*

Information about the high-altitude vehicle and purpose of launch or launches

Summary of the mission and purpose of launch

Mission and purpose: You should provide sufficient information for the Space Agency to understand the proposed flight activities and operations of the HAV. This should include a description of the ultimate objectives of putting any high-altitude vehicle and/or high-altitude payload into high altitude, and a description of how the vehicle and/or high-altitude payload contributes to that objective. If part of the mission and purpose is to test new high-altitude materials, techniques, or capabilities (e.g., an experimental mission), you should provide details of the long-term development plan for the HAV.

Name and type of HAV: If the HAV is a commercial-off-the-shelf design, or of a standard design or class (such as a weather balloon not eligible for exemption), you should include the name or class of the HAV. If not, then a full description will be required.

HAV capabilities: You should include a description of the systems used to control the HAV while in flight. (Note that information about the high-altitude payload system capabilities should be set out in Section 3 of the Application Form).

If you are seeking a licence to cover multiple launches which may include different high-altitude vehicles or launches from different locations, you will need to be able to specify the range of characteristics and capabilities to be launched over the term of the licence. For example, the licence conditions may be able to accommodate variations in the capability or flight characteristics of the high-altitude vehicle provided they are within certain specified parameters.

Information about the High-altitude payload capability

Overview of the high-altitude payload

The overview should include details of subsystems and capabilities such as any imaging systems, meteorological systems or sensors and communications systems.

If any components of the high-altitude payload are commercial-off-the-shelf products, reference to the name, make, and model will generally be sufficient, if not, full details will be required.

For larger HAVs (those capable of supporting heavy high-altitude payloads), or HAVs which use innovative new technologies, you should also include a summary of the measures being used to protect access to the high-altitude payload.

Where the high-altitude payload will be communicating with one or more ground station, other HAV or satellite, your overview should include details of the communication mechanism.

If you are seeking a licence to cover multiple launches that may include different high-altitude payloads, you will need to be able to specify the characteristics and capabilities of each of the high-altitude payloads to be launched under the licence. For example, the licence conditions may be able to accommodate variations in the composition of the high-altitude vehicle payload provided they are within certain specified parameters.

If any component of the high-altitude payload (such as an experiment carried on the high-altitude payload) is owned by a third party, a description of the components and the party owning the components should be included.

High-altitude payload manoeuvring capability

Manoeuvring capability of the high-altitude vehicle should be detailed above in the description of your high-altitude vehicle. You only need to provide a summary here if the high-altitude payload itself has manoeuvring capability.

Contracted high-altitude payload functions or operations

Examples of high-altitude payload functions or operations include payload tasking, control or operation of any scientific experiments carried on the high-altitude payload, processing or management of data downloaded from the high-altitude payload, or management of the ground segments.

If no contracts to provide services are in place at the time of application, please indicate whether there is an intention to contract any high-altitude payload functions or operations.

If any component of the payload (such as an experiment carried on the payload) is owned or operated by a third party, a description of the components and the party owning or operating the components should be included.

Information about remote sensing payload capability

Remote sensing capabilities

Remote sensing capabilities include any ability to sense by any means the surface of the Earth or objects in outer space, or to sense or track the movement of objects (land-based vehicles, ships, aircraft or missiles) on, under or above the surface of the Earth.

Description and summary of remote sensing capabilities:

In describing the remote sensing capabilities of the high-altitude payload you should provide a basic description of the type and operational wavelengths of the sensors (e.g. whether they are radar, LIDAR, visible spectrum, infrared).

In describing the geolocation accuracy of the remote sensing systems, reference should be made to the systems used to support the accuracy of the observations, such as through GPS systems and other calibration methodologies.

Persistence: for HAV's persistence means information about the HAV or its payload's ability to maintain continuous or near-continuous observation of an area over a period of time, such as through hovering or circling, tethers, controlled ascent/descent, or other station-keeping capabilities, or by working in combination with other high-altitude [payloads].

Remote sensing data

The summary must include the following:

- + any customers or classes of customers who will have access to enhanced remote sensing data; and
- + whether the applicant will provide any raw data to any customers or classes of customers; and
- + any plans to make the raw data generated by the payload available to—
 - governments whose territories have been sensed; or
 - for non-commercial, scientific, educational, or other public benefit purposes

You should also provide information about when remote sensing data, either in raw or processed form, will be made available to customers, such as whether the data is available on a near-real-time basis.”

Technical Capability and Safety

High-altitude vehicles that are aircraft:

If your HAV is an aircraft the Space Agency will approach the Civil Aviation Authority to confirm you hold all permits, certificates or other documents required under the [Civil Aviation Act 1990](#) and the associated [Civil Aviation Rules](#). In addition, the Space Agency will seek advice from the Director of Civil Aviation regarding the safety of the operation of the aircraft.

If you do not hold all permits, certificates or other documents required under the Civil Aviation Act 1990 we will not be in a position to issue you with a high-altitude licence. Contact the Civil Aviation Authority directly to obtain these.

Technical capability

You should identify the key people involved in the launch of the high-altitude vehicle and, in particular, those people responsible for ensuring the safety of the launch. You must provide evidence of their qualifications which may include copies of professional certifications including details of where and when they were obtained. You must also provide evidence of their experience which may include a Curriculum Vitae and details of persons who may be contacted for references.

Safety

Requirements for a safety case are set out in Schedule 6 Part 2, paragraph 9 of the Regulations as:

A safety case that—

- (a) describes the activities proposed under the licence to which the safety case relates; and Safety critical systems
 - (b) describes any systems—
 - (i) that have the purpose of preventing, or limiting the effect of, risks to public safety; and
 - (ii) the failure of which could cause or contribute substantially to a serious risk to public safety;
- and

- (c) describes the arrangements in place to verify that the systems described in paragraph (b) are or will be suitable and will remain in good condition for the duration of the licence; and

Safety assessment

- (d) provides for—
 - (i) the identification of any serious risks to public safety associated with the activity; and
 - (ii) the nature of each risk, including the likelihood and consequences (including the potential magnitude and severity of the potential consequences); and
 - (iii) the geographical areas likely to be affected by the activity and, if relevant, demographic information about the local community that may be affected by them; and
 - (iv) the measures that the applicant has implemented, or will implement, to minimise the risks to public safety; and

Relevant safety standards

- (e) provides details of all relevant New Zealand and international standards that have been applied or will be applied in relation to the safety of the activity; and

Safety management systems

- (f) describes the systems that the applicant has implemented, or intends to implement, for the purpose of ensuring that the activities under the licence are conducted in a manner that does not create a significant risk of—
 - (i) serious harm to any member of the public; or
 - (ii) significant damage to property owned by a person other than the licensee; and
- (g) provides details of the key personnel responsible for the safety of the proposed activities under the licence; and

Emergency plan

- (h) includes an emergency plan that—
 - (i) effectively addresses all serious risks to public safety of an accident; and
 - (ii) is specific to the proposed activities under the licence and the serious risks to public safety (if any) identified in the safety assessment under paragraph (d); and
 - (iii) is integrated into the applicant's safety management systems under paragraph (f); and
 - (iv) is understandable by workers, visitors, and other people who are likely to be affected (to the extent necessary for them to fulfil their roles under the plan); and
 - (v) provides for the testing, review, and updating of emergency procedures, including the frequency of any testing, review, and updating.

Fitness to hold a licence

The applicant must make a declaration regarding each applicant and any other person who is to have or is likely to have control over the exercise of rights under the licence and their fitness to hold a licence. For the purposes of a high-altitude activity, a person having control over the exercise of rights under the licence includes the person responsible for directing that the launch can go ahead and the person physically releasing the high-altitude vehicle.

Spectrum Authorisations

Information on spectrum licences can be found at <https://www.rsm.govt.nz/licensing/types-of-licences>.