

Spaceport-1 Airspace Change Proposal ACP-2021-12

Frequently Asked Questions (FAQs)

1. Why can't the sub-orbital rockets be launched from the MOD Hebrides Range?

ANS: As the Hebrides Range is a MoD facility operated on their behalf by QinetiQ, please refer this question to the MoD.

2. How can the MOD Hebrides Range Danger Areas and Range facilities (personnel and equipment) be used to support commercial launch activity at Spaceport 1?

ANS: QinetiQ Ltd manages the MOD Hebrides Range under a contract called the Long Term Partnering Agreement (LTPA). Within this contract, QinetiQ may undertake non-MOD, commercial activities on the range when suitably approved by the MOD under Other Works Approvals (OWAs). This process ensures that there is no adverse impact on MOD operations.

3. How is safety assured for rocket launch?

ANS: Safety of all the Spaceport's operations falls under the Space Industry Act (SIA) 2018 and Space Industry Regulations 2021, with the responsibility for safety falling to the Spaceport operator in the first instance and the rocket provider / launch operator. As part of the licencing process, both must satisfy the regulator (the Civil Aviation Authority (CAA)) that the proposed activities will be safe. Both parties have to meet strict safety and operational criteria that the CAA space team will assure. Furthermore, the Space Range operator, (currently QinetiQ Ltd) is also required to be licenced by the CAA and this is where the responsibility for airspace and sea space safety generally rests.

4. Why does the airspace extend beyond the boundaries of the SP-1 launch site land area and are personnel on the ground beneath this airspace exposed to any risks?

ANS: The airspace safety requirements consider a large aircraft with a high number of passengers travelling at high speed therefore, to reach an acceptably low level of risk, the segregated airspace area has to be significantly bigger than the land or sea space safety areas. The airspace area therefore does not denote an area of risk to personnel on the ground; there are many UK Danger Areas over land that are there to safeguard aviation and do not indicate that a threat to personnel on the ground exists. EG D704 over Benbecula airport is a good local example. This airspace is activated when there is a risk to other airspace users; the risk to 3rd parties on the ground is evaluated differently and restrictions/warnings are put in place accordingly.

5. Why is an airspace change needed if the existing MOD Danger Areas (D701) are being utilised?

ANS: The SP-1 launch site sits outside the existing MOD Danger Areas and as the launch of rockets poses a risk to other airspace users, there is a need to segregate the launch activity from other users of the airspace. This can be safely achieved through the establishment of a small volume of airspace in the form of a Danger Area, around the launch site that is connected to the existing Danger Areas D701.

6. Why is the airspace around the launch site not a uniform shape?

ANS: The shape of the airspace design reflects the detailed safety analysis conducted to ensure there is no risk to other airspace users in the event of a catastrophic failure of the rocket. Furthermore, the shape of the area is also designed to accommodate other airspace users such as the Sollas beach landing area.

7. What is the additional small circular airspace area for around the launch pad?

ANS: From experience gained when launching similar sub-orbital rockets from the MOD Hebrides Range it was discovered that there was a risk to ground personnel conducting critical pre-launch activities, (such as arming/refuelling) from the sudden appearance of low flying aircraft, overhead. To prevent a sudden distraction to such ground personnel, or potential High Frequency radio interference from low flying aircraft on the rocket systems, it is deemed necessary to have a small protection zone around the launch pad.

8. How often and for how long will the small additional Danger Area around the launch pad be activated?

ANS: The small Danger Area around the launch pad (circle of 1000m radius extending from the surface to a height of 3000ft), may be activated several days prior to the rocket launch to enable ground personnel to conduct 'dry' launch runs. The area may also need to be active for extended time periods (several hours) before launch.

9. What if there is a medical emergency/accident and air ambulance/police helicopters need to enter the Spaceport airspace when it is active?

ANS: The airspace will be managed by MOD Hebrides Range and emergency aircraft will be treated in exactly the same manner as they currently are for access into the D701 Danger Areas. Where safe to do so, emergency aircraft will be allowed access. The actual time period where a hazard exists is generally very short and the launch may be delayed if deemed necessary.

10. Why does the airspace need to be activated for up to three hours when the launch to splashdown is only a matter of minutes?

ANS: Experience launching similar rockets from the MOD Hebrides Range has shown that the launch can be delayed by unpredictable events such as changeable weather conditions, the Range safety area being fouled by a 3rd party, or minor technical issues. To accommodate these variable occurrences it is necessary to provide a sufficiently extensive time period within which to conduct the launch. The airspace will always be de-activated once the hazard from rocket launch ceases to exist.

11. How often will the airspace be activated in a year?

ANS: The maximum number of rocket launches is limited to 10 per year in accordance with the planning consent. It is recognised that where a launch does not occur for technical, environmental, Range or other issues, backup launch days may be required so are programmed in advance and activated when required. It is anticipated that there will be no more than two backup days per launch event. When this is factored against the number of launches that are likely to be successful on the first day (based on MOD Hebrides Range experience), it is estimated that, on average, there will be no more than one backup day per launch. Therefore in a year the airspace is unlikely to be activated more than 20 times.

12. Why is segregated airspace required as opposed to other airspace categories?

ANS: During an earlier stage of the approval process, all classifications of airspace were considered and segregated airspace in the form of a Danger Area, was considered the most efficient use of the airspace. This is mainly because a Danger Area can be turned on and off as required so, in the case of rocket launch, the airspace will only be turned on for those infrequent launches and backup days when required. It is estimated that for the vast majority of the year (over 96%) the airspace will revert to its current status with no restrictions on use.

13. Will flights into and out of Benbecula airport be affected by the SP-1 operations? Are there any flight cost implications of the airspace SP-1 airspace change?

ANS: Benbecula airport will continue to operate normally during the times that SP-1's airspace is activated. There may be minor track deviations required for specific approaches, but these are no different than those routinely flown for weather considerations, so will have no effect on pricing.
