|  |  |  |
| --- | --- | --- |
| **Information Requirement** | **Information** | **Notes** |
| The position of launch site in WGS84 Datum;  | 60° 49’.101N0° 46’.788W |  |
| Launch date(s)/window and timings; | 6th – 8th July 2022.  | These are the only dates we have available for the launch so if the weather or other safety issue stops us from launching then no launch will take place.  |
| The limits for the Restricted Zone, Exclusion Zone, Space Launch Hazard Area and expected Splashdown Area; that exist within the designated range;  | Launch Exclusion Zone is a 200m radius circle from the Launch Point.Splashdown Area is calculated to be at location 60° 50’.431N0° 44’.056WExclusions will exist within an area bounded by the following locations:A 60° 51.010'N 0° 45.086'WB 60° 50.603'N 0° 43.611'WC 60° 50.033'N 0° 42.878'WD 60° 49.311'N   0° 45.911'WE 60° 49.019'N   0° 46.621'WF 60° 49.181'N   0° 46.940'WG 60° 49.427'N   0° 46.506'W | The launch azimuth will be 45oT. The rocket will climb to an altitude of 3km before splitting into 2, joined, segments and descending under a parachute. The rocket is expected to land 3.5km from the launch point.  |
| Exact timings of when any restricted areas will be in operation and/or duration of launch process | Restrictions expected to be in place from 1030hrs to 1130hrs.  | There will be a 3-hour launch window starting from 1100hrs. Restrictions may therefore be in place until 1430hrs. See table below for further detail. Timings given are for optimal launch, ie no delays due to safety or weather etc.  |
| The composition of expected equipment entering the marine environment | Composite construction with lightweight fibreglass airframe, fins, and nose cone.Small number of aluminium components (nose tip, fittings and retaining hardware)Reloadable solid fuel rocket motor (APCP Propellant)Payload bay filled with foam to ensure rocket floats for recovery Single-event parachute recovery system |  |
| The expected dimensions of debris and size of debris field; | Rocket is 2.7m tall and 140mm in diameterExpected launch mass in the region of 15kg and an expected recovery mass of 11kg. The rocket will split into 2 connected parts once at apogee and fall under a parachute. |  |
| Nature of restriction (e.g. *all shipping excluded*) and nature of the danger (e.g. *falling debris* (controlled or uncontrolled); and  | All shipping excluded. Unguided rocket falling from 3km altitude under a parachute.  | The wind will influence where the rocket lands, hence the 500m Exclusion Zone around the expected splashdown point. |
| Contact details for further information including telephone number(s) and radio frequencies. Main point of contact will be the Range Operations Manager unless otherwise stated. | Email:info@shetlandspacecentre.comPhone Number - 01479 782042 | ext 1010Back up phone number - 01957 711711Radio Frequencies Channel, 16, 72 (digital selective calling channel) and *working channel agreed with MCA*. |  |

|  |  |  |
| --- | --- | --- |
| **TIME INDEX** | **DAY/TIME** | **ACTIVITY/MILESTONE** |
| L-15 MINS | Launch Day – 10:45 | Final Go/No Go decision – spaceport gives permission to launch |
| L-14 MINS | Launch Day – 10:46 | All personnel except launch team and Range Operations Manager (ROM) move to safe distance/outside the Safety Clear Zone (SCZ) |
| L-10 MINS | Launch Day – 10:50 | Launch vehicle is armed, all pad equipment including cameras are initiated |
| L-9 MINS | Launch Day – 10:51 | All remaining personnel retreat to firing position |
| L-5 MINS | Launch Day – 10:55 | Warning siren at launch site entrance and at firing point are sounded to give 5-minute launch warning – radio warning given to recovery vessel |
| L-1 MIN | Launch Day – 10:59 | Warning siren at launch site entrance and at firing point are sounded to give 1 minute launch warning – radio warning given to recovery vessel |
| L-0 MIN | Launch Day – 11:00 | Launch window opens – ROM gives radio/verbal permission to fire |
| L-0 MIN | Launch Day – 11:01 | Firing system is armed – terminal count begins |
| **L-0 MIN** | **Launch Day – 11:02** | **Firing sequence initiated, LV is fired** |
| L+2 MINS | Launch Day – 11:04 | LV in parachute descent – range maintain radio comms with recovery vessel |
| L+3 MINS | Launch Day – 11:05 | LV touchdown – range give GPS touchdown coordinates to recovery vessel and confirm they are free to enter the SCZ |
| L+28 MINS | Launch Day – 11:30 | Range maintain comms with recovery vessel relaying any visual or RF location data |
| L+58 MINS | Launch Day – 12:00 | LV is recovered from the sea by recovery vessel – they inform the spaceport immediately |
| L+63 MINS | Launch Day – 12:05 | Spaceport inform all relevant agencies and key 3rd parties that the SCZ is deactivated and launch activity has concluded |
| L+88 MINS | Launch Day – 12:30 | All crew at launch site make the site safe and return to SaxaVord – one member of client launch team goes to Baltasound to meet recovery vessel |
| L+2 HOURS | Launch Day – 13:00 | LV is returned to SaxaVord by client launch team member and checked to ensure it is fully safe |
| L+4 HOURS | Launch Day – 15:00 | Client and spaceport teams meet for ‘hot-debrief’ of the launch activity  |
| L+6 HOURS | Launch Day – 17:00 | Launch day officially closed |