



# Marine Management Organisation Marine Licence

## 1 Introduction

This is a licence granted by the Marine Management Organisation on behalf of the Secretary of State to authorise the licence holder to carry on activities for which a licence is required under Part 4 of the Marine and Coastal Access Act 2009.

### 1.1 Licence number

The licence number for this licence is L/2022/00477/1

### 1.2 Licence holder

The licence holder is the person or organisation set out below:

Name / company name	Virgin Orbit
Company registration number (if applicable)	
Address	4022 E Conant Street, Long Beach, CA 90808, USA
Contact within company	Collin Corey
Position within company (if applicable). State if company officer or director	Director, SMA / Launch Licensing

### 1.3 Licence date

Version	1
Licence start date	24 October 2022
Licence end date	30 April 2023
Date of original issue	24 October 2022

### 1.4 Licence validity

This version of this licence is valid from the licence start date to the licence end date.

This version of this licence supersedes any earlier version of this licence. Any activity commenced under a previous version of this licence and which is also a licensed activity authorised by section 4 of this version of this licence may continue in accordance with the licence conditions in section 5 of this version of this licence.

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## 2 General

### 2.1 Interpretation

In this licence, terms are as defined in section 115 of the Marine and Coastal Access Act 2009 and the Interpretation Act 1978 unless otherwise stated.

- "licensed activity" means any activity set out in section 4 of this licence.
- "licence holder" means the person(s) or organisation(s) named in section 1 above to whom this licence is granted.
- "MMO" means the Marine Management Organisation.
- "mean high water springs" means the average of high water heights occurring at the time of spring tides.
- "sea bed" or "seabed" means the ground under the sea.
- "the 2009 Act" means the Marine and Coastal Access Act 2009.
- All times shall be taken to be the time on any given day.
- All geographical co-ordinates contained within this licence are in WGS84 format (latitude and longitude degrees and minutes to three decimal places) unless stated otherwise.

### 2.2 Contacts

Except where otherwise indicated, the main point of contact with the MMO and the address for email and postal returns and correspondence shall be:

**Marine Management Organisation**

**Lancaster House**

**Hampshire Court**

**Newcastle upon Tyne**

**NE4 7YH**

**Tel:0300 123 1032**

**Fax:0191 376 2681**

**Email:marine.consents@marinemanagement.org.uk**

Any references to any local MMO officer shall be the relevant officer in the area(s) located at:

**Marine Management Organisation**

**Hayle MMO Marine Office**

**Marine Renewables Business Park**

**Chi Gallos**

**North Quay**

**Hayle**

**TR27 4DD**

**Tel: 01736 757 303**

**Email: [western@marinemanagement.org.uk](mailto:western@marinemanagement.org.uk)**

## **3 Project overview**

### **3.1 Project title**

Virgin Orbit Rocket Launch from Spaceport Cornwall

### **3.2 Project description**

Virgin Orbit (VO) propose to undertake launch operations initiated from Spaceport Cornwall at Cornwall Airport Newquay).

The launch system consists of a Boeing 747 aircraft carrying an air-launched two stage rocket under its wing. The carrier aircraft will travel to an altitude of approximately 35,000 feet where the rocket will be released and its engine fired. It will then ascend to the desired orbit where the satellite payload will be released.

The trajectory will begin with the release of the rocket west of the UK and southwest of Ireland and will continue south-southwest over the Atlantic Ocean, where the rocket's Stage 1 section and payload fairings will be jettisoned and deposited into Portuguese waters, and the satellite payloads will be released into orbit.

This licence covers the deposit of the Stage 1 rocket and fairings into Portuguese waters, in respect of one satellite launch. This licence permits the deposit from only one satellite launch.

## 4 Licensed activities

This section sets out the licensed activities. The licensed activities are authorised to be carried on only in accordance with the activity details below and with the licence conditions as set out in section 5 of this licence.

Please note that where licensed quantities are displayed with reference to their constituent materials, the relative quantities given for the constituent materials are indicative only.

Site 1 - Shipping Hazard Area - Stage 1 Rocket and Fairing		
Site location	Portuguese waters (See co-ordinates in Licence Schedule 1)	
Activity 1.1 - Stage 1 and Fairing Deposit		
Activity type	Other deposits	
Activity location	Portuguese waters (See co-ordinates in Licence Schedule 1)	
Description	<p>A Boeing 747 aircraft will carry an air-launched two stage rocket under its wing. The carrier aircraft will travel to an altitude of approximately 35,000 feet where the rocket will be released and its engine will be fired. It will then ascend to the desired orbit where the satellite payload will be released. The trajectory will begin with the release of the rocket west of the UK and southwest of Ireland and will continue south-southwest over the Atlantic Ocean.</p> <p>Approximately 3 minutes after ignition, the rocket's Stage 1 section and payload fairings will be jettisoned and deposited into Portuguese waters (see co-ordinates in Licence Schedule 1).</p> <p>See the LauncherOne Rocket Stage 1 and Fairings Component Table (Licence Schedule 2) and Section 5.4.1-5.4.2 of the Assessment of Environmental Effects (Licence Schedule 3) for components of the jettisoned material. No jettisoned material will be recovered.</p>	
Quantities		
Start date	End date	Quantity (kg)
24/10/2022	30/4/2023	2208.3
Methodology	<p>Virgin Orbit will utilize a Boeing 747 to transit a rocket from Cornwall Airport Newquay to the specified drop location (see co-ordinates in Licence Schedule 1).</p> <p>The 747 will survey the range prior to drop, using a Traffic Collision Avoidance System. The pilots will</p>	

	<p>be in constant contact with Air Traffic Control. An Automatic Dependent Surveillance-Broadcast (ADS-B) window-mounted receiver will allow air traffic status in real-time.</p> <p>Vessel traffic will be monitored remotely during the launch window via satellite Automatic Identification System (AIS) provisions, using the MarineTraffic: Global Ship Tracking Intelligence, to understand ship densities in the areas. Virgin Orbit will monitor detail of densities, type of vessel, speed of transit through the area, date, and time of day.</p> <p>Mitigation methods as set out in the Communications Plan (Licence Schedule 4), Navigational Risk Assessment (Licence Schedule 5), and Emergency Response Plan (Licence Schedule 6) will be followed to ensure safe navigation.</p>
Programme of works	<p>One launch will be undertaken.</p> <p>The launch date is to be determined by Virgin Orbit and the MMO will be informed by return to this licence.</p> <p>The launch window will be for a maximum of 2 hours per day over 3 consecutive days (primary launch date with 2 backups).</p> <p>The proposed launch time is 2157 - 2357 Coordinated Universal Time (UTC)/Greenwich Mean Time (GMT).</p>

## **5 Licence conditions**

### **5.1 General conditions**

#### **5.1.1 Notification of commencement**

The MMO must be notified prior to the commencement of the first instance of any licensed activity. This notice must be received by the MMO no less than five working days before the commencement of that licensed activity.

#### **5.1.2 Licence conditions binding other parties**

Where provisions under section 71(5) of the 2009 Act apply, all conditions attached to this licence apply to any person who for the time being owns, occupies or enjoys any use of the licensed activities for which this licence has been granted.

#### **5.1.3 Agents / contractors / sub-contractors**

The MMO must be notified in writing of any agents, contractors or sub-contractors that will carry on any licensed activity listed in section 4 of this licence on behalf of the licence holder. Such notification must be received by the MMO no less than 24 hours before the commencement of the licensed activity.

A copy of this licence and any subsequent revisions or amendments must be provided to, read and understood by any agents, contractors or sub-contractors that will carry on any licensed activity listed in section 4 of this licence on behalf of the licence holder.

#### **5.1.4 Changes to this licence**

Should any of the information on which the granting of this licence was based changed or is likely to change, the MMO must be notified at the earliest opportunity. Failure to do so may render this licence invalid and may lead to enforcement action.



## 5.2 Project specific conditions

This section sets out project specific conditions relating to the licensed activities as set out in section 4 of this licence.

Project specific conditions	
5.2.1	<p>The MMO must be notified in writing of any aircraft being used to carry on the licensed activity in section 4 of this licence on behalf of the licence holder. Such notification must be received by the MMO no less than <b>24 hours</b> before the commencement of the licensed activity. Notification must include the captain's name, aircraft type, number and aircraft owner or operating company.</p> <p>A copy of this licence and any subsequent revisions or amendments must be read and understood by the captains of any aircraft being used to carry on the licensed activity, and a copy of this licence must be held on board any such aircraft.</p> <p>Reason: <i>To ensure that a hard copy of the licence is available should inspection be required.</i></p>
5.2.2	<p>All notifications, communications arrangements, and Navigational Warnings as detailed in the Communications Plan, Schedule 4 of this licence, must be adhered to.</p> <p>These arrangements must be adhered to <b>pre, during, and post launch</b>.</p> <p>The MMO must be sent a copy of each notification <b>within 24 hours of issue</b>.</p> <p>Reason: <i>To ensure that mariners and fishing organisations are made fully aware of the activity in advance of the launch and can navigate safely.</i></p>
5.2.3	<p>All risk mitigation measures as detailed in the Navigation Risk Assessment, Schedule 5 of this licence, must be adhered to, including the requirement for remote satellite downrange monitoring of Automatic Identification System (AIS) vessels for the ship hazard areas.</p> <p>These measures must be adhered to <b>pre, during, and post launch</b>.</p>

	<p>Reason: <i>To ensure safe navigation for shipping and other users of the sea.</i></p>
5.2.4	<p>All aspects of the Emergency Response Plan and the Marine Emergency Action Card in Schedule 6 of this licence must be adhered to.</p> <p>These arrangements must be adhered to <b>pre, during, and post launch</b>.</p> <p>Any changes to these documents must be submitted to all interested parties <b>at least 5 days before the proposed launch</b>.</p> <p>Reason: <i>To ensure contingency arrangements are adhered to and safety is maintained in the event of an emergency.</i></p>
5.2.5	<p>The Marine Management Organisation (MMO), Maritime and Coastguard Agency (MCA), UK Hydrographic Office (UKHO), Irish Coastguard, Coastguard and the French Nav Area II Coordinator must be notified immediately of any mission deviation, as in Section 5 of the Communications Plan in Licence Schedule 4.</p> <p>Reason: <i>To ensure that risk can be reassessed accordingly.</i></p>
5.2.6	<p>Any oil, fuel or chemical spill within the marine environment must be reported to the MMO Marine Pollution Response Team <b>within 12 hours</b>.</p> <p>Within UK office hours (9:00 - 17:00 GMT): 0300 200 2024.</p> <p>Outside UK office hours: 07770 977 825.</p> <p>At all times if other numbers are unavailable: 0345 051 8486.</p> <p>dispersants@marinemanagement.org.uk</p> <p>Reason: <i>To ensure that any spills are appropriately recorded and managed to minimise the risk to sensitive receptors and the marine environment.</i></p>

**5.2.7**

The Latitude and Longitude coordinates (WGS84) of the actual location of the deposit impact area, as well as the components of the deposited material, must be provided upon completion of the deposit activity.

The weight of the respective components in kilograms must be included.

No later than **5 working days** after the licenced deposit activity is completed, the coordinates and components schedule must be provided to the MMO by return to this marine licence, and to Portuguese Directorate General for Natural Resources, Security and Maritime Services (DGRM) by email to [acouto@dgrm.mm.gov.pt](mailto:acouto@dgrm.mm.gov.pt).

Reason:

*To ensure adherence to the proposed deposit components and location.*

## 6 Compliance and enforcement

This licence and its terms and conditions are issued under the Marine and Coastal Access Act 2009.

Any breach of the licence terms and conditions may lead to enforcement action being taken. This can include variation, revocation or suspension of the licence, the issuing of an enforcement notice, or criminal proceedings, which may carry a maximum penalty of an unlimited fine and / or a term of imprisonment of up to two years.

Your attention is drawn to Part 4 of the Marine and Coastal Access Act 2009, in particular sections 65, 85 and 89 which set out offences, and also to sections 86, 87 and 109 which concern defences. The MMO's Compliance and Enforcement Strategy can be found on our website (<https://www.gov.uk/government/publications/compliance-and-enforcement-strategy>).