Training Manual Licensing Statement

Training Manual Guidance and Checklist

The following pages have been developed as guidance to be used when producing a Training Manual, in accordance with the provisions of Space Industry Regulations 2021 Part 7; Chapter 3, to be submitted to the UK Civil Aviation Authority (CAA) as part of a licence application or whenever a change is made.

This licensing statement will guide you through the structure of the Training Manual in accordance with Schedule 3; Part 2. It includes the applicable Space Industry Regulations and Guidance Material (GM) that should be considered when writing your Training Manual.

If you choose to use alternative numbering to the one detailed in the tables below, it is important that you provide us with your numbering or cross reference in the 'Your Reference' columns. (Please see *Column Explanations* for further clarification.)

Your completed statement should be uploaded along with your proposed Training Manual to the CAA Space Regulation Portal.

This document can be iterated throughout the period of the licence and it may evolve from the version(s) submitted at application stage. Should this be the case, you will be required to complete and submit further licensing statements whenever a revision is made to your Training Manual.

Applicant/Company Name:		The licensing statement should be completed for each individual part of the Training Manual. The completed statement should be uploaded to the CAA Space Regulation Portal.
Training Manual (TM) Date:		
TM Revision No:		
TM Version No:		

Column Explanations

Training Manual Content: This column describes the content required in the Training Manual, including example structure references.

SIA, SIR or GM Reference: This column provides the references to the relevant and applicable sections of the Space Industry Act, Space Industry Regulations or Guidance Material.

Your Reference: This column is for you to populate. It is important that you clearly identify where you meet the requirements.

Licensee Comment: This column is for you to provide further information and details of the status of your documents.

CAA Comment: This column is for CAA use only.

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The following are general requirements that must be achieved to comply with the Space Industry Regulations 2021:

Part 7 Chapter 3; 66

(1) The licensee must –

(a) Compile a training manual which complies with the requirements in Part 2 of Schedule 3, and
(b) Apply to the regulator for approval of those sections of that training manual which relate to relevant individuals (the “relevant sections”).

(4) At any time after the application is received and before it is determined, the regulator may require the applicant to provide it with such further information as it reasonably considers necessary to enable it to determine the application.

(7) The licensee must ensure that each copy of the training manual is kept up to date.

Part 7 Chapter 3; 68

(1) The applicant must inform the regulator in writing as soon as possible of any material change in any of the information provided to the regulator in or with the application for approval of sections of the training manual relating to relevant individuals or in response to a requirement from the regulator under regulation 66(4).

It is important to note that the regulator will only approve those sections of the training manual that apply to “relevant individuals” (“RIs”) if a specific role is needed by the type of licence. “RI” is a term used in regulation 58 (Responsibility of licensees) as shorthand for any person fulfilling a specified role at regulation 56 or a specified capacity at regulation 57.

Specified roles (RI) at regulation 56:

- launch director
- flight termination personnel
- flight crew and remote pilots
- sub-orbital aircraft engineer
- range operations manager
- range safety manager

Specified capacity (RI) at regulation 57:

- Spaceflight participant

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0 ADMINISTRATION AND CONTROL OF TRAINING MANUAL				
0.1 Introduction: **(a)** A statement that the manual complies with all applicable regulations and with the terms and conditions of the license. **(b)** A statement that the manual contains instructions that are to be complied with by the relevant personnel. **(c)** Explanations and definitions of terms and words needed for the use of the manual.				
0.2 System of amendment and revision: **(a)** Details of the person(s) responsible for the issuance and insertion of amendments and revisions. **(b)** A record of amendments and revisions with insertion dates and effective dates **(c)** A statement that handwritten amendments and revisions are not permitted, except in situations requiring immediate amendment or revision in the interest of safety. **(d)** A description of the system for the annotation of pages or paragraphs and their effective dates. **(e)** A list of effective pages or paragraphs. **(f)** Annotation of changes (in the text and, as far as practicable, on charts and diagrams). **(g)** Temporary revisions. **(h)** A description of the distribution system for the manuals, amendments, and revisions.	Part 7, Chapter 3; 67 Part 7, Chapter 3; 68			
0.3 Changes to the Training Manual The regulator must be informed in writing of any material changes to the Training Manual as soon as possible in or with	Part 7, Chapter 3; 68			

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the application for approval of sections relating to relevant individuals or in response to a requirement from the regulator. NB. The licensee may wish to initiate the Management of Change (MOC) described in the Safety Operations Manual (SOM) to track and manage these changes when made. If so, reference should be made to the relevant SOM section.				

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1 RECORDS				
1.1 Retention Policy This section should detail how the records specified in Part 7; 1(60)(2), are to be kept.	Part 7 Chapter 1; 60			

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2 ADMINISTRATION OF TRAINING MANUAL				
2.1 Contents of the Training Manual This section should detail information regarding the requirements of the Training Manual.	Part 7 Chapter 3; 66(1) Schedule 3, Part 2, Para 30			
2.1.1 in relation to procedures and guidance related to the Training Manual: **(a)** The training policy, including guidance on objective assessment and the need for impartiality. Including provisions for independent confirmation that an individual meets the required standard of competency **(b)** The procedures for determining and recording that an individual has met the required standard of competency to undertake a role **(c)** The procedures for recording results of training undertaken by relevant individuals, and keeping the records of those results, including the measures to ensure the confidentiality of personal information	Schedule 3, Part 2, Para 31, 38, 45, 41, 44, 37, 42b			

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(d) A statement describing any third-party arrangements which have been for the provision of any services or equipment and setting out precisely what services or equipment are to be provided **(e)** The procedures established for where spaceflight activities with individuals on board a launch vehicle will be undertaken **(f)** The entry requirements for applicants for each role **(g)** The procedures for medical assessments and medical examinations				
2.1.2 in relation to responsibilities of trainers/instructors: **(a)** The responsibilities of the training manager and instructors carrying out any part of the training programme **(b)** The measures being taken to assess the performance of training instructors and to review the adequacy and suitability of the training being provided. **(c)** Information for instructors on the training programme, including: - the syllabus and content of each course - assessments to be carried out - facilities, equipment and instructional material to be used	Schedule 3, Part 2, Para 32, 33, 46, 34			
2.1.3 in relation to relevant individuals: **(a)** A statement of how the licensee will ensure that relevant individuals, have undertaken the required training, and have reached the required level of competence and medical fitness for their roles **(b)** A statement of the policy in relation to individuals who do not fully complete training, fail a competency test, or withdraw or are withdrawn from training	Schedule 3, Part 2, Para 42, 38, 44			

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(c) Where the licensee will be undertaking spaceflight activities with individuals on board a launch vehicle, the informed consent procedures applying to the crew and any spaceflight participants				
2.1.4 in relation to the training programme: **(a)** A schedule of all the training provided, indicating: - priority and sequence of courses - intervals at which recurrent training will be provided - when assessments will be carried out **(b)** A statement of the standards, objectives and training goals for each course, setting out: - what training is provided at each level - who is to provide the training - when practical instruction will be used - what theoretical instruction will be given - criteria required to pass a course **(c)** A description of any aircraft, simulated training devices or other equipment and how they are intended to be used within the training programme **(d)** The locations of where any training is to be carried out **(e)** A full description of the arrangements made for undertaking mission rehearsals, including the time at which mission simulations are held, and who participates in them	Schedule 3, Part 2, Para 39, 35, 40			
2.1.5 in relation to medical requirements: **(a)** A section setting out the measures taken to satisfy the medical requirements which apply to the licensee's activities, which must, where appropriate to those activities, contain: - policies in relation to medical fitness - information on the responsibilities of the licensee, and the training manager in relation to medical fitness	Schedule 3, Part 2, Para 47			

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- information on the responsibilities of the aeromedical examiner and medical staff taking part in the medical programme - the medical requirements and obligations of any flight crew, remote pilots and spaceflight participants **(b)** Information for approved medical examiners, flight crew and spaceflight participants and their medical advisors on: - when and how medical examinations and assessments will be held and conducted - where medical examinations will be conducted and the equipment and facilities available - what medical reports will be required for the purpose of medical assessments - what conditions may be imposed on a certificate or confirmation of medical fitness - a list of the medical records to be kept				

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3 TRAINING PROGRAMME				
3.1 Requirements of the training programme This section will relate to the requirements of the training programme and how it is to be established and maintained to ensure appropriate practical and theoretical training for the roles specified in Part 7; 69(1)(a).	Part 7, Chapter 4; 69(1)(a)			
3.1.1 in relation to Launch Directors: If applicable, the Launch Director must have completed the training requirements as set out in paragraphs 1 – 7 of Schedule 3 Part 1.	Schedule 3, Part 1			
3.1.2 in relation to Flight Termination Personnel: If applicable, the Flight Termination Personnel must have completed the training requirements as set out in paragraphs 8 – 12 of Schedule 3 Part 1.	Schedule 3, Part 1			
3.1.3 in relation to flight crew and remote pilots: If applicable, flight crew and remote pilots must have completed the training requirements as set out in paragraphs	Schedule 3, Part 1			

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13 – 20 in Schedule 3 Part 1 and paragraphs 48, 49 and 51 of Schedule 3 Part 3.	Schedule 3, Part 3			
3.1.4 in relation to all crew and spaceflight participants: If applicable, crew and spaceflight participants must have completed the training requirements as set out in paragraphs 50 and 52 of Schedule 3 Part 3.	Schedule 3, Part 3			
3.1.5 in relation to Sub-Orbital Aircraft Engineers: If applicable, the Sub-Orbital Aircraft Engineers must have completed the training requirements as set out in paragraph 21 of Schedule 3 Part 1.	Schedule 3, Part 1			
3.1.6 in relation to Range Operations Manager: If applicable, the Range Operations Manager must have completed the training requirements as set out in paragraphs 22 – 24 of Schedule 3 Part 1.	Schedule 3, Part 1			
3.1.7 in relation to Range Safety Manager: If applicable, the Range Safety Manager must have completed the training requirements as set out in paragraphs 25 – 29 of Schedule 3 Part 1.	Schedule 3, Part 1 Part 8			
3.1.8 There must also be appropriate training available for individuals who participate in the licensed activities but do not perform a specified role or act in a specified capacity.	Part 7, Chapter 4; 69(1)(b)			
3.2 Objectives of the training programme This section of the training manual is to ensure that all participants are adequately qualified, trained and medically fit to perform assigned duties or participate in the licensed activities. To achieve this the training programme must include: **(a)** Initial, proficiency and readiness training for all relevant individuals **(b)** Initial and readiness training for individuals who do not perform specified roles **(c)** Assessments to determine: - what training is required by relevant individuals	Part 7, Chapter 4; 69(2) Part 7, Chapter 4; 69(3) Part 7, Chapter 4; 69(7)			

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- whether individuals have received and completed all necessary training elements - if individuals are competent to perform their functions **(d)** Also provide training for spaceflight participants who do not perform a specified role				
3.2.1 Initial Training Must enable the following: **(a)** Allow familiarisation of the following where necessary to enable an individual to perform their role or to act as a spaceflight participant: - The organisation and methods of working - The safety regulations in Part 8, including procedures set out in the Safety Operations Manual - Any other regulations that apply to the licence and its licensed activities **(b)** Be made aware of human factors **(c)** Provide general security awareness training in accordance with Part 11, Chapter 4	Part 7, Chapter 4; 69(4) Part 8 Part 11, Chapter 4			
3.2.2 Proficiency Training Must be provided for each specified role to ensure individuals appointed to perform that role: **(a)** Satisfy criteria specified to that role in relation to Schedule 3; Part 1 **(b)** Receive the training specified in Schedule 3; Part 3 **(c)** Are able to perform the duties associated with their role to be able to participate in the licensed activities	Part 7, Chapter 4; 69(5) Schedule 3, Part 1 Schedule 3, Part 3			
3.2.3 Readiness Training	Part 7, Chapter 4; 69(6)			

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To be provided in relation to each mission undertaken by the licence holder for all individuals who are to participate in that mission: **(a)** Understand the mission objectives **(b)** Rehearse the role which they are to perform in the mission **(c)** Demonstrate adequate performance of their role	Part 7, Chapter 4; 70(5)			

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4 TRAINING ASSESSMENTS AND EQUIPMENT				
4.1 Competence Assessments A description of how the training manager or licensee, in the case of Spaceport licence holders who do not have a training manager, intends to conduct competence assessments at regular intervals. It is also to include detail on what process is to be followed if a relevant person fails any competence assessments and how the function will be performed in the interim whilst additional training is undertaken, and further assessments are passed. Competence assessments for flight crew and remote pilots can be also be carried out by one or more of the methods as mentioned in Part 7, Chapter 4; 70(3), provided they cover all phases of the assigned launch vehicles flight.	Part 7, Chapter 4; 70(1), (2) and (3)			
4.2 Emergency Situations A description of any emergency situations that might be simulated in a launch vehicle. Providing that the only spaceflight participants are those who are authorised by the regulator to train the crew or check on any aspect of the licensee's spaceflight activity.	Part 7, Chapter 4; 70(4)			
4.3 Mission Rehearsals This section should outline how prior to any launch, one or more rehearsal missions must be conducted to enable testing of operational procedures and to train staff in their duties.	Part 7, Chapter 4; 70(5), (6) and (7)			

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Any mission rehearsals conducted, are to reproduce any intended spaceflight, spaceport and range control activities which would be carried out on the mission, including: **(a)** Normal and abnormal situations **(b)** Pre-launch, spaceflight and post launch scenarios **(c)** Any conditions in space that could affect the operator's spaceflight activity They may also include a spaceflight participant if necessary, to enable the participant to achieve any training objectives set or to complete any competence assessments.				
4.4 Training Equipment This section of the Training Manual is to provide detail on the training equipment that is required as part of the programme, as well as ensuring that the equipment to be used is sufficient. Training equipment used may include: **(a)** Devices which are capable of simulating a launch vehicle Any equipment or facilities which are used to carry out one or more of the licensed activities ("a simulated training device")	Part 7, Chapter 4; 71(1) and (2)			
4.5 Simulated Training Devices This section will relate to any simulated training devices that may be used within the training programme. Simulated training devices may only be used in the following instances: **(a)** The device accurately represents the same configuration, graphical and instrument displays and environment as the launch vehicle, equipment or facilities it is simulating	Part 7, Chapter 4; 71(3)			

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The device accurately represents conditions on the launch vehicle, equipment or facilities it is simulating as they will be experienced during the course of a licensed activity.				
4.5.1 in relation to differences between equipment: Any differences between the training device and actual launch vehicle, facilities or equipment it is simulating must be identified and described within the training programme.	Part 7, Chapter 4; 71(4)			
4.5.2 in relation to physical effects connected with spaceflight: If the licensee intends to use devices that are designed to reproduce the effects of spaceflight on the human body, a description must be provided for all the applicable effects, such as: **(a)** The effects of acceleration **(b)** Disorientation **(c)** Loss of pressurisation **(d)** Any other adverse physical effects connected with spaceflight	Part 7, Chapter 4; 71(5)			
4.5.3 in relation to monitoring of devices: A description of the intended system(s) to be used to establish and maintain the monitoring of any simulated training devices and/or any other device that is used within the training programme. The system(s) must be able to: **(a)** Identify any changes in the capabilities or configuration of any devices used **(b)** Ensure that any such changes do not reduce the effectiveness of any training or assessment for which the device is used	Part 7, Chapter 4; 71(6)			

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Compliance Statement of the Operator
We confirm to be compliant with the terms and conditions of:

- Space Industry Act 2018
- Space Industry Regulations 2021

Name of Accountable Manager: _____ Date:_____

Accountable Manager Signature: