
EXPLANATORY NOTE

(This note is not part of the Regulations)

These Regulations implement the Space Industry Act 2018 (“the Act”) (c. 5) by putting in place a regulatory regime for spaceflight operations carried out in the United Kingdom.

Part 2 of these Regulations makes provision for the appointment of the Civil Aviation Authority (“the CAA”) as regulator. This means that wherever the Act or regulations give a function to the regulator, the CAA has that function. For functions in the Act of issuing guidance, the CAA and the Secretary of State are both appointed as regulator, so that either of them may issue guidance.

Chapter 1 of Part 3 of these Regulations prescribes eligibility criteria applicable to licensees and to any individuals appointed to undertake prescribed roles on their behalf. The roles to which different types of licence holder must appoint individuals are prescribed in regulations 7 to 11. Regulations 13 to 14(2) place a duty on all licensees to inform the regulator of changes to individuals in prescribed roles and provide that failure to do so is an offence.

Chapter 2 of Part 3 of these Regulations provides that the requirement to hold an operator licence does not apply in relation to carrier aircraft in specified circumstances.

Chapter 3 of Part 3 of these Regulations provides the procedure for obtaining an operator licence, range control licence or a spaceport licence. It delegates matters, such as the form and contents of the application form for a licence and information which must accompany it, to the regulator. Provision is also made in regulations 19, 20, 23 and 24 for matters such as inspections of any site, facility, craft or equipment by the regulator, production of documents to the regulator, disclosure of information relating to the application, how the regulator must consider and determine the application for a licence, withdrawal of an application for a licence and the procedure for an application to renew a licence.

Part 4 of these Regulations prescribes the criteria and requirements which an applicant for a licence to carry out spaceflight activities that include launch or return to earth of a launch vehicle must meet in order for the regulator to be able to grant that applicant a licence. Regulations 26 to 28 set out the steps an applicant must take under section 9(4)(a) to ensure that risks to persons not prescribed under section 9(2) are as low as reasonably practicable. This Part provides for an applicant to provide information to the regulator, part of which is to be a safety case. It also requires an applicant carrying out a risk assessment to take certain steps and take into account certain things, including those set out in Schedule 2.

Chapters 1 and 2 of Part 5 of these Regulations prescribe the criteria and requirements which an applicant must meet in order for the regulator to be able to grant a spaceport licence. An application for a horizontal spaceport licence must be made in respect of an existing aerodrome meeting the requirements in regulation 35(1). An applicant must carry out a safety case which meets the requirements in regulation 36, but where there is no actual launch vehicle known to the applicant, paragraph (8) of that regulation sets out how the applicant will be able to meet those requirements. Unless the applicant’s safety case demonstrates that it is not required, an applicant must (under regulation 37) show that it will be able to put in place an appropriate safety clear zone to ensure that particular types of risks to people from hazardous operations at the spaceport are as low as reasonably practicable. A further requirement on applicants (in regulation 38) is to carry out a siting assessment.

The Act refers to “public safety” in several provisions. This means the health and safety of members of the public and the safety of their property. Chapter 3 of Part 5 of these Regulations provides that any person referred to in regulation 40 who is voluntarily in close proximity to a source of danger

at a spaceport is not to be considered a member of the public for the purposes of section 10(a) of the Act. Regulation 40(2) sets out the meaning of the terms used in regulation 40.

Part 6 of these Regulations sets out the requirements which apply to the holder of a range control licence. A range control licensee must comply with the requirements relating to its organisation and management capability (regulation 42). Where the licensee's range control services consist of or include monitoring the range for spaceflight activities, it must enter into agreements with certain third parties (regulations 43 to 45). Where a licensee's range control services consist of or include identifying an appropriate range for spaceflight activities the licensee must comply with the requirements set out in regulations 46 to 48. Where the licensee's range control services consist of or include the issue of notifications in connection with monitoring the designated range, the licensee must notify certain persons and issue warning notices relating to the operator's spaceflight activities (regulations 49 to 51). Under regulation 52, a range control licensee must establish and maintain a quality management system including a safety management system. Where a spaceflight operator is authorised to provide range control services in respect of its spaceflight activities, it must ensure that the part of its organisation which provides those services is distinct and separate from the part involved in its spaceflight activities in accordance with regulation 54.

Part 7 of these Regulations defines the responsibility of the licensees in relation to training and medical fitness: to ensure that individuals performing a specified role (listed in regulation 56) or participating in spaceflight activities as a spaceflight participant satisfy the criteria identified in this Part, and are medically fit to perform their duties. Licensees must ensure that they have in place a training management system and adequate resources to satisfy their training and medical fitness obligations. For this purpose, licensees must appoint a training manager approved by the regulator (Chapter 2), prepare a training manual (Chapter 3 and Part 2 of Schedule 3) and establish a training programme (Chapter 4). The licensees' responsibilities in relation to the medical fitness of their crew, remote pilots, spaceflight participants and others taking part in the licensed activities are set out in Chapter 5.

Part 8 of these Regulations contains the safety regulations which apply to a spaceflight operator (the holder of a launch operator licence or a return operator licence (regulation 2)). These regulations impose a duty to carry out the operator's spaceflight activities safely. "Carrying out operator's spaceflight activities safely" means the spaceflight operator must carry out the activities in accordance with the safety case by preventing a major accident from occurring or mitigating the consequences of such an accident if it does occur and, if the launch vehicle has a human occupant (regulation 2), in accordance with the risk assessment by securing the safety of a human occupant (regulation 79). Regulations 80 to 82 make provision for the safety case and risk assessment to be reviewed and for revisions of these documents so that the safety duty relates to any revised safety case and risk assessment. Regulations 83 to 104 set out specific safety requirements such as those relating to the fitness of the launch vehicle for the activities and, if the launch vehicle has a human occupant, there are additional requirements set out in regulations 105 to 123.

Part 9 of these Regulations contains requirements for the protection of space crew and carrier aircraft crew against risks arising from such crew being exposed to cosmic radiation. These requirements are closely modelled on those contained in the Air Navigation (Cosmic Radiation: Protection of Air Crew and Space Crew and Consequential Amendments) Order 2019 (S.I. 2019/1115) ("the 2019 Order"). The 2019 Order implements Council Directive 2013/59/Euratom of 5 December 2013 laying down basic safety standards for protection against the dangers arising from exposure to ionising radiation in so far as it applies to basic safety standards for protection against risks arising from air and space crew being exposed to cosmic radiation. Regulation 150 and Schedule 7 contain amendments to the 2019 Order as a result of Part 9.

Part 10 of these Regulations contains the safety regulations which apply to a spaceport licensee. These regulations impose a duty on a spaceport licensee to carry out its activities safely (regulation 152) and set out the further requirements to be met in order to comply with that duty, including providing that the safety case an applicant for a spaceport licence had to carry out under

regulation 36 is reviewed and revised in accordance with regulation 155. Regulation 157 makes provision about safety clear zones and regulations 158 to 166 set out specific safety requirements for a spaceport licensee, including relating to designation of appropriate areas, organisational requirements and emergencies. Regulation 167 provides additional powers for members of the Rescue and Fire Fighting Service attending an emergency – this is to ensure that aerodrome fire-fighters enjoy the same powers in relation to spaceports and launch vehicles as they already hold in respect of aerodromes and aircraft.

Part 11 of these Regulations makes security provisions relating to physical, personnel and cyber, vetting, training and qualifications, critical national infrastructure and essential services and the protection of US technology.

Part 12 of these Regulations makes provision regarding the consent which the spaceflight operator must obtain before that operator allows human occupants (regulation 2) to take part in spaceflight activities. Regulation 204 prescribes that a member of the crew and a spaceflight participant are to give consent. In addition, these human occupants must be at least 18 years of age and have the mental capacity provided for in regulation 205.

Part 13 of these Regulations deals with liabilities and indemnities. Regulation 218 excludes the strict liability (for personal injury, death or physical damage caused to persons or property on land or water in the United Kingdom or in the territorial sea adjacent or to aircraft in flight over such land, water or sea or to persons or property on board such aircraft) of the holder of an operator licence under section 34(2) of the Act towards the individuals listed in that regulation. These individuals can still claim for injury or damage under the common law. Regulation 219 sets out that any limit on the liability of the holder of an operator licence to indemnify Her Majesty's Government does not apply in cases where the operator is guilty of gross negligence or wilful misconduct or in circumstances where the operator has not complied with its licence conditions or the requirements of the Act or regulations made under the Act. Regulation 220 provides that an operator licence must specify a limit on the amount of an operator's liability under section 34(5) of the Act and for any third party liability not covered by that section. It also provides how that limit shall be determined, and where it will not apply. Regulation 221 provides that the power or duty of the Secretary of State to indemnify for claims above an insurance or liability limit does not apply where the operator is liable for gross negligence or wilful misconduct, or where damage or loss is caused by non-compliance by the operator with any conditions of its licence or any requirements under the Act or regulations made under the Act.

Part 14 of these Regulations sets out the powers of the regulator to monitor licensees' activities and enforce their obligations, in order to secure compliance with the Act, regulations made thereunder, the conditions of licences, and the UK's international obligations, as well as protect public safety and national security. Offences are created where a person impersonates an inspector or deliberately obstructs the regulator (Chapter 1). Persons carrying out specified activities must keep accurate records and provide accurate information to the regulator (Chapter 2). The regulator may appoint inspectors who have specified powers of access and investigation, as well as powers to issue enforcement notices where they identify contraventions (Chapter 3). The regulator may share with specified persons information received in respect of an application for a licence or received by exercising powers under this Part (Chapter 4); such information is not to be disclosed unless an exception applies (Chapter 5).

Part 15 of these Regulations sets out the stop notices framework and gives effect to the relevant provisions of Part 3 of the Regulatory Enforcement and Sanctions Act 2008 (c. 13). Under this framework, the regulator may serve notice prohibiting a person from carrying on a specified activity until that person has complied with instructions contained in the notice. Wrongful processing of the stop notice framework by the regulator can result in compensation, and failing to comply with the stop notice is an offence.

Part 16 of these Regulations creates an occurrence reporting regime by imposing a duty on the holder of an operator licence, a spaceport licence or a range control licence to report an occurrence to

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the regulator. An occurrence includes a spaceflight accident and a major accident and includes a near miss threatening the safety of any person and an occurrence during preparation for spaceflight activities.

Part 17 of these Regulations imposes an overarching duty on an applicant for a licence or a licensee to update the regulator where information previously provided changes, makes provision for sending notices and other documents, identifies those persons who are prescribed for the purposes of section 66 of the Act and who can therefore certify certain documents or records for use in legal proceedings and includes a provision requiring review of the Regulations every five years.

A full impact assessment of the effect that this instrument will have on the costs of business, the voluntary sector and the public sector is available from the Department for Transport, Great Minster House, 33 Horseferry Road, London SW1P 4DR and is published alongside the Explanatory Memorandum to this instrument on the [legislation.gov.uk](https://www.legislation.gov.uk) website.