

GUIDANCE ON DUTIES FOR ALL LICENSEES UNDER THE SPACE INDUSTRY ACT 2018 INCLUDING MONITORING AND ENFORCEMENT BY THE REGULATOR

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Section 1: Overview of the Guidance

- 1.1 The Space Industry Act 2018 (the Act) regulates all spaceflight activities carried out in the United Kingdom, and associated activities.
- 1.2 The Act requires any person or organisation wishing to:
 - launch a launch vehicle from the UK
 - return a launch vehicle launched elsewhere than the UK to the UK landmass or the UK's territorial waters
 - operate a satellite from the UK
 - conduct sub-orbital activities from the UK
 - operate a spaceport in the UK, or
 - provide range control services from the UKto obtain the relevant licence.
- 1.3 It is supported by The Space Industry Regulations 2021 (the Regulations), that set out in more detail the requirements for each licence, and the Regulator's Licensing Rules, which specify which application form to use to apply for a licence and what information the regulator will require in support of an application.
- 1.4 There is then a series of guidance documents designed to help explain how to comply with the Act and the Regulations. This document is one of the guidance documents.

With the coming into force of [section 1\(3\) of the Act](#), the [Outer Space Act 1986](#) no longer applies to space activities carried on in the United Kingdom, and accordingly the Outer Space Act 1986 does not apply to a person or organisation wishing to carry out spaceflight activities or operate a spaceport in the United Kingdom. The Outer Space Act 1986 **will** continue to regulate the following activities carried out overseas by UK entities: the procurement of the overseas launch of a space object, where the procurement takes place in the UK; the operation of a satellite in orbit from an overseas facility by a UK entity. Extant licences granted under the Outer Space Act 1986 for the carrying out of space activities from within the UK will continue to be governed under that regime. Where an application for a licence has been made under the Outer Space Act 1986, it will be assessed under that Act and – where successful – will result in the award of a licence under the Outer Space Act 1986.

What is the purpose of this document?

- 1.5 This guidance explains only the core duties of licensees once they have been granted a licence under the Space Industry Act 2018. These include duties to provide information to the regulator on an ongoing basis, following any occurrence (as defined in regulation 272) and in response to specific requests from the regulator to enable to fulfil its monitoring responsibilities. In support of these, the licensee has certain duties around record keeping. All licensees must comply with the duties and requirements imposed by the Act, the Regulations and licence conditions.
- 1.6 The guidance also summarises the regulator's powers to investigate and take enforcement action against licensees to ensure compliance with the Act.

- 1.7 Finally, it provides an overview of the process for renewing, transferring or varying a licence.
- 1.8 This guidance does **not** cover all of the obligations and duties with which a licensee must comply with once a licence has been granted. It is the responsibility of the licensee to ensure that they are aware of, and comply with, all relevant obligations, including any licence conditions the regulator may set.

Who is this guidance for?

- 1.9 This guidance is intended both for existing licensees and for those that are applying for a licence, so that they can understand the reporting and recording duties they will have if their application is successful.

Using this guidance

- 1.10 This guidance should be read in conjunction with [section 15](#) and [section 26](#) of the Act and [Parts 14 to 17 of the Regulations](#). There is also some information on monitoring and the duties of licensees in the relevant guidance documents covering different licence types.
- 1.11 The guidance is not intended to cover every situation and applicants need to carefully consider how the Act applies to the individual circumstances. However, the guidance should help applicants to understand how monitoring and enforcement will be carried out under the Act.
- 1.12 If applicants have any queries, they are encouraged to contact the regulator, to seek clarification or gain further information.

The regulator

- 1.13 The Civil Aviation Authority (CAA) will perform the functions of the regulator under the Act. It is referred to in this guidance as ‘the regulator’. Under [section 2 of the Act](#), the regulator must carry out its functions relating to spaceflight activities with a view to securing the health and safety of members of the public and the safety of their property. This duty has primacy over the other matters that the regulator must take into account in exercising its functions.
- 1.14 In performing its functions, the regulator will need at times to review confidential and commercially sensitive information. The regulator already has robust security processes in place that will ensure all the information sent in relation to applications, and monitoring ongoing licensed activities, is handled and protected appropriately. For more details on the regulator’s security processes and systems, please contact the regulator.

Contacting the regulator

The regulator can be contacted by email to commercialspaceflight@caa.co.uk. The regulator welcomes and encourages ongoing contact from prospective applicants before they submit an application for a licence. This can be from the earliest stages of considering whether to apply for a licence.

Key terms

- 1.15 The Act regulates:

- space activities
- sub-orbital activities and
- associated activities

that are carried out in the UK.

- 1.16 As set out in [section 1 of the Act](#), “space activity” means
- (a) launching or procuring the launch or the return to earth of a space object or of an aircraft carrying a space object
 - (b) operating a space object, or
 - (c) any activity in outer space
- 1.17 “A space object” includes the component parts of a space object, its launch vehicle and the component parts of that.
- 1.18 “Sub-orbital activity” means launching, procuring the launch of, operating or procuring the return to earth of:
- (a) a rocket or other craft that is capable of operating above the stratosphere
 - (b) a balloon that is capable of reaching the stratosphere carrying crew or passengers, or
 - (c) an aircraft carrying such a craft

but does not include space activity. By way of clarification, the regulator will use the International Standard Atmosphere (47km) as the stratopause (i.e. the upper limit of the stratosphere) for the purposes of determining whether an activity is ‘sub-orbital’.

- 1.19 Space activities and sub-orbital activities are referred to in this Act as “spaceflight activities”.
- 1.20 “Spacecraft” means a space object, a rocket or other craft that is capable of operating above the stratosphere or a balloon that is capable of reaching the stratosphere carrying crew or passengers, that is used for spaceflight activities. It includes satellites.
- 1.21 “Launch” is defined in the Act as including causing a craft to take off (or releasing a balloon).
- 1.22 Regulation 2 of the Space Industry Regulations defines a launch vehicle, other than in references to a “US launch vehicle”, as:
- “(a) a craft to which section 1(5) of the Act applies and the component parts of that craft, or
 - (b) a space object which is a vehicle and the component parts of that vehicle,
- that is used for the purpose of the proposed spaceflight activities or the operator’s spaceflight activities, as applicable, but does not include a payload carried by the launch vehicle;”
- 1.23 The “craft to which section 1(5) of the Act applies” referred to in part (a) of this definition are:
- a rocket or other craft that is capable of operating above the stratosphere
 - a balloon that is capable of reaching the stratosphere carrying crew or passengers

- 1.24 Part (b) of the definition covers vehicles that are capable of reaching orbit, such as those used to place a satellite payload in orbit. As explained below, the operator of any satellite carried on board a launch vehicle does not require their own launch operator licence, but does require an orbital operator licence.
- 1.25 Associated activities include the operation of spaceports and range control functions.
- 1.26 Under the Act, any site from which a spacecraft or carrier aircraft is intended to launch is considered a spaceport, and must be licensed. A site at which controlled and planned landings of spacecraft are to take place is also a spaceport and must be licensed.
- 1.27 Range control services are defined in [section 6](#) of the Act as:
- “(a) identifying an appropriate range for particular spaceflight activities;
 - (b) co-ordinating arrangements for the activation and operation of the range;
 - (c) obtaining all necessary information for identifying the range and for co-ordinating its activation and operation;
 - (d) ensuring that notifications are issued for the protection of persons who might be put at risk by spacecraft or carrier aircraft within the range or in the vicinity of it;
 - (e) monitoring the range, and the spacecraft or carrier aircraft for which it is provided, to ascertain
 - (i) whether the restrictions or exclusions to which the range is subject are complied with;
 - (ii) whether planned trajectories are adhered to;
 - (f) communicating any failure to comply with those restrictions or exclusions, or to adhere to those trajectories, for the purpose of enabling any appropriate actions to be taken in response;
 - (g) any prescribed services provided for the purposes of, or in connection with, services within any of paragraphs (a) to (f).”
- 1.28 Under [section 13\(1\) of the Act](#), the regulator has the power to include conditions in an operator licence (launch operator licence, return operator licence and orbital operator licence), spaceport licence and a range control licence. Licensees must comply with those conditions. [Schedule 1 of the Act](#) includes a list of examples of conditions, but this is not exhaustive, and the actual conditions included in a licence will vary depending on the operation planned and the type of licence issued. When deciding what conditions to include in a licence, the regulator must consult the public bodies, including the Health and Safety Executive, listed in [section 13\(6\) of the Act](#). Whenever the guidance refers to the regulator imposing conditions (other than a condition which the regulator is required to impose via the Regulations under section 13(3), the obligation to consult these bodies applies.

Carrying out spaceflight activities at sea

- 1.29 If a person is proposing to launch or carry out other spaceflight activities from UK territorial waters or from a UK flagged ship elsewhere, the Act and Regulations will regulate the activities. Where appropriate, regulations which refer to land also apply to spaceflight activities from a ship – for example, where a regulation refers to a "place" or "other place" from which activities take place, in addition to activities from land. If a person is proposing to launch or carry out other spaceflight activities from a foreign flagged ship outside UK territorial waters and is a British national, UK body corporate or Scottish firm, the Outer Space Act 1986 regulates these activities.

1.30 Sea launch and other sea activities are a complex area; organisations wishing to conduct sea launches are advised to contact the regulator before applying for a licence. Further information on this can be found in section 2 of the guidance document [Applying for a licence under the Space Industry Act 2018](#).

Requirements and expectations

1.31 Where the guidance uses the term “must”, this refers to a requirement in or under the Act. If applicants / licensees fail to meet that requirement, it could result in the licence not being granted or being revoked or suspended. Where it is stated that “the regulator expects” applicants to do something, this describes a preferred approach; however, it is not a legal requirement to comply with the regulator’s expectations.

Types of licence

1.32 The Act refers to three types of licences that can be awarded:

- operator licence
- spaceport licence
- range control licence

1.33 Following the publication of the Act, it was agreed that there should be different licensing requirements for different types of operators. For example, some organisations that would want to operate space objects (such as satellites or research vehicles) would not have a launch capability, and instead would wish to procure such capability and then operate the object once it reached orbit. While these organisations clearly do not need a licence to operate a launch vehicle, they are still required to obtain an operator licence to operate their object in space. Reflecting the various circumstances, there are now five licences available:

- **Launch operator licence:** means an operator licence within [section 3 of the Act](#) which authorises a person or organisation to carry out spaceflight activities that include launching a launch vehicle or launching a carrier aircraft and a launch vehicle. This is the type of licence needed if a person or organisation wants to launch a launch vehicle or use a carrier aircraft to assist with a launch of a launch vehicle. A person or organisation holding a launch operator licence is referred to as a spaceflight operator,¹ or in some circumstances, launch operator licensee. If a launch operator licensee wishes to return a launch vehicle launched from the UK or the UK’s territorial waters to land in the UK, it can apply to do so under the launch operator licence and does not need to apply for a separate return operator licence.
- **Return operator licence:** means an operator licence within section 3 of the Act which is not a launch operator licence and which authorises a person or organisation to operate a launch vehicle, launched into orbit from elsewhere than the United Kingdom, in order to cause that vehicle to land in the United Kingdom. This is the type of licence needed if a person or organisation wants to return a launch vehicle, launched elsewhere than the United Kingdom, to land in the UK or within the UK’s territorial waters. A person or

¹ The term spaceflight operator is used in the Regulations to refer to both the holder of a launch operator licence and the holder of a return operator licence. Any references to spaceflight operator in the Regulations or guidance encompass both licence types, so any requirements for spaceflight operators are applicable to both launch operator licensees and return operator licensees. Where a requirement only applies to either a launch operator licensee or return operator licensee, this is clearly stated.

organisation holding a return operator licence is referred to as a spaceflight operator,¹ or in some circumstances, return operator licensee.

- **Orbital operator licence:** means an operator licence which authorises a person or organisation to procure the launch of a space object into orbit, operate a space object in orbit or conduct other activity in outer space. The most common examples of activities that would be licensed under an orbital operator licence are the procurement of a satellite launch and the operation of a satellite. However, the licence may also cover any other activity in outer space, and is not limited to activities in Earth’s orbit. For example, an orbital operator licence would be needed for missions in lunar orbit, lunar surface missions, or deep space probes. A person or organisation holding an orbital operator licence is referred to as an orbital operator licensee.
- **Spaceport licence:** means a licence granted under [section 3](#) of the Act authorising a person or organisation to operate a spaceport (i.e. a site from which spacecraft or carrier aircraft can be launched or a site at which controlled and planned landings of spacecraft can take place²). Spaceports can be licensed for vertical or horizontal launches (or potentially both). A horizontal spaceport must be located at an aerodrome that is already CAA licensed or certified and National Aviation Security Programme (NASP) directed. A person or organisation holding a spaceport licence is referred to as a spaceport licensee.
- **Range control licence:** means a licence granted under [section 7](#) of the Act authorising a person or organisation to carry out range control services in relation to spaceflight activities. That includes identifying an appropriate range; coordinating the use of a range; issuing protective notifications and monitoring the range. A person or organisation holding a range control licence is referred to as a range control licensee.

Examples of offences and enforcement directions under the Act

- 1.34 Under [section 3 of the Act](#), it is an offence to carry out spaceflight activities or operate a spaceport in the UK without the required licence. It is also an offence to make a false statement for the purpose of obtaining an operator licence or a spaceport licence. A person who commits an offence under this section of the Act may be liable to a fine or imprisonment for a term not exceeding 2 years, or both.
- 1.35 Under [section 7 of the Act](#), it is an offence for range control services to be provided by anyone other than the Secretary of State, or a person or organisation authorised to provide them by a range control licence. It is also an offence for a person to make a false statement for the purpose of obtaining a range control licence. A person who commits an offence under this section of the Act may be liable to a fine or imprisonment for a term not exceeding 2 years, or both.
- 1.36 Under [section 13 of the Act](#), the regulator can grant a licence subject to conditions it thinks appropriate or must include a licence condition if required to do so by a regulation (see

² Ships used for sea launch or landing are not “sites” and are therefore not spaceports for the purposes of section 3 of the Act and so do not need a spaceport licence. However, certain types of installations at sea may be regarded as a “site” and so come within the definition. A person who wants to launch from, or land at, an installation at sea should contact the regulator to find out whether the installation they propose to use requires a spaceport licence.

regulations 9(5) and 10(2)). When a condition is imposed, it is an offence for a licensee to fail to comply with that condition.

- 1.37 Under [section 17 of the Act](#), it is an offence for a spaceflight operator to allow any person to take part in spaceflight activities without them having given their informed consent and fulfilling the age and mental capacity criteria referred to in Part 12 of the Regulations. Under [section 18 of the Act](#), it is an offence a licensee to allow any unqualified individual to take part in activities authorised by the licence or work in a specified role.
- 1.38 Under [section 27 of the Act, the regulator can](#) also issue directions that enable effective enforcement action to be taken, where it appears to the regulator that a person is carrying out spaceflight activities or associated activities without a licence, in contravention of licence conditions or in contravention of the Act or rules made under it.
- 1.39 Under section 27(2), “the regulator may give any directions to that person that appear necessary to be in the interests of safety or for the purposes of securing compliance with–
- (a) the conditions of a licence,
 - (b) provisions contained in or made under this Act, or
 - (c) the international obligations of the United Kingdom.”
- 1.40 It is an offence for a person in receipt of a section 27 direction to fail to comply with it (see [section 31\(3\)\(a\) of the Act](#)). The regulator could also, if it wished to do so, enforce compliance by way of an injunction or equivalent (see section 31(4)).
- 1.41 There are further direction-making powers in the Act, including power for the Secretary of State to give directions under [section 28\(3\)-\(4\)](#) and [section 29\(1\)](#).

The full list of guidance documents issued in relation to the Act

- 1.42 The following guidance documents are available in relation to licences that can be granted under the Act (and any statutory instruments made under the Act):
- Applying for a licence under the Space Industry Act 2018
 - Guidance for launch operator and return operator licence applicants and licensees
 - Guidance for spaceport licence applicants and licensees
 - Guidance for range control licence applicants and licensees
 - Guidance for orbital operator licence applicants and licensees
 - Guidance for the assessment of environmental effects
 - Guidance on security matters for applicants and licensees
 - Guidance on the investigation of spaceflight accidents
 - Guidance on appealing decisions made under the Space Industry Act 2018 and the Outer Space Act 1986
 - Guidance on insurance requirements and liabilities under the Space Industry Act 2018
 - Guidance on duties for all licensees under the Space Industry Act 2018 including monitoring and enforcement by the regulator
- 1.43 In addition, applicants and licensees must follow the [Regulator’s Licensing Rules](#) and are advised to read the [Principles and guidelines for the spaceflight regulator in assessing ALARP and acceptable risk](#).

Section 2: Legislative Background

The Space Industry Act 2018 and the Outer Space Act 1986

- 2.1 As set out above, the Space Industry Act 2018 regulates all spaceflight activities taking place from the United Kingdom. This includes space activities, sub-orbital activities, and all associated spaceflight activities.
- 2.2 It requires any person or organisation wishing to undertake such activities to obtain the relevant licence.
- 2.3 It supersedes the Outer Space Act 1986 for all activities launched from or taking place in the UK.

Section 26: Monitoring and enforcement

- 2.4 [Section 26 of the Space Industry Act 2018](#) stipulates that the regulator is responsible for monitoring all licensed activities for the purposes of:
 - (a) securing compliance with the provisions contained in and made under this Act, the conditions of licences under this Act and the international obligations of the United Kingdom
 - (b) protecting public safety and the national security of the United Kingdom
- 2.5 Under section 26 (3), the regulator is entitled to require licensees to provide information to it to fulfil these responsibilities.
- 2.6 The Act also gives the regulator the power to appoint inspectors to assist in these tasks and sets out the duties and powers of the inspector, including what information inspectors can request and how this information can be shared. These powers are then defined further in the Regulations.
- 2.7 [Part 14 of the Regulations](#) sets out:
 - offences and sanctions in relation to the inspector
 - obligations to provide information to the regulator
 - the appointment of the inspector by the regulator
 - the powers of an inspector in relation to carrying out their duties
 - the sharing of information between the regulator and other bodies
 - restrictions on the disclosure of information

Section 59: Civil sanctions

- 2.8 Under [section 59\(2\) of the Space Industry Act 2018](#) and [Part 3 of the Regulatory Enforcement and Sanctions Act 2008](#), the regulator has the power to serve a stop notice to a licensee to prohibit a person from carrying on the activity specified in the notice until specific steps have been taken, as specified in the notice.
- 2.9 Under [regulation 265](#), a stop notice is to be issued where the regulator reasonably believes that the activity being carried out could cause, or is causing, serious harm to:
 - a) public safety
 - b) persons carried in spacecraft or carrier aircraft

- c) persons at work at spaceports, mission management facilities or sites used in connection with the provision of range control services
 - d) the interests of persons in relation to the use of land, sea and airspace
 - e) the interests of persons with interests in property carried by spacecraft
- 2.10 Part 15 of the Regulations sets out the conditions under which the regulator can issue a stop notice and the steps a licensee must take as the result of such a notice.
- 2.11 This guidance is based on [section 26](#) and [section 59 of the Act](#), and the Regulations, and is designed to help people or organisations understand the role of the regulator and the inspector in ensuring compliance with the UK’s international obligations, provisions in the Act, licence conditions, or in the interest of public safety or national security.
- 2.12 Where a licensee fails to meet their duties as described in section 3 of this guidance, they may have committed a criminal offence.
- 2.13 The guidance is not comprehensive and if there is any doubt, [section 26](#) and [section 59 of the Act](#), and the Regulations, will always take precedence over anything in the guidance.

Further duties applying to all licensees

- 2.14 Under Part 16 of the Regulations, all licensees have a duty to report occurrences to the regulator. An occurrence is defined in regulation 270 as:
- (a) a spaceflight accident,
 - (b) a major accident, or
 - (c) any other fortuitous or unexpected event arising out of or in the course of spaceflight activities or preparation for those activities, and occurring—
 - (i) in or over the United Kingdom, or
 - (ii) elsewhere if any of the circumstances referred to in regulation 273 apply,
- which, if not corrected or addressed, **could** result in a spaceflight accident or a major accident
- 2.15 Under regulation 271, occurrence reports must be made in writing and sent to the regulator within 72 hours of the time at which the licensee became aware of the occurrence. Regulation 274 sets out the information that is required in an occurrence report.

Transfer, variation, suspension or termination of a licence

- 2.16 [Section 15 of the Act](#) sets out the regulator’s powers to consent to the transfer of a licence.
- 2.17 The regulator is also empowered under this section to revoke, vary or suspend a licence under certain circumstances.

Commencement of the Act

- 2.18 The Space Industry Act 2018 received Royal Assent on 15 March 2020, providing a legislative framework for the licensing of space activities, sub-orbital activities, and associated activities carried out in the UK. However, many of the Act’s provisions will only come into force on

[date], when the Space Industry Regulations come into force. From that date, people and organisations will be able to apply for a licence to:

- launch a launch vehicle from the UK for sub-orbital missions involving human occupants, or return such a launch vehicle to the UK
- launch a launch vehicle from the UK for orbital missions that do not involve human occupants, or return such a launch vehicle to the UK
- procure the launch from the UK of a space object (such as a satellite) into orbit
- operate a satellite from the UK
- operate a spaceport in the UK, or
- provide range control services in the UK

2.19 However, at the point the Regulations come into force, it will not be possible to apply for a licence for some activities that are permitted under the Act. These include:

- the licensing of space activities involving an orbital launch vehicle with human occupants
- the licensing of spaceflight activities involving hypersonic (or any other experimental) transport from A to B

2.20 Such activities are technically complex and difficult to regulate. By their very nature, they will require global collaboration on common standards to a much higher threshold than is achievable with current technologies.

2.21 These restrictions are set out in Commencement Regulations, which also include provisions to ensure that the licensing of a procurement of an overseas launch carried out under the Outer Space Act can continue to be done under that Act, whether such a procurement takes place in the UK or overseas.

Structure of this guidance

2.22 Section 3 describes how licensed activities will be monitored, including the duties on a licensee to keep accurate records, fulfil reporting requirements (including reporting occurrences) and provide information to the regulator or their inspectors as required.

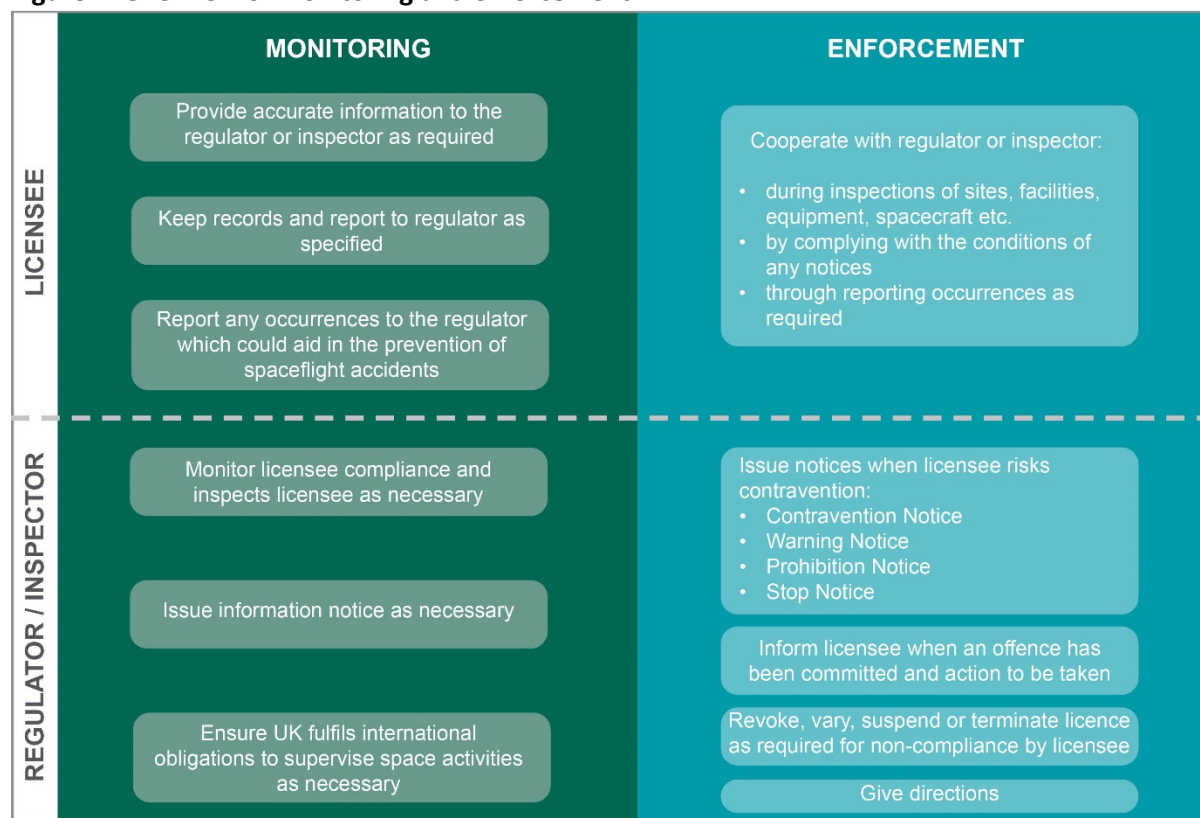
2.23 Section 4 sets out the offences under the Regulations. This section also covers the role of the inspector in more detail and describes the sorts of notices that can be issued to licensees.

2.24 Section 5 sets out how a licence can be changed, including information on how to renew a licence or how to transfer one.

Section 3: Duties applying to all licensees

- 3.1 Once a licence is granted under the Act, all licensees have some core duties that they are required to fulfil. These can be summarised as:
- providing information to the regulator, to enable the regulator to fulfil its international obligations to supervise space activities under its jurisdiction
 - keeping records of, and in relation to, licensed activities
 - reporting occurrences
- 3.2 In addition, there are specific ongoing duties and responsibilities related to each licence type. These are covered in the guidance on that type of licence.
- 3.3 The regulator may also set further duties on licensees through imposing conditions on the licence.

Figure 1: Overview of monitoring and enforcement



Duty to provide information to the regulator

- 3.4 Once a licence is granted, the regulator will continue to monitor the licensee's activity. To do so, it will require information from the licensee, either on a regular or occasional basis. Depending on the licence type, it may also conduct site visits and inspections of equipment.
- 3.5 The nature of the information required will depend on the licence type and on the specific activities. For licences linked to a specific activity (e.g. a single launch), the majority of the information required should have been provided at the application stage and so there may be limited reporting requirements. However, where a licence was granted for a number of

activities (e.g. multiple launches), it is likely that the reporting requirements will be more extensive.

- 3.6 The guidance on each licence type sets out the kind of information the regulator will expect to see as part of its core monitoring. For example, a launch operator may be required to confirm launch dates and details of payloads, which were only indicative at the application stage.
- 3.7 The extent of the reporting requirements is dependent on the scope of the licence and any conditions attached to the licence.

Table 1 in Annex A provides examples of the types of reporting conditions that may be attached to a licence.

- 3.8 In addition to generic reporting requirements, there are certain circumstances in which licensees are required to inform the regulator – for example, if there are changes to the safety case or safety operations manual.
- 3.9 The regulator will evaluate this information to ensure that the planned activities are compliant with the licence and any conditions that were attached to it. This evaluation helps fulfil the regulator’s international obligation to supervise space activities under its jurisdiction.
- 3.10 If licensees do not provide information to the regulator in a timely and appropriate fashion, the regulator may take enforcement action – which can include suspending or revoking a licence.
- 3.11 If there has been a material changes in any of the information submitted as part of the licence application or after a licence has been granted, then the applicant or licensee must inform the regulator in writing as soon as possible after the change becomes known, or risks committing an offence under [regulation 285](#).
- 3.12 In addition to the reporting requirements, the regulator may, at any time, request information from anyone linked to spaceflight activities, as specified in [regulation 228](#). This is done through an “information notice” which the regulator will issue.
- 3.13 The notice will specify the information required, the time period within which the information must be provided, and how that information should be conveyed.

Example

For commercial/contractual reasons, the regulator might issue an information notice to all spaceport licensees requiring them to confirm in writing, within seven days of receiving the request, which weather forecasting services they will use as their primary source for the next six months. Alternatively, if the forecasting service used by one spaceport ceased operations, the regulator could issue an information notice solely to that spaceport.

- 3.14 If licensees do not respond to an information notice in the correct way, the regulator may take enforcement action.

- 3.15 Neither the regulator nor an inspector can compel the production of any document or information which is subject to legal professional privilege or a claim to confidentiality of communications.
- 3.16 Unless information falls into these two categories, there is no right for anyone to withhold any information on the grounds that it is restricted or sensitive. Licensees also cannot withhold information on the basis that it relates to US technology and is therefore covered by International Traffic in Arms Regulations (ITAR) or export controls. ITAR may place restrictions on a US person, but the UK-US Technology Safeguards Agreement and associated Memorandum of Understanding (MoU) aim to ensure that US persons can provide information that the regulator and its inspectors will need.

How the regulator will protect information it receives

- 3.17 All information submitted to the regulator will be handled sensitively and appropriately. The regulator has a number of existing robust security processes in place to ensure all information supplied is handled and protected appropriately. All personal data is stored and processed in accordance with General Data Protection Regulation (GDPR) requirements, including the provision of appropriate technical and organisation security controls.
- 3.18 The regulator uses standard UK Government information classifications, and has in place systems and processes designed for protecting information with higher classification requirements. Where appropriate, the regulator has systems and processes for handling of information with “Secret” classification.
- 3.19 The regulator also employs the principle of Least Privilege, which means that only approved roles are granted access to information, insofar as they need that access to carry out their roles. Privileged access is carefully controlled and limited, and access is reviewed on a regular basis. The regulator also requires protection of all information at rest through encryption.
- 3.20 There are strict requirements for personnel vetting and only staff with appropriate security clearance will be granted access.
- 3.21 The regulator uses strong access controls with multiple authentication factors, and requires the use of secure information exchange for any information requiring protection. It has a range of tools available for this purpose, including [Egress](#) for secure email and [Huddle](#) for secure file exchange and collaboration.

The role of the inspector

- 3.22 The regulator may appoint an inspector to act on its behalf in carrying out the duties set out in [section 26 of the Act](#). [Chapter 3 of Part 14](#) of the Regulations details how an inspector is appointed and what powers they have.
- 3.23 In line with [regulation 241](#), an inspector can request access to premises and vehicles as they deem necessary in relation to their duties. This includes sites which are restricted or segregated on the basis of US technology being present.
- 3.24 Any licensee receiving such a request should:
- allow access to the inspector without delay

- not obstruct the inspector in any way
 - allow the inspector access to any vehicle, equipment or substance
- 3.25 In carrying out their duties, inspectors may need to bring either people or equipment onto premises or into a vehicle. Inspectors will only bring a person they have approved, such as a health and safety expert, and will only bring equipment or materials deemed necessary to carry out, for example, testing. Inspectors can also take items, or samples, away for further inspection or testing.
- 3.26 Where possible, inspectors will provide written notice if they intend to remove something. A person who has responsibilities towards either the vehicle or the premises that an item is taken from can request to be present when anything is done to the item. The inspector may also ask such a person for assistance or facilities in order to carry out their duties.
- 3.27 The inspector may also find it necessary to take measurements or photographs or to make recordings and should not be prevented from doing so.
- 3.28 When requested, licensees must provide any information or documents requested by the inspector. This includes access to the appliance used to generate or store the information e.g. a computer; as well as any document or record which may be held on electrical or electronic equipment.
- 3.29 If licensees in any way obstruct an inspector or fail to meet an inspector's requests, the regulator may take enforcement action.

Sharing information

- 3.30 Under regulation 253, information provided to the regulator either in an application for a licence under the Act or in meeting ongoing monitoring requirements can be shared with:
- the Secretary of State
 - a qualifying health and safety authority
 - the Defence Safety Authority
 - any other public authority or international organisation responsible for regulating any aspect of spaceflight activities
 - someone appointed by the Secretary of State to carry out regulatory functions under the Act
- 3.31 However, there are restrictions on the regulator disclosing information which has been:
- obtained by the regulator (or inspector) under the powers in Part 14 of the Regulations, or
 - shared under regulation 253

Such information is known in Part 14 as "protected information".

- 3.32 The regulator can only disclose protected information if:
- the person/body who provided the protected information gives their consent
 - a public authority needs to disclose the information to comply with a duty
 - the protected information has been sufficiently anonymised

Duty to keep records

- 3.33 To enable licensees to meet their reporting requirements, it is important that they retain comprehensive records of all their licensed activities (spaceflight activities or associated activities). The regulator expects all licensees to keep records throughout the licence period and for three years after the licence has expired.
- 3.34 It is also important for licensees who are required to appoint a training manager to meet the record-keeping requirements set out in [regulation 60](#) and [77](#). More information on training is provided in the guidance on [Applying for a licence under the Space Industry Act 2018](#).
- 3.35 Under [regulation 103](#), spaceflight operators must keep certain records relating to their spaceflight activities. These include:
- records of all communications during spaceflight activities between the mission management facility or ground control at the spaceport and the range control service provider, the spaceport licensee, relevant meteorological service providers, relevant air navigation service providers, and relevant emergency services
 - records of correspondence between the spaceflight operator and the regulator before launch and during the operator's spaceflight activities
 - reports of maintenance work carried out on communication and recording systems used to make the records referred to, and of checks made to such systems to ensure the launch vehicle is fit for the operator's spaceflight activities

For a full list of the duties on spaceflight operators to retain such records, see [regulations 102-103](#) and the separate [Guidance for launch operator and return operator licence applicants and licensees](#).

- 3.36 The regulator expects other licensees to retain similar records of communication, correspondence and maintenance work.
- 3.37 If licensees fail, on request, to provide evidence of adequate record-keeping, the regulator may take enforcement action.

Duty to report occurrences

- 3.38 Under [Part 16 of the Regulations](#), all licensees have a duty to report occurrences to the regulator.
- 3.39 The reporting of events that constitute an occurrence is similar to the duty to report spaceflight accidents under [regulation 7 of the Spaceflight Activities \(Investigation of Spaceflight Accidents\) Regulations 2021](#). However, the definition of occurrence is wider than the definition of a spaceflight accident. Reportable occurrences include:
- a spaceflight accident or a major accident, or
 - any other fortuitous or unexpected event arising out of, or in the course of, spaceflight activities or preparation for those activities, and occurring:
 - in or over the UK, or
 - elsewhere, if any of the circumstances referred to in [regulation 273](#) apply

and which, if not corrected or addressed, could result in a spaceflight accident or a major accident

Definitions

It is important that any person reporting the occurrence is aware of the various definitions concerning accidents, spaceflight accidents, a major accident etc. These definitions are set out in [regulation 2](#).

3.40 The circumstances listed at [regulation 273](#) are circumstances occurring outside of the UK, or combinations of circumstances outside of the UK when the UK is the state:

- from which the launch vehicle or any carrier aircraft was launched
- which has jurisdiction over the organisation responsible for the design of the launch vehicle or any carrier aircraft
- which has jurisdiction over the organisation responsible for the manufacture or final assembly of the launch vehicle or any carrier aircraft, or of any components of that vehicle or aircraft
- which has jurisdiction over the organisation responsible for the maintenance of the launch vehicle or any carrier aircraft or any components of that vehicle or aircraft, or
- in which the licensee's principal place of business is located

3.41 Occurrence reports must be made in writing and sent to the regulator within 72 hours of the time at which the licensee became aware of the occurrence.

3.42 If licensees fail to provide an occurrence report within this time period, the regulator may take enforcement action.

Objective and contents of an occurrence report

3.43 Occurrence reports are vital to the regulator because they build awareness of the performance of the licensee and help to identify actual or potential problems. The sole objective of an occurrence report is the prevention of spaceflight accidents or major accidents, without the apportionment of blame or liability.

3.44 The information that must be given in the occurrence report is listed at [regulation 274](#) and the licensee must prepare the occurrence report having regard to the objective of the report referred to in paragraph 3.43.

3.45 The general categories of occurrence are set out at [regulation 275](#) and summarised in the table below:

Category	Occurrences involving:
A	ground preparations for spaceflight activities at a spaceport or other place from which such preparations take place
B	the launch vehicle or any carrier aircraft, including a technical failure in such a vehicle or aircraft, during: <ul style="list-style-type: none">• preparations for the launch from the time when that vehicle or its component parts or that aircraft or its component parts arrive at the

	<p>spaceport or other place from which the launch is to take place or takes place, and</p> <ul style="list-style-type: none"> the operator’s spaceflight activities
C	a technical failure in the mission management facility or ground control at the spaceport or other place
D	a failure in the provision of range control services
E	any human occupants [of a launch vehicle]

3.46 Licensees should be aware that many occurrences should also be reported to the Health and Safety Executive (HSE) under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013 (RIDDOR). Guidance on RIDDOR and the types of [dangerous occurrences that are reportable](#) can be found on the [HSE website](#).

3.47 As soon as reasonably practicable after receipt of an occurrence report, licensees can expect the regulator to analyse the occurrence report, (including comparing that report with any other occurrence reports) and consider whether it needs to exercise any of its regulatory powers to prevent or mitigate the risk of a spaceflight accident or a major accident occurring. The regulator will retain the occurrence report with a view to identifying any common trends of events, either for that individual licensee or across the scope of activities licensed under the Act.

Confidential information and disclosure of confidential information

3.48 Launch vehicles used for spaceflight activities are usually subject to export controls due to the possible alternative purposes that the technology could be put to. Any information concerning the technology, performance or data derived from launch vehicles is therefore likely to be highly sensitive and strictly controlled by a licensee. In recognition of this sensitivity and the balance to be struck between divulging information for safety purposes versus limiting disclosure of technical data, regulations have been made to protect such information and the circumstances it may be disclosed. [Chapter 6 of Part 16](#) of the Regulations describes these arrangements and covers:

- who may not disclose confidential information
- when US technical data may be disclosed (i.e. only with the consent of the Government of the United States after consultation between the regulator, the Secretary of State and the Government of the United States)
- anonymity requirements that apply to persons preparing occurrence reports and any other person involved in an occurrence
- subject to obtaining consent to disclose US technical data, the purposes for which the regulator can make a disclosure and who that data can be disclosed to
- the extent to which the Chief Inspector of spaceflight accidents or the investigator-in-charge may refer to confidential information (including US technical data) received from the regulator, when complying with their obligations under [regulations 32 to 34 of the Spaceflight Activities \(Investigation of Spaceflight Accidents\) Regulations 2021](#).

3.49 For the purposes of protecting information, permitted disclosures and court applications for disclosure, “confidential information” includes:

- any information referred to in occurrence reports, except to the extent that such information has been made public

- material produced by the regulator and others assisting in the analysis of the occurrence or the exercise of the regulator's powers referred to in regulation 276(1)(b) such as notes and opinions expressed about the analysis of information
- information and evidence about occurrences provided by the Space Accident Investigation Authority (SAIA)
- information and evidence about occurrences provided by any national or international body referred to in regulation 277(5)(h), if the arrangement referred to in that regulation provides that this material is to be treated as confidential information in accordance with Part 16 of the Regulations, and
- US technical data

3.50 Under regulation 278, an application may be made to the court for permission for a person to either disclose confidential information or for confidential information to be disclosed to a person. Regulation 278 contains a description of what such applications must contain, which court has jurisdiction over the issue, and the matters that the court must be satisfied of before making an order for disclosure. Chapter 7 of Part 16 sets out the contraventions and sanctions that are available if a person provides false information (regulation 281) or fails to protect confidential information (regulation 282).

Section 4: Enforcement

- 4.1 The regulator has a range of enforcement powers at its disposal to assist it in fulfilling its primary duty to secure the health and safety of members of the public, the safety of their property, and in meeting the UK's international obligations. These range from issuing notices (e.g. information notices) to revoking a licence, or investigating and prosecuting offences under the Act or the Regulations.
- 4.2 The regulator seeks to take a proportionate approach and use these powers appropriately in line with its primary duty.
- 4.3 An inspector may also issue notices in the course of fulfilling their duties.

Notices issued by an inspector

- 4.4 In line with chapter 3 of Part 14 of the Regulations, if an inspector believes that a licensee has contravened, is contravening, or is conducting an activity that is likely to contravene licence conditions or provisions of the Act or a regulation made under the Act, the inspector may issue notices. The inspector's powers to do so are set out in regulations 247-249. The right to appeal against a prohibition notice and the process for doing so is set out in regulation 250. The inspector's other powers of access and entry are set out in regulations 241-246.
- 4.5 These notices vary in severity:
 - contravention notice: will stipulate the contravention and also specify the time period for resolving the issue. In some instances, the inspector may provide the measures needed to bring the activity back into compliance. This is set out in more detail in regulation 247
 - warning notice: issued when a person fails to comply with a contravention notice. This notice will stipulate the time period for rectifying the problem and may also provide measures that can be taken to resolve the problems. See regulation 248
 - prohibition notice: issued when a person fails to comply with both the contravention and warning notices or where the inspector has determined that there is a risk to public safety or national security. A person who receives a prohibition notice must stop all activities specified in the notice. As set out in regulation 249, the notice will provide details of what has caused the notice to be issued and also the period over which it applies, including when the notice takes effect

Receiving a stop notice from the regulator

- 4.6 In addition to inspectors' notices, the regulator can also issue stop notices. A stop notice is an instruction from the regulator to cease a specified activity until such time as the steps specified in the notice have been carried out.
- 4.7 A stop notice may be issued by the regulator if it is concerned that an activity is causing or is likely to cause serious harm to people or property and will result or is likely to result in an offence being committed in relation to the activity, as set out in regulation 265.

Example

Examples of where the regulator would rely upon this particular enforcement mechanism include instances where there is an immediate danger to the public. This could involve public spectators breaching their designated safe zones and coming unacceptably close to the launch vehicle, or the regulator becoming aware that specific safety requirements have not been implemented by the licensee to protect spectators during launch activities.

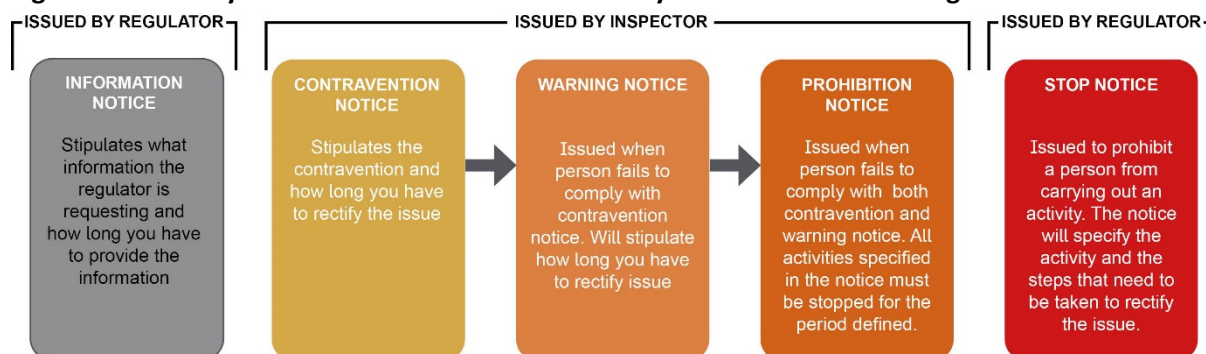
- 4.8 Once the regulator is satisfied that the right steps have been taken to bring the activity back into compliance, the regulator will issue a completion certificate. As described under [regulation 268](#), once this certificate has been issued, the stop notice will no longer apply.
- 4.9 Regulation 268 sets out the licensee's resource to compensation and rights to appeal against decisions by the regulator:
- to serve a stop notice (under regulation 265)
 - not to issue a completion certificate (under regulation 267)
 - as to compensation (under regulation 268)

For more information on rights of appeal and appeal procedures, see section 5 of this guidance.

4.10 Under [regulation 269](#), it is an offence to not comply with a stop notice.

4.11 The regulator cannot use the stop notices mechanism in respect of offences under Schedule 4 of the Act (offences against the safety of spacecraft etc.).

Figure 2: Summary of enforcement notices which may be issued under the regulations



Revocation, variation, suspension or termination of a licence

4.12 Under [section 15 of the Act](#), the regulator may revoke, vary or suspend a licence with the consent of the licensee. The regulator may also revoke, vary or suspend a licence **without** the consent of the licensee in accordance with the terms of the licence or if it is satisfied that it necessary to do so:

- in the interests of safety
- in the interests of national security
- to comply with any international obligation of the UK, or
- otherwise in the national interest

The regulator may also revoke, vary or suspend a licence where a licensee is carrying out spaceflight activities other than in accordance with the terms of its licence (section 15(3)(b) of the Act).

- 4.13 Under [section 15\(4\) of the Act](#), the regulator may also revoke or vary a licence where it appears to the regulator that a condition of the licence has not been complied with, or the licensee has failed to comply with legal obligations including requirements made by any other regulatory body (for example, for a spaceport licensee, these grounds could include breaches of the Control of Major Accident Hazards (COMAH) regulations).

Varying a licence includes removing, varying or suspending a condition of a licence and/or adding a new condition to a licence. If a licensee wants the regulator to vary a licence, then the regulator expects the licensee to request the regulator to do so in writing.

- 4.14 If the regulator deems that an investigation or review is needed to ascertain whether it is necessary to revoke or vary a licence on any of the grounds listed in the bullet points in paragraph 4.12 above (from [section 15\(3\)\(c\) of the Act](#)), the regulator can vary or suspend the licence pending the outcome of the investigation or review. The regulator may also take this action if it appears to it that an investigation or a review is needed to ascertain whether or not the grounds listed in section 15(4) of the Act apply.
- 4.15 Under [section 15\(6\) \(a\) and \(b\) of the Act](#), if the regulator is not the Secretary of State, the regulator must consult the Secretary of State before revoking a licence or before varying a licence, except where the licence is to be varied in the circumstances referred to in the previous paragraph.
- 4.16 The suspension, revocation or expiry of a licence does not affect the obligations of the licensee (or former licensee) under the conditions of the licence.

Offences related to monitoring and enforcement under the Regulations

- 4.17 There are a number of offences that have been created to support the regulator and inspectors in carrying out their duties under Part 14 of the regulations and [section 26 of the Act](#). These are:
- obstructing an inspector or regulator ([regulation 223](#))
 - impersonating an inspector ([regulation 225](#))
 - failing to comply with an information notice ([regulation 230](#))
 - providing false statement ([regulation 232](#))
 - false recording ([regulation 234](#))
 - disclosing protected information ([regulation 256](#))
- 4.18 An offence has also been created for those failing to comply with a stop notice ([regulation 269](#)) under Part 15 of the regulations.
- 4.19 Where relevant, the Regulations provide information about the penalties that will be incurred if an offence is committed, as well as what an appropriate defence may be. The relevant regulations have been signposted throughout this guidance for readers to consult directly.

Section 5: Renewal or transfer of a licence

5.1 Once a licence has been granted, licensees may wish to renew their licence or transfer it to a different licensee. The process for making such changes is summarised below.

Renewing a licence

5.2 The licensing regulations and process already described apply in the same way for a licence renewal as they do for an application for a licence. Applications for licence renewals should be made using the same form as for initial applications. The information to be submitted in connection with the application is specified in the Regulator's Licensing Rules.

5.3 Licensees who intend to submit an application for a renewal must do so at least 90 days before their current licence expires, but are encouraged to contact the regulator in advance of this to discuss their application. For details of the timing of an application to renew a licence, please see the Regulator's Licensing Rules (rule 5.6).

5.4 It is the responsibility of the licensee to seek a renewal, otherwise the licence will expire at the end of the period specified in the licence.

5.5 Section 14(3) of the Act provides that if the regulator is not the Secretary of State, the regulator must consult the Secretary of State before renewing a licence.

Transferring a licence

5.6 Under section 15(1) of the Act, licences may be transferred with the written consent of the regulator.

5.7 The regulator may consent to the transfer only if it is satisfied that it:

- will not impair the national security of the United Kingdom
- is consistent with the international obligations of the United Kingdom
- is not contrary to the national interest

and that:

- the transferee has the financial and technical resources to do the things authorised by the licence, and is otherwise a fit and proper person to do them
- the persons who are expected to do, on the transferee's behalf, any of the things authorised by the licence are fit and proper persons to do them

5.8 If the licensee wants to transfer the licence, the regulator expects the licensee to send a written request to the regulator for its consent to do so, together with information about the transferee. The information which the regulator expects relating to a transferee is set out in Table 1 of the Regulator's Licensing Rules.

5.9 Under section 15(6(c) of the Act, if the regulator is not the Secretary of State, the regulator must consult the Secretary of State before consenting to the transfer of a licence.

Grounds for appeal

5.10 Under [section 60 of the Act](#), licensees are entitled to appeal against the regulator's decision to:

- refuse to renew a licence
- refuse to consent to the transfer of a licence
- vary, or refuse to vary, a licence
- suspend a licence
- revoke a licence
- issue a prohibition notice
- serve a stop notice
- not issue a completion certificate in respect of a stop notice
- not award compensation in respect of a stop notice served, or the amount awarded

5.11 It should be noted that during the appeals process all operations can continue on a site related to the appeal, unless a specific enforcement notice prohibiting certain activities has been issued.

5.12 [Schedule 10 of the Act](#) provides more details on the right to appeal. The [Space Industry \(Appeals\) Regulations](#) apply in such cases and there is a separate [guidance document explaining the appeals process](#).

Annex A

Table 1 – Example of outline conditions on a licence related to generic launch/spaceflight reporting

Operator Type	Reporting Requirement	Description
Launch	Payload Information - Option 1	Either an orbital operator licence, or
Launch	Payload Information - Option 2	For satellites/payloads that do not have an orbital operator licence associated with them, the following information is required to enable the regulator to a review of the satellite/payload to be launched: (1) Payload name (2) Payload manufacturer and country of origin (3) Payload specification (including lifetime) (4) Physical dimensions and mass of the payload (5) Payload owner and operator, if different from the person requesting payload review or the name provided in (2) (6) Orbital parameters for parking, transfer and final orbits (7) Intended payload operations during the life of the payload and (8) End-of-life operational concept for the payload (9) Hazardous materials carried by the payload, and radioactive materials, and the amounts of each (10) National Space Regulator that is responsible for authorising and supervising the space activity (includes UN registration) (11) Approach and coordination of conjunction analysis, conjunction analysis risk assessments and collision avoidance (12) A list of mission unique ground support equipment required to support the payload identified during launch pad operations (13) Identification of contingency operations e.g. propellant offload, access to payload post fairing installation
Launch	Launch campaign schedule	For each launch, a launch operator must file a launch campaign schedule that identifies each review, rehearsal, and safety critical launch processing.

Operator Type	Reporting Requirement	Description
Launch	Mission Information	<p>(1) Launch vehicle designation</p> <p>(2) List of objects to achieve orbit (named payloads and launch vehicle elements (stages and mission related elements))*</p> <p>(3) Orbital parameters for all objects (inertial launch azimuth at lift-off, inertial flight azimuth after lift-off, epoch time, nominal period (min), inclination (deg), eccentricity, semi major axis (km), argument of perigee (deg), right ascension of ascending node (deg), mean anomaly (deg), start time of orbit (hh:mm:ss after launch), end time of orbit (hh:mm:ss after launch))*</p> <p>(4) Injection data (injection point latitude (deg n or s) & longitude (deg e), inertial azimuth at injection point, height above earth (km), injection time (hh:mm:ss after lift-off))*</p> <p>(5) On-orbit activity of the launch vehicle, including each payload delivery point</p> <p>(6) Debris mitigation plan including end-of-life operations for the launch vehicle stage(s) left on orbit</p> <p>(7) Ofcom confirmation of frequency use for launch activity</p>
Launch	Flight Information	<p>(1) Launch Date and Time (earliest and latest possible launch time (GMT))*</p> <p>(2) Planned flight path</p> <p>(3) Sequence of events from lift-off to final injection (separation, ignition, reorientation, ejection, deorbit)</p> <p>(4) Staging and impact locations</p>
Launch	Flight Analysis Updates	Updated flight safety analysis using previously approved methodologies. The products should account for vehicle and mission specific input data. No analysis is expected if the flight safety analysis filed during the licence application is suitable.
Launch	Launch Delay	<p>(1) Confirmation of launch delay or cancellation and associated justification</p> <p>(2) Expected new launch date</p> <p>Note: It is expected that the other reporting requirements will be redelivered</p>
Orbital	Flight Information	<p>(1) Launch Date and Time (earliest and latest possible launch time (GMT))</p> <p>(2) List of payloads on launch</p>

Operator Type	Reporting Requirement	Description
Orbital	Mission Information – LEOP	(1) Injection parameters for the initial orbit of the payload (2) Confirmation that the payload has reached its final operational orbit (3) Confirmation that the payload has completed its check-out and will enter normal operations
Orbital	Mission Information - Nominal Operation	(1) Annual health check on the spacecraft (telemetry information to be provided by operator)
Orbital	Mission Information - End-of-life Operation	(1) Intention that spacecraft will initiate its end-of-life operations (2) Confirmation that the spacecraft has successfully completed its end-of-life operations
Spaceport	Launch schedule	The spaceport operator will provide the regulator with a schedule of upcoming launches. The schedule should identify: (1) Launch operator (2) Launch period/date (the specific detail available on the scheduling of a launch activity will be dependent time between submission of the launch schedule and the launch activity e.g. launch periods are expected for launches that are expected + 6 months post the submission of the launch schedule) (3) Mission details (orbit targeted and expected payloads)
Range	Tbd	Tbd

*Information contained within the 'R-15' form must be provided to USSPACECOM, see www.space-track.org/documentation#/odr. The information may be delivered as part of the R-15 form or separately.