Guidance for Orbital Operator Licence Applicants and Orbital Operator Licensees

Guidance for Orbital Operator Licence Applicants and Orbital Operator Licensees

Table of Contents

Section 1: Overview of the Guidance	3
What is the purpose of this guidance document?	3
Who is this guidance for?	3
Using this guidance	4
The regulator	4
Key terms	4
Types of licence	6
Offences and enforcement directions under the Act	7
The full list of guidance documents issued in relation to the Act	8
Section 2: Legislative Background	9
The Space Industry Act 2018	9
Sections 8 and 9 of Act	9
Other sections of the Act1	0
Commencement of the Act1	0
Section 3: Applying for an orbital operator licence1	1
Section 4: The Traffic Light System1	1
Section 5: Assessment principles for orbital operator licences1	2
Safety1	2
Security1	3
Sustainability1	3
Responsibility1	3
Section 6: Information required as part of an orbital operator licence application1	5
Personnel1	5
Section 7: Reporting requirements for orbital operations licensees1	7
Registration1	7
Annex A: Best Practice Standards1	9
Annex B : Examples of conditions on an orbital operator licence related to generic reporting requirements	9

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. Spaceflight activities are space activities and sub-orbital activities. These terms are defined below.
- 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, operate a spaceport or provide range control services, to obtain the relevant licence. It is supported by <u>The Space Industry Regulations</u> (the Regulations), that set out in more detail the requirements for each licence, and the <u>Regulator's Licensing Rules</u>, which contain procedural matters such as which application form to use to apply for a licence and what information the regulator will require in support of an application.
- 1.3 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 <u>section 1(3) of the Act</u>, the <u>Outer Space Act 1986</u> 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; 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 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 guidance document?

- 1.4 This guidance explains the activities which, under the Act, are authorised by an orbital operator licence. It explains how to apply for an orbital operator licence, what information applicants will need to provide and how the regulator will assess applications. It covers topics such as procuring a UK launch and the responsibilities of operators for managing the satellite or space object once it is in space.
- 1.5 It also sets out the duties of an orbital operator once a licence is granted.

Who is this guidance for?

- 1.6 This guidance is for any person or organisation that wishes to conduct spaceflight activities in outer space from the UK. This includes, for example, the operation, from the UK, of a communications satellite, an orbital manoeuvring vehicle or an in-orbit servicing vehicle.
- 1.7 The guidance may also be of relevance to people or organisations wishing to apply for other licences under the Act, as there are some areas where responsibilities overlap and where

orbital operator licence holders may need to obtain or use information from other licence holders, and vice versa.

Using this guidance

- 1.8 The guidance should be read in conjunction with the <u>Act</u>, <u>the Regulations</u>, the <u>Regulator's</u> <u>Licensing Rules</u> and the guidance on <u>Applying for a licence under the Space Industry Act 2018</u>. The <u>Regulator's Licensing Rules</u> specify the application form to be used for applying for an orbital operator licence and the information required by the regulator in connection with this application.
- 1.9 If applicants have any queries, they are encouraged to contact the regulator, to seek clarification or gain further information.

The regulator

1.10 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 <u>section 2 of the Act</u>, 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.

Contacting the regulator

The regulator can be contacted by email to <u>CAASpaceflightTeam@caa.co.uk</u>. 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

1.11 The Act regulates:

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

that are carried out in the UK.

- 1.12 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
- 1.13 "A space object" includes the component parts of a space object, its launch vehicle and the component parts of that.
- 1.14 "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 proposes to 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'.

- 1.15 Space activities and sub-orbital activities are referred to in the Act as "spaceflight activities".
- 1.16 Associated activities include the operation of spaceports and range control functions.
- 1.17 Under the Act, any site from which a spacecraft or carrier aircraft intends 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, although temporary installations at sea which are to be used **only for landings** cannot be spaceports (see <u>section</u> <u>3(3)</u>).
- 1.18 Range control services are defined in <u>section 6</u> 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)."
- 1.19 "Spacecraft" means a space object, or a craft used for spaceflight activities. It includes satellites.
- 1.20 "Launch" is defined in the Act as including causing a craft to take off (or releasing a balloon).
- 1.21 <u>Regulation 2</u> defines a 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 satellite carried by the launch vehicle;"

- 1.22 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
- 1.23 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.
- 1.24 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

- 1.25 The Act refers to three types of licences that can be awarded:
 - operator licence
 - spaceport licence
 - range control licence
- 1.26 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.
 - **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

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.

United Kingdom, to land in the UK or within the UK's territorial waters. A person or 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 a launch, operate a space object or conduct other activity in outer space. The most common example of an activity that would be licensed under an orbital operator licence is operating 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 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 either CAA licensed or European Aviation Safety Agency (EASA) 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 under <u>section 7</u> 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.
- 1.27 There may also be situations in which both an orbital operator licence and a launch operator licence are required. For example, if part of a launch vehicle is designed to remain in outer space to carry out additional orbital activities following the launch, the launch operator may need to obtain an orbital operator licence. This is likely to be determined on a case-by-case basis, taking into account safety and security considerations.

Offences and enforcement directions under the Act

- 1.28 Under <u>section 3 of the Act</u>, it is a criminal 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.
- 1.29 Under <u>section 7 of the Act</u>, 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

² Temporary installations at sea which are to be used **only for landings** are not spaceports for the purposes of section 3 of the Act – <u>see section 3(3)</u>

section of the Act may be liable to a fine or imprisonment for a term not exceeding 2 years, or both.

- 1.30 In addition to offences specifically set out in the Regulations or the Act, <u>section 27 of the Act</u> also gives the regulator the power to issue directions that enable effective enforcement action to be taken.
- 1.31 Section 27(1) provides that the section applies "where it appears to the regulator that a person is carrying out spaceflight activities, operating a spaceport or providing range control services—
 - (a) without an authorisation required by this Act,
 - (b) in contravention of the conditions of a licence under this Act, or
 - (c) in contravention of any provisions contained in or made under this Act."
- 1.32 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."
- 1.33 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)).
- 1.34 There are further direction-making powers in the Act, including power for the Secretary of State to give directions under <u>section 28(3)-(4)</u> and <u>section 29(1)</u>.

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

- 1.35 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
 - Guidance on 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

Section 2: Legislative Background

The Space Industry Act 2018

- 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 The Outer Space Act 1986 still applies to activities taking place overseas, where a UK company is involved. For example, if a UK satellite manufacturer procured a launch for its satellite from the UK, it would have to do so under the Space Industry Act 2018. If the same manufacturer procured a launch for its satellite from any other country, it would have to do so under the Outer Space Act 1986.

Sections 8 and 9 of Act

- 2.4 This section provides guidance on the common matters that the regulator must be satisfied with in relation to granting all types of licence. These common matters are summarised in subsections (2) and (3) of <u>section 8</u> of the Act. Applicants must provide information to the regulator about these matters. Further details of the information that must be supplied for this purpose can be found in the <u>Regulator's Licensing Rules</u> and in the <u>Guidance on applying for a licence</u>.
- 2.5 Sections 8 and 9 of the Space Industry Act 2018 set out the primary requirements for orbital operator licences.
- 2.6 <u>Section 8 of the Act</u> (Grant of a Licence) sets out a number of general matters that apply to applicants for any licence under the Act. Under section 8, the regulator has the power to grant a licence if the regulator thinks fit. It may do so only if it is satisfied that doing so:
 - 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 applicant 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 expected to do, on the applicant's behalf, any of the things authorised by the licence are fit and proper persons to do them
- 2.7 <u>Section 9</u> identifies the core principles in relation to safety. Section 9 provides that the regulator must not grant a licence unless it is satisfied that requirements in sections 9(2) and 9(4) are met.
 - a. Section 9(2) requires an applicant to have carried out an assessment of the risks to the health and safety of individuals undertaking a prescribed role or capacity in the activities. For the purposes of section 9(2), there are no prescribed roles or capacities that relate to orbital only activities.

b. Section 9(4) requires an applicant to have taken all reasonable steps to ensure that risks to the health, safety and property of persons who are not acting in a prescribed role or capacity are as low as reasonably practicable. Applicants for an operator licence must satisfy the regulator that they have met these requirements.

Other sections of the Act

2.8 Other sections of the Act set out various criteria for applicants or licensees. Many of these apply to applicants for any licence under the Act. For more information about applying for a licence generally, see the guidance on <u>Applying for a licence</u>. These further criteria are referred to where appropriate in this guidance.

Commencement of the Act

- 2.9 As a temporary measure, the Commencement Regulations will be used to commence certain key provisions of the Space Industry Act partially. The effect of such partial commencement would be to ensure that:
 - the licensing of space activities involving an orbital launch vehicle with human occupants will not initially be possible
 - the licensing of spaceflight activities involving hypersonic (or any other experimental) transport from A to B will not initially be possible
 - the licensing of a procurement of an overseas launch carried out under the Outer Space Act continues to be done under that Act
- 2.10 No additional legislation has been drafted regarding Point A to Point B sub-orbital spaceflight operations and orbital and interstellar spaceflight operations with human occupants. It is not currently intended to license these activities. These are technically complex and difficult to regulate activities, and by their very nature will require global collaboration on common standards to a much higher threshold than is achievable with current technologies.

Section 3: Applying for an orbital operator licence

- 3.1 The general process for applying for a licence is set out in the <u>Applying for a licence</u> guidance document.
- 3.2 To apply for an orbital operator licence, a person or organisation must provide information to the regulator so that the regulator can make a reasoned assessment on the suitability of the application. For orbital operator licence applicants, much of this information will be provided by answering the regulator's 'Assessment Questions'.³ <u>The Regulator's Licensing Rules</u> set out the information that must be sent to the regulator in connection with an application.
- 3.3 The regulator will only grant a licence if it is satisfied that the applicant has the necessary resources, skills and capabilities to undertake the proposed activities. The regulator will assess all applications for an orbital operator licence according to the Assessment Principles, which are detailed in section 5 of this guidance.
- 3.4 Given the quantity of information required and the time needed to assess that information, applications should be submitted well in advance of any planned date for a launch or operations. In general, the length of the period of assessment will reflect the complexity of the application.
- 3.5 This guidance focuses on the provision of information about the proposed activity and the demonstration of technical capability for an orbital operator licence.
- 3.6 As set out in <u>Applying for a licence</u>, the regulator may attach conditions to any licence it issues.

Section 4: The Traffic Light System

The Traffic Light System is a pre-application process that is currently used under the <u>Outer Space</u> <u>Act 1986</u>. The regulator is considering whether to use a system of this kind (with necessary adjustments as it would be under the 2018 Act) for all orbital applications once the SIA regime is in force and would welcome your views. Please see [question...] of the Consultation Document.

³ Please note that these questions are in development and are expected to be complete by the end of 2020. However, they will be similar to the questions that are already asked of licensees under the Outer Space Act. Section 6 of this guidance (Assessment Principles) helps explain what applicants will be expected to demonstrate in their responses to the Assessment Questions.

Section 5: Assessment principles for orbital operator licences

- 5.1 In assessing applications for an orbital operator licence, the regulator will follow four core principles:
 - safety
 - security
 - sustainability
 - responsibility
- 5.2 There are standard factors that must be considered under each principle.
- 5.3 Applicants should use the list of Best Practice Standards in Annex A of this document to aid in the compilation of applicable standards to their activities. Applicants should also carry out their own standards survey to find which standards are applicable. An applicant may use other applicable standards providing they are clearly identified and justified as suitable to the applicant's use case.

Safety

- 5.4 As noted above, under <u>section 9 of the Act</u> the regulator must be satisfied that the applicant has taken all reasonable steps to ensure that risks to health safety and property of persons are as low as reasonable practical and that the level of those risks is acceptable.
- 5.5 The focus of this principle is to ensure that the risks of licensed orbital activities to public health or the safety of persons or property are as low as reasonably practicable. In practice, this principle is concerned with mitigating the likelihood and impact of unforeseen, non-malicious events that might occur as a direct or indirect result of a licensed activity, and making sure that accidental interference with the activities of others in the peaceful exploration and use of outer space is minimised.
- 5.6 Unlike applications for a launch operator licence, there is no requirement for an applicant for an orbital operator licence to provide a safety case. However, applicants will be expected to demonstrate how they will work to ensure their operations are safe and that the risks are as low as reasonably possible and at an acceptable level. They will demonstrate this through their answers to the Assessment Questions and in any supporting evidence.
- 5.7 Under this principle, the regulator expects applicants for an orbital operator licence to:
 - demonstrate how their chosen launch operation(s) have been planned to minimise the risk to public safety and the impact on the orbital environment. In doing so, demonstrate how they have considered the reliability and heritage of the chosen launch vehicle
 - consider the reliability of the spacecraft, including appropriate design standards, functionality and capability during all mission phases including launch
 - develop and explain how they will adhere to appropriate plans, procedures, rules and criteria to ensure safe operations during all mission phases
 - ensure suitable functionality and capability of the ground-based elements of the spacecraft system to ensure safe operations during all mission phases

• meet, where appropriate, international standards and guidelines on spacecraft and launch vehicle design, qualification, operation and disposal, testing and ground segment and mission operations

Security

- 5.8 The focus of this principle is to ensure that activities licensed in orbit are secure, both to the operator and third parties. This is primarily concerned with mitigating the likelihood and impact of malicious events that might occur as a direct or indirect result of a licensed activity.
- 5.9 The regulator therefore expects applicants to:
 - demonstrate that their proposed activities will not impair the national security of the United Kingdom
 - demonstrate that their proposed activities will not actively interfere with the activities of others in the peaceful exploration and use of outer space
 - ensure that all aspects of their spaceflight activities and associated activities, including any ground-based activities, are adequately protected against malicious external interference that may compromise an operator's ability to control the activity in orbit or grant access to sensitive data pertaining to the activity.

Sustainability

- 5.10 The focus of this principle is to ensure that activities licensed in orbit are sustainable. A sustainable activity (or mission) is one that meets the requirements of the present without compromising the ability of subsequent generations to embark on activities (or missions) to meet their own requirements in the future. Sustainability is inherently linked to safety and security: whereas safety and security look to mitigate impacts of spacecraft activities on the operations of existing spacecraft, sustainability attempts to mitigate the impacts of spacecraft activities on the future environment, and operations within.
- 5.11 To be considered sustainable, applicants must demonstrate how they will adhere to the same orbital sustainability objectives as currently licensed operators,⁴ by demonstrating how they will:
 - prevent on-orbit break-ups, either from collisions with other objects in orbit or fragmentation
 - limit the number of objects released during normal operations
 - remove spacecraft and orbital stages that have reached the end of their operations from the useful densely populated orbit regions

Responsibility

- 5.12 The focus of this principle is to ensure that activities licensed in orbit are performed in a responsible manner throughout the duration of the mission. This requires the licensee to act responsibly in attempting to minimise risks, to take accountability for the mission's activities and its impacts.
- 5.13 Applicants must therefore demonstrate to the regulator how they will:

⁴ That is, operators licensed under the Outer Space Act 1986.

- avoid breaching the international obligations of the United Kingdom, including but not limited to international registration and liability obligations
- not cause or be perceived to cause undue financial or reputational risk to the UK and work with the UK to ensure that these risks are mitigated appropriately
- be proactive in ensuring compliance with licence conditions, as well as identifying and communicating in a timely manner any issues or necessary changes that require coordination with the regulator

Section 6: Information required as part of an orbital operator licence application

- 6.1 The <u>Regulator's Licensing Rules</u> lists the information that applicants must provide to the Regulator.
- 6.2 Annex D of the Regulator's Licensing Rules specifies that applicants for orbital operator licences are required to provide information about matters including the safety and sustainability of the mission. The regulator will use this information to assess the application against the Assessment Principles outlined in section 5 of this guidance. Applicants for orbital operator licences will provide this information by answering the 'Assessment Questions'.⁵
- 6.3 As set out in <u>regulation 22</u>, the regulator has the right to request other information as it deems necessary to evaluate the licence application. For example, the regulator may request evidence to support an applicant's answers to the Assessment Questions.

Personnel

- 6.4 Applicants must provide details of the individuals they propose to appoint to prescribed roles. For orbital operator licences, the prescribed roles are:
 - accountable manager
 - security manager (where applicable)
- 6.5 The responsibilities for these roles are <u>set out in regulations</u> and are summarised in the guidance document <u>Applying for a licence.</u>

<u>Regulation 10</u> provides that the role of security manager is only required if the applicant intends to conduct activities which may give rise to issues of national security. If applicants are uncertain whether a security manager is required for their operations, they should contact the regulator. For more information on the role and responsibilities of a security manager, if required, see paragraphs 3.29- 3.32 of the document <u>Guidance on security matters for applicants and licensees</u>.

- 6.6 As set out in the guidance on <u>Applying for a licence</u> and specified in the <u>Regulator's Licensing</u> <u>Rules</u>, applicants must provide evidence of the experience, skills and qualifications of any individual nominated for a prescribed role.
- 6.7 The regulator has the discretion to require a licensee to appoint someone to fulfil a particular role if necessary for the operation(s). An example of such a role is a 'safety manager'. Any such roles will be set out in conditions in a licence; however, in practice the regulator will normally advise the applicant, during the application process, if such additional roles are likely to be required. In deciding whether to impose such a condition, the regulator will consider factors such as mission profile, satellite capabilities etc.

⁵ The Assessment Questions are in development and are expected to be complete by the end of 2020. However, they will be similar to the questions that we already asked licence holders under the Outer Space Act. Section 5 of this guidance (Assessment Principles) helps explain what applicants will be expected to demonstrate in their responses to the Assessment Questions.

6.8 In addition to prescribed roles, applicants are encouraged to provide details of the experience, skills and qualifications of any individuals who will play a key role in their operations - for example, controlling the object in space, working with the launch operator etc.

Use of agents

6.9 Applicants for an orbital operator licence may propose to appoint an agent to carry out the activities or part of the activities to be authorised by the licence on their behalf. This requirement is derived from section 3(4) of the Act:

"A person does not require an operator licence to carry out, as employee or agent of another person, spaceflight activities that are authorised by an operator licence granted to that other person."

- 6.10 If the applicant proposes to appoint an agent, the regulator is likely to request the applicant to provide:
 - identity information regarding any such agent, as set out in Section 1 of Table A of the Regulator's Licensing Rules, and
 - any documents which evidence the capability of such an agent to carry out the activities to be authorised by the licence.
- 6.11 The documents that provide evidence of the capability of an agent to carry out the activities on behalf of an applicant or licensee must:
 - provide a detailed description of the activities that the agent will carry out
 - include a written agency agreement with the licensee which includes:
 - an authorisation for the agent to carry out the agreed spaceflight activities, and
 - a schedule of the terms on which the agent will carry out the agreed spaceflight activities on behalf of the licensee.
- 6.12 Prior to the commencement of licensing by the regulator, the regulator will publish a schedule of minimum required terms to be included in a written agency agreement which the licensee must include in any agency agreement with its agents.
- 6.13 Any operator licence granted by the regulator will include the condition that the licensee will only use an agent to perform licensed activities if it has entered into an agency agreement with the agent that includes the minimum required terms published by the regulator; that the licensee will ensure their agent complies with those terms and that the licensee will cease to use the services of their agent should the agent fail to comply with those terms.

Section 7: Reporting requirements for orbital operations licensees

- 7.1 For the purpose of monitoring an orbital operator's spaceflight activities, once a licence has been granted, the regulator envisages the operator reporting certain matters to the regulator on an ongoing basis.
- 7.2 The regulator will use the information provided by the orbital operator licensee to help it satisfy aspects of its duties under the Act and to meet the international obligations of the UK.
- 7.3 It should be noted that these reporting requirements are independent of the regulator's power to request additional ad hoc information at any point during the licensing process. Furthermore, the extent of the reporting requirements is dependent on the scope of the licence.
- 7.4 It is envisaged that there will be two overall types of reporting conditions to be complied with by an orbital operator licensee:
 - generic reporting conditions: these conditions will be substantially the same for all orbital operator licensees
 - specific reporting conditions: these conditions will be specific to the individual orbital operator licensee or even tailored to each operation
- 7.5 Table 1 in Annex B of this guidance provides further details of the kinds of information that an orbital operator licensee may need to report as a condition on a licence. The regulator will specify the frequency of reporting and any time periods in which information must be provided.
- 7.6 The regulator continues to have the right to request monitoring information from any licensee (or all licensees) as it determines necessary to fulfil its duties. Licensees must respond to such requests in a timely fashion. For more details, see the separate document <u>Guidance on duties for all licensees under the Space Industry Act 2018 including monitoring and enforcement by the regulator</u>.

Registration

- 7.7 Under <u>section 61(1)</u> of the Act, the Secretary of State must maintain a register of launches that have taken place from spaceports in the UK. This includes both space and suborbital launches.
- 7.8 This is in addition to the duty on the Secretary of State, set out in <u>section 7</u> of the Outer Space Act 1986, to maintain a register of space objects.
- 7.9 Both duties follow from the UK's participation in the <u>UN Convention on Registration of Objects</u> <u>Launched into Outer Space</u> (the "Registration Convention").
- 7.10 To enable the Secretary of State to fulfil the duty under section 61(1) of the Act, for each launch, the Secretary of State may require as much of the following information from the holder of an operator licence as is appropriate:

- the date of the launch
- the spaceport from which the launch took place
- the nature of each launch vehicle launched
- the purpose of the launch
- name, designation, and catalogue number of the space objects launched
- orbital position and orbital parameters of the space objects launched
- general function of the space objects launched
- 7.11 The Secretary of State may also request further information, as deemed appropriate. The information provided may also be used to notify other international bodies or organisations of UK launches and space objects as is required.
- 7.12 Details of what information must be provided to the Secretary of State will be confirmed at a later date.
- 7.13 The information within the register will be available to the public to view, free of charge.

Annex A: Best Practice Standards

The following set of standards is a non-exhaustive list that may be applicable to the operator in the management, design or operation of the spacecraft or mission. The standards listed are guidance on what the Regulator considers Industry/Government best practice. Operators may choose to tailor these standards to their own activities or develop their own best practice. In their demonstration to the Regulator as part of their licence application, the applicant is expected to show how they have adopted industry best practice/standards and if not the appropriateness of their alternative approach. This list was current at the time of compilation: however, the applicant should refer to the standards bodies for the most up-to-date versions.

Туре	Standard ID	Standard Title			
Spacecraft	ECSS Q70C Rev.1	Materials, Mechanical Parts and Processes			
Spacecraft	ECSS-E-ST-20C	Electrical and Optical Engineering - Electrical and Electronic			
Spacecraft	ECSS-E-ST-31C	Mechanical Engineering - Thermal Control General Requirements			
Spacecraft	ECSS-E-ST-32C Rev.1	Mechanical Engineering - Structural General Requirements			
Spacecraft	ECSS-E-ST-32-08C	Mechanical Engineering – Materials			
	Rev.1				
Spacecraft	ECSS-E-ST-32-01C	Mechanical Engineering - Fracture Control			
	Rev.1				
Spacecraft	ISO 14302:2002	Space systems – Electromagnetic compatibility requirements			
Spacecraft	ISO 14303:2002	Space systems – Launch-vehicle-to-spacecraft interfaces			
Spacecraft	ISO 14622:2000	Space systems – Structural design – Loads and induced environment			
Spacecraft	ISO 14624-1:2003	Space systems – Safety and compatibility of materials – Part 1: Determination of upward flammability of materials			
Spacecraft	ISO 14624-2:2003	Space systems – Safety and compatibility of materials – Part 2: Determination of flammability of electrical-wire			
		insulation and accessory materials			
Spacecraft	ISO 14624-3:2005	Space systems – Safety and compatibility of materials – Part 3: Determination of offgassed products from			
		materials and assembled articles			
Spacecraft	ISO 14624-4:2003	Space systems – Safety and compatibility of materials – Part 4: Determination of upward flammability of materials			
		in pressurized gaseous oxygen or oxygen-enriched environments			
Spacecraft	ISO 14624-5:2006	Space systems – Safety and compatibility of materials – Part 5: Determination of reactivity of system/component			
		materials with aerospace propellants			

Spacecraft	ISO 14624-6:2006	Space systems – Safety and compatibility of materials – Part 6: Determination of reactivity of processing materials with aerospace fluids			
Spacecraft	ISO 14624-7:2006	pace systems – Safety and compatibility of materials – Part 7: Determination of permeability and penetration of naterials to aerospace fluids			
Spacecraft	ISO 14953:2000	ace systems – Structural design – Determination of loading levels for static qualification testing of launch nicles			
Spacecraft	ISO 15389:2001	Space systems – Flight-to-ground umbilicals			
Spacecraft	ISO	Prevention of accidental cross-connection			
	15389:2001/Amd				
	1:2005				
Spacecraft	ISO 15389:2001/Cor				
	1:2006				
Spacecraft	BS ISO 15859-1:2004	Space systems – Fluid characteristics, sampling and test methods – Part 1: Oxygen			
Spacecraft	BS ISO 15859-2:2004	Space systems – Fluid characteristics, sampling and test methods – Part 2: Hydrogen			
Spacecraft	BS ISO 15859-3:2004	pace systems – Fluid characteristics, sampling and test methods – Part 3: Nitrogen			
Spacecraft	BS ISO 15859-4:2004	Space systems – Fluid characteristics, sampling and test methods – Part 4: Helium			
Spacecraft	BS ISO 15859-5:2004	space systems – Fluid characteristics, sampling and test methods – Part 5: Nitrogen tetroxide propellants			
Spacecraft	BS ISO 15859-6:2004	Space systems – Fluid characteristics, sampling and test methods – Part 6: Monomethylhydrazine propellant			
Spacecraft	BS ISO 15859-7:2004	Space systems – Fluid characteristics, sampling and test methods – Part 7: Hydrazine propellant			
Spacecraft	BS ISO 15859-8:2004	Space systems – Fluid characteristics, sampling and test methods – Part 8: Kerosine propellant			
Spacecraft	BS ISO 15859-9:2004	Space systems – Fluid characteristics, sampling and test methods – Part 9: Argon			
Spacecraft	BS ISO 15859-	Space systems – Fluid characteristics, sampling and test methods – Part 10: Water			
	10:2004				
Spacecraft	BS ISO 15859-	Space systems – Fluid characteristics, sampling and test methods – Part 11: Ammonia			
	11:2004				
Spacecraft	BS ISO 15859-	Space systems – Fluid characteristics, sampling and test methods – Part 12: Carbon dioxide			
	12:2004				
Spacecraft	BS ISO 15859-	Space systems – Fluid characteristics, sampling and test methods – Part 13: Breathing air			
	13:2004				
Spacecraft	ISO 15860:2006	Space systems – Gas contamination – Measurement methods for field tests			

Spacecraft	ISO 15863:2003	Space systems – Spacecraft-to-launch-vehicle interface control document			
Spacecraft	ISO 15864:2004	Space systems – General test methods for space craft, subsystems and units			
Spacecraft	ISO 15865:2005	space systems – Qualification assessment			
Spacecraft	ISO 21961:2003	Space data and information transfer systems – Data entity dictionary specification language (DEDSL) – Abstract			
		syntax			
Spacecraft	ISO 21962:2003	Space data and information transfer systems – Data entity dictionary specification language (DEDSL) – PVL syntax			
Spacecraft	ISO 22643:2003	Space data and information transfer systems – Data entity dictionary specification language (DEDSL) – XML/DTD			
		Syntax			
Spacecraft	ISO 23038:2018	Space systems – Space solar cells – Electron and proton irradiation test methods			
Spacecraft	ISO 16454:2007	Space systems – Structural design – Stress analysis requirements			
Spacecraft	ISO 17566:2011	Space systems — General test documentation			
Spacecraft	ISO 19933:2007	Space systems — Format for spacecraft launch environment test report			
Spacecraft	ISO 21350:2007	Space systems — Off-the-shelf item utilization			
Spacecraft	ISO 24638:2008	Space systems — Pressure components and pressure system integration			
Spacecraft	ISO 26871:2012	Space systems — Explosive systems and devices			
Spacecraft	ISO 11227:2012	Test procedures for HV1 material ejecta			
Operations /	IADC-02-01 (Revision	IADC Space Debris Mitigation Guidelines			
Spacecraft	1 - September 2007)				
Operations /	IADC-04-06 (Rev 5.5	Support to the IADC Space Debris Mitigation Guidelines			
Spacecraft	May 2014)				
Operations /	European-CoC (Issue	European Code of Conduct for Space Debris Mitigation			
Spacecraft	1				
	28 Jun 04)				
Operations /	ISO 26872:2019	Space systems Disposal of satellites operating at geosynchronous altitude			
Spacecraft					
Operations /	ISO 27875:2019	Space systems. Re-entry risk management for unmanned spacecraft and launch vehicle orbital stages			
Spacecraft					
Operations /	ECSS Q30-02C	Failure Modes, Effects, And Criticality Analysis			
Spacecraft					

Operations /	ECSS Q40-02C	Hazard Analysis	
Spacecraft			
Operations /	ECSS Q40C Rev.1	Safety	
Spacecraft			
Operations /	ECSS-E-ST-10-06C	System Engineering -Technical Requirements Specification	
Spacecraft			
Operations /	ECSS-E-ST-35C Rev.1	Mechanical Engineering - Propulsion General Requirements	
Spacecraft			
Operations /	ECSS-E-ST-33-11C	Mechanical Engineering - Explosive subsystems and devices	
Spacecraft	Rev.1		
Operations /	ECSS-E-ST-33-01C	Mechanical Engineering - Mechanisms	
Spacecraft	Rev.2		
Operations /	ECSS E70	Ground Systems And Operations	
Spacecraft			
Operations /	ISO 11104:2011	Space data and information transfer systems Time code formats	
Spacecraft			
Operations /	ISO 11754:2003	Space data and information transfer systems Telemetry channel coding	
Spacecraft			
Operations /	ISO 12171:2002	Space data and information transfer systems Telecommand Channel service	
Spacecraft			
Operations /	ISO 12173:2003	Space data and information transfer systems Telecommand Command operation procedures	
Spacecraft			
Operations /	ISO 12174:2003	Space data and information transfer systems Telecommand Architectural specification for the data	
Spacecraft		management service	
Operations /	ISO 12175:1994 +	Space data and information transfer systems Standard formatted data units Structure and construction rules	
Spacecraft	A1:2015		
Operations /	ISO 13420:1997	Space data and information transfer systems Advanced orbiting systems Networks and data links	
Spacecraft		Architectural specification	
Operations /	ISO 13764:1996	Space data and information transfer systems Standard formatted data units Control authority procedures	
Spacecraft			

Operations /	ISO 14619:2003	Space systems – Space experiments – General requirements	
Spacecraft			
Operations /	ISO 14623:2003	Space systems – Pressure vessels and pressurized structures – Design and operation	
Spacecraft			
Operations /	ISO 14625:2007	Space systems – Ground support equipment for use at launch, landing, or retrieval sites–General requirements	
Spacecraft			
Operations /	ISO 14721:2012	Space data and information transfer systems – Open archival information system – Reference model	
Spacecraft			
Operations /	ISO 14952-1:2003	Space systems – Surface cleanliness of fluid systems – Part 1: Vocabulary	
Spacecraft			
Operations /	ISO 14952-2:2003	Space systems – Surface cleanliness of fluid systems – Part 2: Cleanliness levels	
Spacecraft			
Operations /	ISO 14952-3:2003	Space systems – Surface cleanliness of fluid systems – Part 3: Analytical procedures for the determination of on-	
Spacecraft		volatile residues and particulate contamination	
Operations /	ISO 14952-4:2003	Space systems – Surface cleanliness of fluid systems – Part 4: Rough-cleaning processes	
Spacecraft			
Operations /	ISO 14952-5:2003	Space systems – Surface cleanliness of fluid systems – Part 5: Drying processes	
Spacecraft			
Operations /	ISO 14952-6:2003	Space systems – Surface cleanliness of fluid systems – Part 6: Precision-cleaning processes	
Spacecraft			
Operations /	ISO 14961:2002	Space data and information transfer systems – Parameter value language specification	
Spacecraft			
Operations /	ISO 14962:1997	Space data and information transfer systems – ASCII encoded English	
Spacecraft			
Operations /	ISO 15387:2005	Space systems – Single-junction solar cells – Measurements and calibration procedures	
Spacecraft			
Operations /	ISO 15395:1998	Space data and information transfer systems – Standard formatted data units – Control authority data structures	
Spacecraft			
Operations /	ISO 15396:2007	Space data and information transfer systems – Cross support reference model – Space link extension services	
Spacecraft			

Operations /	ISO 15887:2013	Space data and information transfer systems – Data systems – Lossless data compression	
Spacecraft			
Operations /	ISO 15888:2000	Space data and information transfer systems – Standard formatted data units – Referencing environment	
Spacecraft			
Operations /	ISO 15889:2011	Space data and information transfer systems – Data description language – EAST specification	
Spacecraft			
Operations /	ISO 15893:2010	Space data and information transfer systems – Protocol specification for space communications – Transport	
Spacecraft		protocol	
Operations /	ISO 21351:2005	Space systems – Functional and technical specifications	
Spacecraft			
Operations /	ISO 21459:2015	Space data and information transfer systems – Proximity-1 space link protocol – Coding and synchronization	
Spacecraft		sublayer	
Operations /	ISO 21460:2015	Space data and information transfer systems – Proximity-1 space link protocol – Physical layer	
Spacecraft			
Operations /	ISO 22641:2012	Space data and information transfer systems – TM (telemetry) synchronization and channel coding	
Spacecraft			
Operations /	ISO 22642:2015	Space data and information transfer systems – TC (telecommand) synchronization and channel coding	
Spacecraft			
Operations /	BS ISO 22644:2006	Space data and information transfer systems – Orbit data messages	
Spacecraft			
Operations /	ISO 22645:2016	Space data and information transfer systems – TM (telemetry) space data link protocol	
Spacecraft			
Operations /	ISO 22646:2005	Space data and information transfer systems – Space packet protocol	
Spacecraft			
Operations /	ISO	Space Data And Information Transfer Systems — Space Packet Protocol — Amendment 1	
Spacecraft	22646:2005/AMD		
	1:2015		
Operations /	BS ISO 22647:2010	Space data and information transfer systems – Space link identifiers	
Spacecraft			

Operations /	ISO 22663:2015	Space data and information transfer systems – Proximity-1 space link protocol – Data link layer	
Spacecraft			
Operations /	ISO 22664:2016	Space data and information transfer systems – TC (telecommand) space data link protocol	
Spacecraft			
Operations /	ISO 22666:2016	Space data and information transfer systems – AOS (advanced orbiting systems) space data link protocol	
Spacecraft			
Operations /	ISO 22667:2013	Space data and information transfer systems – Communication operations Procedure-1	
Spacecraft			
Operations /	ISO 22669:2013	Space data and information transfer systems – Space link extension (SLE) – Return-all-frames service	
Spacecraft			
Operations /	ISO 22670:2013	Space data and information transfer systems – Space link extension (SLE) – Return-channel-frames service	
Spacecraft			
Operations /	ISO 22671:2011	Space data and information transfer systems – Space link extension (SLE) – Forward command link transmission	
Spacecraft		unit (CLTU)	
Operations /	ISO 22672:2011	Space data and information transfer systems – Space link extension (SLE) – Forward space packet service	
Spacecraft			
Operations /	ISO 15862:2009	Space systems — Launch-vehicle-to-spacecraft flight environments telemetry data processing	
Spacecraft			
Operations /	ISO 21348:2007	Space environment (natural and artificial) — Process for determining solar irradiances	
Spacecraft			
Operations /	ISO 24917:2010	Space systems — General test requirements for launch vehicles	
Spacecraft			
Operations /	ISO 26143:2013	Space data and information transfer systems — Space link extension (SLE) — Return operational control fields	
Spacecraft		service	
Operations /	ISO 26868:2009	Space data and information transfer systems — Image data compression	
Spacecraft			
Operations /	ISO 26870:2009	Space systems — Launch pad and integration site operational documents	
Spacecraft			
Operations /	ISO/TR 11233:2014	Orbit determination and estimation	
Spacecraft			

Operations /	ISO 14222:2013	Atmosphere density models	
Spacecraft			
Operations /	ISO 14200:2012	Process based meteoroid/debris environment models	
Spacecraft			
Operations /	ECSS E ST 10-04C	Space environment	
Spacecraft			
Operations /	ECSS E ST 10-04C	Space environment (Rev 1. 15 February 2017)	
Spacecraft	Rev1.		
Operations /	ISO 16679:2015	Space systems — Relative motion analysis elements after LV/SC separation	
Spacecraft			
Operations /	ISO 16164:2015	Space systems — Disposal of satellites operating in or crossing Low Earth Orbit	
Spacecraft			
Operations /	ISO 16126:2014	Space systems — Assessment of survivability of unmanned spacecraft against space debris and meteoroid impacts	
Spacecraft		to ensure successful post-mission disposal	
Operations /	ISO/TS 20991:2018	space systems — Requirements for small spacecraft	
Spacecraft			
Operations /	ISO 17666:2016	Space systems Risk management	
Management			
Operations /	ISO 16091:2018	Space systems – Integrated logistic support	
Management			
Operations /	ISO 20652:2006	Space data and information transfer systems – Producer-archive interface – Methodology abstract standard	
Management			
Operations	ITU-R S 1003-2	Environmental protection of the geostationary-satellite orbit (ITU Radiocommunication Assembly	
	(01/12/2010)	Recommendation)	
Operations	A/AC.105/C.1/L.284	Revised draft space debris mitigation guidelines of the Scientific and Technical Subcommittee of the Committee	
	[V.09-88517 January	on the Peaceful Uses of Outer Space	
	2010]		
Operations	ISO 14620-1 2018	Space systems Safety requirements Part 1: System safety	
Operations	ISO 14620-2 2019	Space systems Safety requirements Part 2: Launch site operations	
Operations	ISO 14620-3 2005	pace systems Safety requirements Part 3: Flight safety systems	

Operations	ISO 23339:2010	Space systems Unmanned spacecraft residual propellant mass estimation for disposal manoeuvres	
Operations	ISO 24113:2019	Space systems Space debris mitigation requirements	
Operations	ISO 27852:2016	Space systems Estimation of orbit lifetime	
Operations	ISO 14711:2003	Space systems – Unmanned mission operations concepts – Guidelines for defining and assessing concept products	
Operations	ISO 14950:2004	Space systems – Unmanned spacecraft operability	
Management	ISO 14954:2005	Space systems – Dynamic and static analysis – Exchange of mathematical models	
/ Spacecraft			
Management	ISO 15388:2012	Space systems – Contamination and cleanliness control	
/ Spacecraft			
Management	ISO 15390:2004	Space environment (natural and artificial) – Galactic cosmic ray model	
/ Spacecraft			
Management	ISO 16458:2004	Space systems – Unmanned spacecraft transportation – General requirements	
/ Spacecraft			
Management	ISO 17355:2007	Space data and information transfer systems – CCSDS file delivery protocol	
/ Spacecraft			
Management	BS ISO 17399:2003	Space systems – Man-systems integration	
/ Spacecraft			
Management	ISO/TR 17400:2003	Space systems – Space launch complexes, integration sites and other facilities – General testing guidelines	
/ Spacecraft			
Management	ISO 17401:2004	Space systems – Spacecraft interface requirements document for launch vehicle services	
/ Spacecraft			
Management	ISO 21347:2005	Space systems – Fracture and damage control	
/ Spacecraft			
Management	ISO 22010:2007	Space systems — Mass properties control	
/ Spacecraft			
Management	ISO 24637:2009	Space systems — Electromagnetic interference (EMI) test reporting requirements	
/ Spacecraft			
Management	ISO 26869:2012	Space systems — Small-auxiliary-spacecraft (SASC)-to- launch- vehicle interface control document	
/ Spacecraft			
Management	ISO 14300-1:2011	Space systems Programme management Part 1: Structuring of a programme	

Management	ISO 14300-2:2011	Space systems Programme management Part 2: Product assurance		
Management	ISO 14621-1:2019	Space systems – Electrical, electronic and electromechanical (EEE) parts – Part 1: Parts management		
Management	ISO 14621-2:2019	Space systems – Electrical, electronic and electromechanical (EEE) parts – Part 2: Control programme		
		requirements		
Management	ISO 21349:2007	Space systems – Project reviews		
Management	ISO 23041:2018	Space systems — Unmanned spacecraft operational procedures — Documentation		
Management	ISO 23460:2011	Space projects — Programme management — Dependability assurance requirements		
Management	ISO 23461:2010	Space systems — Programme management — Non-conformance control system		
Management	ISO 23462:2014	Space systems — Guidelines to define the management framework for a space project		
Management	ISO 27025:2010	Space systems — Programme management — Quality assurance requirements		
Management	ISO 27026:2011	Space systems — Programme management — Breakdown of project management structures		

Annex B : Examples of conditions on an orbital operator licence related to generic reporting requirements

Operator Type	Reporting Requirement	Description
Orbital	Flight Information	 (1) Launch Date and Time (earliest and latest possible launch time (GMT)) (2) List of payloads on launch
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