

# Guidance for stakeholders on insurance and liabilities requirements under the Space Industry Act 2018

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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. 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 The Space Industry Regulations (the Regulations), that set out in more detail the requirements for each licence, and the Regulator's Licensing Rules, 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.

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; 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 document?

- 1.4 This guidance explains the liabilities and insurance requirements that will be placed on organisations that conduct spaceflight activities in the UK.
- 1.5 This guidance covers insurance and liabilities requirements for spaceflight activities launched from the UK as covered by the [Space Industry Act 2018](#) and the draft Space Industry (Liabilities) Regulations. This guidance focuses in particular on the requirements for third-party liability insurance and how the insurance requirement is calculated in the Modelled Insurance Requirement (MIR). This guidance also sets out the UK Government's approach to limiting an operator's third-party liability.
- 1.6 The approach to setting insurance amounts and limits of liability for satellites launched from or operated from the UK and licensed under the Space Industry Act 2018 will mirror the current policy adopted for licences issued under the [Outer Space Act 1986](#) (as amended). This will apply to in-orbit activities and procurement of a launch. This will be:

- for standard missions, €60 million. This is a mission involving a single satellite, proven platform and recognised operational processes.
- for higher risk missions, the liability limit and insurance amount may be set at a higher level. This is a mission which is:
  - novel in nature or scale, and / or
  - uses techniques, technologies and / or systems which are unproven, and / or
  - presents a higher risk of high-value third-party liability (TPL) claims and / or
  - presents TPL risks that are not well-characterised

The waiver of insurance will also apply in the same way as currently under the Outer Space Act 1986.

For details of insurance under the Outer Space Act 1986, read the guidance on [How to get a licence to launch or operate a satellite, or manage other activities in outer space, under the Outer Space Act 1986](#).

1.7 This guidance covers details of:

- the amount and duration of cover required
- who needs to take out the insurance
- who and what needs to be covered
- how the insurance requirement for launch is calculated under the MIR
- operator responsibilities including requirements for the provision of insurance documentation to the regulator;
- the limiting of operators' third-party liability and
- cases in which a limit will be disapplied

Who is this guidance for?

1.8 This guidance is for any organisation that wishes to apply for a launch operator, return operator or orbital operator licence under the Act.

1.9 The guidance will also be of relevance to applicants for a spaceport or range control licence.

Using this guidance

1.10 The guidance should be read in conjunction with [sections 34-38 of the Act](#) and the [Space Industry Regulations 2020](#). A previous consultation, along with guidance, was published on proposed draft regulations which included details of those who would not be able to make a strict liability right of claim<sup>1</sup> and the cases in which the limit to indemnify the Government would be disapplied (regulations 206 and 207 of the draft Space Industry Regulations).

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<sup>1</sup> Strict liability – Under [section 34\(2\) of the Act](#), an operator is strictly liable for injury or damage caused in the UK to people or their property on land, territorial waters or in relation to an aircraft in flight or persons and property on board such an aircraft as a result of spaceflight activity. This means that a person sustaining injury or damage does not have to prove the operator was at fault to obtain compensation and become involved in complex litigation. A full list of those who do not have a strict liability right of claim is included in [Regulation 206](#).

- 1.11 If applicants have any queries, they are encouraged to contact the regulator, to seek clarification or gain further information.

## The regulator

- 1.12 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.

### Contacting the regulator

The regulator can be contacted by email to [commercialspaceflight@caa.co.uk](mailto: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

- 1.13 The Act regulates:

- Space activities.
- Sub-orbital activities and
- associated activities

that are carried out in the UK.

- 1.14 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
- (c) Any activity in outer space

- 1.15 “A space object” includes the component parts of a space object, its launch vehicle and the component parts of that.

- 1.16 “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’.

- 1.17 Space activities and sub-orbital activities are referred to in the Act as “spaceflight activities”.

- 1.18 Associated activities include the operation of spaceports and range control functions.

- 1.19 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 are not “sites” and so cannot be spaceports (see [section 3\(3\)](#)).
- 1.20 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).”
- 1.21 “Spacecraft” means a space object, or a craft used for spaceflight activities. It includes satellites.
- 1.22 “Launch” is defined in the Act as including causing a craft to take off (or releasing a balloon).
- 1.23 [Regulation 2](#) 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;”
- 1.24 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
- 1.25 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.
- 1.26 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

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

- operator licence
- spaceport licence
- range control licence

1.28 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,<sup>2</sup> 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 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,<sup>1</sup> 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

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<sup>2</sup> 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.

aircraft can be launched or a site at which controlled and planned landings of spacecraft can take place<sup>3</sup>). 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 [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.

#### Offences and enforcement directions under the Act

- 1.29 Under [section 3 of the Act](#), 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.
- 1.30 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.
- 1.31 In addition to offences specifically set out in the Regulations or the Act, [section 27 of the Act](#) also gives the regulator the power to issue directions that enable effective enforcement action to be taken.
- 1.32 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.”
- 1.33 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.”
- 1.34 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)).

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



1.35 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

1.36 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 Act regulates all spaceflight activities and associated activities carried out in the United Kingdom.

### Liability and insurance provisions in the Space Industry Act 2018

#### Liabilities provisions

- 2.2 [Section 34](#) of the Act places a strict liability on an operator carrying out spaceflight activities in the UK. This means that third parties in the UK suffering injury or damage can bring a claim against an operator without having to prove fault.
- 2.3 [Section 36](#) places a liability on a person carrying out spaceflight activities to indemnify the Government or listed person or body for any claims brought against them for loss or damage caused by those activities. This is in line with requirements under the Outer Space Act 1986.

#### Insurance provisions

- 2.4 [Section 38](#) of the Act covers provisions relating to insurance. It is not currently intended to make regulations under this section and insurance requirements under the Act will be set out in licence conditions.

#### Powers to limit operator liability

- 2.5 [Section 12\(2\)](#) of the Act contains a power for the regulator to limit an operator's liability to indemnify the UK Government (as required by section 36) in a licence term. Regulations are not needed to provide for limits on an operator's liability to indemnify Government.
- 2.6 [Section 34\(5\)](#) of the Act contains a power to limit the amount of an operator's liability to third parties which is sustained by prescribed persons or in prescribed circumstances.

#### Cases in which a limit will be disapplied

- 2.7 [Section 35\(5\)\(b\)](#) of the Act provides a power to make regulations prescribing the cases or circumstances in which the Secretary of State's power under subsection (2) (to indemnify a licensee where a claim exceeds the insurance) or the duty under subsection (3) (to indemnify claimants above a liability limit) does not arise. This means that the regulations set out that the limit on an operator's liability to third parties is disapplied in prescribed circumstances. It is not currently intended to produce additional regulations under [section 35\(5\)\(a\)](#) or [section 35\(5\)\(c\)](#) (which provide powers to prescribe limits on the amounts that the Secretary of State may or must pay under subsection (2) or (3), or make provision supplementing subsection (4), which covers the Secretary of State's participation in proceedings.

#### Regulator liability

- 2.8 [Section 37](#) of the Act states that the regulator is not liable in respect of spaceflight-related actions except in cases of gross negligence or wilful misconduct by the regulator.

## The Space Industry Regulations 2020 and the Space Industry (Liabilities) Regulations 2020

- 2.9 Regulations 206 and 207 of the Space Industry Regulations 2020 list the persons who do not have a strict liability right of claim under [section 34\(2\)](#) and cases in which the limit of liability to indemnify Government under [section 36](#) can be disapplied.
- 2.10 In [section 34\(5\)](#) there is a power to make regulations to limit the amount of liability of an operator for injury or damage to third parties. This limit must be set out in an operator's licence. It can be restricted to injury and damage sustained by prescribed persons or in prescribed circumstances. The limit applies to an operator's liability to third parties under section 34(2) and any other third-party liability not covered by section 34(2). This would cover, for example, common law claims made by persons not eligible for the strict liability claim.
- 2.11 The Space Industry (Liabilities) Regulations 2020 set out the following provisions on liabilities:
- Regulation 2 provides that an operator licence must specify a limit on the amount of an operator's liability under section 34(2) of Act and for any third-party liability not covered by that section. It also sets out how that limit will be determined, and that it will **not** apply where the operator is liable for gross negligence or wilful misconduct, or where damage or loss is caused by non-compliance by the operator with any conditions of its licence or any requirements under the Act or regulations made under the Act.
  - Regulation 3 provides that the power or duty of the Secretary of State to indemnify an operator for claims above an insurance or liability limit does **not** apply where the operator is liable for gross negligence or wilful misconduct, or where damage or loss is caused by non-compliance by the operator with any conditions of its licence or any requirements under the Act or regulations made under the Act.
- 2.12 The regulations included in this consultation disapplying the limit on an operator's liability to claimants mirror the regulations that have already been drafted and consulted upon as part of the draft Space Industry Regulations, although they relate to the disapplication of the limit of liability in a different section of the Act.
- 2.13 For launching from the UK, the limit of liability and the insurance amount limit will be set at the same amount as the Modelled Insurance Requirement in most cases. For the procurement of a launch and operating a satellite in orbit, this will follow the existing policy under the Outer Space Act 1986.
- 2.14 In all cases, the liability limit and insurance amount will be set out in an operator's licence.
- 2.15 The regulator has the right to set out any further requirements on insurance as licence conditions.

### Commencement of the Act

- 2.16 As a temporary measure, the Commencement Regulations will be used to partially commence certain key provisions of the Space Industry Act 2018. 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

2.17 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: The insurance and liabilities provisions in the Space Industry Act 2018

### Background

- 3.1 As spaceflight and associated activities come with inherent risk it is important that those suffering damage or loss as a consequence can be compensated.
- 3.2 Under the UN space treaties, the UK Government is ultimately liable to pay compensation for damage caused by its space objects on the surface of the Earth or in relation to aircraft in flight, and liable for damage due to its faults in space. This means that another state suffering damage can bring a claim against the UK Government under the UN space treaties. If damage occurs on the ground or in relation to aircraft in flight, the liability is absolute, which means that the state bringing the claim would not need to prove fault. If the damage occurs in space, the liability is fault based.

### What are the liabilities provisions in the Space Industry Act 2018?

- 3.3 In line with the provisions in the Outer Space Act 1986, [section 36 of the Space Industry Act 2018](#) places a liability on a person carrying out spaceflight activities to indemnify the Government or listed person or body for any claims brought against them for loss or damage caused by those activities. The bodies listed in that section<sup>4</sup> are ones that may be carrying out functions on behalf of the regulator or will be appointed as a regulator.
- 3.4 The inclusion of this indemnity is because, as outlined above, under the UN space treaties, the UK Government is ultimately liable to pay compensation for damage caused by its space objects on the surface of the Earth or in relation to aircraft in flight, and liable for damage due to its faults in space. This indemnity applies to any claims brought against the Government including claims brought under the UN Convention on International Liability for Damage Caused by Space Objects ('the Liability Convention').
- 3.5 However, to provide the general public in the UK with easy recourse to compensation, the Space Industry Act 2018 goes further than the Outer Space Act 1986 with regard to its liability provisions.
- 3.6 [Section 34](#) of the Space Industry Act 2018 places a strict liability on an operator carrying out spaceflight activities in the UK. This means that third parties in the UK suffering injury or damage can bring a claim against an operator without having to prove fault.
  - Section 34(3)(a) provides that regulations can set out those persons who do not have a strict liability right of claim. Draft regulations implementing this provision (and the circumstances where a limit to liability to indemnify the Government will be disappplied) has been consulted upon previously.
  - Section 34(3)(b) sets out that a strict liability claim is not available to a person whose injury or damage was caused or contributed to, by their own negligence.

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<sup>4</sup> These are: (a) an appointed person; (b) the Health and Safety Executive; (c) the Health and Safety Executive for Northern Ireland; (d) the Office for Nuclear Regulation; (e) a body or person prescribed under section 21(2); (f) a public authority with whom arrangements are made under section 64.

3.7 This strict liability applies to any injury or damage caused to persons (regardless of nationality):

- In the UK or its territorial waters;
- To an aircraft in flight above the UK or its territorial waters; or
- To persons or property on board such aircraft.

where the injury or damage is caused by:

- Any craft or space object being used by the operator for spaceflight activities;
- Anything falling from such a craft (for example launch vehicle or satellite);
- Any person in the craft.

3.8 This would include any item jettisoned from the launch vehicle during flight, any debris generated as a result of failure and objects returning from orbit and causing injury or damage within the UK.

3.9 Under section 34(1) of the Act, there is no liability in trespass or nuisance in relation to spaceflight activities where these are carried out in compliance or substantially in compliance with the Act or with requirements and conditions (including licence conditions) imposed by the Act or by the regulator.

3.10 This means that launch operator licensees or orbital operator licensees who are acting lawfully cannot be sued by a third party who considers that their right to quiet enjoyment of land is being affected.

### Who do sections 12(2) and sections 34 to 38 apply to – who is an operator?

3.11 The liability and insurance provisions under sections 34 and 36 applies only to persons carrying out spaceflight activities in the UK. In general, this will be either a launch operator licensee, a return operator licensee or an orbital operator licensee.

3.12 The liabilities apply to:

- All licensed operators; or
- Anyone using a spacecraft or space object in line with an exemption under [section 4\(4\)](#) of the Act.

### Provisions in the Act to limit operator liabilities

3.13 As set out in section 2 above, the Act contains powers to limit, via regulations and in licence conditions, the two types of operator liability identified above.

3.14 In [section 12\(2\)](#), there is a power for the regulator to specify a limit on an operator's obligation to indemnify the UK Government. This limit would be set out in an operator's licence.

3.15 In [section 34\(5\)](#), there is a power to make regulations to limit the amount of liability of an operator for injury or damage to third parties. This limit would be set out in an operator's licence.

## Section 4 - Overview of insurance requirements in licence conditions

4.1 This guidance sets out the Government’s policy on the insurance requirements which will be contained in licence conditions. This includes some standard conditions which will apply to all spaceflight activities as set out below. However, the regulator may also impose conditions relating to insurance requirements on a case-by-case basis. These are described in further detail in other parts of this guidance.

### Proposed licence conditions

4.2 Spaceflight activities come with inherent risks, so it is important that there is resource available to meet any claims arising from incidents which impact third parties.

4.3 [Section 38 of the Act](#) sets out the provisions and powers on insurance. It is not intended to make regulations under this section.

4.4 The regulator intends to implement a policy which sets out insurance requirements in licence conditions, and the guidance provides additional information to support these conditions and other aspects of insurance. This is in accordance with [Schedule 1 of the Space Industry Act](#), which sets out the conditions that may be included in licences. Paragraph 35 relates to insurance and states:

“35 Conditions requiring insurance or indemnities, including—

(a) conditions requiring liability to third parties to be insured for no less than a specified amount;

(b) conditions as to compliance with requirements imposed by regulations under section 38(1).” (emphasis added)

4.5 It is not intended to make regulations under subsection 38(2) (which provides a power for regulations to provide for insurance or reinsurance to be made available by the Secretary of State) as there is a functioning insurance market.

4.6 Details of proposed licence conditions are included in section 7 below.

4.7 The licence conditions set out below and others covered in the licence will ensure that insurance is available to cover claims made:

- Against the UK Government under the Liabilities Convention and therefore that the indemnity to Government is insured;
- By uninvolved persons in the UK (‘third parties’);
- Under common law

4.8 If a licensee does not meet these conditions, the regulator could suspend or revoke the licence. Breach of a licence condition is also an offence under [section 13\(8\) of the Act](#).

### Requirement to hold third-party liability insurance

4.9 Licensees must demonstrate that they either hold or are able to benefit from third-party liability (TPL) insurance for the duration of the licensed activities. The TPL requirements for different types of operation are set out below. This will be set out as a licence condition, unless a waiver of insurance is granted.

- 4.10 Not all parties of a particular operation need to take out individual insurance policies. In line with common practice, it would be acceptable for only one insurance policy to be in place per launch which includes the licensees and UK Government as additional insureds. This will usually be taken out by the launch operator. This reduces costs for spaceflight participants, prevents unacceptable accumulation of risk for insurers and also makes any claims process simpler. However, alternative arrangements may also be permissible and the regulator will consider these accordingly.
- 4.11 Satellite operators (orbital operator licensees) and other parties to the launch (including spaceport licensees and range control service providers) will need to demonstrate that they either hold or are able to benefit from TPL insurance (for example, by being named as an additional insured party or by utilising insurance taken out by a parent company).
- 4.12 There are no mandatory requirements for licensees to hold pre-launch insurance. This will be a commercial decision for operators.
- 4.13 For launch operator licensees, the TPL insurance must cover the duration of the spaceflight activities, as specified in the licence and licence conditions, from and including launch and any re-entry activities covered by the licence.
- 4.14 For in-orbit operations, orbital operator licensees will need to take out or have access to TPL insurance as appropriate to cover the period of in-orbit operations as specified in a licence and associated licence conditions. This may include coverage as part of the launch TPL policy, if applicable.
- 4.15 For sub-orbital launches licensed under the Act, launch operator licensees should consider including the carrier aircraft within the TPL policy where a carrier aircraft is the launch platform. The Act contains provisions which can limit third-party liability which would be applicable to a carrier aircraft.
- 4.16 Under existing aviation law, it is not possible to limit liabilities imposed for carrier aircraft in relation to passengers taking part in spaceflight activities, if that carrier aircraft is also used for air transport purposes i.e. to carry passengers or cargo whilst it is being used for spaceflight activities.
- 4.17 Spaceport licensees will need to consider whether they would need to hold an aviation liability insurance policy to cover third-party liability risk associated with spaceport operations.

#### Length of cover required

- 4.18 Licensees will be required to hold or have access to TPL cover for the duration of the licensed activity until the spaceflight activities have been completed; and where the regulator confirms that the insurance is no longer necessary (for example once the spacecraft has been passivated, is no longer active and has been positioned to the satisfaction of the regulator).
- 4.19 The requirement will be set out in a licence condition.



- 4.20 For launch operations, the duration of a policy typically varies between launch plus 30 days up to launch plus one year, based on current market approaches. As a minimum, the regulator expects the insurance to cover launch plus 30 days, which could account for de-orbiting of spent stages from the launch vehicle for example. A longer duration of cover may be required if the regulator considers that this is necessary to cover the re-entry of any upper stages. A separate MIR calculation for the re-entry phase of the upper stage may be required. Further information on re-entry and end-of life requirements can be found below.
- 4.21 Where a licence covers a single launch, the conditions in the licence will set out that the insurance cover needs to be in place and will reflect the specifics for the launch (for example in terms of the sum insured, details of named and additional insureds<sup>5</sup> and duration of cover).
- 4.22 Where a licence is granted for a number of activities (e.g. multiple launches), it is likely that the reporting requirements will be more extensive.
- 4.23 It is envisaged that, alongside generic reporting conditions, there will also be specific reporting conditions to be complied with by a launch operator licensee. These conditions will be specific to the individual launch operator licensee or even tailored to each launch. Depending on the circumstances, the regulator may place conditions on the licence to be complied with during an individual launch or series of launches, or remove conditions previously placed on the licence.
- 4.24 The precise nature of the conditions will depend upon the nature of the licensed activities authorised. This may also mean that the MIR amount and the limit of liability may need to be changed and this will be managed through amendments to the licence conditions.
- 4.25 Licensees undertaking activities associated with launch (i.e. the spaceport and range control licensees) must have conditions included within their licences on access to TPL insurance. This may be satisfied if the licensee is included as an additional insured party on a launch TPL policy.
- 4.26 Orbital operator licensees must take out TPL insurance to cover in-orbit operations as required by the regulator. It is common for insurance for such operations to be taken out on an annual basis. As licences for in-orbit activities are often issued without an end date, licence conditions will set out that the insurance must be maintained for the duration of the mission, including for any relevant periods which apply to end-of-life activities, as agreed with the regulator. The end of life plan could involve switching the satellite off, passivation and/ or raising / lowering the satellite to a graveyard / lower orbit.
- 4.27 If the satellite is to remain in orbit, orbital operator licensees must indemnify the Government for any claims even after the insurance requirement ends.
- 4.28 Orbital operators that have a fleet of satellites in orbit may wish to add a newly-launched satellite to an existing fleet policy which has less than 12 months of cover remaining of the policy period.
- 4.29 From the regulator's perspective, it is important for operators to be able to demonstrate that TPL insurance is maintained for the duration of the licensed activities and that there are no

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<sup>5</sup> There may be other Additional Insureds that the policy holder may wish to include on the policy (other than those specified in the licence conditions).

periods of time during a mission for which appropriate TPL insurance cover would not reasonably be expected to be available in the current insurance market.

### Defining 'launch' and 'in-orbit phase' for the purposes of insurance

4.30 For the purposes of insurance, it is important to differentiate between the launch and in-orbit phases of a mission.

- "Launch" is defined in the Act as including causing a craft to take off (or releasing a balloon).
- The in-orbit phase will be defined in the licence. Generally speaking, it will be deemed to commence at the point at which separation from the launch vehicle occurs and continue throughout the operational lifetime of the satellite until the satellite is safely disposed of (as per a pre-approved end of life plan) and positioned to the satisfaction of the regulator.

### Insurance requirements for end-of-life and re-entry of UK licensed space objects

4.31 A key driver for the regulations and guidance developed by the UK Government is to minimise risk to people and property arising from in-orbit and re-entry activities. The Space Industry Regulations and guidance build on the UK's international obligations associated with liability, interference and space debris mitigations. The UK is also a member of the Inter-Agency Space Debris Co-ordination Committee (IADC); 13 space agencies who perform active research into space debris. As such, debris mitigation and space sustainability more broadly are a key part of UK policy.

4.32 The UK has an established approach to identifying insurance requirements for in-orbit activities. The upcoming commencement of launch activities from the UK has led the UK Government to consider how the in-orbit activities for upper stages or launch vehicle components and re-entry more broadly (satellites and upper stages) should be considered.

4.33 Launch vehicle components, such as upper stages, injected into orbit will increase the risk of collision to other space objects. The risk to other space objects is dependent on the lifetime of the launch vehicle component on orbit and may be reduced accelerating the re-entry of the object, thereby shortening its in-orbit lifetime. In the event of a collision the UK Government may be liable, if fault can be proved, for damages. Therefore, the UK Government is considering whether there is a need for third party insurance for launch vehicle components.

4.34 At the end-of-life, launch vehicle components such as upper stages will re-enter the atmosphere. The risk to people and property on the ground can be calculated using a variety of methodologies and can be reduced by performing controlled re-entries. Similar considerations also exist for certain sizes/classes of satellites operating in orbit that may need to perform a re-entry for disposal or recovery operations. Therefore, the UK Government is considering what the approach should be to identify insurance requirements for re-entry operations.

4.35 The consultation document seeks views on a proposed approach to calculating the third-party insurance requirement for various phases of a mission – launch, in-orbit and re-entry operations. Subject to further views on this approach, the guidance will reflect the proposals as below:

- Launch phase - To be covered by the MIR approach (as outlined above). This would only be required by the licensed launch vehicle operator;

- Orbital operations - Upper stages and other launch vehicle components which remain in orbit may require a separate TPL insurance requirement. The UK Government is currently considering applying the same requirements for upper stages and launch vehicle components as applied for in-orbit activities. It is hoped that this will reduce the lifetime of launch vehicle components in-orbit, thereby reducing the amount of debris in orbit and risk to space objects and ultimately improve the sustainability of UK launch operations. The requirement for TPL insurance is likely to be dependent on the mission profile of the upper stage and its potential interaction with high-value assets such as the ISS. A potential approach would be:
  - For upper stages with perigee & apogee below 400km, then no TPL insurance for the in-orbit phase would be required.
  - For upper stages with a perigee & apogee above 400km, then the standard TPL is required for the in-orbit phase (€60 million) until apogee the apogee falls below 400km.
  - For upper stages with perigee below 400km and apogee above 400km, then an assessment needs to be performed to see if the orbit can intersect with high value assets (prioritising the ISS). If it is possible then standard TPL would be required until apogee falls below 400km.

The UK Government would welcome feedback on whether existing policies (e.g. Launch +1year) would cover this TPL requirement and the appropriateness in general of this requirement.

- Re-entry activities (covering satellites, expendable upper stages, re-usable elements of launch vehicles or other space objects returning from the orbital environment) would be subject to a similar approach as the MIR approach. The approach adopted and the relationship to international risk thresholds associated with re-entry are subject to further study.

4.36 The final outcome of the financial risk modelling is therefore likely to be up to three conditions (one for each mission phase) on a launch operator's license for each mission included in the license. For an orbital operator, this may lead to two insurance conditions, one for in-orbit and one for re-entry.

4.37 As licences for in-orbit activities are often issued without an end date, licence conditions will set out that the insurance must be maintained for the duration of the mission, including any end-of-life plan (switching the satellite off, passivation, lowering the satellite to a lower orbit etc).

### Provision of insurance documents

4.38 Licensees must provide full details of the insurance cover taken out by submitting the relevant policy documents to the regulator, as required in the licence condition. Further detail on the documents to be provided is set out below.

### Other types of insurance

4.39 In addition, other types of insurance may be required in law other than the Space Industry Act 2018 or recommended as best commercial practice. These are set out below. The main types of additional insurance are:

#### Pre-launch insurance

4.40 The purchase of pre-launch insurance will not be mandatory for launch operations from the UK, but operators may wish to take out such insurance to cover any losses arising prior to launch. Such insurance is usually purchased by satellite manufacturers and launch operators to cover

during manufacture, assembly, integration and test (MAIT) and transition of mission specific items to the start of the launch (intentional ignition or as otherwise specified in the licence). The insurance can generally cover some or all of the following:

- Damage to assets
- Satellite and ground support equipment (GSE)
- Cost or repair, replacement and retesting
- Other expenses and loss of revenue such as contractual penalties to the operator and delay to the delivery schedule.

4.41 Deductibles are usually applied for pre-launch asset cover to avoid small claims (although deductibles will not apply to pre-launch liability cover). The policy can cover a number of years to reflect the length of time to manufacture the satellite.

4.42 If such cover is sought, the regulator may wish to see evidence of the level of insurance obtained. The sum insured should therefore cover the book value of the mission-related items. A spaceport operator would not normally be included as an additional insured in such a policy.

#### Employers' Liability Insurance

4.43 All licensees must comply with requirements on Employers' Liability insurance. Further details on EL insurance can be found at <https://www.gov.uk/employers-liability-insurance>

4.44 Spaceport operators and range control operators may also wish to take out other forms of insurance.

#### What are the terms applied to insurance policies?

4.45 The terms used in the insurance policy shall only be those used in the London market.

#### Which legal jurisdiction in the UK will apply?

4.46 Subject to certain provisions (see section 71 of the Act), the Act extends to England and Wales, Scotland and Northern Ireland. The licence will set out under which legal jurisdiction the licence will apply.

## Section 5 - Limiting operator liabilities

- 5.1 On the basis of independent, commissioned research, the UK Government has decided to limit operator liability and to indemnify a claimant for any losses in excess of that limit.
- 5.2 The extent of the indemnity will be unlimited.
- 5.3 In most cases, the limit of liability will be set at the same level as the insurance amount calculated under the MIR approach. There may be cases (for example if there is limited capacity in the insurance market and the capacity is not sufficient to cover the insurance amount calculated under the MIR) where the limit of liability will be set at a higher level than the insurance amount. In such cases, the regulator / Secretary of State will assess the ability of the operator to cover the difference between the two amounts.

### Cases in which an operator's limit of liability will be disapplied

- 5.4 A limit on an operator's obligation to indemnify Government under [section 12\(2\)](#) of the Act will be applied at the same amount as the limit on the operator's liability to third parties.
- Operators should note that a limit on their liability can be disapplied in cases of gross negligence or wilful misconduct or in cases of non-compliance with the Act, regulations and licence conditions.

### Limiting operator liability in cases where there is more than one launching state

- 5.6 In cases where there is more than one launching state involved in the spaceflight activity different liabilities and insurance arrangements may arise as different launching states apply different insurance and liabilities arrangements from the UK. It is recommended that applicants check with the relevant regulator(s) which arrangements will apply.

## Section 6 - Calculating a Modelled Insurance Requirement (MIR)

### Overview

- 6.1 The amount of TPL insurance for launch activities is determined by the MIR process conducted by the regulator. This will calculate the minimum amount of TPL that will be included as part of a licence condition. The process takes into account the amount of insurance available in the market. The regulator will determine the amount of insurance required and confirm this as a licence condition.
- 6.2 If a licensee or applicant disagrees with the level of insurance that the regulator has set via the MIR process, the licensee or applicant may request that the regulator considers an alternative figure based on modelling work the licensee or applicant has carried out. If the regulator agrees with the licensee's or applicant's modelled outputs, the regulator will revise the required amount.
- 6.3 If conducting its own modelling, the licensee or applicant must use the financial values below.
- 6.4 If the regulator does not agree with the licensee's or applicant's modelled outputs, the licensee or applicant may appeal the regulator's decision (see the Questions section of this document for further information about the grounds for appeal).

### The MIR process

- 6.5 The MIR is similar to the Maximum Probable Loss (MPL) approach adopted in the United States and Australia for calculating insurance requirements for space launches.<sup>6</sup>
- 6.6 The approach has been adapted to reflect the types of risks for launch from the UK and the UK approach to modelling the safety assessment. It applies financial values based on the UK's compensatory regime and commercial / residential property prices. The MIR therefore is designed to set a value for a level of damage that might reasonably be caused in a range of scenarios that could arise in UK circumstances and based on the specifics for each mission. The insurance amount set out in the licence will be determined according to this methodology.
- 6.7 It is important to note that a court or a negotiated settlement may determine that the amount of compensation for damage or loss caused could be higher than the figure given by the calculation. However, a licensee's third-party liability as an operator will be limited to the amount set out in the licence (see below).

### Elements covered and financial values to be used in setting the insurance requirement

- 6.8 The UK Government has determined that the following elements must be covered by the TPL insurance requirement.
  - Death
  - Injury

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<sup>6</sup> The MPL approach sets out a dollar value assessment of Government and third-party properties at risk of damage from launch-related activities or conduct ([https://www.faa.gov/space/licenses/financial\\_responsibility/](https://www.faa.gov/space/licenses/financial_responsibility/)), in other words, a calculation of the maximum amount of damage that could be caused.

- Damage to property
- Business interruption associated with physical damage
- Economic loss arising from physical damage (e.g. the costs of moving to alternative premises)
- Environmental damage (e.g. clean-up costs carried out by public authorities)

6.9 Business interruption losses arising from damage to commercial property and agricultural land have also been included in the MIR calculation. Such losses must relate to the physical injury or damage incurred; they may not for instance cover any losses incurred by business due to any area restrictions imposed during a launch although a court would consider the facts of every individual case.

6.10 To assist in the calculation, the UK Government has developed a set of standard values which must be applied to each of these items. These have been informed by calculations provided by the Government Actuary's Department on the average level of compensation award that may be received in the UK and have been agreed with HM Treasury. Data used for this purpose included approved national statistics and other recognised trade body data. All data has been assured from an actuarial perspective.

#### Launch

Category	Financial Value	
Death	£244,000 per death	
Injury	£192,000 per injury	
Damage / business interruption	Commercial / residential	£1,739 per square metre (which includes business interruption costs arising from damage to commercial property)
	Agricultural land	£1.90 per square metre
Environmental damage	£250,000 set figure for all MIR calculations	

**NOTE - These figures were produced in 2018. They will be subject to a further review, before implementation of the policy, to reflect the latest statistical updates and any inflationary impacts as these figures**

6.11 These values will apply for five years following the coming into force of the Space Industry (Liabilities) Regulations [note – these liabilities regulations will be merged with the Space Industry Regulations post-consultation], at which point they will be subject to a formal review in line with the wider legislation for spaceflight activities. The Government will review the figures annually to determine whether any further update is needed due to a significant circumstance within this period and will consult on any proposed changes (for example the Personal Injury Discount Rate applied in compensation cases; if there is a change in the wider methodology for calculating compensation in UK courts; or an economic downturn having a significant impact on the statistics which are the basis for the derived values).

## Launch operations MIR calculation

6.12 Further detailed guidance on how the regulator will determine the MIR is covered in the technical guidance document.



## Section 7 - Conditions in licences relating to insurance and liability

### Overview

7.1 [Schedule 1](#) of the Act sets out the conditions relating to insurance and liability that may be included in licences. These are:

“35 Conditions requiring insurance or indemnities, including—

- (a) conditions requiring liability to third parties to be insured for no less than a specified amount;
- (b) conditions as to compliance with requirements imposed by regulations under section 38(1).

36 Conditions requiring waivers or indemnities to be provided, including conditions requiring—

- (a) the holder of a spaceflight licence, and
- (b) any person with whom the holder of the licence makes contractual arrangements in connection with the carrying out of activities authorised by the licence (other than an individual taking part in spaceflight activities in a role or capacity prescribed under section 17(1)),

to enter into reciprocal waivers of liability in respect of any injury or damage resulting from the carrying out of those activities.”

Licences issued under the Outer Space Act 1986 may also contain conditions relating to insurance.
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### Examples of conditions in licences relating to insurance

7.2 It is the Government’s intention that every licence should include a condition that a licensee must not carry out any spaceflight activities, or associated activities from and including launch <sup>(7)</sup> authorised by the operator licence, unless the licensee has an insurance policy in place that meets specific requirements (unless a waiver of insurance is applied). These requirements differ by licence type.

7.3 In the case of an **operator licence**, the policy must:

- Insure the UK Government and the persons and bodies listed under [section 36\(2\)](#) of the Act against any claims in respect of damage or loss arising out of or in connection with the spaceflight activities authorised by that licence;
- Insure the operator against any liability which may be incurred by it in respect of injury or damage<sup>(8)</sup> to persons or property under [section 34\(2\) of the Act](#), subject to the specified limit on the amount of the operator’s liability;
- Insure the operator against any third party liability which may be incurred by it in respect of the death of or bodily injury to any person or damage to property not covered by section 34(2), subject to the specified limit on the amount of the operator’s liability;
- Insure the operator against any obligation to indemnify either the UK Government or the listed persons and bodies under section 36(2), subject to any limit on the amount of the operator’s liability.

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<sup>(7)</sup> See [section 69\(1\) of the Act](#) for the definition of “launch”.

<sup>(8)</sup> See section 69(1) for the definition of “injury or damage”.

- 7.4 In the case of a **range control licence**, the insurance policy must cover any third party liability which may be incurred by the licensee in respect of the death of or bodily injury to any person or damage to property caused by, or arising out of, range control services<sup>(9)</sup>.
- 7.5 In the case of a **spaceport licence**, the insurance policy must cover any third party liability which may be incurred by the licensee in respect of the death of or bodily injury to any person or damage to property caused by, or arising out of, spaceflight activities which are to be carried out at the spaceport.
- 7.6 For all licensees, the insurance policy must have a limit of at least the value as determined by the MIR or the in-orbit TPL policy against the liabilities above and that no circumstances exist entitling the insurer to repudiate or disclaim liability.
- 7.7 The regulator also intends to include licence conditions on the following points. These will be specific to each licence but will cover the following principles:
- The limit of an operator’s liability;
  - If a licence covers multiple launches, variations of insurance requirements and limit of liability per launch, as permitted by the licence;
  - That the licensee provides the regulator with the relevant insurance policy documents and evidence of payment of premiums as requested;
  - That the regulator may assess the insurance and consult with insurance advisors internal or external to Government as necessary;
  - That the regulator may require additional insurance to be taken out if the mission fails to meet its objectives (for example if a satellite fails to reach its intended orbit);
  - That the licensee shall not vary terms and conditions of the insurance policy relating to the licensed activities or cancel or cause to be cancelled the insurance policy without the prior written consent of the regulator;
  - That the licensee shall immediately notify the regulator of any event or other occurrence which is likely to give rise to a claim under the insurance policy;
  - That the licensee shall take all necessary action to ensure that the insurance policy continues in force and is valid and enforceable, and the licensee shall do nothing that would enable the insurer to avoid any such policy.
- 7.8 The regulator will also include licence conditions requiring reciprocal waivers of liability as appropriate for the licence in question, as provided for in condition 36 of Schedule 1 of the Act.
- 7.9 The regulator may also include further licence conditions to cater for specific issues relating to the individual licence.
- 7.10 If these conditions are not met, then breaching such conditions could lead to the suspension or revocation of a licence and is also an offence under section 13(8).

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<sup>(9)</sup> “range control services” has the meaning given in section 6(1).

## Section 8 - Baseline requirements for third party liability insurance policies

8.1 The regulator expects that a TPL policy will include the following elements:

<u>Coverage</u>	The policy should offer very broad coverage for bodily injury and damage to property <sup>10</sup> (which may include business interruption arising from such damage <sup>11</sup> ) and cover the following activities as applicable:	<u>For launches licensed under the Act</u> <ul style="list-style-type: none"> <li>○ Launch;</li> <li>○ launch attempt;</li> <li>○ separation;</li> <li>○ de-orbiting (if appropriate – see developing policy on this above);</li> <li>○ re-entry (either of the satellite or spent / re-usable stages as appropriate - see developing policy on this above).</li> </ul>
		<u>In orbit</u> (as applicable) <ul style="list-style-type: none"> <li>○ Establishing, maintaining and operating telecommunications systems and services;</li> <li>○ in-orbit operation;</li> <li>○ de-orbiting;</li> <li>○ re-entry.</li> </ul> <p>Other types of activity may be endorsed separately (such as drift manoeuvres, or ownership rights where a UK-licensed satellite is operated from a country other than the UK).</p>
	<ul style="list-style-type: none"> <li>○ Licensees must ensure that all details and all relevant activities are provided correctly otherwise the policy may be invalid and licensees may be liable to cover any losses;</li> <li>○ Additional coverage may be required in certain circumstances, for example if the payload is injected into the incorrect orbit.</li> </ul>	
<u>Named _____ / additional insureds</u>	<p><u>Launch</u></p> <ul style="list-style-type: none"> <li>○ The launch operator must be the Named Insured;</li> <li>○ The UK Government and the regulator (CAA) must be Additional Insureds on the policy;</li> </ul>	<p><u>In orbit</u></p> <ul style="list-style-type: none"> <li>○ The orbital operator must be the Named Insured;</li> <li>○ The UK Government and the regulator (CAA) must be Additional Insureds on the policy;</li> </ul>

<sup>10</sup> Including through naturally occurring electromagnetic phenomena.

<sup>11</sup> A court may determine that business interruption costs should be covered in a compensation claim and the UK Government has therefore included such costs within the scope of the MIR. Operators should ensure therefore that compensation for business interruption for third parties through the loss of use of their assets arising from a spaceflight incident should be covered in some way, either through a third-party liability policy or other general liability policy. Any losses incurred must be demonstrable and not relate to anticipated loss of future earnings (e.g. based on currently agreed contracts or stock held). The MIR provides rates to be used in the calculation of such costs.

	<ul style="list-style-type: none"> <li>○Other Additional Insureds as required. See alternative additional insureds covering sub-orbital launches;</li> <li>○The rights and obligations of the Additional Insureds must be clearly set out in the policy.</li> </ul>	<ul style="list-style-type: none"> <li>○Additional insureds as required;</li> <li>○The rights and obligations of the Additional Insureds must be clearly set out in the policy.</li> </ul>
<u>Terms, conditions and exclusions</u>	A policy must contain standard aviation and space liability insurance market terms (as applicable), conditions and exclusions, both for launch to orbit and sub-orbital launch. For launch from the UK, only terms used on the London market will be accepted. These terms and exclusions may change from time to time but will be usually applied across the market. The UK Government does not therefore propose to include any standard terms in regulations or guidance.	
<u>Limit of liability / sum insured</u>	The policy must include the limit of liability / sum insured as set out in the operator's licence, including any sub-limits if required.	
<u>Policy period</u>	This should be for at least one year, during which the launch / launches will take place. This may be different from the coverage period for the launch / each launch.	
<u>Coverage period</u>	The regulator expects that the coverage (for launch) is launch plus one year as standard for occurrences related to launch, although variations to this will be considered based on the specifics of each case. The minimum required would be launch plus 30 days. This may be augmented to include payload operations after separation if required.	
<u>Deductibles</u>	No deductibles to apply.	
<u>Law</u>	The laws of England and Wales to apply (and UK Arbitration if required) for a UK launch operator policy.	
<u>Settlement of loss by the UK Government</u>	The UK Government will have the right to settle a loss and have increased authority in the event of a UK launch claim.	
<u>Cancellation provision</u>	The UK Government/regulator (CAA) is to be notified in the event of a policy change, cancellation, claim or non-payment of premium, including for sub-orbital launches. <b><i>A licensee must not cancel a policy without the agreement of the insurer or without notifying the regulator. If a licensee cancels a policy, the licensee must ensure that another acceptable policy is taken out to cover the period immediately following the end date of the current policy and inform the regulator for its agreement.</i></b>	
<u>Downgrade clause</u>	All TPL policies must include a downgrade clause, meaning that if the financial rating of the insurer falls below a certain level, the policy with that insurer is cancelled and a policy should be taken out with an alternative provider.	
<u>Recovery of launch vehicle</u>	In the event of a launch failure, the policy must cover the costs of recovery of the launch vehicle and also the repair of damages following an accident. If the licensee carries out any accident investigation, the costs of such investigation will be at its own expense.	
<u>Legal costs</u>	A licensee's legal costs in the event of a claim arising will be covered by the policy. Such costs are separate to the sum insured.	

## Type of TPL insurance policy required covering multiple launches annually

- 8.2 If the insurance policy is to cover a number of launches annually (if this is permitted within a licence), the regulator would expect that the operator would take out a declaration policy. This means that the details for each launch are declared separately as endorsements to the policy, setting out the specific details for each launch (i.e. payloads, sums insured, named insureds etc.).

## Regulation of insurance policies and markets and rating of insurers

### Market regulation

- 8.3 For an insurance policy to be acceptable to the regulator, it must be taken out with an insurer that is suitably regulated. In the UK, such insurers will be regulated by the Financial Conduct Authority and/or the Prudential Regulation Authority. Where insurance is placed in another market such as France, USA, that market should be similarly regulated and the regulator may wish to see evidence of this.

### Market security and financial ratings

- 8.4 Insurance must be placed through reliable brokers and insurers to provide assurance to the regulator that the sum insured can be met in the event of a claim and that the insurer meets certain financial and governance standards. The regulator will therefore assess the market security of the insurer through which the insurance is placed. A licensee's insurance broker can provide a further assessment using its own market security standards before the policy is taken out.
- 8.5 The regulator will also assess the financial security rating of the insurer in determining whether an insurance policy meets requirements. Evidence of the insurer security (list of underwriters) on an insurance policy is required as part of the insurance submission. As a guideline, insurance underwriters must have a minimum financial strength rating, where available, of:
- A.M. Best's                      A
  - Standard & Poor's              A
  - Moody's                            A3 and
  - Fitch's                              A-

## Section 9 - Documents to be submitted to the regulator

### At application

- 9.1 When applying for a licence (or if a change in licence conditions is required for example in cases where a licence covers multiple launches), an applicant must be able to demonstrate that insurance will be available to cover the proposed operations. The applicant must provide the regulator with copies of the documents in paragraph 9.4 as proof that it either holds (or, in the case of those carrying out associated activities, has access to) the level of insurance required for the proposed activity: These documents can be provided either:
- At the time of application for a licence;
  - Before the licence is granted;
  - Before a licence condition becomes operative; or
  - Before an amended licence condition is applied.
- 9.2 The regulator will set out which approach under paragraph 9.1 is to be taken with the applicant / licence holder.
- 9.3 Where the insurance amount in a licence condition will be determined under the MIR, or is not considered to be a standard mission for in-orbit operations, the regulator may determine that proof of engagement with an insurer and evidence that a proposed operation is insurable will be needed with the application. The documents included in paragraph 9.4 must then be provided to the regulator as per the agreed process in paragraph 9.1, once the insurance amount has been determined.
- 9.4 In any case the documents below must be provided to the regulator within the timeline set out in paragraph 9.5 below and a licence will not be valid unless such documents are provided to and agreed by the regulator:
- Insurance certificate (unredacted)
  - Signed policy wording (unredacted)
  - Schedule of security (underwriter list)
  - Any amendments or endorsements to the policy
- 9.5 Applicants are encouraged to provide these documents to the regulator as early as possible. Applicants must provide them *no later than* four weeks prior to the date by which the licence is required.
- 9.6 A broker certificate can accompany the documentation above to demonstrate that the insurance has been placed. However, this will not be sufficient on its own to demonstrate that the requirements for insurance have been met.
- 9.7 The regulator may ask for further information to help facilitate its review of the insurance requirement, including asking for copies of the information on risk the applicant provided to the insurer to help determine the level of risk of the mission.

### Insurance renewal

- 9.8 Where insurance needs to be renewed due to on-going licence conditions, the same documents as above will need to be provided to the regulator. These documents will need to be provided

at least four weeks before the current insurance cover is due to expire. If a licensee fails to produce the documentation within this timescale, the licensee may be in breach of the licence condition and the licence could be suspended or revoked.

## Section 10 - Additional insurance requirements for launch operations and associated activities

10.1 In addition to pre-launch insurance and employer liability insurance mentioned above, operators may also wish to take out the following types of insurance based on their commercial needs.

### Sub-orbital operations

10.2 The liability insurance requirement for sub-orbital launches and air-launched rockets will be set using the MIR approach.

10.3 For sub-orbital launches licensed under the Act, launch operator licensees should consider including the carrier aircraft within the TPL policy. The Space Industry Act 2018 contains provisions which can limit third party liability which would be applicable to a carrier aircraft.

10.4 It is not possible to limit liabilities imposed for carrier aircraft under existing aviation law in relation to those taking part in spaceflight activities, if that carrier aircraft is also used for air transport purposes i.e. to carry air passengers or cargo whilst it is being used for spaceflight activities.

10.5 If a policy is required to cater for this, details of the insurance requirements can be found on the CAA website [www.caa.co.uk/Commercial-industry/Airlines/Licensing/Requirements-and-guidance/Insurance/](http://www.caa.co.uk/Commercial-industry/Airlines/Licensing/Requirements-and-guidance/Insurance/)

10.6 While detailed TPL coverage terms and conditions are not mandated by the regulatory authorities (e.g. CAA), there are standard terms used in the aviation insurance market and these may differ from those used in the space insurance market. For launch from the UK, only terms used on the London market will be accepted.

10.7 Aircraft policies usually offer hull, spares and liability insurance under the same policy. The regulator will expect the policy taken out to cover the following points:

- Coverage of the policy shall provide sufficient scope to pay all sums which the Insured shall become legally liable to pay as damages for Bodily Injury or Property Damage caused by an Occurrence and arising out of or in connection with the Insured's operations. The insured's operations may be specifically defined);
- There will be no deductible applied for the TPL risk;
- The amount of insurance shall be set at least at the level of that set by the regulator based on the MIR approach;
- Declaration of each launch under an aviation policy may not be required to the insurer but this will depend on the frequency of flights and if there were any material changes between the characteristics of each flight. For coverage for certain types of sub-orbital launch, it is likely that insurers and the regulator will request an indication, prior to inception, of the expected number of flights or flight-hours, with opportunity during the policy period to adjust for this;
- The policy period will normally be 1 year;
- The details of the named Insured (which will normally be the launch operator);



- Details of the Additional Insureds: The UK Government must be listed as an additional insured on the policy. Whilst the regulator is not normally an Additional Insured on aviation policies unless they are directly involved with certain aircraft operations, for spaceflight activities the CAA must be included as an additional insured. Lessors, airport, air navigation service, ground handlers, maintenance companies can be included;
- Standard insurance market terms and conditions as commonly accepted in the insurance market for aviation hull and liability risks will apply;
- A Cancellation Provision must be included: While not standard in aviation policies, the regulator will expect a requirement to be included in a policy for it to be notified in the event of cancellation of or change to policy coverage. ***A licensee must not cancel or cause to be cancelled a policy without the agreement of the insurer or without notifying the regulator. If a licensee cancels a policy, the licensee must ensure that another suitably acceptable policy is taken out to cover the period immediately following the end date of the current policy and inform the regulator for its agreement.***

10.8 Some European regulators require the use of licensed insurers in the aviation market. Whilst the CAA does not set a minimum financial security requirement for insurers for aviation activity generally, in line with the expectations for vertical launch activities, the regulator will expect the insurance to be taken out with an authorised insurer. A minimum security rating may be specified in aircraft lease agreements.

10.9 As per space policies, the laws of England and Wales to apply (and UK Arbitration if required) for a UK launch operator policy.

## Spaceport operations

Types of insurance that operators may consider taking out

10.10 If the spaceport is at a CAA-licensed or EASA-certified aerodrome, the spaceport will already be required to hold any insurance as required as part of its approval (including any requirements on airside liability insurance).

10.11 Spaceport operators may wish to consider taking out insurance to cover the following risks:

- Property damage to ground infrastructure;
- Weather damage / natural disasters;
- Property damage to aircraft/spacecraft;
- Environmental/pollution damage;
- Security risks;
- Ground handling (and other contractors') risks.

## Range control operations

Types of insurance that operators may consider taking out

10.12 Range control service providers may wish to consider taking out insurance to cover the following risks:

- Premises insurance;
- Products liability insurance.

## Section 11 - Cross waivers of liability

- 11.1 As noted above, [Schedule 1](#) to the Space Industry Act 2018 sets out a list of conditions that may be included in licences. This is an indicative list of possible licence conditions and is not exhaustive. Paragraph 36 provides for conditions requiring waivers or indemnities of liability for injury or damage to be included within the operator licence.
- 11.2 Waivers and indemnities essentially relate to the contractual allocation of risk between parties engaging in spaceflight and associated activities. The intention of waivers and indemnities in this context is that the parties involved in spaceflight and associated activities may essentially agree to bear their own losses.
- 11.3 It is Government's understanding that the use of waivers and indemnities in launch operations is already current practice.
- 11.4 Conditions will therefore be included in licences relating to waivers and indemnities on a case-by-case basis, reflecting the specifics of each licence. Each licensee may agree to waive their right to claim against the parties they are contracting with in connection with the spaceflight or associated activity. This may be a condition in a licence for the launch operator, the orbital operator, the spaceport operator and the range control service provider.
- 11.5 To manage claims that may be made by one of the party's employees, contractors, sub-contractors and their employees against the other party, the condition may also require both parties to indemnify the other party for all costs or expenses incurred by them.
- 11.6 It should be noted that any such condition or waiver will not apply to individuals taking part in spaceflight activities in a role or capacity prescribed under section 17(1) [of the Act](#).

## Section 12 - Waiver of insurance requirements (Space Industry Act 2018 and Outer Space Act 1986)

- 12.1 The regulator may waive the requirement to hold third party liability insurance if it deems it appropriate. The waiver will only apply to missions that are considered by the regulator to be “low risk” and only in relation to in-orbit activities. The low-risk assessment will take into account any assessment carried out as part of the traffic light system (TLS) for the licensing of in-orbit operations. It is proposed that the TLS gives prospective licence applicants a pre-application Red/Amber/Green rating, which indicates the apparent acceptability of the risk associated with the proposed mission, (although this would not take into account any additional information required by the regulator, e.g. under the Regulator’s Licensing Rules).
- 12.2 The waiver is discretionary. The regulator may apply the waiver where a mission is classed as “low risk” on the basis of a risk assessment and is to be deployed from the International Space Station or into an orbit lower than the International Space Station. Such missions would require a ‘green’ rating under the TLS. Further details are outlined below.

### Requirements for applying for a waiver

- 12.3 In order to qualify for a waiver, the following criteria will apply:
- The mission will have received a ‘green’ rating as part of the TLS assessment
  - The launching of a satellite and any subsequent deployment from the ISS is to be managed by an established provider with proven technologies / techniques for ejecting objects safely and reliably into orbit
  - For deployment from the ISS, there has been a satisfactory independent safety review conducted by NASA
  - The satellite has passed all other licensing criteria, including but not limited to a satisfactory technical and financial assessment
  - There are no other concerns or risks that would increase the likelihood of claims against the UK Government for loss or damage under the Liability Convention arising from the licensed activity
- 12.4 The current approach used under the Outer Space Act 1986 makes use of a Traffic Light System (TLS). As noted in the consultation on the Space Industry Regulations on 29 July 2020, the UK Government is considering using a TLS of pre-application engagement for orbital operator licences. The proposed TLS draws from the existing processes under the Outer Space Act 1986 but due to the more structured nature of the Space Industry Act 2018, there are some key differences the UK Government would see under a TLS developed under the Space Industry Act 2018.
- 12.5 Under the Act the regulator has an overriding duty to exercise its functions with regard to spaceflight activities (including whether or not to grant a licence) with a view to securing public safety. The Regulations made under the Space Industry Act 2018 (see regulations 20-27) prescribe the process which is to be followed in respect of applications for all licence types and the Regulator’s Licensing Rules set out the information that is to be provided by applicants with their application form (see Table A and Table D for the information required in respect of orbital licence applications). Given the differences between the regimes, a different approach is justified to the TLS.

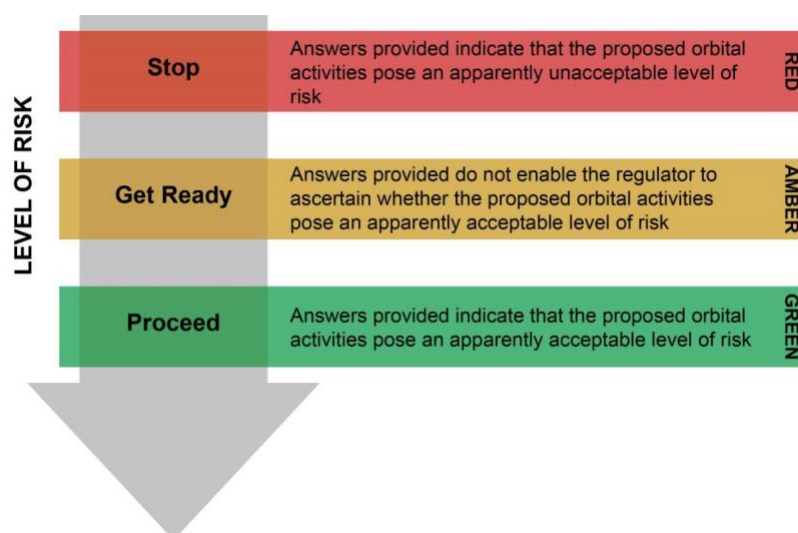
12.6 As under the Outer Space Act 1986, the TLS would not be a formal part of the application process. Rather, it would be an optional pre-application process which would allow prospective applicants to provide the regulator with responses to a short set of questions about their business and the proposed spaceflight activities. Based on those answers, the regulator would give prospective licence applicants a pre-application Red/Amber/Green rating.

12.7 The purpose of the proposed TLS is threefold:

- To help less experienced operators understand the need for safety, security, and sustainability, as reflected in the regulator’s licensing process;
- To help operators understand their readiness to apply and the barriers they may face;
- Where possible, to provide a smoother, more tailored application process.

12.8 Our intention is that the ratings would provide an early, non-binding and approximate indication of the potential level of risk to safety, security and sustainability of the proposed orbital activity. The rating given would be based on the answers provided to the initial questions, and would not take account of any additional information which will be required by the regulator, e.g. under the Regulator’s Licensing Rules, or further information required or requirements which must be met under the Regulations. If a prospective applicant does not meet those requirements when making its formal application, it is unlikely that a licence will be granted, even if it receives a “green” assessment:

- A ‘green’ rating means that the proposed orbital activities pose an apparently acceptable level of risk to safety, security and sustainability;
- An ‘amber’ rating means that the proposed orbital activities pose an uncertain level of risk to safety, security and sustainability;
- A ‘red’ rating means that the proposed orbital activities pose an apparently unacceptable level of risk to safety, security and sustainability.



12.9 Prospective applicants would not be obliged to use the TLS and would be able to submit an application for an orbital operator licence under the Act without having first received a Traffic Light rating. However, the UK Government foresees that new operators, and all operators hoping to launch new types of missions, would benefit from making use of the TLS to

facilitate a smooth process when they make a formal application for an orbital operator licence.

12.10 Prospective applicants must note that any guidance they receive from the regulator before they submit a licence application will **not** form part of the regulator's decision-making process relating to granting or refusing the application for the licence. Nor does the UK Government intend for the red, amber or green rating to indicate the likely determination the regulator will make in respect of an application once submitted. The aim of any informal guidance pre-application is to facilitate the preparation of the application and of information required to be submitted in connection with the application. The process for obtaining a licence starts at the point when the regulator receives the application and the information in connection with it (see regulation 20 and the Regulator's Licensing Rules). The regulator will only begin to consider an application once it has received all necessary documentation.

12.11 At this stage, the UK Government is proposing to offer a TLS only for applicants for orbital operator licences. This is because:

- There is a wider diversity of missions conceivable and technologies used in the orbital context. Accordingly, there is a greater range of risk profiles for orbital activities than for activities covered by other licence types.
- Since 2018, the UK Space Agency has been using a Traffic Light System for applications under the Outer Space Act 1986, which regulates the operation of satellites or the procurement of a satellite launch from an overseas launch service. The UK Space Agency has experience in successfully using a Traffic Light System for activities that would be covered by an orbital operator licence under the Space Industry Act 2018.

## **Section 13 - Use of securities and other alternatives to insurance**

13.1 The Space Industry Act 2018 allows licensees to use securities and other alternatives to insurance. However, no further regulations are being proposed in relation to this.

## Section 14 - How to make a claim

- 15.1 In the event of a claim arising against the UK Government under the obligations under the UN Liability Convention, the claim is made against the launching state (or one of the launching states if there is more than one) by the state of the affected party. This is done through diplomatic channels so this can be either:
- State to state (where diplomatic relations are in place);
  - Through a third state (where the countries concerned do not maintain diplomatic relations); or
  - Through the Secretary General of the United Nations if both states are members of the United Nations.
- 15.2 Where such a claim is made against the UK Government, the relevant operator will be required to meet the claim to the level of any limit of liability included in the relevant licence.
- 15.3 Where a claim is made against an operator under section 34 for claims for damages not covered by the UN Liability Convention e.g. by third parties as defined under the Space Industry Act 2018, (through their appointed solicitor or through the UK Government) the operator must pay compensation up to the limit of liability set out in the relevant licence.

## Questions

### Can I appeal a decision about the level of insurance required?

If an operator is not happy with the level of insurance required by the regulator, the operator can appeal through the proposed appeals process, if initial discussions with the operator do not resolve the issue. Details of this process are included in the [consultation](#) issued on 29 July 2020.

For such an appeal to be considered by an appeal panel, an operator would need to demonstrate that the regulator's actions had been wrong in law, that there had been an error of fact or that there had been an error in the exercise of a discretion by the regulator in determining the insurance requirement and limit of liability. This is set out in paragraph 8 of [Schedule 10](#) of the Act.

### **Issues not covered by the guidance**

- Government insurance and re-insurance scheme

The Act gives the UK Government the power to put in place an insurance or re-insurance scheme backed by HM Treasury. As yet, the UK Government does not intend to make use of this provision.

- Accident and investigation

There is separate guidance published on the investigation of spaceflight accidents.



## **Annex A – Terms used in this guidance**

**Aggregate** – The maximum amount that an insurer will pay out in total within the policy period (i.e. annually). Note that, whatever the aggregate, the policy may also have limits for each separate claim.

**Additional insured** – An individual or entity specifically named and added to an insurance policy to provide the same protections as the named insured individual or entity.

**Deductibles** – A specified amount that must be paid before an insurance company will pay a claim.

**First parties** – The persons or organisations directly involved in the licensed activities. This will cover such entities as the owner and operator of the spaceport, the launch operator, the satellite manufacturer, the satellite owner and associated parties.

**Named insured** – The person or organisation who the insurance covers.

**Ordinary liability** - Liabilities that arise in common law e.g. negligence.

**Per occurrence (or any one occurrence)** – This refers to the maximum amount that an insurer will pay for damages arising from a single event or occurrence where third party damage has been caused. This may or may not be subject to an aggregate. The maximum amount is available to settle any future claims during the policy period providing each claim arises due to a separate occurrence.

**Standard mission** – A mission involving a single satellite, proven platform and recognised operational processes.

**Subrogation** – Where someone takes over a claim made by another person. For example, if an individual has a problem with a broken item that is the responsibility of someone else, the insurance company may pay to fix the item and will then look to recover the costs from the person responsible for the item.

**Third party liability** – Injury to a person who is involved in a claim but is neither the insurer nor the policyholder, or damage to such a person's property. In the case of spaceflight, it refers to all entities not involved in the launch or in-orbit activities (i.e. the general public and others not considered to be first parties to the launch or in-orbit activities).