EXPLANATORY MEMORANDUM TO

THE SPACE INDUSTRY REGULATIONS 2021

2021 No. 792

AND

THE SPACEFLIGHT ACTIVITIES (INVESTIGATION OF SPACEFLIGHT ACCIDENTS) REGULATIONS 2021

2021 No. 793

AND

THE SPACE INDUSTRY (APPEALS) REGULATIONS 2021

2021 No. 816

1. Introduction

1.1 This explanatory memorandum has been prepared by the Department for Transport and is laid before Parliament by Command of Her Majesty.

2. Purpose of the instrument

2.1 The Space Industry Regulations 2021 make provision to enable the licensing and regulation of spaceflight activities, spaceports and range control services in the UK. Those Regulations are designed to enable UK launches by the early 2020s and promote growth, innovation and sustainability whilst protecting public safety, security and the UK's international relations. The Spaceflight Activities (Investigation of Spaceflight Accidents) Regulations 2021 ("the Accident Investigation Regulations 2021") establish a spaceflight accident investigation body and make provision about the conduct of accident investigations. The Space Industry (Appeals) Regulations 2021 ("the Appeals Regulations 2021") outline the decisions made by the regulator that may be appealed by a licence applicant or licence holder. They also create the decision-making body to hear appeals in relation to appealable decisions and set the procedures and timescales for making and deciding appeals. The three sets of regulations are referred to collectively as "the Space Regulations 2021" in this explanatory memorandum.

3. Matters of special interest to Parliament

Matters of special interest to the Joint Committee on Statutory Instruments

3.1 None.

Matters relevant to Standing Orders Nos. 83P and 83T of the Standing Orders of the House of Commons relating to Public Business (English Votes for English Laws)

3.2 The territorial application of this instrument includes Scotland and Northern Ireland.

3.3 The powers under which these instruments are made extend to the entire United Kingdom (see section 71 of the Space Industry Act 2018) and the territorial application of this instrument is not limited either by the Act or by the instruments.

4. Extent and Territorial Application

4.1 The territorial extent of this instrument is England and Wales, Scotland and Northern Ireland.

4.2 The territorial application of this instrument is England and Wales, Scotland and Northern Ireland. However, the Space Industry Regulations 2021 include provisions which relate to spaceflight activities occurring outside the United Kingdom such as launching a rocket outside UK airspace from a carrier aircraft which took off from a UK spaceport or the flight of a launch vehicle as it reaches orbit. The Regulations also regulate spaceflight activities such as launch from a British flagged ship in, for example, international waters. Regulation 16 of the Accident Investigation Regulations 2021 gives the Chief Inspector of Spaceflight Accidents power to cause a safety investigation to be conducted, in so far as practicable to do so, where a spaceflight accident occurs elsewhere than the United Kingdom in the circumstances described in that regulation.

5. European Convention on Human Rights

5.1 The Parliamentary Under Secretary of State at the Department for Transport, Rachael Maclean, has made the following statement regarding Human Rights:

"In my view the provisions of the Space Industry Regulations 2021, the Spaceflight Activities (Investigation of Spaceflight Accidents) Regulations 2021 and the Space Industry (Appeals) Regulations 2021are compatible with the Convention rights."

6. Legislative Context

6.1 The Space Industry Act 2018 ("the 2018 Act") confers a number of powers upon the Secretary of State to make secondary legislation and associated guidance for putting the 2018 Act into effect. These include powers to make regulations and orders, to issue directions and to make guidance. The Space Regulations 2021 are being made to implement the powers contained in the 2018 Act. The 2018 Act, together with the Space Regulations 2021, the Regulator's Licensing Rules and associated guidance will provide the framework for regulating spaceflight activities carried out from the United Kingdom. Space Regulations 2021 are being made using the affirmative resolution procedure. The 2018 Act confers powers upon the Secretary of State to make regulations using both the negative and affirmative resolution procedures. For example, the prescribed procedure under section 16 of the Act for making regulations to appoint the Civil Aviation Authority ("CAA") as regulator is the negative resolution procedure. However, given that the provisions relating to the appointment of the regulator are contained in the Space Industry Regulations 2021, and for other parts of that statutory instrument the affirmative resolution procedure is prescribed, the whole statutory instrument will be made under the affirmative procedure. Furthermore, both the Accident Investigation Regulations 2021 and the Appeals Regulations 2021 follow the affirmative resolution procedure in accordance with section 68(6)(m) of the 2018 Act, given that they both include regulations that create offences.

6.2 The 2018 Act includes criminal offences. It also contains direction-issuing powers which can be used to ensure compliance, as non-compliance with a direction is an offence. Under section 27 of the 2018 Act, the regulator may give directions to a person who contravenes a provision of that Act or regulations made under it. It is an offence under section 31 of the Act for a person to fail to comply with a direction given by the regulator under section 27. In addition to these offences the Act confers powers upon the Secretary of State to make regulations which create offences.

6.3 Part 11 of the Space Industry Regulations 2021 makes security provisions relating to physical, personnel and cyber security, vetting, training and qualifications, critical national infrastructure and essential services and the protection of US technology. Regulations 172, 176, 177, 180 and 187 have been disapplied in so far as they relate to spaceports which are to be co-located with aerodromes to which the National Aviation Security Programme ("the NASP") applies. The NASP is part of the security regime applicable for civil aviation. It provides a comprehensive security framework incorporating the baseline security requirements from retained EU law, as well as additional more stringent measures which are set out in Directions issued by the Secretary of State to industry under Part 2 of the Aviation Security Act 1982. It is envisaged that the NASP would apply in cases where security provisions have been disapplied.

6.4 Part 15 of the Space Industry Regulations 2021 sets out a framework for the issue of stop notices. This framework is prescribed by Part 3 of the Regulatory Enforcement and Sanctions Act 2008. Part 3 is extended to apply to the Space Regulations 2021 by section 59(2) of the 2018 Act. These provisions include a power for the regulator to serve a stop notice under regulation 265 of the Space Industry Regulations 2021, a decision not to issue a completion certificate under regulation 267, a decision not to pay compensation following the service of a stop notice under regulation 268 and a decision on the amount of compensation payable following the service of a stop notice under regulation 268.

6.5 There are references to EU Regulations in the Space Regulations 2021 at regulations 2 (defining the EU Regulations and terms defined by reference to them in regulations 35 and 36), 73(4) and Schedule 3, paragraph 19. All of the references are to Regulations which are retained EU law and they are therefore part of UK law. The references to the Aircrew Regulation (Commission Regulation (EU) No 1178/2011 of 3 November 2011 laying down technical requirements and administrative procedures related to civil aviation aircrew) apply certain requirements for aviation crew to space crew and remote pilots. The requirements for aviation crew are being applied to space crew and remote pilots as it was considered duplicative and burdensome to repeat the legislation in the Space Industry Regulations 2021, and the requirements are also well known, workable and tested.

6.6 The Space Industry Regulations 2021 provide that a horizontal spaceport must be located at a certified aerodrome which the Aerodromes Regulation (Commission Regulation (EU) No. 139/2014 of 12 February 2014 laying down requirements and administrative procedures related to aerodromes) is used to define.

6.7 In addition, the cosmic radiation requirements in Part 9 of the Space Industry Regulations 2021 define certain terms by reference to an EU Directive (Council Directive 2013/59/EURATOM of 5 December 2013 laying down basic safety standards for protection against the dangers arising from exposure to ionising radiation in so far as they apply to the crew of aircraft and spacecraft). Those

definitions are already contained in the Air Navigation (Cosmic Radiation: Protection of Air Crew and Space Crew and Consequential Amendments) Order 2019 (S.I. 2019/1115) (the 2019 Order) which (being made under section 2(2) of the European Communities Act 1972) is retained EU law. Terminology from the Directive is used in the space cosmic radiation requirements as those requirements are modelled on those in the Directive and the 2019 Order (implementing it) to ensure consistency with aviation law.

6.8 Once the Space Regulations 2021 are in force, they will work alongside the 2018 Act and the Outer Space Act 1986 ("the Outer Space Act"). They will also work alongside other legislation such as aviation and health and safety legislation.

6.9 The Outer Space Act will continue to regulate the launch overseas of a space object, the procurement of an overseas launch of a space object, and the operation of a satellite in orbit from an overseas facility, by a UK entity. The 2018 Act will regulate the following activities carried out from the UK:

- launch (space or sub-orbital) and return;
- the procurement of a UK launch (space or sub-orbital);
- the operation of a satellite or other space object such as a launch vehicle in orbit;
- the operation of a spaceport;
- the provision of range control services.

6.10 If a ship has a British flag then the 2018 Act, rather than the Outer Space Act, will regulate spaceflight activities such as launch from the ship irrespective of the nationality of the operator or the waters from which launch is to take place. The Outer Space Act is the relevant Act where there is a foreign flagged ship, for example, in international waters, with activities such as launch being carried out by a British national or UK entity.

7. Policy background

What is being done and why?

7.1 Procurement of a launch from overseas and operation of a satellite in orbit by UK entities are currently licensed under the Outer Space Act. However, the Outer Space Act provisions are not detailed or strong enough for it to be suitable for licensing launch from within the UK. The 2018 Act and the Space Regulations 2021 are therefore required to enable licensing and regulation of launch from the UK to support the UK's economic objectives, whilst balancing the need to protect public safety, security, the environment and the UK's international obligations.

7.2 The 2018 Act provides a framework of the regulatory regime for spaceflight activities in the UK. The Space Regulations 2021 make provision for the detailed regulatory framework to implement the provisions of the Act. Without the Space Regulations 2021, guidance and Regulator's Licensing Rules, there would be insufficient transparency to prospective licence applicants or wider stakeholders on the safety and security outcomes that are expected of licence holders. This would provide uncertainty and risk to businesses applying for a licence. It may also impact public acceptance of this new industry if it is not perceived to be regulated effectively. The Space Regulations 2021 therefore facilitate consistency, fairness and proper decision making by the regulator and ensure licence applicants and holders will know how they will be treated.

7.3 The 2018 Act and the Space Regulations 2021 are a critical part of the Government's Commercial Spaceflight Programme, which aims to enable the UK to be the first country in Europe to achieve small satellite launch, generating growth for the UK's economy and establishing the foundations for ongoing market growth and commercial sustainability by 2030. This will contribute to the wider ambition that industry and Government jointly set to grow the UK's share of the global space economy from 5.1% to 10% by 2030.

7.4 At present, UK companies, institutions and Government rely on sites in other countries to launch UK satellites and scientific experiments into space, where timely launch slots are decreasing and launch costs are increasing. There are also often extensive legal, export and regulatory processes required to launch from these sites. This means access to space is becoming a barrier to growth for the UK's space industry, particularly for the UK's small satellite manufacturers and businesses in the UK space sector that rely on these small satellites to provide their services and products.

7.5 In addition, the market for small satellites – where the UK is particularly strong – is currently at a disadvantage because of the existing launch business model. The demand for launching small satellites is forecast to be greater than launch supply over the next decade. At present UK small satellite providers must launch on rockets that have been designed for much larger satellites because these have traditionally been the main customers for launch services. This creates a critical dependency where the UK's small satellite providers have few choices when they launch their satellites.

7.6 Creating the regulatory conditions to allow launch to take place from the UK will open up a new competitive UK market within the global space economy. This would also accrue the benefits of servicing the end-to-end satellite value chain in the UK, and feed into our emerging National Space Strategy. Enabling UK launch options could mitigate increasing launch costs, reduce legal and logistical costs, and reduce delays and uncertainty by offering more predictable launch options for both UK and non-UK customers.

7.7 Domestic access to space would also provide the UK's scientific community, for whom space is an invaluable but largely inaccessible research environment, with new opportunities for exploration and discovery, and could accelerate the exploitation of revolutionary future spaceflight technologies. With public investment in the space industry returning an average £6 of benefit for every £1 invested, the UK's strategy of investing in enabling industrial capabilities will deliver strong value for money, space sector market growth and spill-over benefits for the wider UK economy for years to come.

The Space Industry Regulations 2021

7.8 The Space Industry Regulations 2021 cover the appointment of the space regulator, and matters relating to licensing, ongoing safety, security, training and medical requirements, and equip the regulator with additional powers to monitor and enforce compliance.

Appointment of the regulator

7.9 The Government is using powers in section 16 of the 2018 Act to appoint the CAA to undertake regulatory functions in the Act and in regulations made under the Act. If the Government did not exercise this power, the default under the 2018 Act is that the

Secretary of State would exercise the regulatory functions. There are two main reasons for appointing the CAA to carry out the regulatory functions. First, the UK Space Agency currently issues licences under the Outer Space Act but also has responsibility for space sector promotion. The Government has taken the opportunity under the 2018 Act to separate regulation from sector promotion and ensure licence decisions are impartial. This is in line with longstanding policy to separate safety regulation from sector promotion. Separately, the Contracting Out (Functions in Relation to Space) Order 2021 will have the effect of delegating certain functions of the Secretary of State under the Outer Space Act – such as those pertaining to the licensing and regulation of activities by a UK entity – to the CAA. Secondly, the CAA is an experienced regulator and has existing skills and expertise in relation to aerodromes, aircraft and use of airspace – which makes the CAA well placed to develop its capability to regulate spaceflight activities.

General provisions relating to grant of licences

7.10 The 2018 Act puts in place key requirements for the grant of operator, spaceport and range control licences. These include, for example, general licensing and eligibility criteria under sections 3, 7 and 8, requirements for an assessment of risk and demonstration that the risk of spaceflight activities is acceptable under section 9, and that a spaceport licence applicant has taken all reasonable steps to ensure that risks to public safety arising from the operation of the spaceport are As Low As Reasonably Practicable ("ALARP").

7.11 Regulations under Part 3 of the Space Industry Regulations 2021 prescribe certain roles that must be undertaken by individuals on behalf of licence holders and make further provision on eligibility to hold a licence or undertake a prescribed role. For example, Chapter 1 of Part 3 makes provision that a person will not be eligible if they:

- have an unspent conviction for an offence involving fraud or dishonesty (which would include, for example, tax evasion offences),
- have an unspent criminal conviction for an indictable offence,
- are an undischarged bankrupt,
- are subject to a bankruptcy restrictions order or undertaking, debt relief restriction order or undertaking or a moratorium period under a debt relief order, or
- are subject to a company director disqualification order or undertaking.

7.12 Failure to meet these criteria is an absolute bar to holding a licence or carrying out a prescribed role. These provide transparent and consistent eligibility criteria in advance to help applicants understand minimum requirements. These requirements on eligibility are in addition to the requirements as to financial and technical resources and being a "fit and proper person" to do the things authorised by the licence under section 8 of the 2018 Act. Without these Regulations, decisions on what roles are undertaken on behalf of the licence holder would be a commercial decision for the licence holder – subject to any conditions that the regulator might attach to the grant of a licence. Without the eligibility criteria, the basic standard would not be transparent or consistent. The Space Industry Regulations 2021 balance setting a minimum entry threshold on eligibility to safeguard safety and security whilst avoiding unnecessary restrictions to market entry.

7.13 The regulator will require evidence of identity and eligibility through the detailed requirements set out in the Regulator's Licensing Rules made under powers in section

8(6) of the 2018 Act. This power has been exercised, delegating to the regulator the power to specify the matters such as the application form and information to be supplied with the application listed at section 8(6)(a) to (d) (the draft application form is included, and the final version can be provided upon request on or after the laying date). Chapter 3 of Part 3 of the Space Industry Regulations 2021 also makes provision about how licence applications (including applications for renewals) are to be made, considered and determined.

Operator licences

7.14 Under the 2018 Act, the term "operator licence" covers a broad range of spaceflight activities – including launch of a spacecraft, operation of a spacecraft in orbit (for example, operation of a satellite), and the return (landing) of a spacecraft. In order to tailor specific regulations for different types of spaceflight activity, the Space Industry Regulations 2021 define two sub-categories of operator licence:

- Launch operator licence;
- Return operator licence.

The holder of either of those licences is referred to as a "spaceflight operator".

7.15 The Space Industry Regulations 2021 do not define any type of orbital licence for in-orbit only spaceflight activities. The reason for this is that in-orbit only activities are to be regulated by the 2018 Act and primarily licence conditions (see below), rather than by the 2018 Act and the Space Industry Regulations 2021. These in-orbit activities are distinct from orbital activities (defined in the Space Industry Regulations 2021 as spaceflight activities using a launch vehicle which has reached a stable orbit) which are carried out by the launch vehicle only in so far as necessary to complete an assignment such as carrying a payload until its release or separation. The risk provisions in section 9 of the 2018 Act and use of conditions under section 13 of that Act are considered sufficient to manage risk and safety where a licence is for in-orbit spaceflight activities only. These in-orbit only activities are characterised by a wide diversity of mission profiles and technologies used. An adaptable, outcomes-based regulatory regime is therefore important to ensure that new developments in recognised standards and practices can be taken into account and that safety and security requirements can best target the specific concerns associated with a given activity. There is already an established process to license such activities under the Outer Space Act – on which the 2018 Act provisions draw. The Government intends to regulate safety of spaceflight in orbit primarily by licence conditions and accompanying guidance in line with our current licensing regime under the Outer Space Act. However, certain security requirements in the Space Industry Regulations 2021 may apply to in-orbit activities. In all cases, these include provisions around controlling access to orbital operation space sites and on maintaining a cyber security strategy. Where the in-orbit activity may give rise to an issue of national security, the operator licence holder will also need to appoint a security manager under Part 3 and comply with requirements in Part 11 to have a space site and operator security programme.

7.16 However, further regulations to address risk and safety under sections 9 and 19 of the 2018 Act are required for operator licences that involve launch and/or return of a spacecraft. Regulations are needed to provide greater clarity and transparency on the nature and depth of analysis of risk that launch and return licence applicants will need to undertake in support of their applications – and up to completion of the licensed

activity. For example, applicants are required to evaluate risks and mitigate consequences for each major accident hazard identified as part of the flight and ground safety analyses required by regulations 26 and 27 of the Space Industry Regulations 2021. An assessment of the risk from individual hazards based on the launch vehicle, flight path and related factors is required to provide insight into the specific activities and to guide the application of controls and mitigations. The provisions in Part 4 of the Space Industry Regulations 2021 are critical to enabling the regulator to assess whether the risk to public safety, after being reduced to ALARP, is acceptable. Those regulations are generic in nature and can be applied to a broad range of launch vehicles, such as vertical and horizontal launch vehicles, sub-orbital spaceflight vehicles and balloons.

7.17 Schedule 1 paragraph 11 (information which the safety case must contain) refers to a technical standard (Chapter 6 of the Space Engineering Technical Requirements Specification produced by the European Cooperation for Space Standardization (ECSS) and dated 6th March 2009) to describe technical requirements which apply to the launch vehicle. As commercial spaceflight is a new industry to the UK, it has not been possible to develop UK-specific requirements types, and doing so will likely take a number of years as the UK develops expertise and experience in this industry. The ECSS is not an EU agency. The ECSS technical standard is recognised as a good example of international best practice, which the UK will follow in lieu of developing our own, separate standard.

7.18 Regulations 31 to 33 of the Space Industry Regulations 2021, read with section 9(2) of the 2018 Act, require the licence applicant to undertake an additional risk assessment where crew or spaceflight participants will be on board a spacecraft during its flight. These risk assessments must identify the hazards to human occupants (crew and spaceflight participants on board a launch vehicle) and define appropriate measures to prevent the hazard occurring or mitigate its consequences. However, the applicant is not required to demonstrate it has reduced risks to ALARP. Nor do the risks need to be acceptable to the regulator. Instead, section 17 of the 2018 Act requires that any human occupant on board the launch vehicle must have given informed consent to the risks involved before being allowed by the licence holder to undertake the flight or take part in other spaceflight activities (such as launch of carrier aircraft, launch vehicle and landing). It is therefore for the individual taking part on board a launch vehicle to decide whether the risk to them personally is acceptable, based on the information provided in the risk assessment and other information about the operator's spaceflight activities referred to in the Regulations. Regulations in Part 12 of the Space Industry Regulations 2021 prescribe who the informed consent provisions under section 17 of the 2018 Act apply to and ensure an individual has the information to decide whether to accept the risks involved in participating in the proposed spaceflight activity. The Regulations do this by setting minimum standards for the contents of the consent form to be signed, information to be provided to human occupants and minimum requirements on the mental capacity of human occupants. Many of the requirements in this Part draw on similar US provisions about informing crew and spaceflight participants of risk.

Spaceport licences

7.19 Part 5 of the Space Industry Regulations 2021 prescribes further requirements for the grant of a spaceport licence, using powers under section 10(b) of the 2018 Act. Without these further requirements, the regulator would be limited to considering

applications based solely on relevant requirements in the 2018 Act. These are the general licence requirements under section 8, the section 10(a) requirement that the regulator must not grant a spaceport licence unless satisfied that the applicant has taken all reasonable steps to ensure that risks to public safety arising from the operation of the spaceport are ALARP, and the submission of an assessment of environmental effects required under section 11.

7.20 The type of spaceflight activity and the types and amount of propellant that will need to be stored, transported and handled at a spaceport will vary depending on type and size of spacecraft and frequency of launch. The Space Industry Regulations 2021 are therefore designed to be proportionate to the activities that are to take place at the spaceport. The requirements in Part 5 of those Regulations are needed to enable the regulator to make informed decisions that the proposed location of the spaceport is appropriate for the type of spaceflight and associated activities and that the risks to public safety from the activities at the spaceport are reduced to a level that is ALARP. They also ensure requirements are clear to a prospective licence applicant and help it understand what will be required from it and the basis on which the regulator will consider the application.

7.21 The requirement on the spaceport licence applicant to carry out a safety case to assess the hazards and risks specific to its spaceport and to set out how it will mitigate these is key to demonstrating to the regulator that the applicant has met the requirement in section 10(a) of the 2018 Act to reduce the risks to public safety of operating a spaceport to a level that is ALARP. Following the grant of a licence, the safety case will be used as the basis for ongoing monitoring and assessment of spaceport activities and must be reviewed and, where necessary, revised under requirements in Part 10 of the Space Industry Regulations 2021.

7.22 Appropriate siting of a spaceport is key to mitigating risks posed by launch and activities such as propellant (hazardous material) storage and handling. The requirement for a siting assessment in regulation 38 is necessary to ensure that the risks of death or serious injury posed to members of the public by the proposed spaceflight activities has been assessed in relation to the proposed location, and that applicants for a spaceport licence have mitigated those risks to a level that is acceptable to the regulator.

Range control licences

7.23 Regulations in Part 6 set out how range control services are to be provided and the systems that range control service providers will need to have in place in support of a launch activity and clarify how their services will support the spaceflight operator's safety case. Schedule 1 to the Space Industry Regulations 2021 requires that information about the range control services be provided as part of the safety case for the spaceflight operator licence. A range control licence holder is not required to provide a separate safety case for its activities, but range control activities contribute to mitigating the safety risks from spaceflight activities. Regulation 52, however, requires the range control licence holder to have both quality and safety management systems in place. These ensure the quality and reliability of the safety-critical services that the range control licence holder is responsible for.

Liabilities and insurance

7.24 Licensing launches into outer space from the UK will make the UK a launching state. Under the UN Convention on International Liability for Damage Caused by Space

Objects ("the UN Liability Convention") a launching state is ultimately liable to pay compensation to other states for any damage to another state's nationals caused by its space activities. To mitigate this liability on the Government, the 2018 Act requires operator licence holders to indemnify the Government for any claims brought against it. Section 34(2) places a strict third-party liability on spaceflight and satellite operators for damage their activities cause in the UK (meaning claimants in the UK do not need to prove fault, just as foreign national claimants do not have to prove fault under the UN Liability Convention).

7.25 The 2018 Act contains powers to limit the application of strict third-party liability and we have used these in Part 13 to reflect the policy intent that the strict liability claim should only be available to the uninvolved general public. This is because individuals involved or actively engaged in spaceflight activities will have been made aware of the risks associated with such activities (for example, through signing an informed consent form). Employees of organisations involved in spaceflight activities will also have recourse to other statutory protections through health and safety legislation and employers' liability insurance. Individuals described in regulation 218 could still make a claim against an operator for injury or damage but would have to prove fault.

7.26 The 2018 Act also contains powers to limit the amount an operator must indemnify the Government for claims arising from spaceflight activities. The Government has exercised this power based on evidence from research and market engagement conducted by the UK Space Agency that indicated that it would not be possible for launch operators to obtain insurance for an unlimited liability. Furthermore, companies holding unlimited liabilities can face difficulty raising finance. Launch operators also stated they will not launch from the UK until a limit on liability is in place both for the strict liability to third parties and for the indemnity of Government. Regulation 220 enables the regulator to set tailored limits on third party liability. The Government will indemnify a claimant for losses above that limit, apart from in limited circumstances where the limit on an operator's liability will not apply.

Ongoing requirements on licence holders relating to safety, security and training etc.

7.27 Parts 7 to 11 and Part 16 make additional provisions on a licence holder's ongoing obligations relating to safety, security, the training and medical fitness of specified individuals and occurrence reporting. Without these regulations, the regulator would need to rely on applying licence conditions under section 13 of the 2018 Act to secure ongoing requirements on these matters for the duration of a licence. Whilst this approach could effectively secure these matters, conditions would apply on a case-by-case basis. Whilst conditions are useful for securing compliance with matters specific to a licence holder, except for the safety of in-orbit only activities, the Government does not consider this to be the most appropriate approach for requirements that will have general application. Setting requirements in these regulations provides greater clarity to a licence applicant and other interested parties about the licence holder's duties and obligations, and how they will be regulated, during the life of the licence.

Safety

7.28 Parts 8 and 10 make provision for the safe conduct of spaceflight activities and operation of a spaceport. The safety regulations are proportionate and objective-based, allowing the licence holder to comply with them in accordance with the type of spaceflight and spaceport activities it is carrying out. They build on the risk assessments and safety cases (these cases are the means by which the applicant

demonstrates to the regulator that its operations to be authorised by the licence can be carried out safely) that must be submitted in support of licence applications. For example, once a licence is granted, the spaceflight operator or spaceport licensee is required to keep its safety case up to date – and the regulations specify the circumstances when the safety case must be reviewed and, if required, revised. The licence holder must not implement any changes to its spaceflight or spaceport activities until the regulator has accepted in writing the revised safety case. The spaceflight operator must also not commence a launch until the regulator has accepted the revised safety case in writing. A similar process applies to the risk assessment that is needed where people will be on board a spacecraft. Regulations also impose a duty on the spaceflight operator or spaceport to carry out their licensed activities safely by carrying them out in accordance with the current safety case, by preventing a major accident and mitigating the consequences of such an accident if it does occur and, in the case of spaceflight activities with human occupants, in accordance with the current risk assessment. Safety regulations also specify other operational requirements, such as requiring the spaceflight operator or spaceport licence holder to have a safety management system in place that complies with the requirements specified in Schedule 4 to the Space Industry Regulations 2021. A safety management system is a systematic and proactive approach to managing safety risks.

Occurrence reporting

7.29 The regulations in Part 16 on occurrence reporting impose a duty on operator, spaceport and range control licence holders to report to the regulator any spaceflight or major accidents, or near misses during spaceflight activities or preparations for them. The regulations on occurrence reporting and the Accident Investigation Regulations 2021 draw on similar requirements in the field of civil aviation. The Government has imposed these requirements on the 2018 Act licence holders because the equivalent civil aviation provisions have significantly contributed to ongoing improvements in civil aviation safety – by ensuring safety lessons are learned and shared, and actions are taken to improve safety. However, the occurrence reporting requirements in Part 16 are less detailed than those for aviation as spaceflight activities are new and developing.

7.30 The objective of the occurrence reporting requirements in Part 16 and the Accident Investigation Regulations 2021 is to prevent future spaceflight accidents, without apportioning blame or liability. In addition to imposing the duty to report occurrences, the regulations specify the key information to allow the regulator to assess the occurrence, and that the occurrence be reported in writing within 72 hours. The regulations also make provisions for protecting information and permitted disclosures, including confidential information, and restrictions on disclosing US technical data; court applications for disclosure and the contraventions and sanctions that are available if the regulations are breached. Setting these obligations in regulations, rather than through conditions on individual licences, makes clear up front that we are seeking a culture of reporting and sharing of information to support ongoing improvements in the safety of spaceflight activities. Safety lessons and improvements arising from occurrence reporting and investigation of accidents may also trigger a review and, where necessary, revision of safety cases under Parts 8 and 10.

Security

7.31 Launch technology can be used for destructive purposes in the wrong hands. It is critical therefore, that the UK fulfil its international obligations to protect information and assets used in spaceflight and associated activities. Part 11 makes provision for appropriate and proportionate levels of security at spaceports and space sites and during spaceflight activities. The regulations are required because section 23 of the 2018 Act primarily provides a power to make security regulations, with examples given in Schedule 5. The security regulations establish minimum security standards to prevent acts of unlawful interference with spaceflight and associated activities. The security regulations cover the three recognised aspects of security: physical, personnel and cyber. They also cover clearance, vetting and security training and qualifications of licensees' staff. The security regulations are cross-cutting and apply to all licence types: operator licences, spaceport licences and range control licences. However, not all security regulations apply to all licence types - for example, the requirement to locate horizontal spaceports at NASP directed aerodromes only applies to horizontal spaceport licences.

7.32 The requirements in Chapter 6 of Part 11 only apply where a spaceport intends to launch US spacecraft or US launch vehicles. The UK has negotiated an agreement with the Government of the United States of America on technology safeguards associated with United States' participation in space launches from the UK (CP307). The agreement can be found at https://www.gov.uk/government/publications/ukusa-agreement-in-the-form-of-an-exchange-of-notes-between-the-united-kingdom-and-the-united-states-of-america-on-technology-safeguards-associated. The security regulations in Chapter 6 of Part 11 are required to implement this agreement.

Training and medical fitness

7.33 Employers already have existing statutory obligations to staff with regard to training and other safety-at-work matters arising from the Health and Safety at Work etc. Act 1974 – for example, the handling, storing and transporting of hazardous substances. The regulations in Part 7 apply additional and specific training, qualifications and medical fitness requirements for a limited, specified set of key roles and people who will either be taking part in or will be responsible for the safe operation of spaceflight and associated activities. These provisions are designed to ensure that such persons are competent and fit to carry out their functions and provide certainty and clarity to licence holders on what is expected of them. The regulations specify the circumstances when a licence holder must appoint a training manager and imposes specific responsibilities and functions on the training manager – such as ensuring the licensee complies with the regulations in Part 7. They also require the licensee to provide a training manual and to establish a training programme ensuring that all those who take part in the licensed activities receive appropriate training. A requirement for approval of sections of the training manual by the regulator ensures that the regulator is fully informed as to the training being provided by the licensee.

7.34 Chapter 5 makes provision regarding the medical fitness of those taking part in spaceflight activities, whether as a member of crew or as a spaceflight participant, and imposes requirements on licence holders to ensure the medical fitness of crew members and participants on board a spacecraft. They also apply to remote pilots and other specified participants in the spaceflight activity. The medical requirements are necessary because of the physical impact that spaceflight can have on a person, and, in the case of pilots and crew, being medically able to perform their functions is safety

critical. For example, regulation 56 specifies the roles and capacities which section 18(4)(b) of the 2018 Act prohibits licence holders from allowing unqualified individuals to perform – such as the training manager, launch director, flight termination personnel etc. The regulations also specify the circumstances when a licence holder must appoint a training manager and imposes specific responsibilities and functions on the training manager – such as ensuring the licensee complies with the regulations in Part 7. In the case of medical fitness, for example, regulation 73 requires that members of crew or remote pilots must hold a valid medical certificate issued by an approved and suitably qualified aeromedical examiner that takes into account the nature of the spaceflight activity and any operational or environmental conditions of that activity.

Monitoring and enforcement

7.35 The 2018 Act provides the regulator with a range of tools to enforce compliance with the provisions of the Act and regulations made under it. The Government has used powers in the Act to make regulations in Part 14 that further equip the regulator to carry out its functions – including provision for access to and sharing information, and for inspection of sites and records. The regime for enforcing the Outer Space Act uses licence conditions to enable the Secretary of State to inspect facilities and documents related to a licence. However, the regime under the 2018 Act follows a model closer to that used for civil aviation – which sets out monitoring and enforcement powers in the Act and in regulations. The Government considers this is preferable because requirements relating to monitoring and enforcement will apply to all licence types.

7.36 The enforcement powers given to the regulator in 2018 Act are designed to deal with the most serious cases requiring the regulator's intervention. Powers provided in these Regulations further equip the regulator to fulfil its duties in a proportionate manner, tailored to the relative seriousness of the matter to be addressed by the licence holder. For example, regulations make provision for the appointment and duties of inspectors – and their powers, including powers of entry to sites and to request information and documents. This includes, under regulation 228, power to issue an information notice where the inspector believes a person is contravening, or conducting an activity likely to contravene, licence conditions or provisions of the 2018 Act or a regulation made under that Act.

7.37 Chapter 1 of Part 14 also creates two new offences: the offence of obstructing an inspector or regulator; and the offence of impersonating an inspector. These offences apply to anyone, not just licensees. These are criminal offences, so criminal sanctions could apply to anyone found guilty of committing them. These sanctions can be found in regulations 224 and 226 respectively which are made under section 54 of the 2018 Act.

7.38 In addition, Part 15 incorporates the "stop notices" scheme provided by the Regulatory Enforcement and Sanctions Act 2008. It is an offence to fail to comply with a stop notice within the time limit specified in the notice. The stop notices scheme is prescribed by section 59(3) of the 2018 Act and Part 3 of the Regulatory Enforcement and Sanctions Act 2008, and so is not subject to consultation.

The Spaceflight Activities (Investigations of Spaceflight Accidents) Regulations 2021

7.39 The investigation of spaceflight accidents is important for the whole space industry to share lessons learnt from any investigation and thus improve safety. The purpose of any safety investigation is solely the prevention of further accidents, where necessary

by promoting safety action and issuing Safety Recommendations. The purpose is not to apportion blame or liability.

7.40 To ensure effective and unbiased investigation, it is critical that the safety investigation authority should be wholly independent and not apportion blame. Without the Accident Investigation Regulations 2021, it would be left to licence holders to investigate any accidents and to decide if they are willing to share safety lessons.

7.41 The Accident Investigation Regulations 2021 provide for the appointment of a Spaceflight Accident Investigation Authority which must operate independently. Fear of being blamed for an accident can deter licensees and others from granting full access to their sites and information on their operations, so the Regulations require that safety investigations must be independent of, and separate from, any judicial or administrative proceedings that seek to apportion blame or liability.

7.42 The Accident Investigation Regulations 2021 are based on the long-established principles used in the investigation of aviation, maritime and rail accidents and work alongside the requirements in the Space Industry Regulations 2021 on occurrence reporting. It is only through these Regulations that we can ensure that effective, independent investigations are undertaken and safety lessons shared.

The Space Industry (Appeals) Regulations 2021

7.43 The Appeals Regulations 2021 add to the provisions in Schedule 10 to the 2018 Act which make provision for appeals against certain decisions made under that Act and the Outer Space Act. The Appeals Regulations 2021 set out how an appeal panel will be established and provide for the process to be followed by the appeal panel and by the parties to the appeal, from the initial application for permission to appeal to the decisions which may be taken by the panel and consequences for the parties. The Appeals Regulations specify which decisions under the Space Industry Regulations 2021 are appealable in addition to those decisions listed in the 2018 Act.

8. European Union Withdrawal and Future Relationship

8.1 The Space Regulations 2021are not being made under the European Union (Withdrawal) Act 2018 but relates to the withdrawal of the United Kingdom from the European Union only in so far as regulation 150 and Schedule 7 of the Space Industry Regulations 2021 make amendments to the Air Navigation (Cosmic Radiation: Protection of Air Crew and Space Crew and Consequential Amendments) Order 2019 (S.I. 2019/1115) which is within the definition of retained EU law in the European Union (Withdrawal) Act 2018.

8.2 In accordance with the requirements of paragraph 15 of Schedule 8 to the European (Withdrawal) Act 2018 Act the Minister has made the following statements:

"Paragraph 15(3)(a): Law which is relevant to the amendment or revocation:
Requirements relating to protection of spacecraft crew from cosmic radiation are currently contained in the Air Navigation (Cosmic Radiation: Protection of Air Crew and Space Crew and Consequential Amendments) Order 2019 (S.I. 2019/1115) ("the 2019 Order"). This was made in part under section 2(2) of the European Communities Act 1972, and therefore constitutes EU-derived domestic legislation (which is retained EU law) within the meaning of the European Union (Withdrawal) Act 2018. The 2019 Order implements the requirements of Council Directive 2013/59/EURATOM of 5 December 2013 laying down basic safety standards for protection against the

dangers arising from exposure to ionising radiation in so far as they apply to the crew of aircraft and spacecraft.

Paragraph 15(3)(b): Effect of the amendment or revocation on retained EU law: As stated in the Explanatory Memorandum to the 2019 Order, relevant space operations were not expected to take place until regulations under the Space Industry Act 2018 came into force, at which point those regulations were expected to replace the requirements of the 2019 Order in relation to spacecraft. The Space Industry Regulations 2021 replace those requirements with similar provision, subject to minor adjustments to ensure that the provisions fit with the space regulatory regime. Schedule 7 to this instrument therefore makes consequential amendments and revocations to the 2019 Order to avoid duplication. In the future the 2019 Order will contain the cosmic radiation requirements for aircraft and air crew only.

Paragraph 15(2): Good reasons statement: In my view there are good reasons for the amendments and revocations contained in Schedule 7 to the Space Industry Regulations 2021, because the relevant provisions previously in the 2019 Order will in future be contained in this instrument. Retaining the provisions in this way will maintain the same level of protection for spacecraft crew as in current legislation. At the same time the minor adjustments made will ensure the provisions fit with the space regulatory regime and use consistent terminology (for example defined terms such as "launch vehicle"). Integrating the cosmic radiation requirements with other elements of the space regulatory regime in this way will provide an integrated approach which is more user-friendly, and which will increase awareness and compliance."

9. Consolidation

9.1 The Space Regulations 2021 are the first Regulations made under the 2018 Act. However, the Government has consolidated within the Space Industry Regulations 2021 existing provisions relating to spaceflight currently located in the 2019 Order.

10. Consultation outcome

10.1 A 12-week consultation on the draft Space Regulations 2021 ran from 29th July to 21st October 2020 (https://www.gov.uk/government/consultations/spaceport-and-spaceflight-activities-regulations-and-guidance). To facilitate consideration of the proposals and gather further evidence, pre-consultation engagement was carried out with key stakeholders in the form of plenary events with industry and events communicating the intent behind the legislation and explaining the consultation process. In addition, officials discussed the draft Space Regulations and guidance with non-governmental organisations and the devolved administrations.

10.2 52 responses were received, 46 of which were from organisations and six were from individuals. Respondents were largely supportive of the proposed regime and provided practical evidence to support their views on the draft Space Regulations2021 and associated documentation and guidance. The flexibility of the Regulations was also welcomed, with respondents embracing the non-prescriptive approach outlined.

10.3 Responses were analysed in detail and some changes proposed by respondents were implemented. The most notable changes made to the Space Industry Regulations 2021 are:

- a spaceport licence applicant will no longer be required to appoint a training manager in a specified role or capacity;
- safety requirements have been more closely aligned for spaceport and launch operator licensees by adopting a single approach to safety management systems for both licence types;
- a specific provision for a range service provider to have a safety management system in place;
- changes to the training regulations around the medical fitness requirements;
- changes to the definitions, including adjustments to the definition of "flight envelope", new definitions describing a "stable orbit" and "flight", and replacing "significant change" with "material change" throughout the Regulations;
- for informed consent, human occupants will now have information provided to them a minimum of 24 hours before the consent form is signed instead of 12 hours;
- some offences and penalties have been adjusted to better align with the legal systems of the devolved administrations;
- adjustments to enable the Space Regulations 2021 to apply to launch from UK territorial waters and British flagged ships in for example, international waters;
- incorporation of the provisions relating to liabilities and insurance which were consulted on separately (see below).

10.4 On the Government's approach to liability, insurance and charging, during the passage of the Bill through Parliament the Government made an undertaking to conduct a Call for Evidence (column 1963 - https://hansard.parliament.uk/lords/2017-11-14/debates/4CBD0C9F-EFD5-44D1-BAFD-937733783012/SpaceIndustryBill(HL)). This Call for Evidence was published in March 2018. The Call for Evidence and Government response can be viewed at: https://www.gov.uk/government/publications/call-for-evidence-space-industry-act-2018. A separate 4-week consultation relating to liabilities and insurance ran from 13 October to 10 November 2020 (https://www.gov.uk/government/speeches/consultation-on-draft-insurance-and-liabilities-requirements-to-implement-the-space-industry-act-2018). Ahead of the consultation, the Government held a plenary session with industry, which welcomed the proposed approach to setting launch insurance requirements and limiting operator liabilities.

10.5 31 responses were received to this consultation, 30 of which represented organisations and one was from an individual. Respondents were largely supportive of the proposed approach to liabilities, insurance and charging, but many suggested that a review of liability limits be carried out to ensure that the implications of this approach on the sector and Government be considered in more detail. As part of its response to the consultation, the Government has committed to carrying out a wider review of insurance and liabilities in 2021 and will engage further with the sector as part of this review.

10.6 On the proposed approach to charging, there was broad support from respondents for the proposal not to charge fees for spaceport, range control and launch licensing activities under the 2018 Act until 2024. On the proposal for a single approach to orbital licensing under both the Outer Space Act and the 2018 Act, there was broad support for a one-off charge of £6,500. This approach has therefore also been

retained. There was concern from consultation respondents about how this would apply to constellation operators. The Government recognises the concerns raised by constellation operators and has looked at ways to reduce the licence fees for these operators. The Government intends to provide further guidance specifically on charging.

10.7 The Government has carried out a full analysis of the responses to both consultations and provided a single response document which is available online at https://www.gov.uk/government/consultations/spaceport-and-spaceflight-activities-regulations-and-guidance.

11. Guidance

11.1 Detailed guidance for licence applicants in support of the Space Regulations 2021 is publicly available at https://www.gov.uk/government/consultations/spaceport-and-spaceflight-activities-regulations-and-guidance.

12. Impact

12.1 The impact on business, charities or voluntary bodies is expected to be above the expected annual net direct costs to business (EANDCB) threshold of +/- £5 million. The regulations offer significant positive returns in the central (best-estimate) scenario, with net social benefits of around £60 million from 2020 to 2034. There is however a high amount of uncertainty about the development of spaceflight in the UK, so the expected net benefits could be higher in a best-case scenario or even negative in a worst-case scenario. In addition, the regulations are expected to result in an EANDCB of around £12 million per year, to mitigate the risks to safety, security, the environment and airspace, and legal and international relations.

12.2 The net benefits to business are expected to be around £90 million from 2020 to 2034. The main affected businesses are those that are expected to enter the market via the licensing process, including spaceports, range control service providers, launch, return and orbital operators. These businesses are expected to also indirectly benefit from providing launch and related services. On the other hand, these businesses are expected to incur direct costs to business for familiarising themselves with the legislation and accompanying guidance, engaging with the regulator during the licence application process and monitoring regime, and complying with the regulations themselves.

12.3 In addition, businesses and communities in the space industry supply-chain and wider economy are expected to be indirectly impacted, both positively and negatively. For example, some of these businesses and communities may benefit from the creation of this new market in the UK and the services it provides, whereas others may face indirect familiarisation costs due to interdependencies with this new market and/or costs of disruption associated with spaceflight operations, and environmental and airspace impacts.

12.4 The impact on the public sector is expected to be around £30 million from 2020 to 2034. This includes the costs of appointing the CAA as the single regulator for commercial spaceflight in the UK and Government liabilities on a per launch basis. The regulator for commercial spaceflight launches from the UK will be directly involved with licensing entry to the market and monitoring compliance with licence conditions for the above types of businesses. The direct costs of establishing functions to regulate these risks are included in the total costs and benefits calculations as a cost

to the public sector and businesses; in the long-run, the cost of regulating the UK launch market is expected to be recovered from the UK launch industry. Under the guidance in HM Treasury guidance on Managing Public Money, the costs of providing such services should be fully recovered from users of the service. However, the Government proposes a different approach to support the UK's nascent launch market. The Government proposes:

- no cost recovery for spaceport, range and launch licensing for three years (under the 2018 Act). The cost of initial operations will be high as the regulator will need time and experience to mature its safety-critical functions. In addition, the volume of applications is expected to be low at first, further increasing costs if priced according to full cost recovery. The Government proposes implementing a charging scheme in 2024, moving towards full cost recovery over a phased approach. Given uncertainties around how the UK launch market will develop, we will review this decision annually;
- partial cost recovery of satellite licensing at £6,500 per licence (under the 2018 Act and Outer Space Act). This is consistent with HM Treasury guidance, ensuring that the same charges apply to all users of a similar defined category of service. Over the long-term, the Government propose implementing a flexible charging regime for all types of mission (e.g. constellations) and licensing activities (e.g. in-life monitoring).

12.5 In addition to the UK spaceflight regulator and the four main types of licence holders, other public bodies may be indirectly impacted by the proposed regulations for information sharing and other monitoring and enforcement purposes, as well as launch operations. For example, central government and devolved administration departments, authorities and agencies, such as the Environment Agency, and local authorities. The criminal justice and accident investigation impacts have been illustrated but are not captured in the total net benefits and costs.

12.6 Finally, wider economic impacts have been considered. These include the environmental impacts of enabling commercial spaceflight activities in the UK, the impact on users of airspace, and the level of market power and innovation that we expect the proposed regulations to generate. Again, the intention of the proposed regulations is to allocate these impacts and risks outside of the business as usual operations efficiently and equitably.

12.7 A full Impact Assessment is submitted with this memorandum and published alongside the Explanatory Memorandum on the legislation.gov.uk website.

13. Regulating small business

13.1 The legislation applies to activities that are undertaken by small businesses. Small and micro businesses (SMBs) make up 99 per cent employment and 33 per cent of turnover in the UK.[1] SMBs often cite regulation as one of the key barriers to growth, and regulation can affect them disproportionately. The default position is to exempt SMBs from the requirements of new regulatory measures.[2]

13.2 However, it would not be appropriate to exclude SMBs from the Space Regulations 2021. This is because SMBs will likely benefit from this legislation, as it enables

[1] House of Commons Library 'Briefing Paper Number 06152: Business Statistics', 12 December 2018 – available at https://commonslibrary.parliament.uk/research-briefings/sn06152/

[2] Department for Business, Energy and Industrial Strategy 'Better Regulation Guidance', 23 August 2019 – available at: https://www.gov.uk/government/publications/better-regulation-framework

commercial spaceflight launch (launch) activities. Without the Space Regulations 2021, it is unlikely that these SMBs would be able to enter the launch market.

13.3 It can be argued that the large suite of regulations being introduced for launch activities places barriers to entry on the industry. However, it would not be appropriate to provide exemptions to SMBs from this legislation, due to the need to mitigate the safety, security, environment, airspace, legal and international relations risks outlined in the problem under consideration.

13.4 In the Space Regulations 2021, the Government aims to minimise the costs to business by imposing only those requirements needed to adequately mitigate the safety, security, environment, airspace, legal and international relations risks of spaceflight and associated activities. Furthermore, both the numbers of prescribed roles and numbers of people are small – and are commensurate with both SMBs entering the market (in that all businesses require at least one person to be employed). If we exclude SMBs we fail to achieve the policy objectives.

14. Monitoring & review

14.1 The approach to monitoring of this legislation is to keep both the 2018 Act and the Space Regulations 2021 under review to ensure that they fulfil the objectives of enabling UK launches by the early 2020s to promote growth, innovation and sustainability whilst protecting public safety, security, the environment and our international relations.

14.2 A statutory review clause is included in regulation 287 of the Space Industry Regulations 2021, regulation 26 of the Appeals Regulations 2021 and regulation 46 of the Accident Investigation Regulations 2021. We will also review the 2018 Act itself 5 to 10 years after enactment.

14.3 A post implementation review will be undertaken to monitor and evaluate the impact of the Space Regulations 2021. Whilst the Space Regulations 2021 will be subject to a formal review, five years from when they come into force, the Government will be continually monitoring and evaluating the progress of this emerging sector. This is to test the identified risks and unintended consequences of the preferred approach, including what the additional impact of the legislation is compared to the counterfactual. The accompanying impact assessment contains more details about the expected activities, outputs and outcomes, as well as risks and unintended consequences.

14.4 An “outcomes” based approach has been taken when drafting the regulations, prescribing what the Government and the regulator expect the outcomes to be rather than how to achieve them. However, outcomes can be harder to assess than prescribed process.

14.5 As has been the case for the development of the legislation and accompanying documents, the Department will continue to work with UK Space Agency, the CAA, industry and other key stakeholders to monitor and evaluate the progress of the Government’s spaceflight programme, the UK spaceflight regulator, and ultimately the size and health of the spaceflight market. The accompanying impact assessment contains more details about these monitoring and evaluation activities.

14.6 Also, the Government will review the Minimum Insurance Requirements financial values annually to determine whether any further update is needed due to a significant circumstance within this period. For example, changes to the inflation rate, the

Personal Injury Discount Rate applied in compensation cases, or an economic downturn having a significant impact on the statistics which are the basis for the derived values. The Government will consult on any proposed changes.

15. Contact

15.1 Jennifer Hurley at the Department for Transport, Telephone: 07966512969 or email: Jennifer.hurley@dft.gov.uk can be contacted with any queries regarding the instrument.

15.2 Jenny Ward, Deputy Director for Aviation Strategy, Consumers and Innovation, at the Department for Transport can confirm that this Explanatory Memorandum meets the required standard

15.3 Rachel Maclean, Parliamentary Under Secretary of State at the Department for Transport can confirm that this Explanatory Memorandum meets the required standard.