



The Spaceflight Safety and Regulatory Council (SSRC)

Meeting no: 4
Date: 3 July 2023, 14:00
Location: Great Minster House and online
Attendees: See Annex A at end

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Agenda

1. *Opening remarks from the Chair, Rt Hon Jesse Norman MP, Minister of State for Transport (JN)*
2. *UK Government updates across UK commercial spaceflight, from Paul Cremin (PC), Commercial Spaceflight Policy & Regulation Lead*
3. *Progress update from Colin Macleod (CM) of the Civil Aviation Authority (CAA).*
4. *Progress update from the Co-Chair Joanne Wheeler (JW) on the latest Regulatory Advisory Group (RAG) meetings.*
5. *Industry Topics*
 - a) *Liability and insurance.*
 - b) *Regulatory policy on a sustainability environment.*
 - c) *Rendezvous and proximity operations policy.*
6. *Government response to industry priorities – Leanne Chhen (LC), UK Space Agency (UKSA).*
7. *Minister's summary and reflections*
8. *Any other business and closing remarks*

Minutes

1. Opening remarks from the Chair, JN

The Chair welcomed delegates, noted the vibrancy of the sector and his excitement at hearing from the industry.

Members were reminded the Council does not operate under Chatham House rules and the meeting would be minuted and recorded, with the minutes made publicly available on the SSRC's GOV.UK page:

<https://www.gov.uk/government/groups/spaceflight-safety-and-regulatory-council>.

JW thanked JN for chairing the meeting and being open to hearing industry views. JW also thanked industry delegates for attending and engaging with agenda priorities.

2. UK Government updates across UK commercial spaceflight, from PC, (Commercial Spaceflight Policy & Regulation Lead)

PC highlighted significant progress since the last SSRC, including the first UK space launch. The launch tested the regulatory framework, and a detailed lessons learned exercise is ongoing with industry, the regulator and across government. The exercise highlighted some areas to improve on and government is keen to progress these.

The Department for Science, Innovation and Technology (DSIT) is proposing a wider spaceflight regulatory activities review, which it will put to the National Space Council later in July. The Department for Transport (DfT) is expecting to undertake a review of the Space Industry Act, which will be considered as part of the work DSIT is doing. The next SSRC will provide more information on the progress of this work and how industry can be involved.

3. Progress update from CM, Head of UK Space Regulation, Civil Aviation Authority

Since the last SSRC, workshops have been delivered with industry to discuss how to make processes, including licensing processes, more efficient for the sector and an internal lessons learned exercise was conducted on the first UK space launch, which set out areas of continuous improvement for CAA with DfT and industry, including in areas such as airspace and roles and responsibilities. CAA has also updated the Airspace Design Review, reviewed the Regulator Licensing Rules and significantly increased engagement with stakeholders. CAA plans to conduct a lessons learned exercise following orbital activities to explore improvement opportunities.

JN asked CM if CAA is planning to introduce an easier process for subsequent launches by companies from different spaceports. CM explained that with the safety case approach, the first licence application is the most detailed and time intensive. Subsequent applications will be modifications of the original, which will make it easier for CAA to approve applications and oversee operations.

4. Progress update from JW (Co-Chair) on the latest RAG meeting

JW highlighted excellent engagement with industry at the RAG and presented the priorities that industry had agreed to take forward with the government.

Priority 1 topics are focused on encouraging effective growth and investment. These topics include: cross-government alignment and engagement; liability and insurance; ensuring a competitive, clear and transparent regulatory environment; environmental sustainability; international strategy, partnerships and collaboration; rendezvous and proximity operations (RPO) and related international agreements; government procurement; and CAA processes.

JW noted that over the last year the CAA has been more proactive in making the licensing processes more efficient and engagement with industry has focused on finding solutions.

Priority 2 topics are less urgent than priority 1, but still of importance to the industry. These include: the UK's role and contribution to the European Space Agency (ESA); the development of an industrial space strategy and a strategic partnership between government, industry and academia; launch; representation in international fora: ESA; CEPT; ITU; UN etc; Earth observation data policy; the development of a venture-capital framework for space; Ofcom's spectrum licensing policy; supply chain mapping and resilience analysis; addressing skills and workforce shortages; and non-Earth imaging (NEI) policy.

5. Industry Topics

a. Liability and Insurance

Peter Anderson (PA) (AAC Clyde Space) provided more detail on the liability and insurance priority, highlighting that both issues need to be considered in more detail as space operations are capital-intensive and investment is becoming increasingly difficult to secure due to associated risks. Insurance offers operators the security to plan services, achieve and fulfil business plans and make them more robust.

PA explained the UK requirement for third party liability insurance is expensive to operators and disadvantages the UK internationally. PA believes that:

- industry needs clarity and consistency internationally, good sustainable practice and the introduction of a cap on unlimited indemnity policies in primary legislation (when the Space Industry Act is next reviewed); and
- establishing space sustainability standards and adhering to design standards could lead to lower tiered insurance requirements, and, as a result, could incentivise other companies to meet agreed standards.

PA presented an overview of a proposal for a mutual modern model for third party liability insurance, which spreads the risk across industry and could be coupled with an incentive-based initiative linked to sustainability.

JW said that the mutual model insurance and tiered approach to liability and insurance would be the first of its kind worldwide; positioning the UK as a world leader and will be consulted on imminently.

b. Regulatory policy on a sustainability environment

Toby Harris (TH) (Astroscale) provided an overview of regulatory policy for a sustainable space environment, highlighting that the space sector is forecast to reach \$1trillion globally in the next decade and sustainability is key to realising this. The UK committed to ensuring the sustainable and responsible use of space in the 2021 National Space Strategy. The Department for Science, Innovation and Technology (DSIT) led Orbital Regulatory Review sets out a road map, which covers sustainability principles and it is important that this pace is maintained and translated into policy outcomes for regulators to enforce.

- TH highlighted the policy changes that are required to fulfil these objectives, which include DSIT/UKSA meeting the commitments of the Orbital Regulatory Review, the implementation of these and other measures into the UK regulatory framework, the funding of new technologies and coordination with international space policy makers and regulators to reach consensus and move implementation forward together.

c. Rendezvous and proximity operations policy (RPO)

Rory Holmes (RH), ClearSpace, provided an overview of the priority relating to RPO policy, highlighting the following key points.

- Servicing, maintaining or upgrading satellites in orbit is an emerging market, and transparent policy is needed to allow UK companies to operate effectively in this market. UK companies are well positioned to capture a significant portion of the in-orbit servicing market.

- Two short term challenges, firstly policy and regulations are not equipped to cover this market and need amending. Secondly, the majority of potential customers are based outside the UK.
- TH presented the industry's key requirements, which include implementing RPO policy that covers the required missions, signing international agreements with allied states that clarifies RPO issues, such as liability, and defining a clear procedure for UK service providers to transfer another space asset to their control.

6. Government response to industry priorities from LC, UKSA

LC provided a response to the key priorities raised by industry and outlined the government's work to address them.

The government agrees with the key priorities and is pleased to share the progress of work to address these.

Liabilities and Insurance – The UK government has committed to carrying out a review of orbital liabilities and insurance, including matters raised in the Space Industry Regulations consultation. The government has accepted the recommendation that the government should introduce a variable limit of liability for satellite operations. Government will imminently publish a consultation covering the proposal on the variable limit approach and is considering an alternative insurance model and charging policy amongst other insurance issues. The consultation will also include an update on a number of areas of space sustainability policy and longer-term issues.

Regulatory policy on a sustainable environment – This is a government priority, and a sustainability plan was announced a year ago. On its anniversary, Minister Freeman held a sustainability-focused roundtable and recently supported the King's AstraCarter initiative. Other activities to support this work include funding for an Earth & Space Sustainability Initiative, a review of the regulatory framework for orbital activities, guidance for industry and CAA on active debris removal, funding for two United Nations Office for Outer Space Affairs projects and funding for international events.

RPO – Work is underway to develop a domestic framework to enable active debris removal. The government will then look to implement frameworks for in-orbit servicing and in-orbit manufacturing. The government is also working with New Zealand to develop template arrangements to regulate multi-state active debris removal and in-orbit service missions. It is envisaged that this arrangement can be applied to other countries.

CM said the CAA's regulatory framework can manage the existing innovations and what the CAA is looking for is clear regulatory policy and direction from government. CM reassured the sector that the CAA is engaging with other countries on RPO.

PC explained that a lot of the sustainability work is led by DSIT, but another side of this work is relating to launch sustainability, led by the DfT. Work is

ongoing to consider what the scope of this work is and how it will affect industry. This is expected to be complimentary to the work undertaken by DSIT.

Scott Hammond (SH), Shetland Space Centre, added that from a spaceport perspective, they fully agree with colleagues regarding the points raised on liability and insurance. He recognised that launch liability and insurance are complex at this stage, as companies are conducting launches for the first time and therefore risk is higher. SH is already seeing a reduction in the market for companies offering such liability and insurance.

JN asked LC when we can expect an outcome on the RPO work with New Zealand. LC confirmed that the agreement is expected to be signed by end of this year by UK and New Zealand counterparts. More details will be published over the summer.

7. Minister's summary and reflections

JN thanked delegates for a constructive meeting and recapped the key priorities raised by industry. JN emphasised that industry engagement with government supports government work and provides clarity on the specifics. JN believes early transparency is crucial to the sector's success.

JW thanked delegates for highlighting key issues affecting industry and thanked JN for his engagement.

8. Any other business and closing remarks

JN highlighted that the next SSRC is planned for November, with a date to be confirmed.

Meeting closed at 15:00.

Annex A - Attendees

Member attendance

- Rt Hon Jesse Norman MP, Minister of State for Transport (Chair)
- Joanne Wheeler, Managing Partner, Alden Legal (Co-Chair)
- Gareth Alston, Government and Regulatory Affairs, OneWeb
- Andy Bradford, Co-Founder and CEO, UKLSL
- Peter Anderson (deputising for Luis Gomes, Chief Executive Officer, AAC Clyde Space)
- John May, Spaceport Program Manager, Orbex
- Paul Livingston, Chief Executive, Lockheed Martin UK Ltd
- John Paffett, Interim Commercial Director, Spaceport Cornwall
- Andy Palfreyman (deputising for Phil Brownnett, Surrey Satellite Technology)
- Simon Potter, Head of Investment & Financial Consulting, Bryce Tech
- Mark Roberts, Managing Director, Gravitilab
- Alan Thompson (deputising for Volodymyr Levykin, Chief Executive Officer, Skyrora Ltd)
- Bhavin Vyas, Head of Space, ADS Group
- Mick O'Connor, Programme Director, Prestwick Spaceport
- Scott Hammond, Deputy CEO Director Operations, Shetland Space Centre
- Andrew Fournet (deputising for Stephen Vance, Director, CGI)

Department for Transport (DfT)

- Paul Cremin, Commercial Spaceflight Policy and Regulation Lead
- Jeremy Ketley, Commercial Spaceflight Policy and Legislation
- Neil Springate, Commercial Spaceflight
- Susan Watts, Environmental and Launch Sustainability Policy Lead
- George Benstead, SSRC Secretariat
- Stephanie Gooby, SSRC Secretariat
- Lucie Olivier, Assistant Private Secretary to the Minister of State
- Samantha Law, Senior Lawyer

Department for Science, Innovation and Technology (DSIT)

- Rebecca Evernden, Director of Space

Ministry of Defence (MoD)

- Peter Hagan (deputising for Natalie Moore, Director for Space)

Apologies

- Darryl Abelscroft, Deputy Director, Future of Aviation, DfT
- Phil Wadey, Head of Space, Airbus
- Paul Williams, Executive Director, Black Arrow Space Technologies Ltd
- Akiko Hama, Client Executive Space and Aerospace, Global Aerospace
- Mark Dickinson, Vice President of Satellite Operations, Inmarsat
- Chris Mutlow, Director, RAL Space
- David Oxley, Director of Strategic Projects, Space Hub Sutherland

- Victoria Montag, Business Development Manager, Spaceport Macrihanish
- Lee Paul, CEO, Spaceport Snowdonia
- Sean Hardacre, Managing Director, Deimos Space UK Ltd

Meeting observers & technical advisors

The Spaceflight Safety and Regulatory Council (SSRC) is formed of senior-level members from spaceflight industry, Government officials, and Ministers. It is representative of the segments of the commercial spaceflight industry that are impacted by the Space Industry Act 2018 and Space Industry Regulations 2021.

Observer status was offered to industry members who are not members of the Council and to other Government departments and the devolved administrations.

The meeting was also supported by technical advisors from the UK Space Agency, the Civil Aviation Authority, Air Accidents Investigation Branch, Health & Safety Executive, and Maritime Coastguard Agency.