Call for Input: Review of UK UAS Regulations

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Foreword

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Over the last decade, drones and other Unmanned Aircraft Systems (UAS) have become an established part of our airspace. Operations that were previously expensive and high-risk have now become cheaper and low-risk, due to the capabilities UAS can provide.

In the next decade, we expect adoption of UAS to increase significantly, delivering transformational benefits across many sectors. However, mass uptake of UAS will also change the safety and security risks that require mitigation.

The CAA implement the guard-rails that ensure UAS are operated safely and securely. However, our role needs to continually evolve, aligning to changing risks and meeting the requirements of the UAS community. The CAA are therefore reviewing UK UAS regulation, to ensure it is fit for the future.

At present, UAS regulation mitigates most risks through placing requirements on UAS users. In the future, we plan to make it simpler for UAS users to comply with the regulation by shifting mitigations, in part, to UAS themselves – ensuring UAS are safe and secure by design.

New technologies can make it easier for UAS users to fly safely, by preventing unsafe actions from taking place. For example, geo-awareness functionality can help prevent UAS entering restricted airspace. Remote ID technology can enable action to be taken when UAS are misused.

Through mitigating risks at source, there could also be new opportunities to simplify the regulations applied to UAS users. Collectively, this approach could enable UAS to be adopted at a much greater scale, delivering benefits for the UAS community and the wider public.

This Call for Input provides an opportunity for UAS stakeholders to provide feedback on how CAA can make UAS regulation fit for the future – effectively mitigating risks, whilst still delivering user needs and enabling the sector to grow. We look forward to hearing your views.

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Executive Summary

The CAA has a key role in enabling the benefits of UAS, through ensuring the sector can operate safely and securely. As uptake of UAS grows, regulation of UAS will need to evolve to match changing risks and meet the requirements of the UAS community. In addition, the UK's withdrawal from the European Union provides new opportunities to improve UAS regulation and enable the UK to be a global leader in UAS.

The CAA is currently reviewing UK UAS regulation to ensure it is fit for the future and that safety and security risks are proportionately mitigated. Through this review, we aim to ensure regulation is appropriate for end-users – whether they are recreational UAS flyers, model aircraft hobbyists or commercial UAS operators. In addition, we aim to enable manufacturers and service providers to participate in the UK market without disproportionate barriers.

This Call for Input sets out our early thinking on the opportunities to improve regulation of UAS. In Chapter 2, we summarise some of the challenges that stakeholders have identified with operational requirements, such as the complexity of operational categorisations and the approach to exclusions. Opportunities to improve operational requirements for UAS users include simplifying the operational categories, and adopting new risk assessment and competency frameworks for more sophisticated UAS operations. These aim to ensure UAS regulations are suitable for the users they apply to.

In Chapter 3, we describe potential challenges with product regulation, such as the complexity of the class marking system for manufacturers and users. We have identified further opportunities to enable the adoption of product requirements, to ensure UAS are safe and secure by design. These include opportunities to simplify the regulatory framework for technical standards, to enable adoption of new technologies (such as Remote ID and geo-awareness), and to improve how manufacturers can help UAS users understand how to use their UAS responsibly. These aim to make it easier for UAS to be used safely and securely.

There may also be other opportunities to improve UAS regulation, beyond those described in this Call for Input. We welcome views from stakeholders on what other improvements we should be progressing.

This Call for Input will allow stakeholders to influence policy whilst we are still developing our proposals. We ask 19 questions from stakeholders on the ideas put forward in this Call for Input. We welcome views from recreational UAS flyers, model aircraft hobbyists, commercial UAS operators and UAS manufacturers, amongst others. Feedback will be used by the CAA, in addition to other evidence and analysis, to inform a future consultation on the changes we propose to progress. Responses to this Call for Input are required by 7th September 2023, using the feedback form on the CAA website.

1. **Re-name operational categories**
   Change the names of operational categories to be more intuitive for UAS users
2. **Simplify operational categorisations**
   Improve how operational requirements are organised and presented to users
3. **Update model aircraft regulation**
   Ensure future regulatory framework is suitable for flyers of model aircraft
4. **Simplify operational exclusions**
   Simplify registration and training requirements for users of <250g and 'toy' UAS
5. **Support users of non-class marked UAS**
   Ensure owners of non-class marked UAS can fly them safely and securely
6. **Adopt new, digitalised risk assessment approach**
   Implement the international standard for authorisations and risk assessments
7. **Expand pilot competency framework**
   Update training curriculum and courses for advanced UAS users
8. **Implement manufacturer standards**
   Implement requirements for manufacturers to use technical standards
9. **Introduce product labelling scheme**
   Adopt CAA-backed labels to help consumers make informed purchasing decisions
10. **Change product exclusions**
    Change exclusions for UAS from requirements such as Remote ID and geo-awareness
11. **Implement Remote ID**
    Require UAS to digitally communicate ID and location information during flight
12. **Implement geo-awareness**
    Require UAS to help prevent of flying in restricted airspace
13. **Improve user guidance**
    Require manufacturers to digitally communicate safety information to UAS users
14. **Introduce user validation requirements**
    Require manufacturers to capture information on UAS flyers
15. **Update policy and guidance document structure**
    Streamline the set of policy and guidance documents maintained by CAA

Chapter 1
Introduction

This chapter introduces the context of CAA's review of UK UAS regulation. It sets out the objectives of this Call for Input – to obtain views from stakeholders on the opportunities to improve regulation of UAS in the UK. It summarises the structure of the document and how to respond.

Context

1.1 The CAA is committed to enabling the safe and secure adoption of drones and other Unmanned Aircraft Systems (UAS) at scale. Through effectively mitigating the safety and security risks associated with mass uptake of UAS, we intend to unlock the significant public value from UAS and enable the UAS sector to grow.

1.2 At present, UAS users are required to comply with regulatory requirements that place limitations on how UAS can be operated, the minimum skill level of pilots, and the registration of UAS, amongst others. Whilst current regulations primarily consist of operational requirements on UAS users, requirements to adopt manufacturer standards will be implemented from 2026. These standards will ensure UAS are safe and secure by design, making it easier for users to comply.

1.3 However, stakeholders have identified opportunities for UAS regulation to be improved – ensuring it mitigates risks whilst meeting the needs of the UAS community. In addition, the UK's exit from the EU provides an opportunity to consider where it may be beneficial to diverge from the inherited EU regulations.

1.4 As such, CAA are progressing a review of UK UAS regulation. This review aims to obtain views from stakeholders on how UAS regulation could be improved, to ensure it is fit for the future.

1.5 This Call for Input sets out our early thinking on potential challenges with the UAS regulatory framework today and in the future, and potential opportunities for improvement. It provides an opportunity for stakeholders to give feedback on the direction-of-travel and priority for CAA's policy development, ahead of a fuller consultation.

1.6 Unlike a consultation, this document doesn't set out fully developed proposals or options analysis. Responses will be considered, alongside other evidence and analysis, to inform proposals put forward in a future consultation. Final decisions will be made after this future consultation.

Document summary

1.7 The Call for Input takes the following structure:

- Chapter 1 sets out the context of CAA's review of UAS regulation and the Call for Input. It describes the structure of the document and a summary of how to respond.
- Chapters 2 and 3 consider operational requirements and product requirements respectively. Each chapter includes:
  - A summary of existing regulation
  - Objectives for future policy
  - Stakeholder feedback on the effectiveness of the regulation
  - Potential opportunities to improve regulation
- Chapter 4 considers other opportunities to improve UAS regulation, beyond operational requirements and product requirements.
- Chapter 5 provides a summary of next steps and how to respond to this Call for Input.

1.8 Throughout Chapters 2, 3 and 4, we put forward 15 opportunities to improve UAS regulation. Each opportunity has a reference number, to make it easier for stakeholders to navigate and respond to the Call for Input.

1.9 Whilst the opportunities in this Call for Input are presented as discrete, there are interdependencies and interactions across the regulatory framework for UAS. These will impact the optimal combination of opportunities to be taken forward. For example, the optimal approach to operational requirements will be impacted by the structure of product classifications, and vice versa. We welcome stakeholder views on these interactions and will take this into consideration as we develop policy.

Responding to this Call for Input

1.10 We are seeking views from individuals and organisations representing recreational UAS users, commercial UAS users, model aircraft flyers, UAS manufacturers, technology service providers and Recognised Assessment Entities, amongst others.

1.11 Responses are required by 7th September 2023, using the feedback form on the CAA website.

1.12 A summary of responses to this Call for Input will be provided within a future consultation on the proposals we intend to take forward.

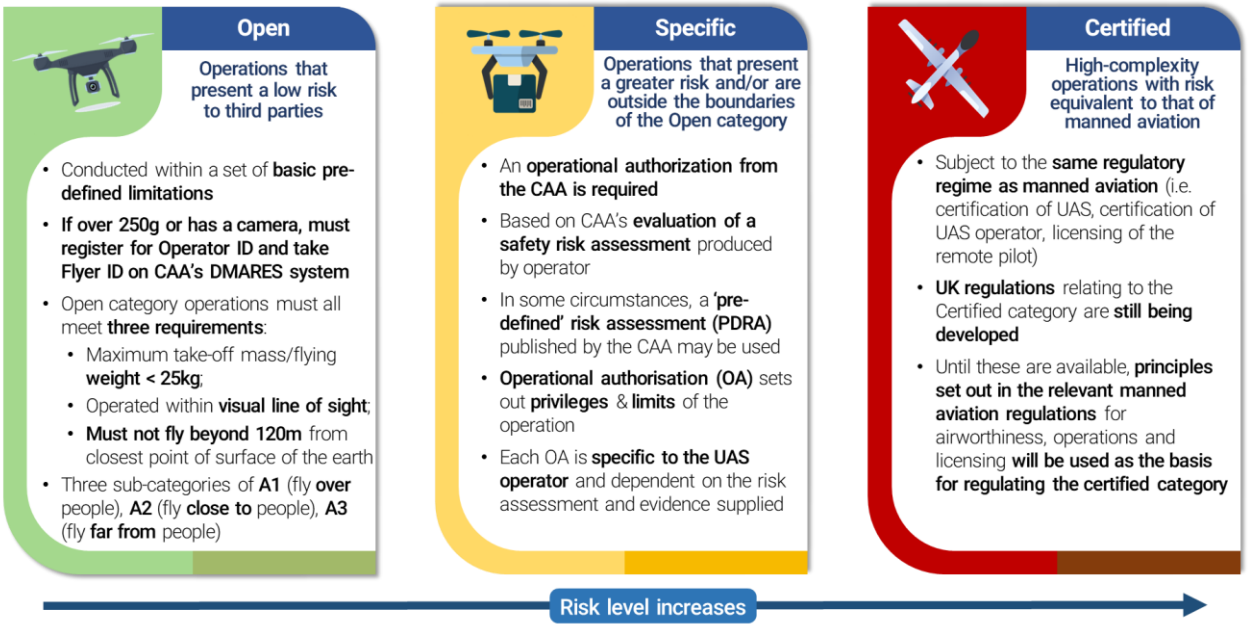
Chapter 2

Operational Requirements

This chapter considers the regulation that applies to UAS flyers and operators. It describes the current regulatory framework in place today, feedback from stakeholders on the effectiveness of regulation, policy development objectives and opportunities to improve regulation. These opportunities cover operational categorisations, exclusions, transitional arrangements, operational authorisations and pilot competency.

Existing Regulation

2.1 UAS pilots and operators are currently subject to a range of regulatory requirements, relating to safety mitigations, pilot competency and registration, amongst others. Regulatory requirements are organised in categories and sub-categories, relating to the risk level of the operation, as summarised in the below illustration. Many of these requirements are contained within UK Regulation (EU) 2019/947[1], referred to as the 'Implementing Regulation'.



2.2 UK Regulation (EU) 2019/947 also includes requirements on the minimum technical characteristics for UAS used in certain categories and sub-categories from 2026. In effect, this ensures that all UAS purchased after 2026 and flown in the 'open' category are safe and secure by design. Whilst UAS purchased before 2026 don't

[1] **UK Regulation (EU) 2019/947**: https://publicapps.caa.co.uk/docs/33/CAP_1789A_UAS_IR2019_947.pdf

need to meet these technical requirements, the regulations set restrictions on how these UAS can be used after 2026.

2.3 Further requirements are set out in other regulations. For example, regulations restricting collection of personal data are set out in the Data Protection Act 2018, and requirements relating to Flight Restriction Zones are set out in the Air Navigation Order 2016.

Stakeholder Feedback

2.4 Stakeholder feedback provided to CAA has identified challenges with the regulatory framework for operational requirements. The key challenges identified by stakeholders are:

- Operational requirements, and particularly the system of categorisations, sub-categorisations and exclusions, are complex and challenging for some users to understand. This creates a barrier to users complying with regulations and operating UAS safely and securely.
- The thresholds for certain operational requirements are not suitable for the evolving security and safety risks from UAS, resulting in some risks not being robustly mitigated.
- Restrictions for how UAS manufactured before 2026 (before implementation of product standards) can be used could be excessively burdensome for some UAS users. This could cause unintended consequences, such as UAS owners selling or disposing of their UAS earlier than they otherwise would.
- The approach to authorisations and risk-assessments in the ‘Specific’ category is inefficient and time-consuming, which is creating a barrier to market participation for commercial UAS operators.

Question 1: *Do you agree with the challenges with operational requirements identified by stakeholders, and why?*

Policy Objectives

2.5 The following section sets out potential opportunities which could help address these challenges. In developing these opportunities, we have sought to deliver the following policy objectives:

- **Mitigate safety and security risks** – The regulations protect flyers, operators, aviation and the general public from harm caused by misuse of UAS.

- **User-centric** - The users of regulation can identify, access and understand the regulation.
- **Enforceable** – The regulation enables enforcement bodies to take action to ensure compliance with the regulation.
- **Growth enabling** – The regulation enables the UAS sector to grow through reducing barriers to market participation and supporting innovation.
- **Scalable** – Regulation is suitable to be adopted at the expected scale of the sector in the future.

2.6 In practice, some of the opportunities described in the following section could result in UK regulation diverging from EU regulation. We welcome views from stakeholders on the value of international alignment of operational requirements.

Question 2: *Should CAA adopt the following policy objectives for operational requirements and why? Mitigate safety and security risks; User-centric; Enforceable; Growth enabling; Scalable. Please describe any other objectives we should consider.*

Question 3: *Do you value international alignment in operational requirements, and why?*

Opportunities

Categorisations

2.7 Today, regulatory requirements for UAS users are organised in a system of categories ('Open', 'Specific' and 'Certified') and sub-categories (A1, A2 and A3 within the 'Open' Category). However, this approach is often cited by stakeholders as a cause of confusion, which creates a barrier to compliance.

2.8 We are exploring opportunities to make the framework of operational categorisations simpler for users, aiming to remove barriers to compliance and safe/secure operation of UAS. In particular, we are focusing on how to improve the regulatory framework for flyers operating in the 'Open' category (such as recreational or less frequent flyers), who are less like to fully engage with the regulations before operating a UAS.

2.9 We expect that naming the categories in a more intuitive way will help make the regulations easier for users to understand and navigate **(Opportunity 1: Re-name operational categories)**. Alternative approaches could include naming the categories in relation to the complexity of operation (e.g. 'basic' or 'advanced'), or risk level (e.g. 'low risk' or 'high risk'). This would mitigate feedback from stakeholders that the naming scheme for operational categorisations is unintuitive.

2.10 We are also considering more opportunities to simplify how operational requirements are organised and presented **(Opportunity 2: Simplify operational categorisations)**. Potential alternative models include:

- Replacing the 'Open' category sub-categories with a single set of operational requirements, with some graduation of requirements for higher risk operations
- Combining A1 and A3 sub-categories into a single sub-category.

2.11 Whilst simplification may make the regulations easier to understand, we are also mindful of not increasing the regulatory burden on users, and ensuring benefits are proportionate to the cost of change.

2.12 In addition, we are also considering whether the current regulatory framework for model aircraft users will continue to be effective in the future (**Opportunity 3: Update model aircraft regulation).** Specifically, we are considering whether requirements for model aircraft operations within the 'Open' category (excluding operations taking place under an Article 16 authorisation) are appropriate or whether an alternative approach, such as a dedicated sub-category, is required. We are also considering opportunities to clarify the definition of model aircraft. This aims to ensure regulation for model aircraft users is proportionate to risks, and simple to navigate.

Question 4*: Should CAA re-name operational categories and sub-categories (Opportunity 1) and why?*

Question 5: *Should CAA simplify how operational requirements are categorised (Opportunity 2) and why?*

Question 6*: Should CAA update how model aircraft operations are regulated (Opportunity 3) and why?*

Exclusions

2.13 At present, users of 'toy' UAS and <250g UAS are exempt from some regulatory requirements. However, feedback from stakeholders suggests this is a source of confusion and misunderstanding, which in turn can lead to non-compliance. We are considering how to simplify the approach to exclusions from operational requirements, whilst ensuring mitigations are proportionate **(Opportunity 4: Simplify operational exclusions).**

2.14 Specifically, some stakeholders find that the definition of 'toy' is prone to misunderstanding. This makes it harder for users to know how to comply, and to operate their UAS safely and securely. We are considering whether an alternative approach for exclusions may be simpler for users. Options include exempting UAS

based on weight or other metrics, or by improving the definition of 'toy'. This could be simpler for consumers to understand and result in increased levels of compliance from 'toy' and non-'toy' UAS users.

2.15 We are also evaluating whether exclusions for users of UAS weighing below 250g remain appropriate. This reflects the increasing capability of these UAS and the risks they pose – such as from entering restricted airspace, or unlawfully collecting personal and sensitive data. However, we also recognise the need to take a proportionate approach to mitigating risks. We welcome evidence from stakeholders on whether 250g remains an appropriate threshold, and the costs and benefits to different stakeholders from alternative approaches.

***Question 7**: Should CAA simplify exclusions from operational requirements (Opportunity 4) and why? Please describe any alternative exclusions that should be considered.*

Transitional arrangements

2.16 As described in the following chapter, manufacturers will need to ensure UAS are safe and secure by design from 2026 onwards. Article 20 of UK Regulation (EU) 2019/947 sets out operational requirements for UAS manufactured before 2026 without class-marks, such that, from 2026:

- UAS without class marks weighing less than 250g can be used in the A1 and A3 sub-category.
- UAS without class marks weighing less than 25kg can only be used in the A3 sub-category.

2.17 This aims to mitigate safety and security risks from UAS manufactured without technical mitigations, whilst still allowing these UAS to be used after 2026.

2.18 However, this may have unintended consequences for users who bought UAS before 2026 intended to be used in A1 or A2 category. These users would either be restricted in their activities or forced to replace their UAS earlier than they otherwise would. We are considering options to support UAS users who buy UAS before 2026 without class marks, mitigating some of the impacts of these transitional arrangements **(Opportunity 5: Support users of non-class marked UAS)**.

2.19 These opportunities include extending the transition period from which legacy UAS can be used in certain operational sub-categories. Further requirements could need to be placed on users who wish to operate legacy UAS in these categories. However, we anticipate that requirements will still need to facilitate safe usage of UAS, whilst promoting uptake of UAS that are safe and secure by design.

***Question 8:** Should CAA change transitional arrangements for users of UAS without class marks (Opportunity 5) and why?*

Authorisations and Risk Assessments

2.20 At present, operations in the 'specific' category need to be authorised by the CAA before taking place. There is currently a complex set of processes for an operational authorisation to be requested, logged, assessed, and returned to the applicant. This is time-consuming and inefficient for all stakeholders. At the core of the application process is the Operating Safety Case (OSC) which sets out the details of the proposed operation, a risk assessment, and mitigations in place to ensure safety is maintained.

2.21 However, there are several key limitations with the current approach:

- Users are required to manually enter their personal details, Operator and Flyer IDs. As there is little validation against CAA systems, there may be potential for errors.
- The OSC is submitted as a file upload, with no standard format/template for its contents.
- There is limited standardisation of risk management within the current process, meaning that the contents of the OSC vary widely based on knowledge and expertise of the applicant.
- Each OSC is reviewed manually by CAA, with back-and-forth communications with applicant over contents.

2.22 To address these issues, CAA will deliver a more streamlined and user-friendly end-to-end process for operational authorisations. In addition, CAA will deliver a new standard approach to risk assessment, by adopting the Specific Operations Risk Assessment (SORA) methodology that was developed collaboratively by the Joint Authorities for Rulemaking of Unmanned Systems (JARUS) (**Opportunity 6: Adopt new, digitalised risk assessment approach**).

2.23 SORA is a multi-stage process that provides a structured and logical approach to assessing risk for intended operational environments. It is used as an Acceptable Means of Compliance (AMC) to fulfil the requirements of European UAS Regulations around risk assessment and is already used internationally. The CAA will use JARUS SORA v2.5 as the basis for its updated OA risk assessment process and UK guidance material (GM). This will involve restructuring the main body of the document and making changes where required, such as changing the air-risk collision model to reflect UK airspace characteristics.

2.24 The CAA is currently developing UK policy material relating to SORA. Once drafting of the UK policy is complete, a full external consultation activity will allow all stakeholders to provide feedback.

Pilot Competency

2.25 Beyond the Flyer ID test, there are currently two levels of certification for remote pilots, with ~14,000 holders across:

- A2 Certificate of Competency (A2 CofC) – for operations within the A2 subcategory of the Open Category.
- General VLOS Certificate (GVC) – for operations within the Specific Category.

2.26 Around 30 Recognised Assessment Entities (RAEs) have been authorised by the CAA to deliver training activities and conduct assessments against the A2 CofC and GVC qualifications. However, in the future, a more comprehensive and scalable approach to training will be required to enable growth in more complex UAS operations **(Opportunity 7: Expand pilot competency framework).**

2.27 CAA published a consultation[2] on the Future of Remote Pilot Competency in the Specific Category on 4th July 2023. To support a wider range of future operational scenarios, two additional levels of competency have been proposed:

- **RPC-B – Basic certification**. This may either replace or supplement the GVC and covers a broader range of content. It requires a minimum of 20 hours practical instruction.
- **RPC-A – Advanced certification.** Focused on complex and BVLOS operations. Minimum of 55 hours practical instruction, with optional add-on modules for highly complex or specialist operations.

2.28 We welcome feedback on these proposals through this consultation.

[2] **Future of Remote Pilot Competency in the Specific Category** https://consultations.caa.co.uk/rpas/remote-pilot-competency-rpcwg/user_uploads/the-future-of-remote-pilot-competency-in-the-specific-category--july-2023-.pdf

Chapter 3

Product Requirements

This chapter considers the regulation that applies to UAS products primarily applied to UAS manufacturers and other operators in the UAS supply chain. It describes the current regulatory framework in place today, the objectives we're using to inform future policy development, feedback from stakeholders on the effectiveness of regulation, and opportunities to improve regulation. These opportunities cover the class- marking system itself, exclusions, Remote ID, geo-awareness and user guidance.

Existing Regulation

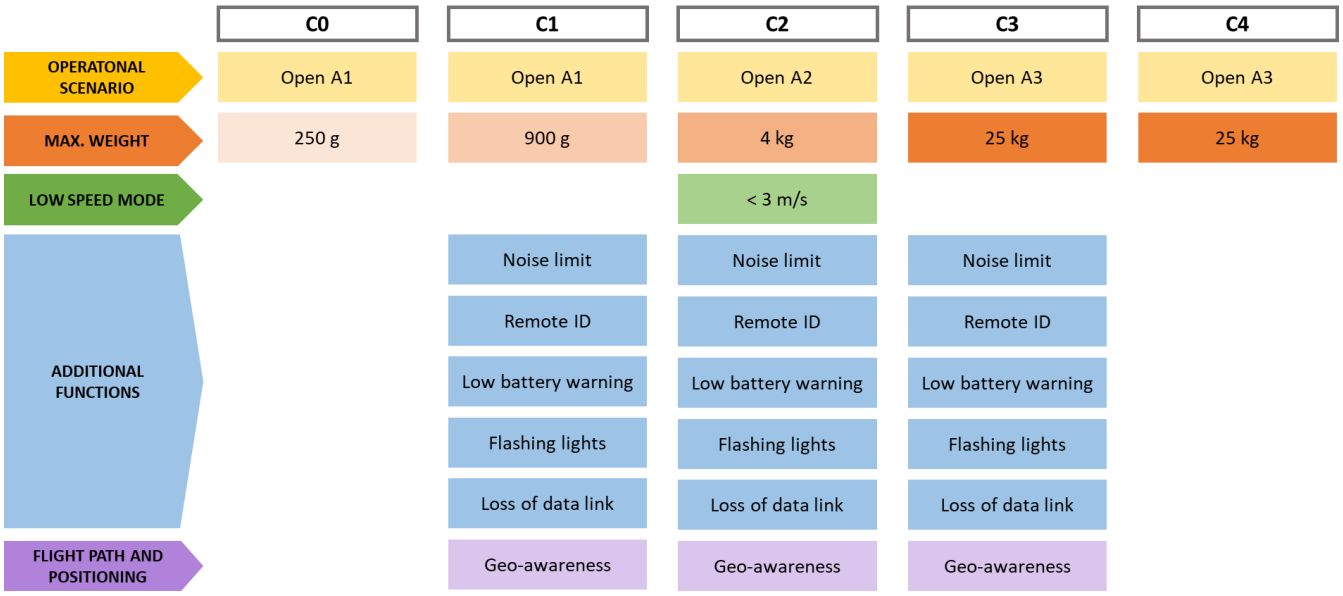
3.1 Today, the most significant safety and security risks are primarily mitigated through actions taken by UAS users. In the future, UAS should be safe and secure by design. This will prevent unsafe or insecure UAS operations from taking place and make it easier for UAS users to fly responsibly.

3.2 In practice, this will require regulatory requirements that set minimum technical characteristics on some UAS. This could include preventing UAS from flying in restricted airspace without permission, or requiring UAS to communicate ID data during flight, amongst others.

3.3 Other than general product safety requirements, no UAS-specific regulations have been implemented in the UK that set requirements on manufacturers or other economic operators. However, from 2026, UAS manufacturers will be required to adopt manufacturing standards that require UAS to be safe and secure by design. The regulatory framework for standards adoption is set out in the UK Regulation (EU) 2019/945[3], referred to as the 'Delegated Regulation'.

3.4 This regulatory framework, based on retained EU legislation, is referred to as 'class marking'. These regulations set out requirements for 7 different classes of UAS (summarised below). They also include regulations to enable the system for standards adoption to work effectively – including requirements for testing, certification and market surveillance. As described in the prior chapter, the UK Regulation (EU) 2019/947 (the Implementing Regulation) also sets requirements on UAS users that will limit what class of UAS can be used in certain operational categories.

[3] **UK Regulation (EU) 2019/945:** https://www.legislation.gov.uk/eur/2019/945/contents



Stakeholder Feedback

3.5 Over the coming years, CAA will need to work with manufacturers and other stakeholders to enable adoption of product requirements. These activities will include establishing a Market Surveillance Authority, appointing Conformity Assessment Bodies, designating technical standards and publishing supporting guidance.

3.6 In advance of implementation, stakeholders have provided feedback on potential challenges with the regulatory framework for product requirements. The challenges identified by stakeholders can be summarised as:

- The complexity of the class marking framework will create barriers to manufacturers participating in the market.
- The class marking framework is likely to be confusing for end users, due to the number of product classes and the complex interactions between classes and operational requirements.
- The thresholds between classes and exclusions from certain requirements leads to some safety and security risks not being fully mitigated.
- Some regulatory requirements are not as effective as they could be in mitigating safety and security risks.
- Users are not communicated adequate information at point-of-purchase or product set-up on how to use their UAS safely and securely.

***Question 9**: Do you agree with the challenges identified by stakeholders relating to product requirements, and why?*

Policy Objectives

3.7 The following section sets out potential opportunities which could help address these challenges. In developing these opportunities, we have sought to deliver the following objectives:

- **Mitigates safety and security risks** – The regulations protect flyers, operators, aviation and the general public from harm caused by misuse of UAS.
- **User-centric** – The regulations enable users to make informed purchasing decisions, understand how to operate a UAS safely, and make it easier to comply.
- **Growth enabling** – The regulation enables industry-participants to grow, through reducing barriers to market participation and supporting innovation.
- **Scalable** – Regulation is suitable to be adopted at the expected scale of the sector in the future.
- **Internationally aligned** – The regulations enable manufacturers to operate across multiple geographies without unnecessary burdens.

Question 10: *Should CAA adopt policy objectives for product requirements, and why?: Mitigates safety and security risks; User-centric; Growth enabling; Scalable; Internationally aligned? Please describe any other objectives we should consider.*

Opportunities

Class Marking

3.8 As described in the 'Context' section, the UK Regulation (EU) 2019/945 requires manufacturers to adopt technical standards from 2026, using a system of 'class marking'. We are considering how to implement the class marking framework (or other similar approaches), to effectively mitigate risks, to make it easier for users to comply, and to reduce barriers to market participation **(Opportunity 8: Implement manufacturer standards).**

3.9 We are considering opportunities to simplify the class marking framework, to improve how it works for manufacturers and users. Specifically, we are considering the impact of replacing the 5 classes intended to be used in the 'Open' Category with a smaller number of classes - for example, consolidating classes C1, C2 and C3 into a single class. When combined with a label indicating product weight, this may be simpler for users to understand, facilitating increased compliance. We expect this could still be delivered through using international standards, ensuring that manufacturers aren't unduly burdened by divergences from the EU approach.

3.10 In addition, we are considering how to help users understand whether a UAS is safe and secure by design. To deliver this, we are considering implementing an CAA-backed labelling scheme for some UAS, to complement the class marking framework **(Opportunity 9: Implement product labelling scheme).** In practice, this scheme could allow UAS with a C1-C3 class mark (or equivalent) to have a CAA-backed label that is easily recognisable to users.

3.11 This could help users make informed purchasing decisions and have confidence in the safety of their UAS. In addition, this could make it easier for UAS users to understand the interactions between class marking and operational requirements, and to comply. However, we would need to consider the cost and impact to CAA and manufacturers of such a scheme, before progressing with implementation.

Question 11: *Should CAA implement manufacturer standards (Opportunity 8) and why?*

Question 12: *Should CAA implement a product labelling scheme (Opportunity 9) and why?*

Exclusions

3.12 In the current regulation, UAS weighing less than 250g or classified as 'toys' would not be required to meet some product requirements, such as Remote ID and geo-awareness. However, this approach may not fully address the risks presented by some of these UAS. For example, some UAS that meet this criterion could still be used to infringe controlled or restricted airspace, or to collect private or sensitive data without consent. In addition, the current approach to exclusions may be a source of confusion for users when making purchasing decisions, or when understanding what type of UAS can be used in different operational categories.

3.13 To address these risks, we are considering whether the approach to product exclusions for certain UAS remains appropriate **(Opportunity 10: Change product exclusions)**. Alternative approaches could involve extending some requirements, such as Remote ID and geo-awareness, to UAS below 250g with cameras. In addition, we could replace the exclusion for 'toy' UAS with a criterion based purely on weight, to avoid ambiguity for users. However, we recognise that some exclusions are likely to be proportionate – for example, for very small UAS without cameras.

3.14 The optimal approach taken would be dependent on what other changes to class marking are progressed, as discussed in the prior section. In our decision making, we will consider how to mitigate risks effectively and proportionately, whilst enabling international alignment where valuable to do so.

Question 13*: Should CAA simplify exclusions from product requirements (Opportunity 10) and why?*

Remote ID

3.15 Despite current UAS regulation, some UAS are used unlawfully for smuggling, harassment, and infringement of sensitive sites. The police currently have a limited ability to identify the person responsible for a UAS's operation at the time of an incident. In the future, technology will enable UAS to transmit operator and flight data during flight. This technology, called Remote ID, could allow police to identify malicious and/or incompetent operators, both in real-time and historically – leading to re-education, fines, or convictions.

3.16 In addition, the data provided by Remote ID will enable the CAA to be more effective as a regulator, by providing data on how UAS are used in practice. The data provided by Remote ID will improve the CAA's understanding of the sector and enable the CAA to develop policy that specifically targets the risks presented by UAS.

3.17 UK Regulation (EU) 2019/945 sets out a requirement to implement Remote ID in the UK by January 2026, through manufacturer requirements and operational requirements. We are exploring how Remote ID could be implemented in the UK (**Opportunity 11: Implement Remote ID**).

3.18 Remote ID requires UAS to transmit the operator's registration number, serial number, position, altitude, route, speed and take-off point. This data would be readable through a mobile phone near to the UAS (e.g. via WiFi/Bluetooth, referred to as 'direct' Remote ID). Data would also be passed to a database over a network (referred to as 'network' Remote ID). This would provide visibility in real-time and create a historical record.

3.19 We are exploring implementing a hybrid approach to Remote ID (i.e. both 'direct' and 'network') for UAS. This could be applied to UAS in the 'open' category that are above 250g or have a camera (potentially excluding some UAS, such as model aircraft), and to UAS in the 'specific' category. We are considering opportunities to add Remote ID functionality to some legacy UAS, via remote upgrade or add-on modules, with an appropriate transition period. This would aim to robustly mitigate safety and security risks from UAS, whilst managing impacts to UAS users.

3.20 We expect Remote ID to transform how security risks from UAS are mitigated. However, Remote ID is not part of the Airspace Modernisation Space to enable UAS to integrate into airspace. We anticipate that other complementary technologies, such as Electronic Conspicuity, will be also required in some circumstances.

***Question 14**: Should CAA implement Remote ID (Opportunity 11) and why?*

Geo-Awareness

3.21 Regulations exist today to prohibit UAS flying in airspace restriction zones, including airspace above aerodromes, prisons, and high-security buildings. However, in the future, UAS should be manufactured with mitigations in place that make it easier for users to comply with these restrictions. This could include functionality on UAS controllers that alert users when they are flying in restricted airspace ('geo-awareness'), or that prevent UAS from entering restricted airspace altogether ('geo-fencing'). Whilst some UAS have this functionality today, stakeholder feedback has identified limitations in how this functionality is implemented in practice.

3.22 The current class marking requirements, due to be implemented from 2026, contain requirements for some UAS intended for use in the 'Open' category to have 'geo-awareness' functionality. We intend to work towards implementing this requirement **(Opportunity 12: Implement geo-awareness).**

3.23 We are also considering further opportunities to help prevent UAS from deliberately or inadvertently flying in restricted airspace, making it easier for users to comply. Specifically, we are considering opportunities:

- To provide further policy and guidance relating to how aeronautical data relevant to UAS is obtained and used by UAS manufacturers and flyers.
- To strengthen requirements on manufacturers to limit UAS flying in restricted airspace, using 'geo-fencing' functionality or similar.
- To improve user understanding of the regulations regarding restricted airspace.

3.24 In addition, CAA and government are working together with our stakeholders to improve how airspace restriction zones are managed, with several actions set out in the Airspace Modernisation Strategy.

Question 15*: Should CAA implement geo-awareness (Opportunity 12) and why?*

User Guidance

3.25 UK Regulation (EU) 2019/945 includes requirements for manufacturers to provide an information notice to users at the point-of-purchase, as made available by the CAA. In practice, this information notice could be a leaflet describing the safety and security mitigations users should carry out when operating an UAS. In addition, flyers and operators are expected to have the necessary competency qualifications, such as the Flyer ID, before operating a UAS.

3.26 We expect there are opportunities to improve how user guidance is communicated to users at the point-of-purchase or whilst using the UAS, promoting responsible UAS operation. These opportunities include:

- Requiring manufacturers to convey safety and security guidance to users during product set-up or pre-flight, via the controller or other interface **(Opportunity 13: Improve user guidance).**
- Requiring manufacturers to validate Flyer or Operator ID during product set-up or pre-flight, to ensure flyers/operators have the appropriate registration and training before flying. If a consumer is unable to provide this information, this could result in a notification to users and/or limitations on how the UAS could be used **(Opportunity 14: Introduce user validation requirements).**

3.27 For both opportunities, we would need to consider the potential costs and impacts to manufacturers, the effectiveness of different approaches, and the proportionality of any controls placed on UAS users.

Question 16*: Should CAA introduce requirements for manufacturers to provide user guidance during product set-up or pre-flight, via the controller or other interface (Opportunity 13) and why?*

Question 17*: Should CAA introduce user validation requirements on manufacturers (Opportunity 14) and why?*

Chapter 4

Other Opportunities

This section sets out other opportunities to improve UAS regulation, beyond operational requirements and product requirements. It seeks views on any other opportunities that stakeholders would like to see progressed.

Policy and Guidance Documents

4.1 For regulation to be most effective, requirements should be organised, presented and communicated clearly. Today, regulatory requirements contained primarily in UK Regulation (EU) 2019/945 and UK Regulation (EU) 2019/947 are supported by other sources of information, such as CAA website, the Drone Code[4], the CAP 722 document series[5] and supporting Acceptable Means of Compliance (AMC) and Guidance Material (GM).

4.2 Some stakeholders have provided feedback that the complexity of the policy and guidance document structure forms a barrier to users understanding how to comply. We are considering opportunities to improve policy and guidance documents maintained by the CAA **(Opportunity 15: Update policy and guidance document structure)**. These opportunities would aim to make documents more suited to their users, and to minimise potential for duplication, interdependency, and contradiction. In turn, this should make it easier for users to comply with the regulations, whilst also delivering benefits for CAA, government and the police.

4.3 The opportunities we are considering include:

- **Combining UK Regulation (EU) 2019/945 and UK Regulation (EU) 2019/947** – removing the significant interdependency between the two regulations.
- **Replacing the CAP 722 series with extended AMC and GM** – removing the duplication between these two documents and clarifying the legal status of non- legislative guidance.
- **Introducing a new user-friendly 'SkyWay' Code –** creating a new user-friendly document, modelled on the SkyWay Code used in aviation[6], that collates all the relevant regulatory requirements for different user groups.

4.4 The optimal set of changes would be impacted by other opportunities set out in this

[4] The Drone Code: https://register-drones.caa.co.uk/drone-code
[5] CAP 722: Unmanned Aircraft System Operations in UK Airspace – Guidance: http://publicapps.caa.co.uk/modalapplication.aspx?appid=11&mode=detail&id=415
[6] 'SkyWay' Code**:** https://www.caa.co.uk/general-aviation/safety-topics/the-skyway-code/

document. For example, the costs of combining UK Regulation (EU) 2019/945 and UK Regulation (EU) 2019/947 may only be justified if making significant changes to these regulations. We welcome stakeholder views on whether the benefits of these opportunities would justify the cost of change to CAA and the UAS community.

***Question 18**: Should CAA simplify policy and guidance document structure (Opportunity 15) and why?*

Other Opportunities

4.5 This Call for Input has set out 15 potential opportunities to improve UAS regulation, where we are seeking views from stakeholders. However, there are several other areas where CAA is working to improve UAS regulation. These include:

- Enabling the police to issue Fixed Penalty Notices for certain breaches of regulations, supported by improved guidance for enforcement.
- Promoting the uptake of Electronic Conspicuity and Detect and Avoid technology.
- Implementing a new framework for assessing and validating flightworthiness of UAS in the 'specific' category.
- Developing new policy frameworks for operation of UAS within the 'certified' category.
- Supporting the development of policy for UAS Traffic Management.

4.6 In addition, the Department for Transport has previously consulted on several potential improvements in their publication titled 'Future of transport regulatory review: future of flight'[7]. This includes potential changes relating to alcohol limits and insurance.

4.7 Beyond these opportunities, we welcome views from stakeholders on what other improvements to the UAS regulatory framework should be considered.

***Question 19:** What other opportunities to improve UAS regulation, beyond those described in this Call for Input, would you like to see progressed?*

[7] Future of transport regulatory review: future of flight https://www.gov.uk/government/consultations/future-of-transport-regulatory-review-future-of-flight

Chapter 5

Next steps and how to respond

5.1 This Call for Input provides a summary of existing UAS regulation, describes the challenges with UAS regulation, proposed objectives for future policy development and identifies 15 opportunities for improvement. We welcome views from stakeholders on these challenges and opportunities.

5.2 Responses to this Call for Input will be considered, alongside other evidence and analysis, to inform the scope of future policy development. All responses will be reviewed by the CAA.

5.3 We expect to consult on a set of proposals, following this Call for Input. A summary of feedback to this Call for Input will be included within this future consultation.

5.4 Feedback can be provided by 7th September 2023, using the feedback form on the CAA website.

APPENDIX A

Summary of Questions

1. Do you agree with the challenges with operational requirements identified by stakeholders, and why?

2. Should CAA adopt the following policy objectives for operational requirements and why? Mitigate safety and security risks; User-centric; Enforceable; Growth enabling; Scalable. Please describe any other objectives we should consider.

3. Do you value international alignment in operational requirements, and why?

4. Should CAA re-name operational categories and sub-categories (Opportunity 1) and why?

5. Should CAA simplify how operational requirements are categorised (Opportunity 2) and why?

6. Should CAA update how model aircraft operations are regulated (Opportunity 3) and why?

7. Should CAA simplify exclusions from operational requirements (Opportunity 4) and why? Please describe any alternative exclusions that should be considered.

8. Should CAA change transitional arrangements for users of UAS without class marks (Opportunity 5) and why?

9. Do you agree with the issues identified by stakeholders relating to product requirements, and why?

10. Should CAA adopt policy objectives for product requirements, and why? Mitigates safety and security risks; User-centric; Growth enabling; Scalable; Internationally aligned. Please describe any other objectives we should consider.

11. Should CAA implement manufacturer standards (Opportunity 8) and why?

12. Should CAA implement a product labelling scheme (Opportunity 9) and why?

13. Should CAA simplify exclusions from product requirements (Opportunity 10) and why?

14. Should CAA implement Remote ID (Opportunity 11) and why?

15. Should CAA implement geo-awareness (Opportunity 12) and why?

16. Should CAA introduce requirements for manufacturers to provide user guidance during product set-up or pre-flight, via the controller or other interface (Opportunity 13) and why?

17. Should CAA introduce user validation requirements on manufacturers (Opportunity 14) and why?

18. Should CAA simplify policy and guidance document structure (Opportunity 15) and why?

19. What other opportunities to improve UAS regulation, beyond those described in this Call for Input, would you like to see progressed?

APPENDIX B

Abbreviations

Abbreviations	
BVLOS	Beyond Visual Line of Sight
CAA	Civil Aviation Authority
FRZ	Flight Restriction Zones
JARUS	Joint Authorities for Rulemaking of Unmanned Systems
OA	Operational Authorisation
OSC	Operational Safety Case
PDRA	Pre-Defined Risk Assessment
RAE	Recognised Assessment Entities
SORA	Specific Category Operational Risk Assessments
UAS	Unmanned Aircraft System
UTM	Unmanned Traffic Management
VLOS	Visual Line of Sight