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Title	Introduction of a regulatory framework for the operation of drones - Unmanned aircraft system operations in the open & specific category
NPA Number	NPA 2017-05 (A)

UK CAA (European.Affairs@caa.co.uk) has placed **154** unique comments on this NPA:

Cmt#	Segment description	Page	Comment	Attachments
2064	(General Comments)	0	<p>General</p> <p>Comment: The UK CAA welcomes the move to the creation of a risk and performance based approach in the regulation of Unmanned Aircraft Systems (UAS) which is centred primarily on the type of operation being undertaken. The UK CAA also acknowledges, and is in agreement with, the principle of the 'three category' concept and is therefore fully supportive of the overall aims of NPA 2017-05 with regard to the creation of proposed regulations for the Open and specific categories.</p> <p>We are pleased to provide the following comments, which are offered in the spirit of ensuring that the regulation that is subsequently produced is a realistic and proportionate document, which can be used by European citizens and enforced by regulatory authorities in a simple and pragmatic manner.</p>	
2065	(General Comments)	0	<p>General</p> <p>Comment: The NPA makes no comment regarding the requirements for insurance of unmanned aircraft, which we consider to be a significant oversight which requires urgent attention. The provisions of current EU insurance regulation (785/2004) are not sufficient to properly cover the scope of operations that this NPA covers. As examples:</p> <ul style="list-style-type: none"> - EC 785/2004 does not apply to 'model aircraft with an MTOM of less than 20kg', but the term 'model aircraft' is not defined, and so we do not know what aircraft with an MTOM below 20kg (if any) the regulation is intended to cover. The text in NPA 2017-05 goes to great lengths to point out the difficulties that have been experienced in attempting to distinguish between a model aircraft and any other UAS, which further reinforces the impracticalities of the insurance regulation. - Given that the Open category is proposed to have an upper mass limit of 'less than 25kg', this would imply that Open category operations of 20kg or more require to be insured. However, given that the intent of the Open category is that there is no competent authority involvement, it is unclear as to how this insurance requirement will be monitored/enforced. - EC 785/2004 also requires cover for 'war and terrorism' risks, but this would appear to be a disproportionate requirement for small UAS. - If 'toy drones' are not considered to be model aircraft, then we 	

have the potential situation where UAS in the A1 sub category (which are considered 'harmless' enough to be flown over people) will be required to be insured for third party liability (including war and terrorism), which is not logical.

Justification: Requirement for clarity in the application of EC Regulation 785/2004

Proposal: EC Regulation 785/2004 requires to be updated in order to cater for the development of the small UAS industry/market and NPA 2017-05. In the meantime, the EC is urged to provide a clarification of the intent of EC Regulation 785/2004's application to UAS with an MTOM of less than 20kg. Given that these proposed regulations cover all aspects of UAS activity any insurance requirements also need to address the full implications of UAS operation and the potential effects. In addition, we also need to consider that our intent is to protect the general public; therefore it also needs to take into account situations where the terms and conditions have not been met (similar to the situation where injured parties are recompensed when an uninsured driver is involved).

2066 (General Comments)

0

General

As an overall summary, we offer the following very general comments as a broad impression. The more specific points are picked up in the individual comments.

Open Category Comments:

The complexity of the proposed regulation, in terms of what is being proposed as a 'low threat' category, appears to be disproportionate to the intent of the Regulation and in general, we remain concerned that the Open category, as described within this NPA is too complicated. We recognise that a degree of additional complexity is required to enable 'product requirements/standards' to be introduced, however this regulatory framework will affect people from all walks of life and must therefore be designed for the lowest common denominator. This has been reinforced during the NPA period where various groups of people that have been briefed on the Subcategory system have experienced a huge difficulty in following through all of the possible permutations.

During the process of examining the NPA, we have also moved towards the opinion/impression that the upper mass limit for the Open category (at 'less than 25kg) is unnecessarily high. This is discussed further in the comment below.

The product requirements for the various Open category Subcategories, as listed in the Appendices to Sub Part A, do not appear to offer anything significant in the way of technical differences between the different Subclasses. The only real differentiation between the Subcategories in terms of safety of operation appears to be a different level of pilot competence. Therefore, the benefits of the product requirements and UA markings are not clear.

Specific Category Comments:

The proposal does not set any minimum requirements for competency for operators and remote pilots detailed within the AMC or GM. While we fully understand that it is for the competent

authority to determine these on a case by case basis for each application, there should be some form of baseline set out from which the requirements should be based in order that a consistent approach can be maintained throughout the EU.

With platforms of 25Kg or more, there is no guidance as to any technical data that should be supplied by manufacturers of the products to the consumer. The Open Category goes in to some detail on this, but for the Specific Category, where the products being used are potentially more complex, we feel that a minimum level of technical guidance should be provided.

Market Surveillance:

We are unsure as to the regulatory mechanisms that are in place in order to address unsafe conditions (e.g.. withdraw, ground or modify a product that is available on the market, or one that is likely to be introduced to the market in the near future).

2067 (General Comments)

0

General

Comment: During the period that we have been examining and commenting on the proposal within the NPA, it has become apparent that the 'need' for the Open category to have its upper mass limit set at 'less than' 25kg (i.e. 24.99kg) no longer exists and that it could easily be set at a much lower level without affecting the overall intent. It is clear that the 25kg boundary has been chosen because it essentially equates to what we already 'traditionally' have within the EU (UK and some other countries use 20kg, but most use 25kg, as does the USA with 55lbs), and that this has evolved from the perspective of the aeromodellers.

- with the Article 14 proposal placing model clubs and associations into the Specific category under an operational authorisation, the need for such a high mass limit in the Open category no longer applies to the aeromodelling fraternity.
- the primary aim of the Open category is to capture the recreational and the 'lower tech' commercial UAS markets; most, if not all, of these tend to use 'off the shelf' UA that are below 10kg in mass.
- we doubt that there are many UA available on the commercial market (in the 10-25kg mass range) at prices that are affordable to most people.
- even with the rule set proposed within the NPA, it is most likely that any operator needing to use a UA that is greater than 10kg will be looking for some sort of Specific category operating approval.
- when discussing the various levels of 'freedom' offered within the A3 Subcategory, people tend to naturally look towards the 'worst option' (i.e. "...but we don't want that happening with a 24kg drone...") despite the fact that it is highly unlikely that such a situation would ever occur.
- a 24kg drone would be extremely expensive and/or very bulky to transport around, so it would only be the most dedicated persons that would operate such a device.

			<p>We therefore suggest that the mass limit for the Open category should be revised to a lower level, such as 'less than 10kg'. We do not think that this level would have any significant detrimental effect on Open category operators, but it would have a significant effect in being able to simplify the requirements for the Open category and prevent unnecessary concern over a very small number of drones, all of which could be easily accommodated within the Specific category. There appears to be little, if any, need for a higher mass.</p> <p>Justification: Prevention of unnecessary complexity in the regulations and a more realistic approach to the needs of the Open category.</p> <p>Proposed Text: General proposal to set the mass boundary of the Open category as <i>"..a UAS with an MTOM of less than 10kg"</i></p>	
2068	<p>2.3.1.5 Model aircraft — 2.3.1.6 Boundaries of the open, specific, and certified category — 2.3.1.7 Third-country UAS operators — 2.3.1.8 Registration — 2.3.1.9 Link with the U-Space — 2.3.1.10 Applicability — 2.3.2 Open-category issues — 2.3.3 Specific-category issues — 2.4. What are the expected benefits and drawbacks</p>	9 - 20	<p>Page No: 9, 10 & 16</p> <p>Paragraph No: 2.3.1.5, 2.3.1.6, 2.3.2.1</p> <p>Comment: We believe the text is misleading in referencing Article 12(1)(d) of regulation (EU) 201X/XXX because the text refers to the whole Article.</p> <p>Justification: Correction of typographical error.</p> <p>Proposed Text: In each case, replace "Article 12(1)(d)" with <i>"Article 12"</i>.</p>	
2072	<p>2.3.1.5 Model aircraft — 2.3.1.6 Boundaries of the open, specific, and certified category — 2.3.1.7 Third-country UAS operators — 2.3.1.8 Registration — 2.3.1.9 Link with the U-Space — 2.3.1.10 Applicability — 2.3.2 Open-category issues — 2.3.3 Specific-category issues — 2.4. What are</p>	9 - 20	<p>Page No: 10</p> <p>Paragraph No: 2.3.1.6, 3rd paragraph</p> <p>Comment: The text states: <i>"A UAS operation is then classified into the certified category when, considering the risks involved, it requires the certification of the UA and of its operator, as well as licensing of the flight crew."</i></p> <p>It should be noted that an applicant may chose to have their UA certificated based on a business decision rather than based on the risk level of the operation. The applicant may decide that certification (and a type certificate) will facilitate sales internationally or they may want to undertake series production. UAS.SPEC.110 implies that a certificated UA may be operated in the Specific category.</p> <p>Justification: The text is potentially misleading.</p> <p>Proposed Text: Add a note after the list at the top of page 11 as follows: – <i>"Note that the decision to operate in the certified"</i></p>	

	the expected benefits and drawbacks		<i>category may be a business decision and may not necessarily be based on risk levels alone."</i>	
2073	2.3.1.5 Model aircraft — 2.3.1.6 Boundaries of the open, specific, and certified category — 2.3.1.7 Third-country UAS operators — 2.3.1.8 Registration — 2.3.1.9 Link with the U-Space — 2.3.1.10 Applicability — 2.3.2 Open-category issues — 2.3.3 Specific-category issues — 2.4. What are the expected benefits and drawbacks	9 - 20	<p>Page No: 11</p> <p>Paragraph No: 2.3.1.7</p> <p>Comment: –Clarity is required whether it is really the intention that EASA will assess (analyse) the details of the licenses of other countries. It is noted in the text that <i>"EASA will involve experts from the MSs in the team performing this analysis"</i> but it is not clear how this will be achieved.</p> <p>Justification: Request for further clarity on EASA's plans for the recognition of Third-country licences/certificates.</p>	
2074	2.3.1.5 Model aircraft — 2.3.1.6 Boundaries of the open, specific, and certified category — 2.3.1.7 Third-country UAS operators — 2.3.1.8 Registration — 2.3.1.9 Link with the U-Space — 2.3.1.10 Applicability — 2.3.2 Open-category issues — 2.3.3 Specific-category issues — 2.4. What are the expected benefits and drawbacks	9 - 20	<p>Page No: 14</p> <p>Paragraph No: Table 1</p> <p>Comment: We believe the table is incorrect and is not what was written in the MSs counterproposal. It appears that the titles for the A1 and A2 sub categories have been transposed.</p> <p>Justification: Accuracy of the whole document and correction of a misleading argument</p> <p>Proposed Text: Move the text in the row associated to the 'A1 Fly close to people' into the row marked 'A2 Fly far from people' and vice versa.</p>	
2077	2.3.1.5 Model aircraft — 2.3.1.6 Boundaries of the open, specific, and certified category — 2.3.1.7 Third-country UAS operators —	9 - 20	<p>Page No: 17 (half way down)</p> <p>Paragraph No: 2.3.2.1</p> <p>Comment: The text states: <i>"Additionally, UAS Class C0, C1 and C2 can also be operated in this Subcategory "</i> We believe the text is potentially confusing. (See also UK CAA comment relating to AMC1 UAS.OPEN.60(b) on page 103).</p> <p>Justification: This text is not reflected in UAS.OPEN.60 on p38</p>	

	2.3.1.8 Registration — 2.3.1.9 Link with the U- Space — 2.3.1.10 Applicability — 2.3.2 Open- category issues — 2.3.3 Specific- category issues — 2.4. What are the expected benefits and drawbacks		which only refers to Class C3 and C4. Proposed Text: Suggest either delete this text or amend UAS.OPEN.60.	
2080	2.3.1.5 Model aircraft — 2.3.1.6 Boundaries of the open, specific, and certified category — 2.3.1.7 Third- country UAS operators — 2.3.1.8 Registration — 2.3.1.9 Link with the U- Space — 2.3.1.10 Applicability — 2.3.2 Open- category issues — 2.3.3 Specific- category issues — 2.4. What are the expected benefits and drawbacks	9 - 20	Page No: 19 Paragraph No: 2.3.2.2 Comment: The text states: <i>“Part-MRK contains elements included in airworthiness regulations, such as technical requirements, a conformity procedure, or market surveillance provisions. However, these regulations have not been applied as this would require compliance with Part-21, which would not be proportionate in the case of UAS.”</i> We believe the text is potentially confusing because it implies that some form of airworthiness requirements are defined within Part MRK, which is not the intent for non certificated UAS. Justification: Clarification of text Proposed Text: Delete this final paragraph	
2081	2.3.1.5 Model aircraft — 2.3.1.6 Boundaries of the open, specific, and certified category — 2.3.1.7 Third- country UAS operators — 2.3.1.8 Registration — 2.3.1.9 Link with the U- Space — 2.3.1.10 Applicability — 2.3.2 Open- category issues — 2.3.3 Specific- category issues — 2.4. What are the expected	9 - 20	Page No: 20 Paragraph No: 2.3.3, 3 rd paragraph on page Comment: UAS operations are likely to want to carry dangerous goods as cargo or mail. The transport of dangerous goods by UAS is a complex subject that will need to be addressed. Justification: In developing the operating scenarios, full consideration will need to be given to any required operational declaration / authorisation in respect of the goods being carried.	

	benefits and drawbacks		
2082	3.1.1 Draft cover regulation — Article 1	23	<p>Page No: 23</p> <p>Paragraph No: Article 1, paragraph 3.</p> <p>Comment: While the extent of the proposed regulation is clear, it would be helpful to include a definition of 'indoor UAS operations' either within Guidance Material to this article, or in Article 2</p> <p>Justification: Clarification of how the regulation applies</p> <p>Proposed Text: Add new definition as follows: <i>'Indoor UAS operations' means an operation within a building or other structure where there is no opportunity for the UA to leave the structure and gain access to the open air/external environment. Operations contained within a 'cage' or a similarly secure netted area that prevents the UA's egress may also be considered to be 'indoors' for the purposes of this regulation.</i></p>
2083	3.1.1 Draft cover regulation — Article 2	24 - 26	<p>Page No: 24</p> <p>Paragraph No: Article 2, paragraph 1</p> <p>Comments: The definitions within Article 2 do not include any references to dangerous goods. The definitions within GM1 UAS.OPEN.30(c)(7) (for 'dangerous goods' or the 'ICAO Technical Instructions') do not establish legally enforceable definitions as this is guidance material.</p> <p>Additionally, there are no definitions of 'cargo' or 'mail'</p> <p>Justification: With no definitions, the terms as used in the GM may be open to interpretation.</p> <p>Proposed Text: Add the following definitions:</p> <p><i>'dangerous goods' means articles or substances capable of posing a risk to health, safety, property or the environment, included in the list of dangerous goods of the ICAO Doc 9284 'Technical Instructions'</i></p> <p><i>'Technical Instructions' means the latest effective edition of International Civil Aviation Organization (ICAO) Doc 9284 'Technical Instructions for the Safe Transport of Dangerous Goods by Air', including its Supplement and any Addenda/Corrigenda thereto.</i></p> <p><i>'cargo' means any property carried by a UAS other than mail.</i></p> <p><i>'mail' means dispatches of correspondence and other items tendered by, and intended for delivery to, postal services in accordance with the rules of the Universal Postal Union (UPU).</i></p>
2084	3.1.1 Draft cover regulation — Article 2	24 - 26	<p>Page No: 26</p> <p>Paragraph No: Article 2, paragraph (ff)</p> <p>Comment: Given that UAS.OPEN.30 allows the capability of using a UA observer and refers to VLOS in this context, the definition of VLOS should be adjusted to reflect this too. The requirement for the</p>

			<p>UA observer to be situated with (i.e. next to) the remote pilot is, we believe, an important point. If the UA observer is further away, then the communication aspects between remote pilot and UA observer need to be addressed as well, in which case we would consider this to be an 'Extended VLOS' operation which should be addressed within the Specific category.</p> <p>Justification: Consistency throughout the regulation</p> <p>Proposed Text: Amend to read as follows: "<i>visual line of sight (VLOS)</i>' means a type of operation in which the remote pilot, or a UA observer situated next to the remote pilot, maintains continuous unobstructed and unaided visual contact with the UA, allowing them to monitor the flight path of the UA in relation to other aircraft, persons, and obstacles for the purpose of maintaining separation from them and avoiding collisions."</p>
2087	3.1.1 Draft cover regulation — Article 3	26 - 27	<p>Page No: 26</p> <p>Paragraph No: Article 3, paragraphs 3 and 4</p> <p>Comment: The term 'system' would be better termed as a 'capability' as the requirement may be achieved by a number of 'systems' or other equally suitable solutions that are not system based.</p> <p>Justification: Appropriateness.</p> <p>Proposed Text: Replace '<i>electronic identification system</i>' and '<i>geofencing system</i>' with '<i>electronic identification capability</i>' and '<i>geofencing capability</i>'</p>
2088	3.1.1 Draft cover regulation — Article 3	26 - 27	<p>Page No: 26</p> <p>Paragraph No: Article 3, paragraph 5, last line</p> <p>Comment: Regarding the 'regulation' being referred to in the last line; it is not clear if this is the revised Basic Regulation, or a different regulation.</p> <p>Justification: Clarification of the regulation that is being referred to is required.</p>
2089	3.1.1 Draft cover regulation — Article 6	28	<p>Page No: 28</p> <p>Paragraph No: Article 6, paragraph 1(b)</p> <p>Comment: The text states: "<i>authorisation of and oversight over specific-category UAS operations</i>". We believe this is potentially confusing.</p> <p>Justification: The competent authorities could have responsibilities for oversight and approval of online training and certificate of competence (including exam) in the <u>Open</u> category. Hence, referencing only the Specific category could be misleading.</p> <p>Proposed Text: Insert an additional sub paragraph as follows: "(d) approval of and oversight over the assessment of pilot competence and safety promotion aspects within the Open Category."</p>
2090	3.1.1 Draft cover regulation	28 - 29	<p>Page No: 28</p>

	— Article 7		<p>Paragraph No: Article 7, paragraph 1(a)</p> <p>Comment: The text states“... examine documents, records and reports relevant to UAS operations, remote pilots or UAS operators; ...” We believe this could be misunderstood as also needing to apply to the Open Category.</p> <p>Justification: Clarity of legal text and the intention.</p> <p>Proposed Text: Amend to read as follows: “...examine documents, records and reports relevant to UAS operations, remote pilots or UAS operators within the specific category...”</p>
2091	3.1.1 Draft cover regulation — Article 7	28 - 29	<p>Page No: 28</p> <p>Paragraph No: Article 7, paragraph 1(b)</p> <p>Comment: The text in this sub paragraph could be misunderstood as also needing to apply to the Open Category, but we do not believe this is the case as oversight for UAS operators is only intended for those within the Specific category. We also question whether this needs to be specified as an annual programme, because of the potentially wide ranging scope of the Specific category.</p> <p>Justification: Clarity of legal text and the intention.</p> <p>Proposed Text: Amend to read as follows: “...develop a proportionate oversight programme for UAS operators holding a declaration, an authorisation or a certificate for a UA, including audits and inspections, within the specific category as appropriate and proportionate to the identified risks...”</p>
2093	3.1.1 Draft cover regulation — Article 7	28 - 29	<p>Page No: 28</p> <p>Paragraph No: Article 7, Paragraph 1(d)</p> <p>Comment: We question the requirement for competent authorities to specifically be required to produce <i>training materials</i>. We consider that a requirement on the competent authority to produce appropriate guidance materials should be sufficient.</p> <p>Justification: Organisations intending to conduct remote pilot competency assessments should be capable of producing their own training material.</p> <p>Proposed Text: Amend to read as follows: “...produce training materials and other guidance materials for the community of UAS users, aimed at safety promotion of UAS operations, including dissemination of any updated regulations affecting UAS operations;...”</p>
2096	3.1.1 Draft cover regulation — Article 7	28 - 29	<p>Page No: 29</p> <p>Paragraph No: Article 7, paragraph 1(g)</p> <p>Comment: The Open category is mentioned in the text but this category is not subject to any approval/certification activity, therefore this should not be included as it appears to contradict the principle of the Open category</p> <p>Justification: Clarification of precise requirements. Open category implies that no authorisation is issued to operators by the competent authority. Therefore there is no legal basis on which to suspend or revoke something that doesn't exist.</p>

			<p>Proposed Text: Amend to read as follows: <i>"...issue, maintain, amend, suspend, limit or revoke authorisations and/or certificates required to carry out UAS operations in the open and specific category, or impose other measures or sanctions, as necessary;..."</i></p>	
2097	3.1.1 Draft cover regulation — Article 7	28 - 29	<p>Page No: 29</p> <p>Paragraph No: Article 7, paragraph 1(h)</p> <p>Comment: The text states that a competent authority is required to maintain a register of certificates of Remote Pilot competences. The Remote Pilot Certificate of Competence is intended for use within the Open category for the A2 sub class. As the Open category is not intended to have any direct involvement from the competent authority, this does not appear to be logical. We believe it will be up to the operator to be able to demonstrate that he/she has the required CofC and it should be the responsibility of the assessment organisation to maintain a record of the people it has assessed. Within the Specific category, any records of pilot competence will be included within the application for the operational authorisation.</p> <p>Justification: Reduction of unnecessary burden on the competent authority.</p> <p>Proposed Text: Amend to read as follows: <i>"...establish and maintain one or more registers of operational declarations, operational authorisations certificates of remote-pilot competences and LUCs, and when tasked to do so, establish and maintain a register of UAS operators and UA; and..."</i></p>	
2098	3.1.1 Draft cover regulation — Article 9	29	<p>Page No: 29</p> <p>Paragraph No: Article 9</p> <p>Comment: Consideration could be given to combining this Article 9 with Article 13</p> <p>Justification: Apart from including market surveillance authorities, Article 9 could be considered largely covered by Article 13.</p> <p>Proposed Text: Recommend that Articles 9 and 13 are combined.</p>	
2099	3.1.1 Draft cover regulation — Article 10	30	<p>Page No: 30</p> <p>Paragraph No: Article 10, paragraph 3(b)</p> <p>Comment: We are uncertain whether EASA is really stating that <u>it will be assessing the processes and procedures for the issuing of certificates by all other non EU countries</u>. Clarity is required whether EASA will then produce a list of 'approved countries' and whether this will be made available to the competent authorities of the member states to use. Details of when this will be compiled and provided to member states is requested.</p> <p>Justification: Request for clarification of the intent of this sub paragraph and the method to be used to promulgate the relevant information.</p>	
2100	3.1.1 Draft cover regulation — Article 11	30 - 31	<p>Page No: 30</p> <p>Paragraph No: Article 11, paragraphs 2 to 6</p>	

			<p>Comment: This section discusses AltMoC, against the proposed Regulation and its implementing rules. This proposed Regulation only covers the Open and Specific categories. The level of notification and reporting that is being proposed is considered to be a significant administrative burden for little obvious gain.</p>
2101	3.1.1 Draft cover regulation — Article 13	31	<p>Page No: 31</p> <p>Paragraph No: Article 13</p> <p>Comment: The text as currently written can be misinterpreted to say there will be a new Regulation EU 2017/XXX for occurrence reporting, rather than updating the current Regulation EU 376/2014. Our preference would be to keep all occurrence reporting in one place.</p> <p>However, our belief is that the 'Regulation EU 2017/XXX' that is being quoted actually refers to the proposed EASA Basic Regulation and we request clarification that this is indeed the case.</p> <p>Justification: Previously, there have been differing occurrence reporting requirements amongst the EASA rules. These have recently been updated to reflect EU 376/2014 so there is alignment across all EU rules. We would want to avoid creating different reporting requirements in different regulations again.</p>
2103	3.1.1 Draft cover regulation — Article 14	32	<p>Page No: 32</p> <p>Paragraph No: Article 14</p> <p>Comment: We believe this potentially places a regulatory burden on the NAA to conduct subsequent oversight of the model association's activities - Articles 6 and 7 require NAAs to conduct oversight of operators with operational authorisations, but this needs to be clarified (in that the level of oversight needs to be reduced and that Model associations do not need to be overseen in the same way). We note that the article enables NAAs to issue authorisations to model associations 'without further demonstration of compliance' (i.e. trust in extant methods/processes), however it is unclear how this should be overseen in the future.</p> <p>Justification: Clarification of intent regarding the degree of oversight required for extant model associations.</p> <p>Proposed Text: We request an adjustment is made of the oversight requirements detailed in Articles 6 and 7 and their associated GM/AMC to reduce the oversight burden, and allow competent authorities more leeway in determining the degree of oversight.</p>
2104	3.1.1 Draft cover regulation — Article 15	32 - 33	<p>Page No: 32</p> <p>Paragraph No: Article 15, paragraph 3</p> <p>Comment: We question the wording of this paragraph as it does not appear to comply with the intention as we understand it. Paragraph 3, as written, appears to prevent UAS of less than 250g (that are sold within 3 years of the Regulation entering force) from operating after the '3 year point' if they are not 'CO' marked. Therefore, using the current estimated dates, this means that a 'toy' drone of less than 250g sold in 2019 (before CO UAS are required to be sold on the market) will not be able to be flown after 2021. We believe that this paragraph was intended to permit UAS of less than</p>

			<p>250g that are already in use to continue to be flown in the A1 sub category, in the same way that 'home built' UAS of less than 250g will be able to; it would be inappropriate to discriminate against a UA that has been bought previously in a shop and a UA that has been 'built at home' - the primary safety argument for the A1 sub category is the low mass of the UA, and hence the low risk.</p> <p>Justification: Clarification of text in order to explain intent and remove an unintended consequence.</p> <p>Proposed Text: Amend to read as follows: <i>"UAS ... not complying with Appendix I.1 to Annex I to this Regulation and having a maximum take-off mass (MTOM) of less than 250 g, including payload, may continue to be operated after three years after entry into force of this Regulation [estimate 2021] as privately built UA in accordance with the operational Subcategory A1, as defined in UAS.OPEN.40."</i></p>	
2107	3.1.1 Draft cover regulation — Article 15	32 - 33	<p>Page No: 32</p> <p>Paragraph No: Article 15, paragraph 4</p> <p>Comment: As written, the text does not adequately account for UA that have been purchased on the market (i.e. they are not 'privately built') but are not marked as Class C3 or C4. It is understood that such UA would be able to be used within sub category A3 in the same way that privately built UA would be. It is also not clear why only Appendices I.2 and I.5 had been singled out as surely the same circumstances would also relate to appendices I.3 and I.4 as well.</p> <p>Justification: Clarification of text and intent, and removal of unintended consequence</p> <p>Proposed Text: Amend as follows: <i>"UAS not complying with Appendices I.2 to I.5 to Annex I to this Regulation and having an MTOM between 250 g and 25 kg, including payload, may continue to be operated after three years after entry into force of this Regulation [estimate 2021] in accordance either with the operational Subcategory A3, as privately built UA as defined in UAS.OPEN.60, or within the conditions of Subpart B of Annex I to this Regulation."</i></p>	
2108	3.1.1 Draft cover regulation — Article 15	32 - 33	<p>Page No: 32</p> <p>Paragraph No: Article 15, paragraph 6</p> <p>Comment: We believe the text of the article is not very clear with regard to what information needs to be published by this date. It is not understood whether this is a requirement for a statement of intent from the member state about its future plans, or whether it means that the new airspace zones system must 'go live' by this point.</p> <p>Justification: Clarity of intent of Article, in particular the timing of the activation of the zone system</p>	
2110	UAS.OPEN.20 Registration	35 - 36	<p>Page No: 35</p> <p>Paragraph No: UAS.OPEN.20, sub-paragraph (c)(1)</p> <p>Comment: The text in this paragraph does not reflect the details in Table 2 on page 15. This text implies that <i>any</i> UA of less than 900g does not need to be individually registered. Table 2, however,</p>	

			<p>suggests that this derogation is only applicable for Class C1 UA. We realise that the details in Table 2 are only a summary, but it is highly likely that this table, or a version of it, will become used as a 'short cut' reference of the relevant regulations, hence this needs to be correct. From our experience of discussions within the expert group, it is understood that the intent was that the registration of the operator only would be required when operating a UA of less than 900g (i.e. individual UA would only be required when their MOTM was 900g or greater), but this now requires clarification.</p> <p>Justification: Clarification of intended requirement for registration of UAS Operator only.</p> <p>Proposed Text: The following are recommended:</p> <p>a. <u>If the intent is to only register individual UA with an MTOM of 900g or more</u> - amend Table 2 'UAS registration' column entries for A2 and A3 classes to read: <i>"Operator and UA (Note: the UA does not require to be registered if it is less than 900g)"</i> . Based on our understanding of the intent, this is the UK preferred option.</p> <p>b. <u>If the intent is to only allow this derogation for Class C1 UA</u> - delete sub paragraph (1) and re-write sub-paragraph (c) as a single sentence as follows: <i>"By way of derogation from point (a), the UA may not be registered if it is a UA Class C1, as defined in Appendix I.2 to this Annex."</i></p>	
2112	UAS.OPEN.20 Registration	35 - 36	<p>Page No: 35</p> <p>Paragraph No: UAS.OPEN.20 - Note related to AMC1 UAS.OPEN.20(a) and UAS.SPEC.20(a)(1)</p> <p>Comment: We believe the text is potentially confusing.</p> <p>Justification: It is potentially confusing to reference AMC for 'UAS.SPEC.20(a)(1)' in this Subpart A for the Open category.</p> <p>Proposed Text: Delete "and UAS.SPEC.20(a)(1)" from the text at the bottom of the page.</p>	
2113	UAS.OPEN.20 Registration	35 - 36	<p>Page No: 36</p> <p>Paragraph No: UAS.OPEN.20 - Note related to AMC1 UAS.OPEN.20(e) and UAS.SPEC.20(a)(3)</p> <p>Comment: We believe the text is potentially confusing.</p> <p>Justification: It is potentially confusing to reference AMC for 'UAS.SPEC.20(a)(3)' in this Subpart A for the Open category.</p> <p>Proposed Text: Delete "and UAS.SPEC.20(a)(3)" from the text at the top of the page.</p>	
2118	UAS.OPEN.30 Requirements applicable to all UAS operations in the open category	36 - 37	<p>Page No: 36</p> <p>Paragraph No: UAS.OPEN.30(c)(3)</p> <p>Comment: We agree that the remote pilot must be made clearly responsible for the safe separation from any other airspace user(s), however we do not think that an explicit statement regarding 'giving</p>	

way' is appropriate or required. While an 'always give way' requirement sounds fine as a basic statement, it is not necessarily practicable, or even desirable when considered more closely. We should not give other aviators the impression that they always have right of way - this will only confuse pilots of manned aircraft at best, or promote inaction at worst, especially for encounters with the larger drones - while this limitation is aimed at the 'open' category, it will undoubtedly become a de-facto impression that all drones, irrespective of their size, will always give way. In the UK, we have already had instances where pilots have flown towards drones they've seen and had Airprox with because they think they have right of way over the drone - manned aircraft must be ready to give way and, of course, avoid, too. We fully agree that the default option for drone operators in the 'open' category should be avoidance, and it is likely that, in almost all cases, it will be the drone operator who sees the confliction before the pilot of the manned aircraft, but this is the reason for maintaining and closely defining the VLOS requirement. As an additional note, the text used in UAS.SPEC.30 (c)(2) is a more appropriate statement, which would then offer consistency throughout the document.

Justification: Clarity and accuracy of requirements within the text

Proposed Text: Delete '*give way to manned aircraft*' and replace with either

- a. '*maintain a thorough visual scan of the airspace surrounding the UA in order to observe and avoid collisions with manned aircraft*'

or;

'ensure the safe operation of the UAS with respect to third-party activities on the ground or in the air'

2120 UAS.OPEN.30 Requirements applicable to all UAS operations in the open category

36 - 37

Page No: 36

Paragraph No: UAS.OPEN.30(c)(6)

Comment: The text as written appears to repeat itself (by saying that you must keep the UA in VLOS **or** keep the UA within such a range that the remote pilotmaintains VLOS). Following on from our comments for Article 2 (ff) (definitions - VLOS), we recommend this text should also be amended in order to reflect the definition. We welcome the ability to make use of a UA observer step to enable a slightly more flexible approach, rather than insisting that it must be the remote pilot that maintains the visual contact with the UA, but given that this is to be employed within the Open category and hence without any operational oversight, we feel that there must be a stricter degree of restraint placed on this freedom. As a result we feel that the UA observer should be positioned next to the remote pilot in order that the remote pilot can quickly revert to direct observation of the UA him/herself. Situations where a UA observer is used further away from the remote pilot should be addressed within the bounds of the Specific category, where proper attention can be paid to the responsibilities of the individuals involved and the procedures that are employed. This comment and proposed text is in line with the AMC that is proposed for this section (operations in FPV mode), which we agree with, and we do not believe that the ability

			<p>to use a UA observer should be permitted beyond this in the Open category</p> <p>Justification: Consistency throughout the regulation</p> <p>Proposed Text: Delete current text and replace with: <i>'keep the UA within VLOS; when a UA observer situated next to the remote pilot is being used, the remote pilot remains fully responsible for the safety of the flight and the actions of the UA observer. Clear and effective communication shall be established between the remote pilot and the UA observer;'</i></p>	
2121	UAS.OPEN.30 Requirements applicable to all UAS operations in the open category	36 - 37	<p>Page No: 36</p> <p>Paragraph No: UAS.OPEN.30(c)(8)</p> <p>Comment: This text states <i>"not fly close or inside areas where an emergency response effort is ongoing unless they have permission from the local authority"</i>. The 'local authority' is not the correct entity on every occasion.</p> <p>Justification: Member states might not cascade authority in such a manner where the 'local authority' may grant such permission.</p> <p>Proposed Text: Recommend amend as follows: <i>"not fly close or inside areas where an emergency response effort is ongoing unless operating in accordance with procedures published by the member state"</i>.</p>	
2122	UAS.OPEN.35 Maximum height of UAS operations in the open category	37	<p>Page No: 37</p> <p>Paragraph No: UAS.OPEN.35(a)</p> <p>Comment: We consider that the correct term in this case is 'surface' rather than 'ground level'. Use of this term will also address flight over patches of water (which is not the ground). Given that this Regulation also applies out to the 12nm limit offshore, this would be a more appropriate term to use. It is already used within UK aviation regulations for this reason.</p> <p>Justification: Clarity and precision of regulation</p> <p>Proposed Text: Replace <i>"....above ground level"</i> with <i>"....above the surface"</i></p>	
2123	UAS.OPEN.35 Maximum height of UAS operations in the open category	37	<p>Page No: 37</p> <p>Paragraph No: UAS.OPEN.35(b)</p> <p>Comment: We are in full agreement with the principle of permitting flight above 120m/400ft when in the vicinity of a fixed obstacle that is higher than this, but in our opinion, an additional vertical distance of 50m (about 150ft) above the highest obstacle is unnecessarily excessive. We would suggest that something like 15m (i.e about 50ft) is a more sensible figure. In addition, the text as it is written only permits flight above 120m when the object being flown over is itself higher than 120m. Thus, for an obstacle that is 110m high, the text states that a UA may only be flown a maximum of 10m above it (i.e. 120m above the surface), whereas if the obstacle was 130m high, the UA can be flown up to a height of 180m - this is clearly not the intention.</p>	

			<p>Justification: Precision of regulation and the use of a more realistic figure.</p> <p>Proposed Text: Amend to read as follows: <i>“By way of derogation from point (a), when the operation involves flying over a fixed obstacle, the maximum height of the UAS operation may exceed 120m, up to a maximum of 15m above the height of the obstacle, with the approval of the owner, or person in charge, of the object.”</i></p>
2124	UAS.OPEN.40 Requirements applicable to UAS operations in Subcategory A1	37 - 38	<p>Page No: 37</p> <p>Paragraph No: UAS.OPEN.40(b)(1)</p> <p>Comment: The reference to ‘open assemblies of people’ requires greater clarification and definition. If we are to specify this in a regulation, we need to define what is meant by an open assembly of people (and what is not). However, if a UA in Subcategory A1 has been deemed to be safe to ‘fly over people’, then what is the justification in preventing flight over an ‘assembly’?</p> <p>Justification: Clarity of regulation and proportionality</p> <p>Proposed Text: Recommend delete this requirement from Sub category A1. In addition a definition of <i>open assembly of people</i> is required in Article 2, along with suitable Guidance Material.</p>
2125	UAS.OPEN.40 Requirements applicable to UAS operations in Subcategory A1	37 - 38	<p>Page No: 37</p> <p>Paragraph No: UAS.OPEN.40(b)(2)</p> <p>Comment: As written, the text implies that Subcategory A1 UAs must always be operated in ‘follow me mode’, which is clearly not the intent. As mentioned in the comment to UAS.OPEN.35(a), references to ‘above ground level’ should be replaced with ‘above the surface’. The text of the rule derogates the remote pilot from the need to operate the UAS in accordance with the manufacturer’s requirements/instructions [UAS.OPEN.30 (C)(5)], but this appears to be an incorrect reference. However, we cannot clearly identify which rule the derogation is intended to be from.</p> <p>Justification: Rectification of incorrect reference.</p> <p>Proposed Text: Amend to read as follows: <i>“(2) when operating in follow-me mode, up to a height of 50 m above the surface;”</i></p>
2126	UAS.OPEN.40 Requirements applicable to UAS operations in Subcategory A1	37 - 38	<p>Page No: 37 (and paragraph 2.3.1.4 on page 8)</p> <p>Paragraph No: UAS.OPEN.40(b)(3)</p> <p>Comment: The text is potentially confusing and inconsistent with Appendix I.2 on page 51 and Table 2 on page 15. The text states: <i>“with an active electronic identification system, when using a UA Class C1 fitted with a camera of more than 5 megapixels (MP) and a real-time video transmission link or any other type of sensor able to record personal data;”</i> There is no mention of “an audio sensor” as referred to in Appendix I.2(k). However, “an audio sensor” could in any case be considered to be covered by “any other type of sensor able to record personal data.” The requirement for a “real-time video transmission link” is not covered in Table 2. Additionally, the requirement as written would mean that UA fitted with cameras that possess a recording facility, but no real time transmission capability,</p>

			<p>do not require an electronic identification system; which does not make sense. We appreciate that this requirement for electronic identification has been included in an attempt to address privacy and security issues, but the use of a camera's capability as the determining factor for fitment does not appear to be logical. It will not be possible to police or enforce such a limitation adequately. If it is truly considered that electronic identification is required for this class, then it should be applied throughout.</p> <p>Justification: Clarification of text and correlation with the remainder of the document</p> <p>Proposed Text: Once an agreed clear text is established, it should be consistently applied to both UAS.OPEN.40(b)(3) and Appendix I.2.</p> <p>Either:</p> <ul style="list-style-type: none"> - Delete the whole section because electronic identification is not required for Class C1; <p>Or;</p> <ul style="list-style-type: none"> - Amend text to read as follows: <i>'(3) with an active electronic identification system when using a UA Class 1 fitted with any type of sensor able to record personal data; '</i> 	
2128	UAS.OPEN.40 Requirements applicable to UAS operations in Subcategory A1	37 - 38	<p>Page No: 37</p> <p>Paragraph No: UAS.OPEN.40(b)(4)(i)</p> <p>Comment: As mentioned in the comment to UAS.OPEN.35(a), references to 'above ground level' should be replaced with 'above the surface'.</p> <p>Justification: Consistency, clarity and precision of regulation</p> <p>Proposed Text: Replace "...above ground level" with <i>"....above the surface"</i>.</p>	
2129	UAS.OPEN.40 Requirements applicable to UAS operations in Subcategory A1	37 - 38	<p>Page No: 38</p> <p>Paragraph No: UAS.OPEN.40 - Note related to AMC1 UAS.OPEN.40(b)(5)(i)</p> <p>Comment: We believe the reference is incorrect due to typographical error.</p> <p>Justification: Correct reference</p> <p>Proposed Text: The text should be: 'AMC1 UAS.OPEN.40(b)(5) <i>(ii)</i>'</p>	
2130	UAS.OPEN.50 Requirements applicable to UAS operations in Subcategory A2	38	<p>Page No: 38</p> <p>Paragraph No: UAS.OPEN.50(e)(1)</p> <p>Comment: See also UK CAA comments to the relevant AMC and GM. The AMC text implies the need for a practical flying assessment of the pilot's ability to fly the UA, which we believe is the overall intent, but the use of '<i>theoretical test</i>' does not explicitly state the need for a practical flying assessment</p> <p>Justification: Clarification of regulation and removal of unintended consequence.</p>	

			<p>Proposed Text: Amend as follows: <i>"(1) being at least 16 years old, and holding a certificate of competence after successfully completing a theoretical and practical test in a manner and format established by the Agency; or "</i></p>
2132	UAS.OPEN.50 Requirements applicable to UAS operations in Subcategory A2	38	<p>Page No: 38</p> <p>Paragraph No: UAS.OPEN.50</p> <p>Comment: The rules within UAS.OPEN.50, Table 2 on page 15 and the associated AMC/GM do not make any specific mention of flight within congested areas. Because the A2 category is intended to offer some significant levels of operational freedom to operators/remote pilots, we feel that there should be some mention of congested areas, so that the level of unnecessary enquiries can be reduced. While we accept that the regulatory style used is one of 'by exception' (i.e. we say what a person cannot do, with the assumption that if the rules do not prevent you doing something, then it is permissible), however some level of guidance at the very least would go a long way to providing appropriate information.</p> <p>Given the additional freedoms that are offered by Subcategory A2, we suggest an additional AMC or GM which further describes 'Operations in Subcategory A2' is provided. This can include, for example, a statement that A2 operations may be undertaken in congested areas, but that the safety distances from uninvolved people must still be maintained.</p> <p>Justification: Clarity of text</p>
2134	UAS.OPEN.60 Requirements applicable to UAS operations in Subcategory A3	38 - 39	<p>Page No: 38</p> <p>Paragraph No: UAS.OPEN.60(a)</p> <p>Comment: The text appears to exclude the use of UA other than C3 or C4 from being used in sub category A3, but there is no reason why a UA marked 'C2' for example, could not be used in this category provided that the other requirements of the A2 sub-category are adhered to (e.g. by a person who has not yet completed the requisite training for the A2 certificate of competence, or who elects not to operate in the A2 subcategory).</p> <p>Justification: Clarification of regulation and removal of unintended consequence.</p> <p>Proposed Text: Delete text in sub paragraph (2) and replace with <i>"(2) Class C1, C2, C3 or C4, as defined in Appendices I.2 to I.5 to this Annex.</i> Delete sub paragraph (3)</p>
2137	UAS.OPEN.60 Requirements applicable to UAS operations in Subcategory A3	38 - 39	<p>Page No: 38</p> <p>Paragraph No: UAS.OPEN.60(c)</p> <p>Comment: Rather than keeping a 'safety' distance....we believe this would be better stated as a 'safe' distance</p> <p>Justification: Correction of text</p> <p>Proposed Text: <i>"keeping a safe distance from the boundaries of congested areas or aerodromes when operating a privately built UAS or UAS Class C4; "</i></p>

2138	UAS.OPEN.60 Requirements applicable to UAS operations in Subcategory A3	38 - 39	<p>Page No: 39</p> <p>Paragraph No: UAS.OPEN.60 - Note related to AMC1 UAS.OPEN.60(b) Operations in Subcategory A3.</p> <p>Comment: We believe the above reference is incorrect due to a typographical error.</p> <p>Justification: Correct reference.</p> <p>Proposed Text: The text should read: '<i>AMC1 UAS.OPEN.60(a) Operations in Subcategory A3</i>'.</p>
2141	UAS.OPEN.60 Requirements applicable to UAS operations in Subcategory A3	38 - 39	<p>Page No: 39</p> <p>Paragraph No: UAS.OPEN.60 - Note related to AMC1 UAS.OPEN.40(b)(5)(i)</p> <p>Comment: We believe the above reference is incorrect due to a typographical error.</p> <p>Justification: Correct reference</p> <p>Proposed Text: The text should read: '<i>AMC1 UAS.OPEN.40(b)(5) (ii)</i>'</p>
2142	UAS.OPEN.70 Duration and validity of remote pilot competence	39	<p>Page No: 39</p> <p>Paragraph No: UAS.OPEN.70(a)</p> <p>Comment: We believe the references given are incorrect due to typographical errors and should be amended as proposed below.</p> <p>Justification: Correct references</p> <p>Proposed Text: "<i>The remote pilot basic competence, required by UAS.OPEN.40(b)(5)(ii) and UAS.OPEN.60 (e) (1) (b) (3) (i), shall be valid for three years...</i>".</p>
2144	UAS.OPEN.70 Duration and validity of remote pilot competence	39	<p>Page No: 39</p> <p>Paragraph No: UAS.OPEN.70 (a) & (b).</p> <p>Comment: EASA has not published an AMC or GM in this matter yet, as the links provided have no text within them. However, our concern is that the higher risk sub category (A2) has a longer time period between assessment/validation than the lower risk ones.</p> <p>It is recommended that both requirements are aligned to three years.</p> <p>Justification: The currency period should be clearly related to the risk and the rate of change of the technology and regulations.</p>
2145	SUBPART B — SPECIFIC CATEGORY — UAS.SPEC.10 Responsibilities of the UAS operator	40	<p>Page No: 40</p> <p>Paragraph No: UAS.SPEC.10 - Note related to AMC1 UAS.OPEN.10(b) and UAS.SPEC.10(b)</p> <p>Comment: It is potentially confusing to reference AMC for UAS.OPEN.10(b) in this Subpart B for the Specific category.</p> <p>Justification: Correction of text</p>

			Proposed Text: Delete " AMC1 UAS.OPEN.10(b) and ".
2146	SUBPART B — SPECIFIC CATEGORY — UAS.SPEC.10 Responsibilities of the UAS operator	40	<p>Page No: 40</p> <p>Paragraph No: UAS.SPEC.10(a)</p> <p>Comment: This wording can be construed as being vague and would benefit by stating that policies and procedures must be written down.</p> <p>Justification: Clarification of text to justify intent.</p> <p>Proposed Text: "<i>Develop written policies and procedures adapted to its operation and size, and designate a remote pilot (s) for each operation or, in case of autonomous operations, ensure that during any phases of the operation, responsibilities and functions are properly defined in accordance with the policy and procedures;</i>"</p>
2147	UAS.SPEC.20 Registration	41	<p>Page No: 41</p> <p>Paragraph No: UAS.SPEC.20</p> <p>Comment: We believe it needs to be considered whether or not there would be a need for the 'Traditional' aircraft registration for some UA in the Specific Category and how this will be applied when compared with the proposed UAS.SPEC.20 registration process. We foresee that we will end up having a number of quite large UAs, comparable in size to many manned aircraft, within the Specific category and it would surely be more appropriate to register these aircraft in the 'traditional' (i.e. G-XXXX, EC-XXX etc) method, rather than via the method suggested here.</p> <p>Justification: Determination of the limits of the UAS.SPEC.20 registration process.</p>
2148	UAS.SPEC.20 Registration	41	<p>Page No: 41</p> <p>Paragraph No: UAS.SPEC.20 - Note related to AMC1 UAS.OPEN.20(a) and AMC1 UAS.OPEN.20(f).</p> <p>Comment: The text is potentially confusing.</p> <p>Justification: It is potentially confusing to reference AMC for the Open category in this Subpart B for the Specific category.</p> <p>Proposed Text: Delete "AMC1 UAS.OPEN.20(a) and" as well as "AMC1 UAS.OPEN.20(f) and".</p>
2149	UAS.SPEC.30 Requirements applicable to all UAS operations in the specific category	41 - 42	<p>Page No: 42</p> <p>Paragraph No: UAS.SPEC.30(c)(5)</p> <p>Comment: This text states "<i>not fly close or inside areas where an emergency response effort is ongoing unless they have permission from the local authority</i>". The 'local authority' is not the correct entity on every occasion.</p> <p>Justification: Member states might not cascade authority in such a manner where the 'local authority' may grant such permission.</p> <p>Proposed Text: "<i>not fly close or inside areas where an emergency response effort is ongoing unless operating in accordance with</i>"</p>

			<i>procedures published by the member state</i> ".	
2150	UAS.SPEC.30 Requirements applicable to all UAS operations in the specific category	41 - 42	<p>Page No: 42</p> <p>Paragraph No: UAS.SPEC.30 - Note related to AMC1 UAS.OPEN.30(b)(3)</p> <p>Comment: The text is potentially confusing.</p> <p>Justification: It is potentially confusing to reference AMC for the Open category in this Subpart B for the Specific category.</p> <p>Proposed Text: Delete "AMC1 UAS.OPEN.30(b)(3) and"</p>	
2153	UAS.SPEC.30 Requirements applicable to all UAS operations in the specific category	41 - 42	<p>Page No: 42</p> <p>Paragraph No: UAS.SPEC.30 - Note related to GM1 UAS.OPEN.30(c)(9)</p> <p>Comment: The text is potentially confusing.</p> <p>Justification: It is potentially confusing to reference GM relating to the Open category in this Subpart B for the Specific category.</p> <p>Proposed Text: Delete "GM1 UAS.OPEN.30(c)(9) and".</p>	
2154	UAS.SPEC.40 Operational risk assessment	42 - 43	<p>Page No: 42</p> <p>Paragraph No: UAS.SPEC.40(c)</p> <p>Comment: The initial text of this sub paragraph gives the impression that a LUC holder does not need to comply with the requirement for providing a risk assessment, identify mitigation measures, or consider the requirements of sub paras (1) to (5). While a LUC holder <i>may</i> be able to disregard these measures, it can only be done if the privileges within the associated LUC permit this. Thus, a LUC holder wishing to conduct an operation that is outside of the scope of his/her LUC will still be required to comply with this entire sub paragraph.</p> <p>Justification: Clarification of text to remove unintended consequences</p> <p>Proposed Text: "If the intended operation is not fully addressed by a standard scenario issued by the Agency, the UAS operator, except when holding a LUC with the appropriate privileges as per Subpart C of this Annex, shall provide the competent authority with a risk assessment of the proposed operation, and identify mitigation measures to be put in place in order to limit the risk of operation to an acceptable level. The UAS operator shall consider as a minimum the following: "</p>	
2156	UAS.SPEC.40 Operational risk assessment	42 - 43	<p>Page No: 42</p> <p>Paragraph No: UAS.SPEC.40(c)</p> <p>Comment: The minimum aspects of the risk assessment do not include any consideration of the potential hazard of any cargo or mail, including dangerous goods.</p> <p>Justification: Cargo and mail should be taken into account.</p> <p>Proposed Text: Insert new sub paragraph (8) "hazards</p>	

presented by any cargo or mail, including dangerous goods”

2158 UAS.SPEC.50
Operational
declaration

43

Page No: 43

Paragraph No: UAS.SPEC.50

Comment: In the absence of a clear understanding of the shape and form of the standard scenarios we are not able to determine whether or not the requirements of this Section are appropriate or can be complied with.

We believe the two paragraphs detailed below conflict with each other in terms of the submission of the operational declaration by the applicant and the receipt of the declaration by the competent authority as follows;

Paragraph (b) states: ‘Upon receipt of the declaration, the competent authority shall verify that the declaration contains all required information and documents, and shall intervene in case of a safety issue.’

This suggests that the competent authority will undertake a review process of the declaration in terms of the contents of the documents received. In case of a safety issue, the term ‘shall intervene’ suggests that any issue will be pursued prior to the declaration being accepted. However, there is no indication as to how or if the competent authority advises the UAS operator that the declaration has been accepted by the competent authority and that operation may commence.

Paragraph (d) states: ‘After submission of the operational declaration, the UAS operator shall be entitled to start the operation if all conditions and mitigations identified in the corresponding standard scenario are met.’

This suggests that once the operational declaration has been submitted, the UAS operator can immediately commence the operation without receiving confirmation from the competent authority that the review of the declaration has been assessed as satisfactory

This suggests an open-loop situation whereby any operator could potentially commence an operation that the competent authority subsequently determines to identify as containing a safety issue. That being the case, the competent authority would be in the position of informing an operator that the particular operation should cease pending confirmation/correction of the associated aspects. In order to adequately review the operation being undertaken, the competent authority should be given the opportunity of reviewing the declaration first, then, when satisfied that no safety issues exist, advise the operator that they may commence the operation.

Without having an opportunity to assure safety prior to the operation commencing, the competent authority has no means to discharge its obligations, duty of care and responsibilities under the regulation.

Justification: The competent authority should allow an operation to commence under an Operational Declaration, only when satisfied that no safety issues exist.

Proposed Text: Replace text to read as follows:

			<p><i>“(b) Upon receipt of the declaration, the competent authority shall verify that the declaration contains all required information and documents, and shall intervene in case of a safety issue. When satisfied that the declaration is acceptable, the competent authority shall notify the applicant accordingly</i></p> <p><i>(d) After submission of the operational declaration, the UAS operator shall not be entitled to start the operation unless all conditions and mitigations identified in the corresponding standard scenario are met and approval from the competent authority has been granted.”</i></p>	
2159	UAS.SPEC.70 Operations manual	44	<p>Page No: 44</p> <p>Paragraph No: UAS.SPEC.70</p> <p>Comment: We believe this requirement should be tightened further as this implies that an operator does not need to have an operations manual for all types of operation (i.e. some standard scenarios). Operators in the Specific category should be required to have some form of operations manual as a basic minimum if they are to be properly overseen by the competent authority.</p> <p>Justification: Basic minimum standards for operators, which will also assist with regulatory oversight by the competent authority during inspections and audits.</p> <p>Proposed Text: Amend to read as follows: <i>“The UAS operator shall compile an operations manual adapted to the type of operation, to include standard scenarios as issued by the Agency.”</i></p>	
2161	UAS.SPEC.80 Issuing an operational authorisation	44 - 45	<p>Page No: 44</p> <p>Paragraph No: UAS.SPEC.80(b)(2)(i)</p> <p>Comment: Typographical error. The reader is referred to the wrong section.</p> <p>Justification: Correction of text.</p> <p>Proposed Text: Adjust text to read: <i>“an operational risk assessment provided by the UAS operator pursuant to UAS.SPEC.40 has been performed;”</i></p>	
2162	UAS.SPEC.80 Issuing an operational authorisation	44 - 45	<p>Page No: 44</p> <p>Paragraph No: UAS.SPEC.80(d)</p> <p>Comment: While the intent of this rule is fully understood, we believe that the current method by which it is proposed to be achieved requires some further attention, most specifically in relation to the levels of additional workload that are being placed on the competent authorities and the associated costs involved. Like EASA, the UK CAA is required to recover its costs through fees and charges that are paid by the applicant (i.e. ‘the operator pays’), although we appreciate that many other NAA’s do not operate in this way. With the proposal as it stands:</p> <p>- The ‘host’ competent authority of the operator will incur an additional workload when liaising with the competent authority of the ‘other State’ in which the operator wishes to fly, and hence this</p>	

additional work will be charged to the operator as well.

- A competent authority will incur an additional workload when it is required (by the 'host competent authority') to assess the risk assessment of an operator from another state, but it will not be able to recover its costs for doing this (unless there is some method of exchanging charges between States or a direct method for charging the operator).

We believe that the operator (i.e. the entity that wishes to fly in another state) should be doing the majority of the work rather than the 'host competent authority' doing this work on his/her behalf, and hence it should be the operator that works with the 'other State competent authority'. This does not necessarily require a complete 're-application' to the new State however, the operator would be able to use his 'host State' approval as the basis for further liaison with the new competent authority regarding any additional local requirements.

Justification: Ensuring that the workload of competent authorities is kept to an appropriate level and that the costs for work conducted by each competent authority are properly recovered. The application should be made to the Member State where the operations are to take place.

Proposed Text: Amend to read as follows: "*(d) If an operation is conducted partially or totally in the airspace of a Member State other than the Member State of registration of the UAS operator, **the operator shall make an application to the competent authority of the Member State where the operation is intended to take place. The competent authority of the State where the operation is to take place, taking into account any operational authorisation issued by the operator's Member State, shall assess the impact of local conditions on the operation and:***

(i) If satisfied that any local requirements are already covered, issue an authorisation for that State.

(ii) If further mitigation is required to address the local conditions, liaise with the operator to address these additional risks and, once satisfied, issue an authorisation for that state."

2164 UAS.SPEC.90
Duration and
validity of the
operational
authorisation

45

Page No: 45

Paragraph No: UAS.SPEC.90(a)

Comment: We do not believe that the facility for issuing an 'unlimited duration' operational authorisation should be stated within the regulation. The competent authorities should have the ability to decide on the period of validity based upon their knowledge and experience of the operator. We must accept that there are likely to be significantly more Specific category UAS operators than there are manned operators, and so an annual oversight audit visit to each operator could require a significant increase in competent authority resource. In addition, we should also note that the majority of the Specific category operators will, in the early years at least, be predominantly relatively simple operations (i.e. ones that are only 'just above' the Open Category parameters) which will only require a fairly simple oversight process (e.g.. a 'desk top audit') rather than the formal oversight visit/audit that is suggested in the GM to Article 7.

			<p>Because of this, it might be better to run an annual renewal process (or at least leave the competent authorities with the opportunity to do this), where the onus is on the operator to apply for a renewal (including the required audit documentation - and if not, the authorisation expires), rather than have a process where the competent authority has to 'chase up' several thousand operators for their documents. We believe that this will encourage better business practices from UAS operators, which can then be rewarded by an extended authorisation period for the 'good' operators.</p> <p>Justification: This would permit a more proportionate level of regulatory oversight and allows competent authorities the flexibility to adapt as the situation develops beyond its current 'pre-evolutionary' stage.</p> <p>Proposed Text: Amend to read as follows: <i>"An operational authorisation shall be issued for a limited duration, as determined by the competent authority. It shall be valid subject to:"</i></p>	
2166	UAS.SPEC.100 Access	45	<p>Page No: 45</p> <p>Paragraph No: UAS.SPEC.100</p> <p>Comment: We find it difficult to understand the intent for including in the text <i>"whether this person is contracted to do so or not."</i> and find it potentially misleading. We believe that the authorisation of the competent authority to a person should be sufficient.</p> <p>Justification: Clarity of text</p> <p>Proposed Text: Delete final part of sentence so that it reads: <i>"For the purpose of demonstrating compliance with this Regulation, a UAS operator shall grant access to any person authorised by the competent authority at any time to any facility, document, records, data, procedures or any other material relevant to its activity subject to authorisation or declaration."</i></p>	
2167	UAS.SPEC.110 Use of certified equipment and certified UA	45	<p>Page No: 45</p> <p>Paragraph No: UAS.SPEC.110(a)</p> <p>Comment: The use of the word <i>'required'</i> in the first line <i>"If the UAS operation is required to be conducted with a certified UA or...."</i> is potentially misleading. It is unclear whether it refers to the competent authority mandating (i.e. <i>'requiring'</i>) the operator to make use of certified UA/equipment (in which case this would probably make it a Certified category operation), or whether it refers to the operator choosing or wanting to use a certified UA/equipment in order that he can benefit from the advantages that may be offered. We believe that the intent is for the second case.</p> <p>Justification: Clarity of text and intention.</p> <p>Proposed Text: Delete the words <i>'required to be'</i> so that the text reads <i>"If the UAS operation is conducted with a certified UA or...."</i></p>	
2169	SUBPART C — LIGHT UAS OPERATOR CERTIFICATE (LUC) — UAS.LUC.10	46	<p>Page No: 46 to 48</p> <p>Paragraph No: UAS.LUC.XX General comment</p> <p>Comment: The text as provided does not make it clear as to the</p>	

	Responsibility of a LUC holder		<p>expectations for operators with a LUC when connected to operations within other Member States. The text could be interpreted either that a LUC holder must still observe the cross State authorisation requirements of UAS.SPEC.80(d), or it could also be interpreted that a LUC automatically provides access to the airspace of all other Member States without further approval. The latter interpretation, without recognised standards, particularly for operator and remote pilot competencies, does not provide a basis upon which mutual recognition of risk/safety management can depend. A 'LUC operation' in a state other than the state of the operator, must be approved/overseen by the competent authority of the state within which the UA is being operated in the same way that a Specific operation authorisation is managed.</p> <p>Justification: Adequate demonstration of competent authority safety oversight (third parties).</p>	
2170	UAS.LUC.30 Management system	46 - 47	<p>Page No: 47</p> <p>Paragraph No: UAS.LUC.30 related AMC/GM</p> <p>Comment: The amount of additional AMC/GM related to the running of a management system (14 entries) appears to be excessive.</p> <p>Suggest the volume of AMC/GM entries are reviewed with the view to reducing the level of content.</p> <p>Justification: Potential for complication and confusion</p>	
2171	UAS.LUC.100 Access	48	<p>Page No: 48</p> <p>Paragraph No: UAS.LUC.100</p> <p>Comment: We find it difficult to understand the intent for including in the text "<i>whether this person is contracted to do so or not.</i>" and find it potentially misleading. We believe that the authorisation of the competent authority to a person should be sufficient.</p> <p>Justification: Clarity of text</p> <p>Proposed Text: Delete final part of sentence so that it reads: "<i>For the purpose of demonstrating compliance with this Regulation, a UAS operator shall grant access to any person authorised by the competent authority at any time to any facility, document, records, data, procedures or any other material relevant to its activity subject to authorisation or declaration.</i>"</p>	
2173	APPENDICES — Appendix I.1	49 - 50	<p>Page No: 49 to 57</p> <p>Paragraph No: Appendices</p> <p>Comment: All of the product requirements appear to assume that the UAs are only electrically powered, however there is no reason why they could not be powered in other ways, especially in Classes C3 or C4.</p> <p>It is recommended that the product requirements are adjusted to reflect the potential for alternative fuel systems (e.g. internal combustion)</p> <p>Justification: Correction of possible unintended consequences</p>	
2174	APPENDICES —	49 -	<p>Page No: 49 to 57</p>	

	Appendix I.1	50	<p>Paragraph No: Appendices</p> <p>Comment: The product requirements for the various Open category Subcategories, as listed in the Appendices to Sub Part A, do not appear to offer anything significant in the way of technical differences between the different Subclasses. The only real differentiation between the Subcategories in terms of safety of operation appears to be a different level of pilot competence, rather than any key technical aspects. Although there are requirements surrounding safe operation such as “be designed and manufactured to fly safely” and “be safely controllable by a pilot following the manufacturer’s instructions”, “Safely” is not defined in terms of what is safe or not, or what is an acceptable level of safety. Therefore, the benefits of the product requirements and UA markings are not clear.</p> <p>Justification: Clarification of what safety benefits are actually brought through the product requirements system.</p>
2178	APPENDICES — Appendix I.1	49 - 50	<p>Page No: 49</p> <p>Paragraph No: Appendix I.1 (g)(5)</p> <p>Comment: The reason for specifying these voltages is unclear, and potentially restricts technical innovation.</p> <p>Justification: Clarity and necessity of text and rationale</p> <p>Proposed Text: Amend to read as follows: <i>“if powered by electricity, be manufactured such that the voltage and current combination generated does not lead to any risk or harmful electric shock, even when the UAS is damaged”</i></p>
2179	Appendix I.2	51 - 52	<p>Page No: 51</p> <p>Paragraph No: Appendix I.2(b)</p> <p>Comment: We note the rationale for this is detailed in Annex 9 of Part B of the NPA (impact assessment Pages 119 and 120) but the rationale for the conclusion is limited to only one test case. It is unclear how this can be correlated to the potential impact forces of an (up to 899g) UA travelling at 18m/s.</p> <p>Justification: We believe the implications of such high mass, high speed UA need to be more clearly articulated.</p>
2180	Appendix I.2	51 - 52	<p>Page No: 51</p> <p>Paragraph No: Appendix I.2(d)</p> <p>Comment: We do not understand the rationale for linking a value of 5MP for the camera fitted in a UA with a requirement for electronic identification. We appreciate that this requirement for electronic identification has been included in an attempt to address privacy and security issues, but the use of a camera’s capability as the determining factor for fitment does not appear to be logical. It will not be possible to police or enforce such a limitation adequately. If it is truly considered that electronic identification is required for this class, then it should be applied throughout. Additionally, the requirement as written would mean that UA fitted with cameras that possess a recording facility, but no real time transmission capability, do not require an electronic identification system; which is not</p>

			<p>logical.</p> <p>Justification: The comment questions the logic of the requirement and addresses a potential unintended consequence.</p> <p>Proposed Text: Once an agreed clear text is established, it should be consistently applied to both Appendix I.2 and UAS.OPEN.40(b)(3).</p> <p>Either:</p> <ul style="list-style-type: none"> - Delete the whole section because electronic identification is not required for Class C1; <p>Or;</p> <ul style="list-style-type: none"> - Amend text to read as follows: <i>'(d) be equipped with an electronic identification system as per Appendix I.6.b to this Annex when using a UA Class 1 fitted with any type of sensor able to record personal data;</i> 	
2182	Appendix I.2	51 - 52	<p>Page No: 51</p> <p>Paragraph No: Appendix I.2, paragraph (i)</p> <p>Comment: We believe the product requirement to limit the UA to a nominal voltage not exceeding 24V or the equivalent AC voltage is unnecessary. This prescriptive bounding of the voltage levels appears to be based on today's current battery technology and could limit future innovation.</p> <p>Justification: Clarity and necessity of text and rationale</p> <p>Proposed Text: Amend to read as follows: <i>"if powered by electricity, be manufactured such that the voltage and current combination generated does not lead to any risk or harmful electric shock, even when the UAS is damaged"</i></p>	
2184	Appendix I.2	51 - 52	<p>Page No: 51</p> <p>Paragraph No: Appendix I.2, paragraph (k)</p> <p>Comment: Appendix 1.2(k) appears to be a repetition of Appendix 1.2(d) and could cause confusion.</p> <p>Justification: Clarity.</p> <p>Proposed Text: It is recommended to delete paragraph (k) in toto.</p>	
2185	Appendix I.2	51 - 52	<p>Page No: 52</p> <p>Paragraph No: Appendix I.2</p> <p>Comment: We believe that the requirements proposed below should be included so that the technical assurance aspects of the Class are protected:</p> <p>Justification: Tightening of requirements to ensure that the UA remains within its C1 'approval'</p> <p>Proposed Text: Add the following requirements:</p> <p><i>x. Be equipped with a system which limits/prevents the UA from operating if the software is not updated regularly</i></p>	

			<p><i>(time duration between updates to be determined based on the risk and level of reliance on technical systems)</i></p> <p>xx. Be manufactured in a way so that the systems necessary for safe flight and maintaining classification limits cannot be tampered with</p>	
2186	Appendix I.3	53 - 54	<p>Page No: 53</p> <p>Paragraph No: Appendix I.3</p> <p>Comment: The product requirements that are set out for Class C2 do not appear to add in any additional technical requirements that justify flight closer to people. Apart from the maximum mass of the UA being less than 4kg, the primary method of claiming this class to be 'safer', and hence able to be flown closer to people, appears to just be an increased level of remote pilot competence. There are no 'technical capabilities' within this product requirements set that make it safer. As a result, this brings into question the need for the separate product standards at all. Using this logic, we believe any UA with a mass of less than 4kg could be flown 'close to people'.</p> <p>Justification: Clarification of what safety benefits are actually brought through the product requirements system.</p>	
2188	Appendix I.3	53 - 54	<p>Page No: 53</p> <p>Paragraph No: Appendix I.3, paragraph (i)</p> <p>Comment: We believe the product requirement to limit UA to a nominal voltage not exceeding 48V or the equivalent AC voltage is unnecessary. This prescriptive bounding of the voltage levels appears to be based on today's current battery technology and could limit future innovation</p> <p>Justification: Clarity and necessity of text and rationale</p> <p>Proposed Text: Amend to read as follows: <i>"if powered by electricity, be manufactured such that the voltage and current combination generated does not lead to any risk or harmful electric shock, even when the UAS is damaged"</i></p>	
2189	Appendix I.3	53 - 54	<p>Page No: 53</p> <p>Paragraph No: Appendix I.3 – General comment</p> <p>Comment: There is no reference to maximum velocity or cruising speed for these craft. As these platforms can fly as close as 20m (Rotorcraft)/ 50m (Fixed Wing) to uninvolved persons, we believe consideration should be given to kinetic energy and the consequent potential to cause injury in this regard.</p> <p>There is a requirement in the Class C1 for a kinetic energy requirement; therefore it would be appropriate to set a similar requirement for this class as well if the 'technical limitations' argument is to be effective. As mentioned in a previous UK CAA comment, the operating benefits of this class appear to be solely reliant on remote pilot competence rather than any technical limitations, so the logic of the product requirements system for the separate classes is questionable.</p> <p>Justification: Clarity of rationale for the product requirements.</p>	

			<p>Proposed Text: It is recommended that an additional requirement is included which limits the maximum speed of the UA to a limit that is appropriate for use close to people.</p>	
2190	Appendix I.3	53 - 54	<p>Page No: 53</p> <p>Paragraph No: Appendix I.3</p> <p>Comment: We believe that the requirements proposed below should be included so that the technical assurance aspects of the Class are protected:</p> <p>Justification: Tightening of requirements to ensure that the UA remains within its C2 'approval'</p> <p>Proposed Text: Add the following requirements:</p> <p>(x) <i>be equipped with a system which limits/prevents the UA from operating if the software is not updated regularly (time duration between updates to be determined based on the risk and level of reliance on technical systems)</i></p> <p>(xx) <i>be manufactured in a way so that the systems necessary for safe flight and maintaining classification limits cannot be tampered with</i></p>	
2191	Appendix I.4	55	<p>Page No: 55</p> <p>Paragraph No: Appendix I.4, paragraph (g)</p> <p>Comment: We believe the product requirement to limit UA to a nominal voltage not exceeding 48V or the equivalent AC voltage is unnecessary. This prescriptive bounding of the voltage levels appears to be based on today's current battery technology and could limit future innovation</p> <p>Justification: Clarity and necessity of text and rationale</p> <p>Proposed Text: Amend to read as follows: <i>"if powered by electricity, be manufactured such that the voltage and current combination generated does not lead to any risk or harmful electric shock, even when the UAS is damaged"</i></p>	
2193	Appendix I.4	55	<p>Page No: 55</p> <p>Paragraph No: Appendix I.4</p> <p>Comment: We believe that the additional requirements proposed below should be included so that the technical assurance aspects of the Class are protected:</p> <p>Justification: Tightening of requirements to ensure that the UA remains within its C3 'approval'</p> <p>Proposed Text: Add the following requirements:</p> <p>(x) <i>be equipped with a system which limits/prevents the UA from operating if the software is not updated regularly (time duration between updates to be determined based on the risk and level of reliance on technical systems)</i></p>	

			(xx) <i>be manufactured in a way so that the systems necessary for safe flight and maintaining classification limits cannot be tampered with'</i>	
2195	Appendix I.6	57	<p>Page No: 57</p> <p>Paragraph No: I.6.a — Geofencing system</p> <p>Comment: No reference is made to the security aspects of this system, i.e. cyber security and the potential for individuals to override this function on the UA being operated. We suggest that the product requirement is amended to reflect this omission.</p> <p>Justification: Adjustment of text to address the potential for a security risk.</p>	
2196	Appendix I.6	57	<p>Page No: 57</p> <p>Paragraph No: I.6.a — Geofencing system</p> <p>Comment: There appear to be no technical requirements regarding this function or EIS, so it must be assumed that EASA will publish these subsequently. Clarity is requested regarding how the detailed technical standards for this function and EIS will be made available and when. The language surrounding "geo-fencing" and the requirements within the NPA do not seem to acknowledge the EASA/NAA position on Geo-limitation published last year [EASA/NAA Task force report issued 2 Sep 16.]. Therefore, it is not clear what the status of this paper is and the research contained within it, in relation to the proposed requirements for the geo-limitation/geo-fencing function proposed within the NPA.</p> <p>Justification: Request for clarification.</p>	
2197	Appendix I.6	57	<p>Page No: 57</p> <p>Paragraph No: Appendix I.6.a - Geofencing system</p> <p>Comment: We believe that the additional requirements proposed below should be included so that the technical assurance aspects of the system are protected:</p> <p>Justification: Tightening of requirements to ensure that the geofencing capability remains within its 'approval' parameters.</p> <p>Proposed Text: Add the following requirements:</p> <p><i>'(d) be equipped with a system which limits/prevents the UA from operating if the software is not updated regularly (time duration between updates to be determined based on the risk and level of reliance on technical systems)</i></p> <p><i>(e) be manufactured in a way so that the systems necessary for safe flight and maintaining classification limits cannot be tampered with'</i></p>	
2199	Appendix I.6	57	<p>Page No: 57</p> <p>Paragraph No: Appendix I.6.a – Geofencing system</p> <p>Comment: In respect of geofencing, it is unclear as to the intent of the need to meet ADQIR standards e.g. clarity is required as to who will design, assess, install and maintain not only the 'geofencing'</p>	

			software but its status (updates, changes to geography etc will be required). Justification: Request for clarification	
2201	Appendix I.6	57	Page No: 57 Paragraph No: I.6.b — Electronic identification system Comment: No reference is made to the security aspects of this system, i.e. cyber security and the potential for individuals to override this function on the UA being operated, or to produce/transmit false data. We suggest that the product requirement is amended to reflect this omission. Justification: Adjustment of text to address the potential for a security risk.	
2202	Appendix I.6	57	Page No: 57 Paragraph No: I.6.b — Electronic identification system Comment: There appear to be no technical requirements regarding this function (operating frequency, modulation scheme, frequency(ies), polarisation), so it must be assumed that EASA will publish these subsequently. It is unclear how the detailed technical standards for this function will be made available and when. Clarity is also requested as to whether it is EASA's intention that this function operate over unlicensed bands. Justification: Request for clarification	
2203	Appendix I.6	57	Page No: 57 Paragraph No: Appendix I.6.b - Electronic identification system Comment: We believe that the additional requirements proposed below should be included so that the technical assurance aspects of the system are protected: Justification: Tightening of requirements to ensure that the electronic identification capability remains within its 'approval' parameters. Proposed Text: Add the following requirements: <i>(f) be equipped with a system which limits/prevents the UA from operating if the software is not updated regularly (time duration between updates to be determined based on the risk and level of reliance on technical systems)</i> <i>(g) be manufactured in a way so that the systems necessary for safe flight and maintaining classification limits cannot be tampered with</i>	
2205	Appendix I.6	57	Page No: 57 Paragraph No: Appendix I.6.b, Electronic identification system, paragraph (e) Comment: The text in sub paragraph (e) refers to ' <i>altitude above ground level</i> '. We believe this term is not a correct one in aviation terms.	

			<p><i>Altitude</i> is the term used when referring to the vertical distance of an object above mean sea level.</p> <p><i>Height</i> is the term used when referring to the vertical distance of an object above a specific point.</p> <p>Additionally the term 'above the surface' is more appropriate to be used due to the potential for UAs to be operated over stretches of water.</p> <p>Justification: Accuracy in terminology being used</p> <p>Proposed Text: Amend to read as follows: "<i>(e) the geographical position of the UA and its height above the surface.</i>"</p>	
2206	Part-MRK — ANNEX II — Making available on the market — SECTION 1 — GENERAL PROVISIONS	58 - 60	<p>Page No: 58 and 59</p> <p>Paragraph No: Article II.2, sub-paragraphs f and p</p> <p>Comment: The text is unclear, it is not understood what is meant by the numbers (10) and (11) that appear respectively in these paragraphs.</p> <p>Justification: Clarity.</p>	
2208	Part-MRK — ANNEX II — Making available on the market — SECTION 1 — GENERAL PROVISIONS	58 - 60	<p>Page No: 59</p> <p>Paragraph No: Article II.2, sub-paragraph m</p> <p>Comment: It is not understood why the term 'peer evaluation' is included.</p> <p>Justification: Although this definition is provided, the term does not appear anywhere else in this document.</p>	
2211	Part-MRK — ANNEX II — Making available on the market — SECTION 1 — GENERAL PROVISIONS	58 - 60	<p>Page No: 60</p> <p>Paragraph No: Article II.4</p> <p>Comment: Typographical error.</p> <p>Justification: Correction</p> <p>Proposed Text: The text should read: "<i>...and which complies with this Regulation.</i>"</p>	
2213	SECTION 2 — OBLIGATIONS OF ECONOMIC OPERATORS	61 - 65	<p>Page No: 63</p> <p>Paragraph No: Article II.7, paragraph 5</p> <p>Comment: Typographical error.</p> <p>Justification: Correction</p> <p>Proposed Text: The text should read: "<i>...compliance with the requirements set out in Article II.3 (2) and (3).</i>"</p>	
2214	SECTION 2 — OBLIGATIONS OF ECONOMIC OPERATORS	61 - 65	<p>Page No: 63</p> <p>Paragraph No: Article II.7, paragraph 7</p> <p>Comment: Typographical error.</p> <p>Justification: Correction</p>	

			<p>Proposed Text: The text should read: <i>“Importers who consider or have reason to believe that a product which they have placed on the market is not in conformity....”. As per Article II.8 Sub-paragraph 4.</i></p>	
2215	SECTION 2 — OBLIGATIONS OF ECONOMIC OPERATORS	61 - 65	<p>Page No: 64</p> <p>Paragraph No: Article II.8, paragraph 3</p> <p>Comment: Typographical error.</p> <p>Justification: Correction</p> <p>Proposed Text: The text should read: <i>“...compliance with the requirements set out in Article II.3 (2) and (3).”</i></p>	
2217	SECTION 2 — OBLIGATIONS OF ECONOMIC OPERATORS	61 - 65	<p>Page No: 65</p> <p>Paragraph No: Article II.9</p> <p>Comment: Typographical error.</p> <p>Justification: Correction</p> <p>Proposed Text: The text should read: <i>“An importer or distributor shall be considered a manufacturer for the purposes of this Regulation and he shall be subject to the obligations of the manufacturer under Article II.5.....”</i></p>	
2230	SECTION 3 — CONFORMITY OF THE PRODU	66 - 68	<p>Page No: 66</p> <p>Paragraph No: Article II.11</p> <p>Comment: There appears to be a word missing at the start of the text</p> <p>Justification: Typographical error.</p> <p>Proposed Text: Amend to read: <i>“A product which”</i></p>	
2231	SECTION 3 — CONFORMITY OF THE PRODU	66 - 68	<p>Page No: 66</p> <p>Paragraph No: Article II.12, paragraph 2</p> <p>Comment: Typographical error.</p> <p>Justification: Correction</p> <p>Proposed Text: Delete the word “see”. <i>“...using the internal production control procedure set out in see Appendix II.1.”</i></p>	
2232	SECTION 4 — NOTIFICATION OF CONFORMITY ASSESSMENT BODIES	69 - 75	<p>Page No: 71, 72, 74 and 75</p> <p>Paragraph No: Article II.21, paragraph 10 Article II.23, paragraph 4 Article II.29, paragraph 1 Article II.31, paragraph 2 and 3</p> <p>Comment: We believe the text could be more precise.</p> <p>Justification: Increased clarity.</p>	

			Proposed Text: Amend to read as follows: <i>“Appendices II.2 and II.3”</i>
2234	SECTION 5 — UNION MARKET SURVEILLANCE, CONTROL OF ELECTRICAL EQUIPMENT ENTERING THE UNION MARKET AND UNION SAFEGUARD PROCEDURES	76 - 79	<p>Page No: 78</p> <p>Paragraph No: Article II.39, paragraph 1</p> <p>Comment: Typographical error.</p> <p>Justification: Correction</p> <p>Proposed Text: The text should read: <i>“Where, having carried out an evaluation under Article II.37(1), a Member State finds that although the product is in compliance with this Regulation...”</i></p>
2235	SECTION 5 — UNION MARKET SURVEILLANCE, CONTROL OF ELECTRICAL EQUIPMENT ENTERING THE UNION MARKET AND UNION SAFEGUARD PROCEDURES	76 - 79	<p>Page No: 79</p> <p>Paragraph No: Article II.40, paragraph 2</p> <p>Comment: Typographical error.</p> <p>Justification: Correction</p> <p>Proposed Text: The text should read: <i>“Where the non-compliance referred to in paragraph 1 persists, the Member State concerned shall take all appropriate measures to restrict or prohibit the corresponding product system...”</i>.</p>
2237	SECTION 6 — FINAL AND TRANSITIONAL PROVISIONS	80	<p>Page No: 80</p> <p>Paragraph No: Article II.42</p> <p>Comment: Typographical error.</p> <p>Justification: Correction</p> <p>Proposed Text: The text should read: <i>“Member States shall not impede, for the aspects covered by this Annex, the making available on the market or putting into service of products covered by this Annex which were placed on the market”</i></p>
2238	Appendix II.3	85 - 88	<p>Page No: 87</p> <p>Paragraph No: Appendix II.3, paragraphs 5.2 and 6</p> <p>Comment: We are unsure whether the time period of 5 years in Appendix II.3 compared to 10 years in paragraph 3.2 of Appendix II.2 on page 84 is intentional, and question whether they should they be consistent. See also Appendix II.1 paragraph 4.2 on page 81.</p> <p>Justification: Difference in quoted time periods.</p>
2239	Appendix II.4	89	<p>Page No: 89</p> <p>Paragraph No: Appendix II.4, paragraph 6</p> <p>Comment: Typographical error.</p> <p>Justification: Correction</p> <p>Proposed Text: The text should read: <i>“where the conformity assessment module in Annex II has been applied”</i>.</p>
2240	Appendix II.5	90	<p>Page No: 90</p>

			<p>Paragraph No: Appendix II.5, -paragraphs 5 and 6</p> <p>Comment: Typographical error.</p> <p>Justification: Correction</p> <p>Proposed Text: The text should read:</p> <p>Paragraph 5:</p> <p><i>"The object of the declaration described above is of Class [include the class number of the product as defined by Appendices 1.1 to 1.5 to this Regulation]</i>".</p> <p>Paragraph 6, first bullet point:</p> <p><i>"— [include the reference to this Regulation and the Appendix relevant to the class of the Product]</i>".</p>	
2241	Appendix II.6	91	<p>Page No: 91</p> <p>Paragraph No: Appendix II.6</p> <p>Comment: Typographical error.</p> <p>Justification: Correction</p> <p>Proposed Text: The text should read:</p> <p><i>"The simplified EU declaration of conformity referred to in Article 11.5 (10) shall be provided as follows:"</i></p> <p><i>"— of Class [include the class number of the product as defined by the Appendices 1.1 to 1.5 of this Regulation]</i>"</p>	
2242	AMC1 Article 7 Oversight	92	<p>Page No: 92</p> <p>Paragraph No: AMC1 Article 7 paragraph (b) & (c)</p> <p>Comment: This oversight programme appears to be an excessive burden on the resources of a competent authority for a risk based approach for these categories of operation. Competent authorities should be able to determine the appropriate level of oversight. The Regulation mandates unscheduled site inspections of operators, as well as cross border inspections. This will increase cost to industry as the competent authority would need to recover costs as part of carrying out their oversight duties.</p> <p>Justification: This AMC appears to be disproportionate to the activity.</p>	
2243	AMC2 Article 7 Oversight programme	93	<p>Page No: 93</p> <p>Paragraph No: AMC2 Article 7</p> <p>Comment: This oversight programme appears to be an excessive burden on competent authority resources. Authorities should be given the option to choose levels of proportionality in terms of conducting their oversight activities.</p> <p>Justification: Competent authorities should be able to choose the</p>	

			audit and inspection frequency schedule, using a risk based approach.	
2244	AMC3 Article 7 Oversight programme — audit and inspection	93	<p>Page No: 93</p> <p>Paragraph No: AMC3 Article 7 paragraphs (c) & (d)</p> <p>Comment: There are no finding(s) levels defined.</p> <p>Justification: There should be findings associated with oversight. This would bring this into line with other regulations, i.e. Part M, Part 21 etc.</p> <p>Proposed Text: Amend paragraph (d) to read as follows:</p> <p><i>(d) The number or levels of non-compliance identified by the competent authority may either support that authority's continuing confidence in the organisation's competence, or lead to an erosion of that confidence, and subsequently to an increase of the scale and frequency of oversight over specific operators. The findings are to be classified as follows:</i></p> <p><i>A level-one finding is any non-compliance with these requirements that could lead to uncontrolled non-compliances and which could affect the safety of an SUA operation.</i></p> <p><i>A level-two finding is any non-compliance with these requirements that is not classified as level-one.</i></p>	
2245	AMC4 Article 7 Oversight programme — follow-up	93 - 94	<p>Page No: 93 and 94</p> <p>Paragraph No: AMC4 Article 7</p> <p>Comment: There should be a level of findings system introduced, with varying timescales for corrective action. This will help determine the severity of the findings so that these may be presented objectively to the operator. We believe that three months is also too long a period when there are potential safety issues that would require immediate rectification.</p> <p>The Agency is requested to provide text to create such a system.</p> <p>Justification: Use of level findings will assist with better defined time scales.</p>	
2248	GM1 Article 9 Exchange of safety information	94	<p>Page No: 94</p> <p>Paragraph No: GM1 Article 9</p> <p>Comment: Regarding previous UK CAA comments, EASA's involvement in the sharing of safety information needs to be clarified.</p> <p>Justification: Request for clarification of the intent of this GM</p>	
2250	3.2.2 AMC to Part-UAS — SUBPARTA — Open category — AMC1 UAS.OPEN.10(a) Policy and procedures	96	<p>Page No: 96</p> <p>Paragraph No: AMC1 UAS.OPEN.10(a)</p> <p>Comment: The text of the regulation UAS.OPEN.10(a) requires the development of "policy and procedures" adapted to the operation. The AMC1 UAS.OPEN.10(a) states that the operator should "develop a safety policy and procedures if the operator employs more than one pilot". This implies that a "safety policy and procedures" is somehow different from "policy and procedures" and is only necessary if the operator employs more than one pilot.</p>	

			<p>We suggest the text in UAS.OPEN.10(a) and AMC1 UAS.OPEN.10(a) is adjusted to achieve consistency.</p> <p>Justification: Clarity and consistency</p>	
2251	GM1 UAS.OPEN.10(c) EU declaration of conformity	96	<p>Page No: 96</p> <p>Paragraph No: GM1 UAS.OPEN.10(c)</p> <p>Comment: The text is potentially confusing. We question why Class C3 or C4 are not also included.</p> <p>Justification: Correction of missing items</p> <p>Proposed Text: Amend to read as follows: <i>“should contain the same CE Class mark as the one labelled on the UA (i.e. Class CO, C1, C2, C3 or C4).</i></p>	
2252	AMC1 UAS.OPEN.20(a) Registration form	96 - 97	<p>Page No: 97</p> <p>Paragraph No: AMC1 UAS.OPEN.20(a) sub-paragraph (c)(2)(vii)</p> <p>Comment: We believe the text <i>“a list of other dangerous material on board”</i> is incorrect because UAS.OPEN.30(c)(7) does not allow the transportation of dangerous goods in the Open category..</p> <p>Justification: Correction of text to remove possible unintended consequence</p> <p>Proposed Text: Delete <i>“vii) a list of other dangerous material on board.”</i></p>	
2253	GM1 UAS.OPEN.20(b)& Registration	97	<p>Page No: 97</p> <p>Paragraph No: GM1 UAS.OPEN.20(b)&(c), first part</p> <p>Comment: We suggest the text should also include reference to the UA to be clearer.</p> <p>Justification: Clarification of text</p> <p>Proposed Text: Amend to read: <i>“Registration of the UAS operator or the UA is not required when operating a UAS with an MTOM, including payload, of less than 250 g, including:...”</i></p>	
2254	GM1 UAS.OPEN.20(b)& Registration	97	<p>Page No: 97</p> <p>Paragraph No: GM1 UAS.OPEN.20(b)&(c), second part</p> <p>Comment: The text regarding the requirement to register the UA appears to be confusing and different in meaning when compared to the text in UAS.OPEN.20 and Table 2. In particular, this GM text states that <i>any</i> UA with a C2 mark <i>must</i> be registered, but UAS.OPEN.20(1) (i.e. the actual rule) states that UA registration is not required if the MTOM is less than 900g. Given that the C2 class is quoted as having an MTOM, including payload, of less than 4kg, the GM requirements for C2 class UA of less than 900g are more stringent than the rule itself. In addition, in order to make the GM text complete, reference should also be made to UAS bearing a class C3 or C4 mark as well. (see also UK CAA comment on UAS.OPEN.20(c)(1)).</p>	

			<p>Justification: Clarity of text</p> <p>Proposed Text: Amend to read as follows:</p> <p><i>“However, the operator has to register the UA when it operates:</i></p> <p><i>— a UAS bearing a Class C2, C3 or C4 mark with an MTOM, including payload, of more than 900g; or</i></p> <p><i>— other UAS privately built or not bearing a UAS Class mark, with an MTOM, including payload, of more than 900 g. ”</i></p>	
2255	AMC1 UAS.OPEN.30(c)(Operations in first-person view (FPV)	99	<p>Page No: 99</p> <p>Paragraph No: AMC1 UAS.OPEN.30(c)(6)</p> <p>Comment: The principles stated here reflect UK CAA’s comment on UAS.OPEN.30 (c)(6) on page 36. For the Open category, this is the maximum flexibility that should be permitted for flight with the aid of a UA observer.</p> <p>Justification: Restriction of privileges within the Open category</p>	
2256	GM1 UAS.OPEN.30(c)(Dangerous goods	99	<p>Page No: 99</p> <p>Paragraph No: GM1 UAS.OPEN.30(c)(7)</p> <p>Comment: UK CAA comment to Article 2 (page 24) refers. The definitions given within GM1 UAS.OPEN.30(c)(7) (for ‘dangerous goods’ and the ‘ICAO Technical Instructions’) do not establish legally enforceable definitions as this is guidance material. These should be defined within Article 2.</p> <p>Justification: With no specified definitions, the terms as used in the GM may be open to interpretation.</p> <p>Proposed Text: Delete this GM in toto and insert the following definitions into Annex 2:</p> <p><i>‘dangerous goods’ means articles or substances capable of posing a risk to health, safety, property or the environment, included in the list of dangerous goods of the ICAO Doc 9284 ‘Technical Instructions’</i></p> <p><i>‘Technical Instructions’ means the latest effective edition of International Civil Aviation Organization (ICAO) Doc 9284 ‘Technical Instructions for the Safe Transport of Dangerous Goods by Air’, including its Supplement and any Addenda/Corrigenda thereto.</i></p> <p><i>‘cargo’ means any property carried by a UAS other than mail.</i></p> <p><i>‘mail’ means dispatches of correspondence and other items tendered by, and intended for delivery to, postal services in accordance with the rules of the Universal Postal Union (UPU).</i></p>	
2258	AMC1 UAS.OPEN.30(c)(Emergency response effort	99	<p>Page No: 99</p> <p>Paragraph No: AMC1 UAS.OPEN.30(c)(8), paragraph (b)</p> <p>Comment: Within AMC or GM, particularly for this subject, we believe that it should be appropriate that a suitable guide to what</p>	

			<p>can be considered to be 'a safe distance' is provided. Given the subject, we believe that at least 150 metres separation from an emergency response site would be appropriate.</p> <p>Justification: This will prevent personal interpretation in this matter, which could be wide ranging.</p> <p>Proposed Text: Amend to read as follows:</p> <p><i>"(b) Otherwise, a safe distance of at least 150 metres must be maintained between the UA and the emergency response site such that the UA does not interfere with, or endanger, the activities of the emergency response services....."</i></p>	
2259	AMC1 UAS.OPEN.40(a) (and UAS.OPEN.50(b) Modification of a UAS with a CE Class mark	100	<p>Page No: 100</p> <p>Paragraph No: AMC1 UAS.OPEN.40(a)(2)&(3) and UAS.OPEN.50(b)</p> <p>Comment: The text as written does not really seem to be consistent with text that we would expect for an AMC; it appears to be more appropriate to GM, or even a rule of its own which discusses such modification. In addition, the reference to UAS.OPEN.50(b) does not appear to be relevant – it is more relevant to UAS.OPEN.50(a)</p> <p>Justification: Appropriateness of text and correction of typo</p> <p>Proposed Text: Change title to "GM1 UAS.OPEN.40(a)(2)&(3) and UAS.OPEN.50(a) Modification of a UAS with a CE Class mark</p>	
2260	AMC1 UAS.OPEN.40(b) (Operational limitations	100	<p>Page No: 100</p> <p>Paragraph No: AMC1 UAS.OPEN.40(b)(1)</p> <p>Comment: It is implied by the wording that the UAs in the subcategory A1 can fly as close to 3 meters from uninvolved persons. This appears to be unsafe from a distance perspective, as C1 UAS Class platforms can operate up to a speed of 64.8 Km/h (18m/s). We believe the reaction time in the event of an emergency will be insufficient in this regard.</p> <p>Justification: Maintenance of an appropriate safety margin within the guidance</p> <p>Proposed Text: Either:</p> <p><i>"The remote pilot should reduce as much as possible the time of the UA overflying persons, and when flying close to or over people, the UA should not fly below 3 m from surface level. When flying over people below 10m from surface level, the forward speed of the UA should not exceed the equivalent of a 'fast walking pace' in order to minimise the risk to those persons" or;</i></p> <p>Or</p> <p><i>"The remote pilot should reduce as much as possible the time of the UA overflying persons, and when flying close to or over people, the UA should not fly below 3 m from surface level. When flying over people below 10m from surface level, adequate measures must be in place to minimise the risk to those persons"</i></p>	
2261	AMC1 UAS.OPEN.40(b) (and	100 - 101	<p>Page No: 100</p>	

	UAS.OPEN.60(e)(Basic competence of the remote pilot to operate in Subcategory A1 and A3		<p>Paragraph No: AMC1 UAS.OPEN.40(b)(5)(i)</p> <p>Comment: The reference in the title has a typographical error.</p> <p>Justification: Correction</p> <p>Proposed Text: The text should read: "<i>AMC1 UAS.OPEN.40(b)(5)(ii) and</i>"</p>	
2262	AMC1 UAS.OPEN.40(b)(and UAS.OPEN.60(e)(Basic competence of the remote pilot to operate in Subcategory A1 and A3	100 - 101	<p>Page No: 100</p> <p>Paragraph No: AMC1 UAS.OPEN.40(b)(5)(i) and UAS.OPEN.60(e)(1)</p> <p>Comment: No reference is made to an online test as mentioned in the implementing rules.</p> <p>Justification: Clarity and completeness.</p> <p>Proposed Text: Amend to read as follows: "<i>The acquisition of the basic competence of the remote pilot, required for UAS operation in Subcategory A1 and A3, should be supported by an online training tool and a test, covering the following elements:.....</i>"</p>	
2265	AMC1 UAS.OPEN.40(b)(and UAS.OPEN.60(e)(Basic competence of the remote pilot to operate in Subcategory A1 and A3	100 - 101	<p>Page No: 100</p> <p>Paragraph No: AMC1 UAS.OPEN.40(b)(5)(i) and UAS.OPEN.60(e)(1) – sub paragraph (a)(2)</p> <p>Comment: We believe the subjects mentioned in this section do not 'entail visual line of sight'. Rather what is described here are the essentials for safe operation <i>within</i> visual line of sight</p> <p>Justification: Accuracy of AMC/GM</p> <p>Proposed Text: Amend to read as follows:</p> <p>"(2) safe operations within visual line of sight (VLOS), which entails:</p> <p>(i) the basic principles of VLOS operations and the importance placed on it;</p> <p>(ii) keeping a safe distance from people, property, vehicles, and other airspace users;</p> <p>(iii) a specific code of conduct in case of encountering other traffic;</p> <p>(iv) respecting the height limitation(s); and</p> <p>(v) using a UA observer;"</p>	
2266	AMC1 UAS.OPEN.50(e)(Competences required for the remote pilot to obtain the certificate of competence	101	<p>Page No: 101</p> <p>Paragraph No: AMC1 UAS.OPEN.50(e)(1), paragraph (a)</p> <p>Comment: The text within paragraph (a) states that competence is demonstrated by '<i>...successfully completing a <u>theoretical test</u> in an entity approved by the competent authority</i>'. However, sub paragraph (a)(1) references '<i>performing as a remote pilot with a degree of competence appropriate to the UAS</i>'; this implies a practical flying assessment of the pilot's ability to fly the UA, which we believe is the overall intent, but the use of '<i>theoretical test</i>' does not explicitly state the need for a practical flying assessment.</p> <p>In addition, the initial text states that the CoC will be '<i>issued by the competent authority</i>', but the stated intent of the regulation is that</p>	

			<p>there is no competent authority involvement with operators in the Open category. Issuing CoCs to a potentially large number of operators in the A2 Subcategory would be a significant administrative burden on competent authorities (many of whom, like the UK CAA, would need to charge the operator for this). The CoC should be issued by the assessment entity, with the standards of the assessment entity being overseen by the competent authority.</p> <p>Justification: Clarity of the GM and AMC.</p> <p>Proposed Text: Amend to read as follows:</p> <p><i>"(a) Before starting an operation in Subcategory A2, a remote pilot should hold a certificate of competence (CoC) issued by the competent authority after they demonstrate this competence by successfully completing a theoretical and practical test in an entity approved by the competent authority..."</i></p>	
2267	AMC1 UAS.OPEN.50(e) (Competences required for the remote pilot to obtain the certificate of competence)	101	<p>Page No: 101</p> <p>Paragraph No: AMC1 UAS.OPEN.50(e)(1), paragraph (a)</p> <p>Comment: Typographical error.</p> <p>Justification: Correction</p> <p>Proposed Text: The text should read: <i>".....In addition to the basic competence defined in AMC1 UAS.OPEN.40(b)(5) (ii) and UAS.OPEN.60(e)(1), and ..."</i></p>	
2268	GM1 UAS.OPEN.50(e) (Competences required for the remote pilot to obtain the certificate of competence)	101 - 102	<p>Page No: 101/ 102</p> <p>Paragraph No: GM1 UAS.OPEN.50(e)(1)</p> <p>Comment: This appears to cause confusion as to the requirements for competence. ATO are Approved Training Organisations, however it states that the training for competence is not approved. If DTOs and ATOs offer this training for demonstration of competence, it is not clear how NAA's ensure standardisation. ATO according to the Basic Regulation is an approved training provider; therefore this should be added to their approval if they are to assess competence. We question whether this will then impact on Part ORA of the Regulation.</p> <p>In addition, the text needs to specify that a practical test is also required in order to display competence, as this cannot be achieved via theoretical means only.</p> <p>Justification: Clarification of the requirement and meaning.</p>	
2270	GM1 UAS.OPEN.50(b) and UAS.OPEN.60(b) Uninvolved persons	102	<p>Page No: 102</p> <p>Paragraph No: GM1 UAS.OPEN.50(b) and UAS.OPEN.60(b), 1st paragraph</p> <p>Comment: Typographical error.</p> <p>Justification: Correction of text</p> <p>Proposed Text: The text should read: <i>"'Uninvolved persons' means anyone not directly taking part in a UAS operation."</i></p>	
2271	AMC1	103	<p>Page No: 103</p>	

	UAS.OPEN.50(b) and UAS.OPEN.60(b) Uninvolved persons		<p>Paragraph No: AMC1 UAS.OPEN.50(b)</p> <p>Comment: It is unclear whether this distance is intended to be taken as a horizontal 'cylinder' throughout. The diagram supplied suggests a cylinder, as does the text in the first paragraph, however the second paragraph simply states '<i>...at least 20m/50m away...</i>' which suggests that an overflight in excess of 20m/50m is acceptable.</p> <p>Additionally, the text of the final paragraph mentions "<i>An rotary-wing UAS should....</i>" We don't believe this term is sufficient to cover the 'multicopter' types of UA as well, (the term is normally limited to helicopters only). We realise that the intent is to include multicopters, but the term as stated in the AMC may impose an unforeseen limitation.</p> <p>Justification: Clarification of text</p> <p>Proposed Text: All text and diagrams need to be adjusted to ensure commonality. Replace the term "<i>rotary-wing UAS</i>" with "<i>UAS which develop lift by means of vertical thrust (e.g. multicopters)...</i>"</p>
2273	AMC1 UAS.OPEN.60(b) Operations in Subcategory A3	103	<p>Page No: 103</p> <p>Paragraph No: AMC1 UAS.OPEN.60(b)</p> <p>Comment: The text is confusing.</p> <p>If the text in (a)(1), (a)(2) and (a)(3) concerning Class C0, C1 and C2 is correct (as referenced in the middle of page 17), then this is inconsistent with UAS.OPEN.60 which only refers to Class C3 and C4. UAS.OPEN.60 states that:</p> <p><i>"UAS operations in Subcategory A3 shall be performed:</i></p> <p><i>(a) with a UA:</i></p> <p><i>(1) privately built, having an MTOM, including payload, of less than 25 kg; or</i></p> <p><i>(2) Class C3, as defined in Appendix I.4 to this Annex; or</i></p> <p><i>(3) Class C4, as defined in Appendix I.5 to this Annex; "</i></p> <p>In addition, if operations can be conducted in Subcategory A3 with a Class C2 UA, we question whether this means that the C2 UA can be operated without the remote pilot having a certificate of competence which would be required for A2. If using a Class C1 UA in A3, it is questioned whether it is acceptable to not have the lost link management.</p> <p>The above could imply that UAS operations in Subcategory A2 can be conducted with a C1 or C0 UA. This is not covered by any text.</p> <p>Justification: Clarification of text and intent</p>
2275	AMC1 UAS.OPEN.60(b) Operations in Subcategory A3	103	<p>Page No: 103</p> <p>Paragraph No: AMC1 UAS.OPEN.60(b), paragraph (b)</p> <p>Comment: The text is confusing as it states: "<i>UAS in this Subcategory are not intended to be operated in congested areas or</i></p>

			<p><i>close to aerodromes or over uninvolved persons.</i>" Not operating in congested areas is true for Class C4 but not for C3 (reference page 17 and Table 2).</p> <p>Justification: Accuracy for text within the AMC</p> <p>Proposed Text: Amend to read as follows: <i>"UAS in this Subcategory are not intended to be operated in congested areas or close to aerodromes or over uninvolved persons. In addition, only Class C3 UAS within this Subcategory are intended to be operated in congested areas "</i></p>
2276	AMC1 UAS.OPEN.60(b) Operations in Subcategory A3	103	<p>Page No: 103</p> <p>Paragraph No: AMC1 UAS.OPEN.60(b), paragraph (d)</p> <p>Comment: The text states that UAS Class C4 and privately built must <i>"...keep a safety distance from the boundaries of congested areas of cities, towns or settlements, or aerodromes..."</i> but there is no guidance as to what would be considered a 'safe distance' in this instance; this is a very subjective statement and may be subject to wide ranging interpretation between enforcement authorities in different States and indeed, between different operators. This could generate an increased level of workload in answering enquiries, thus some further guidance as to what distance would be considered to be a 'safe distance' should be offered. Note that within the UK, we currently use a set distance of 150m, but we are open to a lesser distance than this being specified.</p> <p>Justification: Clarity of intent regarding safe distances</p> <p>Proposed Text: Add additional text as follows: <i>"When the operation is conducted with a privately built UAS or UAS Class C4, the remote pilot should keep the UA at a safe distance from the boundaries of congested areas or aerodromes such that no third party is endangered in case of UA malfunction or loss of control. The safe distance should be determined based on the actual performance of the UA, but should not normally be less than xxx metres."</i></p>
2279	AMC1 UAS.OPEN.70(a) Renewal of basic competence	104	<p>Page No: 104</p> <p>Paragraph No: AMC1 UAS.OPEN.70(a)</p> <p>Comment: The requirement is already for an online training course and test, suggest this remains the same as per initial criteria.</p> <p>Justification: This will allow for standardisation.</p> <p>Proposed Text: Add as follows: <i>"The remote pilot competence shall be renewed every 3 years and shall require the completion of online training with a test."</i></p>
2280	AMC1 UAS.OPEN.70(b) Renewal of certificate of competence	104	<p>Page No: 104 of 128</p> <p>Paragraph No: AMC1 UAS.OPEN.70(b)</p> <p>Comment: See earlier UK CAA comment, reference AMC1 UAS.OPEN.70(a) Renewal of basic competence</p> <p>Justification: This will allow for standardisation.</p> <p>Proposed Text: Add as follows: <i>"The remote pilot certificate of</i></p>

			<i>competence shall be renewed every 3 years;"</i>	
2281	SUBPART B — Specific category — AMC1 UAS.SPEC.10(a) Policy and procedures	105	<p>Page No: 105 of 128</p> <p>Paragraph No: AMC1 UAS.SPEC.10(a)</p> <p>Comment: We do not understand why this AMC is limited to operators that employ more than one pilot, as these requirements should apply to all. A sole pilot/ operator should also have a safety policy and procedures. Similarly, an operator with only one pilot, but a number of support personnel, will also need to compile a list of personnel and their duties.</p> <p>Justification: A sole pilot/ operator should not be exempted from these requirements.</p> <p>Proposed Text: Delete text <i>"If a UAS operator employs more than one pilot,"</i> and start the sentence with <i>"The UAS operator....."</i></p>	
2282	SUBPART B — Specific category — AMC1 UAS.SPEC.10(a) Policy and procedures	105	<p>Page No: 105</p> <p>Paragraph No: AMC1 UAS.SPEC.10(a), 2nd bullet point</p> <p>Comment: We suggest operators should also keep records of any relevant qualifications/ competencies for themselves and their pilots.</p> <p>Justification: This will allow better oversight by the National Authorities and ensure that operators only use suitably competent personnel.</p> <p>Proposed Text: Add as follows: <i>"Compile and maintain a list of personnel with assigned duties, including any certificates of competence or relevant qualifications."</i></p>	
2283	AMC1 UAS.SPEC.30(b)(Ensuring that the UAS is in a safe condition to complete the intended flight	106 - 107	<p>Page No: 106</p> <p>Paragraph No: AMC1 UAS.SPEC.30(b)(3)</p> <p>Comment: An additional point to be added under paragraph (a) is proposed below to better detail safe condition prior to OPS, i.e. inspection of platform etc. We believe that this should be the primary consideration, therefore it should appear first.</p> <p>Justification: This will ensure that operators carry out all necessary checks prior to carrying out operations.</p> <p>Proposed Text: Add additional point under paragraph (a) as follows:</p> <p><i>"(1) Ensure that the UA is in a safe condition prior to commencing operations."</i></p> <p><i>Renumber subsequent sub paras (2), (3) etc</i></p>	
2284	AMC1 UAS.SPEC.50(a) Operational- declaration form	108	<p>Page No: 108</p> <p>Paragraph No: AMC1 UAS.SPEC.50(a)</p> <p>Comment: Typographical error.</p> <p>Justification: Correction</p> <p>Proposed Text: The text should read: <i>"The UAS operator should</i></p>	

			<i>submit the document(s) indicated in point (g) together with the declaration form."</i>	
2285	GM1 UAS.SPEC.50(c) Operations conducted in a Member State other than the Member State of registration	109	<p>Page No: 109</p> <p>Paragraph No: GM1 UAS.SPEC.50(c)</p> <p>Comment: See UK CAA comments to UAS.SPEC.50 and also UAS.SPEC.80(d) We believe the responsibility for verification lies with the member state of registration. However the other member state should also at least have the opportunity to acknowledge receipt of the application. Without having an opportunity to assure safety prior to the operation commencing, the competent authority has no means to discharge its obligations, duty of care and responsibilities under the regulation.</p> <p>Justification: This ensures that the competent authority of the State where the operation takes place can be suitably aware of the operation.</p> <p>Proposed Text: See UK CAA proposed text for UAS.SPEC.50.</p>	
2286	AMC1 UAS.SPEC.60(a) Operational- authorisation application form	109 - 110	<p>Page No: 109</p> <p>Paragraph No: AMC1 UAS.SPEC.60(a)</p> <p>Comment: The operational-authorisation application form does not require detail of the handling of any cargo or mail that includes dangerous goods.</p> <p>Justification: The additional risks associated with the transport of dangerous goods are an important consideration for the operational authorisation process.</p> <p>Proposed Text: Add new paragraph as follows: <i>(j) if the proposed operation is intended to, or might, involve the carriage of cargo or mail that contains dangerous goods, this must be clearly stated within the application along with detailed procedures regarding the packing, processing and recording of these goods for each flight."</i></p>	
2288	AMC1 UAS.SPEC.70 Operations manual — minimum information	110	<p>Page No: 110</p> <p>Paragraph No: AMC1 UAS.SPEC.70</p> <p>Comment: Whilst 'To be developed' we believe the eventual text should include procedures for the carriage of dangerous goods as payload, detailing procedures for acceptance prior to loading, inspecting packages for any evidence of leakage or damage, etc. The transport of dangerous goods by air is a complex subject. UAS operations are likely to want to carry dangerous goods as cargo or mail including consumer retail supply, medical samples from remote locations for testing, etc. Limitations on the nature, quantity and packaging of the permitted dangerous goods needs to be addressed along with procedures for acceptance, loading and communication of information to emergency services. The details required in accordance with AMC2 UAS.LUC.30(b)(2) Management system (Complex Operators) (h)(3) would appear to be appropriate here too.</p> <p>Justification: The additional risks associated with the transport of dangerous goods are an important consideration for the operational authorisation process</p>	

2292	AMC1 UAS.SPEC.80 Operational- authorisation form	110	<p>Page No: 110</p> <p>Paragraph No: AMC1 UAS.SPEC.80, paragraph (b)</p> <p>Comment: The operational-authorisation form does not address the carriage of dangerous goods as cargo or mail.</p> <p>Justification: UAS operations are likely to want to carry dangerous goods as cargo or mail including consumer retail supply, medical testing, etc.</p> <p>Proposed Text: Amend to read as follows: "<i>(b) the operational limitations and conditions of the Member State of operation, including details relating to any permitted cargo or mail that includes dangerous goods;</i>"</p>
2295	GM1 UAS.SPEC.80 Recognition of an operational authorisation between EU Member States	110 - 111	<p>Page No: 110</p> <p>Paragraph No: GM1 UAS.SPEC.80</p> <p>Comment: See UK CAA comments to UAS.SPEC.80. While the intent of this requirement is fully understood, the proposed method places a significant burden on the competent authorities without any visible return for the additional time expended. We believe that the operator (i.e. the entity that wishes to fly in another state) should be doing the majority of the work rather than the 'host competent authority' doing this work on his/her behalf, and hence it should be the operator that works with the 'other State competent authority'. This does not necessarily require a complete 're-application' to the new State however; the operator would be able to use his 'host State' approval as the basis for further liaison between the operator and the new competent authority regarding any additional local requirements.</p> <p>We suggest the GM text should be adjusted to align with the UK CAA proposed text provided on UAS.SPEC.80</p> <p>Justification: Ensuring that the workload of competent authorities is kept to an appropriate level and that the costs for work conducted by each competent authority are properly recovered. The application should be made to the Member State where the operations are to take place.</p>
2298	SUBPART C — LIGHT UAS OPERATOR CERTIFICATE (LUC) — AMC1 UAS.LUC.20 Application for a LUC	112	<p>Page No: 112 to 118</p> <p>Paragraph No: SUBPART C — LIGHT UAS OPERATOR CERTIFICATE (LUC) – General comment</p> <p>Comment: The overwhelming majority (14 out of 20 entries) of the AMC/GM that has been offered for Subpart C of the UAS Regulation are specifically related to the requirements associated with the operation of a management system within the organisation. This level of detail, when compared to the remainder of the GM/AMC within Subpart C, appears to be disproportionately excessive. It gives the impression that a management system is only required for UAS operators that wish to hold a LUC (which is clearly not the case), and furthermore, it gives the impression that a management system is 'all that is required' to be able to obtain a LUC.</p> <p>The proposed Management system appears to have been copied directly from SMS for ATOs, without any appropriate adjustment of</p>

			<p>the text and its relevance is questioned.</p> <p>The requirement for a management system is not unique to the LUC, therefore much of the quoted management system 'guidance' would also apply to all Specific category operators as well (particularly the division between a complex and a non complex operator) and hence, should be included within Subpart B</p> <p>We believe that the GM/AMC associated with the LUC should be more aimed at what the LUC is, what it is intended to achieve, and what additional levels of evidence and scrutiny are involved within the application and approval process. In many cases, we still do not see what the benefits of a LUC are over a more properly constructed Specific authorisation.</p> <p>Justification: Appropriateness of content and its correct location within the Regulation</p>	
2299	SUBPART C — LIGHT UAS OPERATOR CERTIFICATE (LUC) — AMC1 UAS.LUC.20 Application for a LUC	112	<p>Page No: 112</p> <p>Paragraph No: AMC1 UAS.LUC.20, paragraph (c)</p> <p>Comment: The text At paragraph (c): <i>"a statement that all documentation submitted to the competent authority has been verified by the applicant and found to comply with the applicable requirements"</i> seems only to repeat what is stated in the last sentence of UAS.LUC.20 paragraph (b)..</p> <p>Justification: Unnecessary repetition.</p> <p>Proposed Text: Suggest delete paragraph (c).</p>	
2300	AMC1 UAS.LUC.30(a) Management system	112	<p>Page No: 112 to 118</p> <p>Paragraph No: UAS.LUC.30 related AMC/GM</p> <p>Comment: The amount of additional AMC/GM related to the running of a management system (14 entries) appears to be excessive and, in some cases, repetitive. Indeed, the determination of whether or not a UAS operator should be considered as being 'complex' is not unique to the LUC, but would apply throughout the Specific category.</p> <p>It is suggested that the volume of AMC/GM entries are reviewed with the view to reducing the level of content and applying it more appropriately throughout the AMC/GM for the Specific category</p> <p>Justification: Potential for complication and confusion.</p>	
2302	AMC1 UAS.LUC.30(b)(1) Management system	112	<p>Page No: 112</p> <p>Paragraph No: AMC1 UAS.LUC.30(b)(1), paragraph (a)(3)</p> <p>Comment: We believe that in this case, it is more appropriate to use language that is consistent with EU 376/2014 (the occurrence reporting regulation)</p> <p>Justification: Consistency of language throughout similar documents/regulations</p> <p>Proposed Text: Amend to read as follows: <i>"(3) safety reporting and internal investigations are to improve safety, and should not be used to attribute blame or liability."</i></p>	

2303	GM1 UAS.LUC.30(b)(1) Management system	113	<p>Page No: 113</p> <p>Paragraph No: GM1 UAS.LUC.30(b)(1), paragraph (a)</p> <p>Comment: EU 376/2014 (the occurrence reporting regulation) also makes reference to liability, therefore it would be appropriate to include this here</p> <p>Justification: Consistency of language throughout similar documents/regulations</p> <p>Proposed Text: Amend to as follows: <i>"The purpose of safety reporting and internal investigations is to use reported information to improve the level of safety performance of the UAS operator and not to attribute blame or liability."</i></p>
2305	AMC1 UAS.LUC.30(b)(3) - Management system	114 - 115	<p>Page No: 114</p> <p>Paragraph No: AMC1 UAS.LUC.30(b)(3), paragraph (a)</p> <p>Comment: The text states: <i>"The management system documentation of the LUC holder should be included in a safety management manual (SMM) or in the operations manual (OM)."</i> However, the text in GM1 UAS.LUC.30(b)(3) paragraph (a) on page 115 suggests that management documentation could also be a training manual.</p> <p>Justification: Consistency of text</p> <p>Proposed Text: Amend as follows: <i>"The management system documentation of the LUC holder should be included in a safety management manual (SMM), or in the operations manual (OM) or training manual."</i></p>
2306	AMC1 UAS.LUC.30(b)(4) Management system	115	<p>Page No: 115</p> <p>Paragraph No: AMC1 UAS.LUC.30(b)(4), paragraph (a)(2)</p> <p>Comment: Based on the UK CAA comment to AMC1 UAS.LUC.30(b)(3), paragraph (a), the text should also include the safety management manual (SMM).</p> <p>Justification: Increased clarification</p> <p>Proposed Text: Amend to read: <i>"(2) SMM, OMs, logbooks, and records;"</i></p>
2308	AMC2 UAS.LUC.40 Procedures for subcontractors	118	<p>Page No: 118</p> <p>Paragraph No: AMC2 UAS.LUC.40</p> <p>Comment: Typographical error.</p> <p>Justification: Correction of text</p> <p>Proposed Text: The text should read: <i>"If any activity is carried out by partner organisations or subcontractors, the LUC manual should include a relevant statement of how the LUC holder is able to ensure compliance with UAS.LUC.30(b)(5),..."</i></p>