



Notice of Proposed Amendment 2025-03 (A)

issued in accordance with Article 6 of MB Decision 01-2022

Environmental protection requirements for products not covered by ICAO Annex 16

Noise requirements for vertical take-off and landing capable aircraft (VCA)

RMT.0733 – SUBTASK 2

WHAT THIS NPA IS ABOUT		
<p>This notice of proposed amendment (NPA) proposes:</p> <ul style="list-style-type: none">— to create a delegated act to include detailed noise requirements applicable to vertical take-off and landing (VTOL)-capable aircraft (VCA) and a decision on the related acceptable means of compliance (AMC) and guidance material (GM);— to amend Annex I (Part 21) to Commission Regulation (EU) No 748/2012 for consistent implementation of the proposed new delegated act, and the related AMC and GM. <p>The proposed regulatory material is expected:</p> <ul style="list-style-type: none">— to ensure that new VCA are designed to minimise noise;— to provide a level playing field for manufacturers;— to provide certified noise levels for reference to the competent authorities responsible for land-use planning and for granting VCA operational authorisations;— to maintain a high level of environmental protection in Europe.		
<p>REGULATION INTENDED TO BE ISSUED</p> <ul style="list-style-type: none">— Commission Delegated Regulation (EU) 20YY/XXXX on noise requirements for VCA <p>REGULATION INTENDED TO BE AMENDED</p> <ul style="list-style-type: none">— Commission Regulation (EU) No 748/2012	<p>ED DECISIONS INTENDED TO BE ISSUED AND AMENDED</p> <p>ED Decisions that issue the AMC and GM to support the application of those regulations</p>	
<p>AFFECTED STAKEHOLDERS</p> <p>Design organisation approval holders, production organisation approval holders, EU Member States and national competent authorities</p>		
WORKING METHODS		
Development	Impact assessment(s)	Consultation
By EASA	Light	NPA – public
<p>RELATED DOCUMENTS/INFORMATION</p> <ul style="list-style-type: none">— Terms of References RMT.0733 Issue 2, issued on 12 December 2024		
<p>PLANNING MILESTONES: Refer to the latest edition of the EPAS Volume II.</p>		



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1. About this NPA

1.1. How this regulatory material was developed

The European Union Aviation Safety Agency (EASA) identified the need to certify the designs of newly developed vertical take-off and landing (VTOL)-capable aircraft (VCA) for noise. According to Article 19(1)(a) of Regulation (EU) 2018/1139¹ (the Basic Regulation), there is no alternative to rulemaking to provide standardised requirements for the noise certification of VCA.

This rulemaking activity is included in the 2025 edition of Volume II of the *European Plan for Aviation Safety (EPAS)*² under Rulemaking Task (RMT).0733 (Subtask 2).

EASA developed the regulatory material in question in line with the Basic Regulation and the rulemaking procedure³, and in accordance with the objectives and working methods described in the terms of reference for this RMT⁴.

1.2. How to comment on this NPA

The draft regulatory material is hereby submitted for public consultation.

Notice of proposed amendment (NPA) 2025-03 is divided into three parts, (A), (B) and (C). The present document, NPA 2025-03(A), includes the background information pertaining to the regulatory proposal. NPA 2025-03 (B) includes the proposed new delegated act that includes VCA noise requirements, and related acceptable means of compliance (AMC) and guidance material (GM). NPA 2025-03 (C) includes proposed amendments to Annex I (Part 21) to Commission Regulation (EU) No 748/2012 for consistent implementation of the VCA noise requirements for certification, and the related AMC and GM.

Please submit your comments using the **comment-response tool (CRT)** available at <http://hub.easa.europa.eu/crt/>⁵.

To facilitate the collection and technically support the subsequent review of comments by EASA in an efficient, controlled and structured manner, stakeholders are kindly requested to submit their

¹ Regulation (EU) 2018/1139 of the European Parliament and of the Council of 4 July 2018 on common rules in the field of civil aviation and establishing a European Union Aviation Safety Agency, and amending Regulations (EC) No 2111/2005, (EC) No 1008/2008, (EU) No 996/2010, (EU) No 376/2014 and Directives 2014/30/EU and 2014/53/EU of the European Parliament and of the Council, and repealing Regulations (EC) No 552/2004 and (EC) No 216/2008 of the European Parliament and of the Council and Council Regulation (EEC) No 3922/91 (OJ L 212, 22.8.2018, p. 1), <http://data.europa.eu/eli/reg/2018/1139/oj>.

² EASA, *European Plan for Aviation Safety (EPAS), Volume II – EPAS actions – 2025 edition*, <https://www.easa.europa.eu/en/document-library/general-publications/european-plan-aviation-safety-epas-2025>.

³ EASA is bound to follow a structured rulemaking process as required by Article 115(1) of Regulation (EU) 2018/1139. Such a process has been adopted by the EASA Management Board (MB) and is referred to as the 'rulemaking procedure'. See MB Decision No 01-2022 of 2 May 2022 on the procedure to be applied by EASA for the issuing of opinions, certification specifications and other detailed specifications, acceptable means of compliance and guidance material ('Rulemaking Procedure'), and repealing Management Board Decision No 18-2015 (<https://www.easa.europa.eu/en/the-agency/management-board/decisions/easa-mb-decision-no-01-2022-rulemaking-procedure-repealing-mb>).

⁴ EASA, 'ToR RMT.0733 – Environmental protection requirements for products not covered by ICAO Annex 16', EASA website, 12 December 2024, <https://www.easa.europa.eu/en/document-library/terms-of-reference-and-rulemaking-group-compositions/tor-rmt0733>.

⁵ In the event of technical problems, please send an email with a short description to crt@easa.europa.eu.



comments to the respective predefined segments of the NPA within the CRT and refrain from submitting specific comments or all their comments to the 'General comments' segment.

Further, once all comments are placed in the respective predefined segments, there is no need to submit them (as a PDF attachment) to the 'General comments' segment.

The deadline for the submission of comments is **21 November 2025**.

1.3. The next steps

Following the consultation on the draft regulatory material, EASA will review all the comments received and will duly consider them in the subsequent phases of this rulemaking activity.

Considering the above, EASA may:

- issue an opinion proposing a new Commission delegated regulation including noise requirements for VCA and amendments to Commission Regulation (EU) No 748/2012; the opinion will be submitted to the European Commission, which will consider its content and decide whether to issue the related regulations;
- issue decisions issuing and amending AMC and GM to support the application of these regulations.

When issuing the opinion and decisions, EASA will also provide feedback to the commentators on how the comments were considered in a comment-response document (CRD), which will be published on the EASA website.



2. In summary – why and what

2.1. Why we need to act

New air mobility concepts based on innovative technologies, such as VCA, have emerged in recent years. VCA operations create new opportunities for the transportation of passengers or cargo in different geographical areas, including congested urban areas. VCA operations could become widely deployed in Europe in the future and create new noise-related nuisances, as they will operate closer to populations than other aircraft or rotorcraft.

The European Commission has recently adopted a package of regulations⁶ to provide a consistent regulatory framework for innovative air mobility. These regulations lay down provisions to ensure and maintain the necessary level of safety as regards airworthiness and operations for technologies such as VCA and unmanned aircraft systems.

These regulations do not relate to environmental protection and thus do not provide the requirements to ensure the environmental compatibility of VCA.

The following sections provide more details on the issue to be addressed by this NPA.

2.1.1. Description of the issue

The 2021 EASA study on the societal acceptance of urban air mobility in the EU⁷ revealed that noise is the second main concern of EU citizens, after safety. The study identified various factors that influence citizens' noise perception and confirmed that noise is one of the limiting factors for the successful introduction of urban air mobility in EU cities.

To mitigate the annoyance caused by VCA and to contribute to their societal acceptance, VCA should be designed to minimise noise. This can be achieved through the noise certification of VCA.

However, the current EU regulatory framework does not provide noise requirements applicable to the certification of VCA. The current noise requirements applicable to the noise certification of aircraft are the standards and recommended practices (SARPs) in Volume I of Annex 16 to the Chicago Convention (ICAO Annex 16) as implemented in Article 9 of the Basic Regulation.

While ICAO Annex 16 Volume I contains noise SARPs for helicopters and tilt-rotors, some specific design characteristics of VCA make the direct use of those SARPs technically impossible. For example, ICAO Annex 16 Volume I does not include appropriate source noise correction to the level of detail needed for VCA, which hinders repeatability and accuracy; and lower noise measurement heights are needed because the expected noise levels of VCA are lower than those of helicopters and tilt-rotors. Moreover, EASA considers that hover noise should be measured and reported to ensure that its noise signature is taken into account in the certification scheme, which is not required in the noise SARPs of ICAO Annex 16 Volume I.

Unlike for safety, the EU regulatory framework does not allow EASA to establish a certification basis for environmental protection that would include the prescription of special conditions for the cases

⁶ EASA, 'European Commission adopts regulatory package, giving go-ahead for VTOL operations and air taxis', EASA website, 10 April 2024, <https://www.easa.europa.eu/en/newsroom-and-events/news/european-commission-adopts-regulatory-package-giving-go-ahead-vtol>.

⁷ EASA, '[Urban air mobility \(UAM\)](#)'



where Volumes I, II and III of ICAO Annex 16 do not contain applicable SARPs. Hence, in the absence of any noise requirements applicable to VCA, their noise certification is not possible.

It should be noted that certification authorities in other world regions have already started to update their regulations to include noise requirements for VCA. In the United States, the Federal Aviation Administration is working to develop noise certification processes for these novel designs and in the meantime publishes ‘rules of particular applicability’ or ‘G-3 issue papers’ for individual projects. In Brazil, the National Civil Aviation Agency (ANAC) recently published an airworthiness certification procedure for the Embraer EVE-100⁸ for consultation and will introduce a policy framework to develop noise standards for VCA. The Japan Civil Aviation Bureau (JCAB) is considering handling the noise requirements of ongoing VCA applications by publishing noise standards for each model. The International Civil Aviation Organization (ICAO) is currently developing noise SARPs for ‘emerging technology aircraft’; however, the timing of this initiative is undetermined, and priority is currently given to smaller unmanned aircraft systems.

2.1.2. Who is affected by the issue

The issue described in Section 2.1.1 will have an impact on the following stakeholders:

- the general public,
- manufacturers, and
- competent authorities.

2.1.3. How could the issue evolve

A lack of action could lead to:

- a low level of environmental protection for EU citizens;
- market distortion between, on the one hand, VCA and, on the other hand, helicopters and tilt-rotors that would perform similar operations to VCA and for which noise requirements already exist in ICAO Annex 16 Volume I Chapters 8 and 11; and
- limitations on the ability of EU Member States to assess the noise impact of VCA operations.

2.1.4. Conclusion on the need for rulemaking

Based on the above considerations and on the assessment in Chapter 3, EASA concluded that the development of regulatory material is necessary.

2.2. What we want to achieve – objectives

The overall objectives of the EASA system are defined in Article 1 of the Basic Regulation. The regulatory material presented here is expected to contribute to achieving these overall objectives by addressing the issue described in Section 2.1.

More specifically, with the regulatory material presented here, EASA intends:

⁸ ANAC, Portaria Nº 15760/SAR, 31 October 2024, <https://www.anac.gov.br/assuntos/legislacao/legislacao-1/portarias/2024/portaria-15760>.



- to ensure that new VCA are designed to minimise noise;
- to provide a level playing field for manufacturers;
- to provide certified noise levels for reference to the competent authorities responsible for land use planning and for granting VCA operational authorisations;
- to maintain a high level of environmental protection in Europe.

2.3. How we want to achieve it – overview of the proposed amendments

In the absence of applicable SARPs in Volumes I, II and III of ICAO Annex 16, the only way forward for the environmental protection certification of products in accordance with the Basic Regulation is the development of detailed noise requirements in a delegated act that would be designated by EASA as a basis for certification in accordance with Annex I (Part 21) to Commission Regulation (EU) No 748/2012. Section 2.3.1. provides more details on the legal basis.

This NPA proposes to:

- create a delegated act to include detailed noise requirements applicable to VCA and a decision covering the related AMC and GM;
- amend Annex I (Part 21) to Commission Regulation (EU) No 748/2012 for the consistent implementation of the proposed new delegated act, and the related AMC and GM.

2.3.1. New delegated act and related acceptable means of compliance and guidance material

a. Proposal

The proposed delegated act on detailed noise requirements applicable to VCA contains noise limits that support the noise minimisation of VCA designs.

In addition, the proposed delegated act contains a standardised method to determine VCA noise levels. This should ensure that all VCA designs are certified uniformly across the EU and should contribute to the level playing field for manufacturers.

This NPA proposes an overarching delegated act that would apply to products in the absence of applicable SARPs in Volumes I, II and III of ICAO Annex 16 and for which new requirements would need to be developed in accordance with the terms of reference of RMT.0733. It is proposed to introduce the noise requirements for VCA in an Annex I (Part-NVCA) to the proposed delegated act. New annexes to that new regulation could be subsequently introduced as needed with additional environmental protection requirements (e.g. for noise certification of other designs or for emissions).

Subsection 2.3(d) below provides the detailed rationale behind the structure and content of the delegated act, and the related AMC and GM.

b. Legal basis

According to the second subparagraph of Article 9(2) of the Basic Regulation, the essential requirements for environmental compatibility of products, for which Volumes I, II and III of ICAO Annex 16 as referred to in the first subparagraph do not contain applicable environmental protection requirements, are set out in Annex III to that regulation, which requires that the product be designed to minimise noise and emissions.



The legal basis for the development of detailed environmental protection requirements to implement the essential requirements in Annex III of the Basic Regulation is Article 19(1)(a) of that regulation, which empowers the Commission to adopt delegated acts in accordance with Article 128 of that regulation.

The legal basis for the issuance of AMC and GM for the application of the delegated acts is Article 76(3) of the Basic Regulation.

c. Applicability date

EASA intends to issue an opinion in the fourth quarter of 2026 at the latest (see Volume II of EPAS 2025) so that the delegated act can be adopted in early 2027. EASA has not targeted a specific applicability date for this regulatory material. It will depend on the progress of this RMT and should be the same as the entry into force of the delegated act.

The decision containing the related AMC and GM should be applicable at the same date as the delegated act.

d. Rationale for the proposed regulatory material

The proposed regulatory material is composed of the following.

- A cover regulation lays down environmental protection requirements for the certification of products in accordance with Commission Regulation (EU) No 748/2012. This cover regulation was designed in such a way as to enable the inclusion of environmental protection requirements for other products than VCA and other environmental domains (e.g. emissions) in the future.
- Annex I (Part-NVCA), laying down the noise requirements for VCA, is structured as follows:
 - Subpart A specifies the scope and applicability of the requirements;
 - Subpart B establishes the requirements for the determination of VCA certification noise levels;
 - Subpart C prescribes the noise limits that VCA shall meet;
 - Subpart D specifies the reporting requirements;
 - the appendices contain detailed provisions necessary for the determination of the VCA certification noise levels.

Technical background to the proposed requirement

The regulatory text contained in Annex I (Part-NVCA) is based on the environmental protection technical specifications (EPTS) that EASA published on 16 July 2024 for VCA equipped with tilting rotors⁹ and on 12 December 2023 for VCA equipped with non-tilting¹⁰ rotors. These EPTS were provided to VCA manufacturers that want to determine the noise levels of their products in accordance with a standardised method developed by EASA. The content of these EPTS was derived from legacy standards in Chapters 8 and 13 of ICAO Annex 16 Volume I as detailed hereafter.

⁹ See: [Environmental Protection Technical Specifications applicable to VTOL-capable aircraft powered by tilting rotors](#)

¹⁰ See: [Environmental Protection Technical Specifications applicable to VTOL-capable aircraft powered by non-tilting rotors](#)



The EPTS for VCA with non-tilting rotors were based on the SARPs for helicopters in Chapter 8 of ICAO Annex 16 Volume I, due to the similarity in design characteristics and the vast experience gathered in implementing the related SARPs internationally by most aircraft-noise-certificating authorities (with close to 250 records in EASA's noise database) since their applicability began in 1985.

Note: Chapter 11 of ICAO Annex 16 Volume I, which is applicable to helicopters with a maximum take-off mass that does not exceed 3 175 kg, was considered when developing the EPTS but eventually ruled out, as it contains only one reference flight procedure (i.e. overflight), which is not sufficient to capture VCA noise signatures properly, and some VCA under development already exceed 3 175 kg.

The EPTS for VCA with tilting rotors were developed based on the SARPs in Chapter 13 of ICAO Annex 16 Volume I, which applies to tilt-rotors. Chapter 13 is technically identical to Chapter 8. However, it accounts for the nacelle angle parameter (i.e. the tilting angle of the arm over which the engines are mounted) and includes two flight modes for the overflight procedure, instead of only one in Chapter 8. The SARPs in Chapter 13 are the result of years of technical developments such that they are considered a robust basis for the proposed noise requirements for VCA with tilting rotors.

The proposed regulatory text is largely based on the SARPs of Chapters 8 and 13 of ICAO Annex 16 Volume I and the related guidance material in ICAO Doc. 9501, with some adaptations to the EASA regulatory framework. It is organised according to the requirements in the proposed new Regulation (EU) 20YY/XXXX accompanied by the related AMC and GM, to follow a logical sequence: how to measure the noise, how to process the resulting noise data, which noise limits apply and how to report to the Agency.

Noise evaluation metrics

The noise evaluation metric retained for the take-off, overflight and approach procedures is the effective perceived noise level (EPNL) as in Chapters 8 and 13 of ICAO Annex 16 Volume I. EPNL is more complex than other metrics (e.g. sound exposure level) that are directly available in common sound level meters. However, the use of EPNL is widely implemented among most noise-measuring organisations and its implementation is considered a reasonable burden on VCA applicants.

The noise evaluation metric retained for the hover is the A-weighted equivalent continuous sound pressure level (L_{Aeq}), which is commonly used to measure and communicate on aviation noise. EPNL cannot be used for hover, since the measured noise is constant.

Test equipment

The test equipment necessary to measure noise must meet similar quality standards to those in Chapters 8 and 13 of ICAO Annex 16 Volume I. It is adapted to prevent the use of outdated noise- or weather-measuring equipment (e.g. analogue tapes). To measure the position of the VCA during the test, only augmented global navigation satellite systems are allowed. The use of a photographic scaling method is considered insufficiently accurate and therefore not permitted.

Reference procedures

The proposed take-off, overflight and approach reference procedures are based on those in Chapters 8 and 13 of ICAO Annex 16 Volume I.

In addition to the take-off, overflight and approach reference procedures, the proposed requirements include a reference procedure for hover. The noise generated during hover is expected to be the highest from the four procedures and should be considered for certification to capture the inherent noise signature of the VCA without any influence from flight performance parameters. The hover



procedure can be considered a proxy for the vertical take-off and vertical landing. ANAC and the JCAB have recently indicated that they would also mandate a hover noise measurement and use the corresponding procedure in EASA's EPTS as a benchmark.

The main differences between the proposed regulatory text and Chapters 8 and 13 of ICAO Annex 16 Volume I are listed below.

- A requirement is added to identify and report the noisiest configuration for all reference procedures, while Chapters 8 and 13 require this only for the approach reference procedure. Due to the relative lack of knowledge of VCA noise signatures, it is proposed to add this requirement to ensure that the certified noise levels capture the noise generated during operations.
- For all reference procedures, the test height tolerance (i.e. difference between reference height and actual test height) is expanded to accommodate the expected lower noise signature of VCA than helicopters and tilt-rotors. The concept of a targeted test height provides flexibility to the applicant and ensures that the VCA noise can be measured (i.e. above the ambient noise).
- For the take-off, overflight and approach procedures, the measured noise adjustments to the reference trajectories (i.e. adjustments for distance and for the effects of atmospheric absorption, and source noise correction) are adapted to VCA considering the targeted test height, which may be quite lower than the reference height, and more flexible source noise corrections due to the variety of VCA designs and noise signatures.

Noise limits

Noise limits that shall not be exceeded for the noise certification of VCA are proposed for the take-off, overflight and approach reference procedures. These limits are identical to those in Chapter 8 of ICAO Annex 16 Volume I applied to current new helicopters (Section 8.4.2 of ICAO Annex 16 Volume I), which are lower than the limits for tilt-rotors. While VCA are expected to produce lower noise signatures than helicopters, they are brought to market with business cases comparable to those of helicopters. Acknowledging the need for a level playing field between products with comparable business cases and considering the present lack of available VCA noise data, the Agency proposes to initially use the same limits for VCA as for helicopters.

No noise limits are proposed for hover, since there are no SARPs for hover in ICAO Annex 16 Volume I. Therefore, for the noise certification of VCA for the hover reference procedure, the noise levels shall be measured and reported.

The requirements for the noise certification of VCA may be revised in the future once enough VCA noise data has been collected through certification projects.

2.3.2. Amendment to Commission Regulation (EU) No 748/2012 and the related acceptable means of compliance and guidance material

a. Proposal

This NPA proposes to amend Annex I (Part 21) to Commission Regulation (EU) No 748/2012 and the related AMC and GM to include the link to the proposed delegated act and to ensure its consistent implementation for certification.



The proposed implementation ensures that the proposed delegated act applies only in cases where Volumes I, II and III of ICAO Annex 16 do not contain applicable SARPs.

While initially related to VCA noise certification, the reference to the overarching delegated act in Annex I (Part 21) to Commission Regulation (EU) No 748/2012 should permit the application of any subsequent (if any) environmental protection requirements that would be added in that delegated act.

b. Legal basis

The legal basis for amending Commission Regulation (EU) No 748/2012 is Article 19(1) of the Basic Regulation, and specifically Article 19(1)(d) regarding the conditions for issuing type certificates and for changes to such certificates.

The legal basis for the issuance of AMC and GM for the application of the delegated acts is Article 76(3) of the Basic Regulation.

c. Applicability date

The applicability date of the amendments to Annex I (Part 21) to Commission Regulation (EU) No 748/2012 and the related AMC and GM should be consistent with (and at least not earlier than) the applicability date of the proposed delegated act.

d. Rationale for the proposed regulatory material

Table 1 summarises the rationales behind the proposed amendments to Annex I (Part 21) to Commission Regulation (EU) No 748/2012 and its related AMC and GM. The proposed regulatory material is provided in **NPA 2025-XX(C)** (see Chapter 4).

Table 1: Rationales for proposed amendments

Points/AMC/GM	Rationale
21.B.85 GM2 21.B.85 GM1 21.B.85(b)	<p>Applicable environmental protection requirements</p> <p>21.B.85 is amended to include an introductory sentence that specifies that the applicable environmental protection requirements are those applicable to the product at the date of application for certification.</p> <p>21.B.85(a), with the amended introductory sentence, is the same as the current 21.A.85(a), which refers to the Basic Regulation. However, the term ‘essential’ is deleted because it was wrongly introduced with Regulation (EU) 2025/1065. The essential requirements are in the second subparagraph of Article 9(2) of the Basic Regulation and not in the first subparagraph.</p> <p>21.B.85(b) is added to refer to the proposed delegated act (Regulation (EU) 20YY/XXXX).</p> <p>GM2 21.B.85 is amended to add a paragraph 3 to refer to Regulation (EU) 20YY/XXXX.</p> <p>GM1 21.B.85(b) is added to refer specifically to Annex I (Part-NVCA) to Regulation (EU) 20YY/XXXX.</p>
21.B.425 Appendix VII	Noise certificates

GM1 Appendix VII GM2 Appendix VII	<p>A new EASA Form 45c with its title is added in Appendix VII to be used to attest the noise certification of an individual VCA that complies with Part-NVCA) of Regulation (EU) 20YY/XXXX. The related GM2 Appendix VII explains how to fill in EASA Form 45c.</p> <p>GM2 Appendix VII refers to ‘the EASA certification noise levels database’. This database will be created for VCA after the first VCA have been certified for noise.</p> <p>A title is added to the existing EASA Form 45.</p> <p>A note is added at the bottom of each form to explain the use of each form.</p>
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2.4. What are the stakeholders’ views

The guidelines in the EPTS for VCA equipped with tilting and non-tilting rotors (see Section 2.3.1) were developed considering the contribution of key stakeholders through technical workshops and the comments received during the EPTS public consultations in 2023 and 2024.

These guidelines allow the VCA manufacturers to determine the noise levels of their products, but they cannot be used for the noise certification of VCA.

During the development and consultation of the EPTS, European VCA manufacturers and operators and national authorities expressed the need for a harmonised measurement procedure associated with noise limits to certify the noise of their VCA designs. This feedback has supported the development of the VCA noise requirements as proposed in this NPA.



3. Expected benefits and drawbacks of the proposed regulatory material

The proposed regulatory material is expected to bring the following benefits:

- a high level of environmental protection for EU citizens,
- increased ability of Member States to grant operational authorisations,
- a level playing field between VCA manufacturers and operators through reduced risks of non-harmonised local noise-related operating restrictions in Member States.

The main drawbacks are the additional noise certification costs for manufacturers, which are assessed to be low (see economic impacts below).

The proposed regulatory material has no safety impact and no social impact on EU citizens.

Impacts on environmental protection are positive: the proposed noise requirements are designed to mitigate the risk of exposing EU citizens to unacceptable noise levels caused by VCA operations. The noise measurement procedures were designed to be relevant to typical VCA operations, and maximum permitted noise levels were set for various flight conditions. Thus, the requirements will contribute to maintaining a high and uniform level of environmental protection in the EU.

Economic impacts are both positive and negative.

Positive economic impacts are:

- a level playing field for VCA manufacturers and for VCA operators through mitigating the risk of non-harmonised local noise requirements or operating restrictions in each Member State,
- a level playing field for VCA and helicopters/tilt-rotors, as noise requirements already apply to the latter.

Negative economic impacts include the following.

- Manufacturers will incur a one-off cost to develop a process for the demonstration of compliance with the new noise requirements, and recurring costs to demonstrate the compliance of each new product or product change. These are considered low compared with the full development and certification costs for a VCA, and meeting the proposed noise limits is considered technically feasible.
- Competent authorities will incur recurring costs to issue noise certificates for VCA. These are considered comparable to the costs linked to the issuance of noise certificates for conventional aircraft and rotorcraft.



4. Proposed regulatory material

Please refer to:

- NPA 202X-XX (B) – Proposed new delegated act (Regulation (EU) 20YY/XXXX) and the related AMC and GM,
- NPA 202X-XX (C) – Proposed amendments to Annex I (Part 21) to Commission Regulation (EU) No 748/2012 and the related AMC and GM.



5. Monitoring and evaluation

EASA plans to monitor as follows whether the objectives described in Section 2.2 will be achieved by means of the regulatory material.

EASA plans to publish the certified noise levels on its website, as is done with other aircraft categories (currently every three months). The Agency will also publish time trends in certified VCA noise levels in the European aviation environmental report (EAER) it publishes every three years. This will enable it to monitor whether the proposed noise standard leads to actual noise reductions.

Through the Member States' Advisory Body (MAB) and the European Aviation Environment Group (EAEG), EASA also plans to collect regular feedback from competent authorities on how they use the published VCA noise data to inform land-use planning and issue operating authorisations. Through the Stakeholder Advisory Body (SAB) and the EAEG, the Agency will also collect feedback from stakeholders, including manufacturers and non-governmental organisations, on how the VCA noise requirements and AMC/GM may be revised based on lessons learned from past certification projects and day-to-day VCA operations.



6. Proposed actions to support implementation

In order to support affected stakeholders in the implementation of the new regulatory material, EASA may organise dedicated workshops and presentations about the VCA noise requirements for the MAB and the SAB.



7. References

Annex 16 'Environmental Protection' to the Convention on International Civil Aviation, Volume I, up to Amendment 14.

ICAO Doc. 9501, *Environmental Technical Manual*, Volume I, third edition.

EASA, 'Environmental protection technical specifications applicable to VTOL-capable aircraft powered by non-tilting rotors', 12 December 2023, <https://www.easa.europa.eu/en/downloads/139022/en>.

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Appendix – Quality of the NPA

To continuously improve the quality of its documents, EASA welcomes your feedback on the quality of this document with regard to the following aspects.

Please provide your feedback on the quality of this document as part of the other comments you have on this NPA. We invite you to also provide a brief explanation, especially when you disagree or strongly disagree, so that we consider this for improvement. Your comments will be considered for internal quality assurance and management purposes only and will not be published (e.g. as part of the comment-response document).

1. The regulatory proposal is of technically good/high quality

Please choose one of the options

Fully agree / Agree / Neutral / Disagree / Strongly disagree

2. The text is clear, readable and understandable

Please choose one of the options

Fully agree / Agree / Neutral / Disagree / Strongly disagree

3. The regulatory proposal is well substantiated

Please choose one of the options

Fully agree / Agree / Neutral / Disagree / Strongly disagree

4. The regulatory proposal is fit for purpose (achieving the objectives set)

Please choose one of the options

Fully agree / Agree / Neutral / Disagree / Strongly disagree

5. The regulatory proposal is proportionate to the size of the issue

Please choose one of the options

Fully agree / Agree / Neutral / Disagree / Strongly disagree

6. The regulatory proposal applies the better regulation principles^[1]

Please choose one of the options

Fully agree / Agree / Neutral / Disagree / Strongly disagree

7. Any other comments on the quality of this document (please specify)

^[1] For information and guidance, see:

- https://ec.europa.eu/info/law/law-making-process/planning-and-proposing-law/better-regulation-why-and-how_en;
- https://ec.europa.eu/info/law/law-making-process/planning-and-proposing-law/better-regulation-why-and-how/better-regulation-guidelines-and-toolbox_en.

