

ADVANCE -NOTICE OF PROPOSED AMENDMENT (A-NPA) No 13-2006

Aircraft Noise Documents

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A. EXPLANATORY NOTE

I. General

1. The purpose of this Advance-Notice of Proposed Amendment (A-NPA) is to solicit comments on the system for administering noise information of an individual aircraft. The comments provided in response to this A-NPA will be considered in determining the Agency's rulemaking activities in this field. The scope of this A-NPA is described in more detail below.
2. The Agency is directly involved in the rule-shaping process. It assists the Commission in its executive tasks by preparing draft regulations, and amendments thereof, for the implementation of Regulation (EC) No 1592/2002 of the European Parliament and the Council of 15 July 2002 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency ¹(hereinafter referred to as "the Basic Regulation") which are adopted as "Opinions" (Article 14.1). It also adopts Certification Specifications, including Airworthiness Codes and Acceptable Means of Compliance and Guidance Material to be used in the certification process (Article 14.2).
3. When preparing its rulemaking decision the Agency is required to follow a structured process as described in the EASA rulemaking procedure². Such process may include preliminary consultation in those cases where the Executive Director concludes that additional consultation is required prior to the decision to embark on the drafting/NPA/consultation procedure. This may be the case for rulemaking in new areas or in cases where there are several courses for action and general input is desired before deciding on the approach to take. The A-NPA will allow for the publication of consultation papers seeking opinions and input on, for example, a choice of different rulemaking options to address a specific need.
4. This rulemaking activity is included in the Agency's rulemaking programme for 2006. It implements the rulemaking task 21.040.
5. The text of this A-NPA has been developed by the Agency. It is submitted for consultation of all interested parties in accordance with Article 43 of the Basic Regulation and Articles 5(3), and 14 of the EASA rulemaking procedure.

II. Consultation

6. To achieve optimal consultation, the Agency is publishing the A-NPA on its internet site. Comments should be provided within 3 months in accordance with Article 14 of the EASA rulemaking procedure. Article 14 states that the duration of the consultation period is determined by the Executive Director: the standard period for NPA has been chosen in this case.

¹ Regulation (EC) No. 1592/2002. OJ L 240, 7.9.2002, p.1., Regulation as last amended by Regulation (EC) No. 1701/2003 OJ L 243, 27.9.2003, p. 5

² Decision of the Management Board concerning the procedure to be applied by the Agency for the issuing of opinions, certification specifications and guidance material ("rulemaking procedure"): EASA MB/7/03, 27.6.2003.

7. Comments on this proposal may be forwarded (*preferably by e-mail*), using the attached comment form, to:

By e-mail: NPA@easa.europa.eu

By Fax: +49(221) 89990 5508

By correspondence: Process Support Unit
Rulemaking Directorate
EASA
Ref: A-NPA 13-2006
Postfach 10 12 53
D-50452 Köln
Germany

8. Comments should be received by the Agency **before 23 November 2006**. If received after this deadline they might not be treated. Comments may not be considered if the form provided for this purpose is not used.

III. Comment response document:

9. All comments received in time will be responded to and incorporated in a comment response document (CRD). This may contain a list of all persons and/or organisations that have provided comments. The CRD will be widely available on the Agency's website.

IV. Background

Historic overview of noise documentation

10. The problems caused by aircraft noise were recognised as an international problem in the 1960s and a special meeting was held in 1969 under the auspices of the International Civil Aviation Organisation (ICAO) to address them. In that meeting the Committee on Aircraft Noise (CAN) was established and the need, criteria and method for aircraft noise certification were agreed in principle. When discussing the administrative requirements, the meeting agreed that these requirements should, broadly, be similar to those for Airworthiness Certification. The significance of this derives from the Chicago Convention³, which is the international treaty that regulates international aviation. One of its main principles is that States accept the operation of the aircraft from other States over and into their territory, provided these aircraft meet minimum agreed standards and that such is stated in documents that are carried on board of the aircraft. Thus it was decided that a document for noise was required to be carried on board of the aircraft.
11. It was agreed that the document attesting compliance with the applicable noise certification standards could be in the form of either a separate "Noise Certificate" or a statement contained in another document approved by the state of registry and required by that state to be carried on the aircraft. Such documentation should provide, in addition to the basic aircraft information, a statement of additional modifications, if any, incorporated for the purpose of

³ Convention on International Civil Aviation, signed at Chicago on 7 December 1944.

compliance with the applicable noise certification standards and the maximum mass at which compliance with these standards had been demonstrated. Such document (or system of documents) is generally referred to as noise documentation. Volume I of Annex 16 to the Chicago Convention on International Civil Aviation contains the Standards and Recommended Practices related to aircraft noise (hereinafter referred to as “Annex 16 Vol. I”).

Development of the noise documentation system in ICAO

12. Over time the noise certification status of an aircraft became an important aspect. This is related to several factors:
 - Aircraft manufacturers were interested in designing aircraft as quiet as possible. The noise levels determined as part of the process for noise certification were important parameters in that they were used to compare different designs. The mere availability of good quality noise levels has been an important element in promoting quiet designs.
 - Airport operators have been using noise certification levels as a criterion for operating restrictions, allowing or banning certain aircraft or certain operations on their airport.
 - Certificated noise levels have often been the basis for airport noise charges and used to classify aircraft for calculating their contribution to the total noise exposure around airports.
13. As such the significance of the noise certificate changed from being a mere proof of compliance to a kind of diploma of merit and it was considered necessary in 1975 to add the actual noise levels to those items that were listed in the noise documentation.
14. Important parameters that influence the certificated noise levels are the aircraft take-off and landing masses for which they are determined. Initially the certificates were issued for the maximum structural mass of the aircraft, but as Air Traffic Control and noise charges became more important, manufacturers limited the maximum take-off mass and/or landing mass of their aircraft to improve their certificated levels. Another important parameter, particularly in the approach phase, is the flap setting of the aircraft. Manufacturers routinely provide supplemental data on noise levels in approach with lower flap settings.
15. As the administrative provisions in Annex 16 Vol I did not contain a standardised format for noise documentation, many different formats and systems developed over time. The data items in the various systems differed in content and definition. This led to problems with the growing use of the noise documentation as described above. In its fifth (2001) meeting the Committee on Aviation Environmental Protection (CAEP) that had taken over the work of the CAN, agreed to investigate the implementation of the administrative aspects of noise certification and the possibilities for standardizing the noise documentation.
16. The group that was tasked with this work agreed on a list of items that should be mentioned in the noise certification documentation and proposed guidance material on the exact contents and meaning of those items. The group was not able to recommend a single format for the noise documentation as three different types of systems had developed around the world, each with its own merits. Each of the systems in the end provides the same data; they differ in the way they are implemented. At its following meeting CAEP (CAEP/6) decided to include guidance material in the ICAO Standard recommending that states standardize on one of these options (Annex 16, Vol. I Attachment G).

17. The options were:

Option 1: A Noise Certificate where all information is contained in a single one page document.

Option 2: Two complementary documents.

Option 3: Three complementary documents.

18. These options and their backgrounds are described in more detail under the proposed options summarised later in this A-NPA:

Establishment of current European legislation

19. While the above ICAO standardisation work was being performed in ICAO, the EASA Basic Regulation and implementing procedures were also in development. In anticipation of the outcome of the ICAO work a proposal was made to use Option 1 for the European system, as this reflected what seemed to be a majority position of European members participating in the CAEP process. The vast majority of the current 25 EU countries was also already using this or a very similar system. The Commission had on its side also a strong preference for this option and decided therefore to include it in its proposed implementing rule. No comment was made on this point when that draft was circulated for comments in 2003 and Commission Regulation 1702/2003⁴ enshrines this option in Subpart I of its annex called Part 21. As such the system will be in effect on 28 March 2007.⁵

Why this A-NPA

20. When the final decision of CAEP/6 was adopted on 23 February 2005 as Amendment 8 to Annex 16, Vol. I, some minor differences existed between the format of the noise certificate as recommended by ICAO Amendment 8⁶ and the European implementation (EASA Form 45⁷). Part of the Notice of Proposed Amendment (NPA15-2005, published on the Agency's website on 14 July 2005) aimed therefore at removing these differences, which were of an editorial nature.
21. However, several comments were received indicating concerns with this limited adaptation to the ICAO Standard. Some had expected that Member States would be given the choice between the three different options suggested by ICAO. This seems incompatible though with the provisions of the Basic Regulation, which requires common standards across the whole community. It would therefore not be possible to leave Member States to decide what option they prefer. Such a choice has to be done at Community level and has to be implemented to all Community operators without discrimination. Conversely, if it were decided to use the

⁴ Commission Regulation (EC) No. 1702/2003 of 24 September 2003 laying down implementing rules for the airworthiness and environmental certification of aircraft and related products, parts and appliances, as well as for the certification of design and production organisations. OJ L 243, 27.9.2003, p.6.

⁵ Currently a transition phase is in effect which allows Member States to continue to issue noise certificates in accordance with applicable national regulations.

⁶ Annex 16, Attachment G Guidelines for the administration of noise certification documentation, Figure G-1 Noise certificate.

⁷ Annexed to section B of Part 21.

flexibility built in the ICAO standard, then the choice should be left to the owners/operators of the aircraft so as to place all of them on a level playing field.

22. This A-NPA is aimed primarily at obtaining the views of all affected stakeholders on which noise documentation system would be preferable for Europe.

The functions of noise certification documentation

23. Before looking at possible administrative systems to implement noise documentation, it is important to have a clear understanding of the current functions of the noise documents from a regulatory perspective and to examine what criteria could be used to evaluate pros and cons of the possible systems:
 - Contracting states are required to recognise noise documents specified in Annex 16 Vol. I. Such documents are a condition to gain access to other ICAO States' airspace, as permitted under the ICAO Chicago Convention and Annex 16 Vol. I. For this purpose any document which demonstrates that the aircraft meets the applicable noise requirements and contains the prescribed information is sufficient.
 - Noise certification values are used as a discriminator for access to airports (ranging from full interdiction to partial curfews) or for calculating landing fees, as part of airport authorities' policies to reduce the impact of noise. For these purposes clear and correct noise certification data must be readily and easily available to avoid costly and lengthy administrative verifications by airport operators or the systematic use of the most stringent data.

Description of possible administrative systems

24. Six possible alternative options for administration of noise documents are considered here. Note that these options refer back to ICAO options, which may be confusing. Whenever the ICAO Option is meant this is clearly indicated by the use of the word "ICAO" before the word Option.

25. *Option 1. ICAO Option 1 or Do nothing*

This would mean continuing to implement ICAO Option 1 as already reflected in Part 21, amended to adjust Form 45 to the ICAO template. In this administrative system the document attesting noise certification takes the form of a separate Noise Certificate that contains all necessary information items. Only one certificate per aircraft serial number is issued. This system requires a certain involvement of the competent authorities of the State of registry (NAAs). It must ascertain conformity of the individual aircraft with an approved type configuration prior to the issuance of the document. Every time the aircraft's noise characteristics change, the NAA must go through this process again, revoke the old document and issue a new noise document. This makes the system less flexible and difficult to administer when there are frequent changes to the aircraft characteristics that influence its noise certification levels.

26. All information on the noise characteristics is readily available in one document. Little technical expertise is required to find the certificated noise levels of the aircraft, which helps the users of the information.

27. Appendix 1 to this A-NPA contains the recently updated Form 45 as will be mandatory for all European states shortly.⁸

28. *Option 2. ICAO Option 2*

The second option is to switch to ICAO Option 2, which is an administrative system consisting of two documents, designated in this A-NPA as 2A and 2B. Document 2A attests noise certification but is limited to identification of the aircraft and the statement of compliance. This would be in the form of a (limited) Noise Certificate. The other information items would be transferred in a series of complementary noise documents 2B, normally as an approved page of the Aircraft Flight Manual (AFM) or Aircraft Operating Manual (AOM). The series of documents cover all possible noise configurations for the aircraft or possibly for a whole family of aircraft, or even for all aircraft in the fleet of one operator.

29. This system reduces the administrative burden on applicants and the NAA, because all possible noise configurations of one aircraft are covered in one set of papers normally approved as part of the Type Certification process. Once the aircraft type is certified, no changes to the documentation are needed when the aircraft configuration changes from one certified configuration to another.
30. A disadvantage of this option is that the number of different listed configurations can be large. This is due to the fact that the information is normally contained in the AFM, and aircraft manufacturers often try to make these manuals generic. Hence, all possible combinations of take-off mass, landing mass, engines and technical modifications can be listed for the type. For a large transport category aircraft this can amount to several hundred different configurations, which are listed in one or more AFM noise appendices covering close to 100 pages. It should be noted here that the ICAO guidelines specify in Annex 16, Vol. I, Attachment G, section 2.3.3.2 that it should be obvious from the documentation which one of the configurations is applicable at any given time.
31. The burden of identifying or verifying an aircraft configuration and tracking changes falls on the user of the noise data. Interpreting the data and deciding which configuration is applicable requires understanding of technical details and could require physical inspection of the aircraft or its technical documentation. This system is less transparent to the user, and may lead to users taking conservative approach where, for instance, regulations for noise related landing fees are based on the noisiest possible configuration.
32. An example of a possible implementation of this system is provided in Appendix 2 to this A-NPA.
33. *Option 3. ICAO Option 3*

The third option proposes an administrative system consisting of three documents designated in this A-NPA as document 3A, a series of documents 3B and a third document 3C. The first document (3A) is identical to document 2A of Option 2, and attests noise certification.

⁸ Until no later than 28th of March 2007 there is a transition phase which allows member states to continue issuing noise certificates in accordance with applicable national regulations, see Article 2.3(d) of Commission Regulation (EC) No 1702/2003 of 24 September 2003 laying down implementing rules for the airworthiness and environmental certification of aircraft and related products, parts and appliances, as well as for the certification of design and production organisations. OJ L 243.

34. The series of documents (3B) is also similar to that of Option 2. Information items are transferred via a series of noise documents in the format of 2B, normally as approved pages of the AFM or AOM. The series covers all possible noise configurations for the aircraft or possibly for a whole family of aircraft or even for all aircraft in the fleet of one operator.
35. Document 3.C is issued in accordance with a regulated process. It identifies the current aircraft configuration by associating a unique identifier to the actual Maximum Take-off Mass (MTOM) that is active. This option thus builds on the second option but adds a document (or computerized process) that tracks the changes of the aircraft. The system makes it possible to track frequent changes to the aircraft noise characteristics (e.g. daily or every individual flight) when it is administrated by the operator or owner of the aircraft. Thus, if an airline operates into airports that have noise charges, or noise zoning systems, which are dependent on the aircraft noise certification levels this option creates an incentive for the operator to reduce operating masses. Such mass reductions lead to a reduction of noise charges and, depending on the system of noise zoning, make more operations into or out of noise limited airports possible. In general such a system is preferred by operators that want to make the best use of the available noise 'capacity' at an airport.
36. The system is simpler to use than Option 2, as the user of the noise information can determine the valid noise certification values without much technical knowledge or investigation.

A possible implementation of Option 3 is provided in Appendix 3 to this A-NPA.

37. *Option 4. Choice between the three ICAO options.*

As the needs of different owners or operators may differ it could also be envisaged to provide them with the choice between the three different systems. Note that this would have to be implemented in all EU Member States in order to have common standards across the Community. This option would of course create a bigger burden for NAAs.

38. *Option 5. The American system*

The American system⁹ is very close to ICAO Option 2, but without a separate noise certificate. Noise requirements are defined as part of the airworthiness requirements and thus the Certificate of Airworthiness fulfils the role of the document 2A, attesting compliance with the noise requirements. The noise and configuration information is listed in the flight manual, which often contains information for many different aircraft configurations. When there is no obligation to carry the AFM, and with it the noise information, on board the aircraft, this makes it more difficult to administer the noise information by those who need such information, as described under item 23 above. It is doubtful therefore whether such system meets the requirement that the noise documentation must be carried on board of the aircraft as specified in Annex 16 Vol I.

39. *Option 6. Additional statements to the noise certificate*

The question could be asked if the flexibility that is sought in the options 2 to 4 above could not be obtained in a different way. As explained previously, the flexible systems are desired by those operators that want to optimize their use of a given noise budget or to minimize their noise charges by taking into account operational variations in MTOM. This is not the prime purpose of noise certification. The primary purpose of noise certification is to ascertain that a

⁹ This system is also used by several other countries.

certain level of technology is incorporated in aircraft designs. A mere decrease in MTOM does not really change the technology level of the aircraft. It is more a reflection of the well known fact that a decrease of MTOM leads to a decrease of fly-over noise levels on take-off.

40. It is conceivable that additional statements (additional to Form 45) about the noise from an aircraft would be issued by the NAA. This would provide noise levels that are more representative of the actual operation of the aircraft. An important advantage would be that such statements could not only take into account the effect of lower take-off mass, but also the effect of lower flap setting on approach or other operational aspects that influence the noise levels received by those living around airports. Note that the latter two aspects are not normally possible on the noise certificate as the certification requirements prescribe the configuration and operating conditions in which the aircraft must be measured. In principle additional statements could even take into account the effects of the use of noise abatement procedures. As such this option would be more effective in creating an incentive to use minimum noise operating techniques than just issuing different noise documents every time the MTOM changes.
41. At the request of, and paid for by an applicant, EASA could validate the data which would form the basis of such additional statements. Proper systems would need to be implemented by the airport authority to ascertain adherence to the conditions under which the statement had been issued to the operator. It would be essential to avoid confusion between the noise certificate and the noise statement, and this could be achieved by explicitly stating on the statement that it is not a noise certificate. Only the Form 45 noise certificate is able to provide proof that the aircraft meets the applicable noise requirements specified in the ICAO Chicago convention and Annex 16 Vol. I.
42. A possible implementation of Option 6 is provided in Appendix 4. Note that nothing in the ICAO system forbids the States to provide supplemental information as long as it is clearly stated. In fact it is already today quite common to provide supplemental noise data such as noise levels for other than reference flap settings or for masses lower than the MTOM. Option 6 is thus an addition on top of the basic ICAO system

Roles and tasks of EASA and NAAs

43. In order to understand the consequences of the different options some information is provided in the following section on the role and tasks of EASA and the NAAs in the noise certification process.
44. ***EASA's role***

For every aircraft type, EASA determines the technical data that shall be entered into the noise certification documentation. As part of the investigation carried out to approve the issuance of the type certificate, the Agency determines what, if any, are the applicable noise certification requirements, monitors the noise testing of the aircraft and approves the final test report data. All information that is relevant for issuance of the noise document is entered in the Type Certificate Data Sheet for Noise (TCDS-N) which is officially published via the agency's website. It provides information on the applicable noise standards, the main aircraft technical data (model, engine etc) and the certificated noise levels. If Option 6 is chosen, EASA would have to extend its database to include conditions other than certification reference conditions.

45. In order to monitor the application of the Basic Regulation and its Implementing Rules by NAAs, the Agency conducts standardisation inspections in the fields covered by Article 1(1) of the Basic Regulation. In this context, the Agency verifies that the NAAs use the administrative procedure that is prescribed in Regulation 1702/2003, OJ L 243 for issuing noise documentation and reports its findings to the Commission.

46. *NAAs' role*

NAAs are tasked with performing sufficient investigation activities for an applicant for, or a holder of, a noise document to justify the issuance, maintenance, amendment, suspension or revocation of the noise document. This includes evaluation of eligibility, evaluation of the documentation received with the application, and/or inspection of aircraft.

47. If the NAA establishes that an individual aircraft conforms to one of the aircraft types that has been approved by the Agency, it will issue or maintain the noise document for that individual aircraft. It will also provide data items that are specific to the aircraft such as the registration mark, serial number etc. If, as under Options 2 to 5, the noise documentation contains more than one noise configuration, the NAA would have to verify that all of these conform to EASA approved configurations. The NAA of the Member State of registry will, as necessary, amend noise documents and enforce the related Regulations.

V. Regulatory Impact Assessment and questions

Safety

48. EASA does not expect these options to have any impact on safety.

Economic

49. The economic impact of the different options depends broadly on the following factors:
1. Whether non-EU operators use administrative systems that are different from the EU system, and whether those differences would lead to unequal treatment of operators.
 2. Whether the different administrative systems have different economic effects on NAAs, operators or other parties (regardless of the non-EU systems).
 3. Whether the different systems would lead to different overall costs of the administrative system.
50. Options 1, 3 and 6 would meet the requirements specified the ICAO convention and Annex 16 Vol. I regarding the recognition of noise certificates and the conditions for free access which is of course of eminent importance in view of the international character of aviation. This is less certain for options 2, 4 and 5 as in these options it is not clear if the minimum information as required in Annex 16 Vol. I will be on board the aircraft. If this were not the case, a difference would have to be filed with ICAO Annex 16.
51. If applicants are given the choice between the three ICAO systems (Option 4), this would lead to a more complex and costly administration for NAAs. Option 2 puts most of the administrative burden and costs on the users of the noise data. Options 2, 3, 4, 5 and 6 would lead to additional work during the type certification of the aircraft as more configurations would have to be identified and verified.

52. For Options 3 and 4 (because it contains option 3), in order to gain the maximum flexibility, operators must be able to change their noise certification status without the need to involve NAAs. A regulated system should then be installed to audit the fair application and administration of the configuration changes. This would come at an additional cost.
53. In Option 2, 3, 4, 5 and 6 there would be the costs of verification of the additional data and in Option 6 the cost of implementing and administrating the additional statements. Although the administrative process could be performed in parallel with the already existing process for noise certificates, there would be additional costs associated with it. In option 6, the adherence to the actual configuration, operational conditions and operational procedures would be a matter between the operator and the user of the noise data, normally an airport authority.
54. EASA would like to receive input on the following questions. Which system would have the best guarantees for equal treatment of all operators and why? Are there other economic effects that need to be taken into account when considering the options?

NAAs are in particular asked to review the differences in costs (both start-up and recurring) between the above six options and the effects on their tariffs (if any) for applicants of such documents.

Environmental

55. EASA is of the opinion that the administrative system of noise certification has a positive effect on the environment. Low noise levels are an important marketing argument for aircraft manufacturers and operators and the noise certification system helps in mobilise market forces to reduce aircraft noise. High quality, accurate noise data that can be easily accessed helps to differentiate between different aircraft designs and promotes competition on this aspect. The Agency believes therefore that a simple and transparent system, such as the one page noise certificate of Option 1, is preferable to systems that are more difficult to administer and use. This was one of the main arguments that led to the initial choice of Option 1 for the EU. Another argument for Option 1 is that the noise levels in this system will be less influenced by day to day variations in operational mass and will therefore be more representative of the general level of noise reduction technology incorporated in the design of the aircraft.
56. It can also be argued that the greater flexibility in Options 2, 3, 4, 5 and 6 will benefit the environment as these contain an incentive to operate at lower take-off masses where possible. Option 6 would be better than Options 2 to 5 because other effects that have a positive influence on the noise around airports would also be included.
57. On the other hand such a system would only be an incentive for noise restricted airports. And on such airports it would probably lead to more flights, and in the end would not lead to reduction of the net noise exposure of those living around it.
58. State of the art methods to calculate noise exposure around airports already take into account the effects of operational aircraft mass and actual operating procedures. As such it could be argued that the added complexity and administration of a system like Option 3 or 6 is not warranted.
59. The Agency would like to receive input on this subject. Would any of the systems be more beneficial than others in terms of improving the environment around airports?

Social

60. EASA does not believe the choice of systems would have any social effect other than those covered under the environmental section.

Equity and fairness

61. Are there any other effects than those discussed above that lead to unequal or unfair treatment that need to be taken into account? The systems differ in where the administrative burden lies. Option 1 puts more of the burden on the aircraft owner or operator. Option 2 and, to a lesser extent, Options 3 and 6 seem to put more of the burden on the users of the noise data. What would be a fair system for all involved (such as industry, airlines, airport authorities stakeholders, NAAs, EASA, people living around airports)?

VI. Questions

62. To summarize, EASA would like to receive answers on the following questions:
1. The main question is: which of the described options would be the best overall system from both the environmental and economic perspective for Europe and why?
 2. EASA would be interested to receive comments on whether the ICAO condition that it should be obvious which configuration is applicable at any given time, is met in known implementations of options 2 and 5.
 3. If non EU operators use administrative systems that are different from the EU system, would these differences lead to unequal treatment of operators? If so, what would be the magnitude of the inequality?
 4. Would the different systems have different economic effects on operators or other parties (regardless of the non-EU systems)? If so what would be the magnitude of those?
 5. Which system would have the best guarantees for equal treatment of all operators and why?
 6. Would the different systems lead to different overall administrative costs and, if so, what would these be?
 7. Are there possibilities to reduce the administrative and economic burden of the system of noise certification?
 8. Are there other effects that need to be taken into account when considering the options? NAAs are in particular asked to review the cost differences (both start-up and recurring) of the above six alternatives and the effects on their tariffs (if any) for applicants of such documents.
63. EASA is interested in any other comments, data, views and proposals for improvement on the subject which would help to decide whether a change in the system would be beneficial for Europe. It would be very helpful if the answers would contain concrete estimates of the costs and benefits of the different Options.

B. APPENDICES

For use by State of registry	1. <State of Registry>		3. Document Number: 1 2 3 4 5	
2. NOISE CERTIFICATE				
4. Nationality and Registration Marks: XX-YYY	5. Manufacturer and Manufacturer's Designation Of Aircraft: BOEBUS 740		6. Aircraft Serial Number: 12345	
7. Engine: GRC 2500		8. Propeller: * N/A		
9. Maximum Take-Off Mass (kg) 77,000	10. Maximum Landing Mass(kg)* 64,500	11. Noise Certification Standard: ICAO Annex 16 Chapter 3		
12. Additional modifications incorporated for the purpose of compliance with the applicable noise certification standards: None				
13. Lateral/Full-Power Noise Level: 93.6 EPNdB	14. Approach Noise Level: 96.2 EPNdB	15. Flyover Noise Level: 87.4 EPNdB	16. Overflight Noise Level* N/A	17. Take-off Noise Level* N/A
Remarks EASA Noise TCDS ID: A469				
18. This Noise Certificate is issued pursuant to Annex 16, Volume I to the Convention on International Civil Aviation dated Dec. 7, 1944 and Regulation (EC) No. 1592/2002, Article 6 in respect of the above-mentioned aircraft, which is considered to comply with the indicated noise standard when maintained and operated in accordance with the relevant requirements and operating limitations.				
19-. Date of Issue dd mm yyyy Signature				

Document 1A

No other documents are issued under this option.

A-NPA No 13-2006
Appendix 2, possible implementation for Option 2

For use by State of registry	1. <State of Registry>	3. Document Number: 1 2 3 4 5
2. NOISE CERTIFICATE		
4. Nationality and Registration Marks: XX-YYY	5. Manufacturer and Manufacturer's Designation Of Aircraft: BOEBUS 740	6. Aircraft Serial Number: 45678
18. This Noise Certificate is issued pursuant to Annex 16, Volume I to the Convention on International Civil Aviation dated Dec. 7, 1944 and Regulation (EC) No. 1592/2002, Article 6 in respect of the above-mentioned aircraft, which is considered to comply with the indicated noise standard when maintained and operated in accordance with the relevant requirements and operating limitations.		
19-. Date of Issue dd mm yyyy Signature		

Document 2A

Approved noise configuration				
AFM/AOM number: AOM 123	5. Manufacturer and Manufacturer's Designation Of Aircraft: BOEBUS 740		Config ID: A474	
7.Engine: GRC 2500		8. Propeller: * N/A		
9. Maximum Take-Off Mass (kg) 77,000	10. Maximum Landing Mass(kg)* 66,000	11. Noise Certification Standard: ICAO Annex 16/I Chapter 3		
12. Additional modifications incorporated for the purpose of compliance with the applicable noise certification standards:				
13. Lateral/Full-Power Noise Level: 93.6EPNdB	14. Approach Noise Level: 96.4 EPNdB	15. Flyover Noise Level: 87.4 EPNdB	16. Overflight Noise Level* N/A	17. Take-off Noise Level* N/A
Remarks				

Document 2B – 1

Approved noise configuration				
AFM/AOM number: AOM 123	5. Manufacturer and Manufacturer's Designation Of Aircraft: BOEBUS 740		Config ID: A469	
7.Engine: GRC 2500		8. Propeller: * N/A		
9. Maximum Take-Off Mass (kg) 77,000	10. Maximum Landing Mass(kg)* 64,500	11. Noise Certification Standard: ICAO Annex 16/I Chapter 3		
12. Additional modifications incorporated for the purpose of compliance with the applicable noise certification standards:				
13. Lateral/Full-Power Noise Level: 93.6EPNdB	14. Approach Noise Level: 96.2 EPNdB	15. Flyover Noise Level: 87.4 EPNdB	16. Overflight Noise Level* N/A	17. Take-off Noise Level* N/A
Remarks				

Document 2B - 2

Appendix 2, possible implementation for Option 2

Approved noise configuration				
AFM/AOM number:	5. Manufacturer and Manufacturer's Designation Of Aircraft:			Config ID:
AOM 123	BOEBUS 740			A472
7.Engine: GRC 2500		8. Propeller: * N/A		
9. Maximum Take-Off Mass (kg) 72,000		10. Maximum Landing Mass(kg)* 64,500		11. Noise Certification Standard: ICAO Annex 16/I Chapter 3
12. Additional modifications incorporated for the purpose of compliance with the applicable noise certification standards:				
13. Lateral/Full-Power Noise Level: 93.7EPNdB	14. Approach Noise Level: 96.2 EPNdB	15. Flyover Noise Level: 85.2 EPNdB	16. Overflight Noise Level* N/A	17. Take-off Noise Level* N/A
Remarks				

Document 2B - 3

Approved noise configuration				
AFM/AOM number:	5. Manufacturer and Manufacturer's Designation Of Aircraft:			Config ID:
AOM 123	BOEBUS 740			A473
7.Engine: GRC 2500			8. Propeller: * N/A	
9. Maximum Take-Off Mass (kg) 78,00		10. Maximum Landing Mass(kg)* 64,500		11. Noise Certification Standard: ICAO Annex 16/I Chapter 3
12. Additional modifications incorporated for the purpose of compliance with the applicable noise certification standards:				
13. Lateral/Full-Power Noise Level: 93.8EPNdB	14. Approach Noise Level: 96.2 EPNdB	15. Flyover Noise Level: 83.1 EPNdB	16. Overflight Noise Level* N/A	17. Take-off Noise Level* N/A
Remarks				

Document 2B - 4

Approved noise configuration				
AFM/AOM number:	5. Manufacturer and Manufacturer’s Designation Of Aircraft:			Config ID:
AOM 123	BOEBUS 740			A465
7.Engine: GRC 2500			8. Propeller: * N/A	
9. Maximum Take-Off Mass (kg) 68,000		10. Maximum Landing Mass(kg)* 63,000		11. Noise Certification Standard: ICAO Annex 16/I Chapter 3
12. Additional modifications incorporated for the purpose of compliance with the applicable noise certification standards:				
13. Lateral/Full-Power Noise Level: 93.8EPNdB	14. Approach Noise Level: 96.0 EPNdB	15. Flyover Noise Level: 83.1 EPNdB	16. Overflight Noise Level* N/A	17. Take-off Noise Level* N/A
Remarks				

Document 2B - 5

Approved noise configuration				
AFM/AOM number:	5. Manufacturer and Manufacturer's Designation Of Aircraft:			Config ID:
AOM 123	BOEBUS 740			A471
7.Engine: GRC 2500		8. Propeller: * N/A		
9. Maximum Take-Off Mass (kg) 77,000		10. Maximum Landing Mass(kg)* 64,500		11. Noise Certification Standard: ICAO Annex 16/I Chapter 3
12. Additional modifications incorporated for the purpose of compliance with the applicable noise certification standards:				
13. Lateral/Full-Power Noise Level: 93.6EPNdB	14. Approach Noise Level: 94.1 EPNdB	15. Flyover Noise Level: 86.4 EPNdB	16. Overflight Noise Level* N/A	17. Take-off Noise Level* N/A
Remarks				
MOD ABC123 (Inlet treatment)				

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Appendix 2, possible implementation for Option 2

Approved noise configuration				
AFM/AOM number:	5. Manufacturer and Manufacturer's Designation Of Aircraft:			Config ID:
AOM 123	BOEBUS 740			A462
7.Engine: GRC 2500			8. Propeller: * N/A	
9. Maximum Take-Off Mass (kg) 68,000		10. Maximum Landing Mass(kg)* 63,000		11. Noise Certification Standard: ICAO Annex 16/I Chapter 3
12. Additional modifications incorporated for the purpose of compliance with the applicable noise certification standards:				
13. Lateral/Full-Power Noise Level: 93.8EPNdB	14. Approach Noise Level: 93.9 EPNdB	15. Flyover Noise Level: 83.1 EPNdB	16. Overflight Noise Level* N/A	17. Take-off Noise Level* N/A
Remarks MOD ABC123 (Inlet treatment)				

Document 2B - 7

Approved noise configuration				
AFM/AOM number:	5. Manufacturer and Manufacturer's Designation Of Aircraft:			Config ID:
AOM 123	BOEBUS 740			A470
7.Engine: GRC 2500			8. Propeller: * N/A	
9. Maximum Take-Off Mass (kg) 77,5000		10. Maximum Landing Mass(kg)* 66,000		11. Noise Certification Standard: ICAO Annex 16/I Chapter 3
12. Additional modifications incorporated for the purpose of compliance with the applicable noise certification standards:				
13. Lateral/Full-Power Noise Level: 93.6EPNdB	14. Approach Noise Level: 96.4 EPNdB	15. Flyover Noise Level: 87.4 EPNdB	16. Overflight Noise Level* N/A	17. Take-off Noise Level* N/A
Remarks MOD CDE456 (JN Package)				

Document 2B - 8

For reasons of brevity only 8 different configurations have been given in this example. In reality there can be less, but also many more, up to several hundred different configurations in document 2B.

The configuration which is actually applicable to a particular aircraft has to be determined by investigating which matches the aircraft. This may involve technical inspections and consultation of the aircraft technical documentation.

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Appendix 3, possible implementation for Option 3

For use by State of registry	1. <State of Registry>	3. Document Number: 1 2 3 4 5
2. NOISE CERTIFICATE		
4. Nationality and Registration Marks: XX-YYY	5. Manufacturer and Manufacturer's Designation Of Aircraft: BOEBUS 740	6. Aircraft Serial Number: 45678
18. This Noise Certificate is issued pursuant to Annex 16, Volume I to the Convention on International Civil Aviation dated Dec. 7, 1944 and Regulation (EC) No. 1592/2002, Article 6 in respect of the above-mentioned aircraft, which is considered to comply with the indicated noise standard when maintained and operated in accordance with the relevant requirements and operating limitations.		
19-. Date of Issue dd mm yyyy Signature		

Document 3A

Approved noise configuration				
AFM/AOM number: AOM 123	5. Manufacturer and Manufacturer's Designation Of Aircraft: BOEBUS 740		Config ID: A474	
7.Engine: GRC 2500		8. Propeller: * N/A		
9. Maximum Take-Off Mass (kg) 77,000	10. Maximum Landing Mass(kg)* 66,000	11. Noise Certification Standard: ICAO Annex 16/I Chapter 3		
12. Additional modifications incorporated for the purpose of compliance with the applicable noise certification standards:				
13. Lateral/Full-Power Noise Level: 93.6EPNdB	14. Approach Noise Level: 96.4 EPNdB	15. Flyover Noise Level: 87.4 EPNdB	16. Overflight Noise Level* N/A	17. Take-off Noise Level* N/A
Remarks				

Document 3B - 1

Approved noise configuration				
AFM/AOM number: AOM 123	5. Manufacturer and Manufacturer's Designation Of Aircraft: BOEBUS 740		Config ID: A469	
7.Engine: GRC 2500		8. Propeller: * N/A		
9. Maximum Take-Off Mass (kg) 77,000	10. Maximum Landing Mass(kg)* 64,500	11. Noise Certification Standard: ICAO Annex 16/I Chapter 3		
12. Additional modifications incorporated for the purpose of compliance with the applicable noise certification standards:				
13. Lateral/Full-Power Noise Level: 93.6EPNdB	14. Approach Noise Level: 96.2 EPNdB	15. Flyover Noise Level: 87.4 EPNdB	16. Overflight Noise Level* N/A	17. Take-off Noise Level* N/A
Remarks				

Document 3B - 2

Appendix 3, possible implementation for Option 3

Approved noise configuration				
AFM/AOM number:	5. Manufacturer and Manufacturer's Designation Of Aircraft:			Config ID:
AOM 123	BOEBUS 740			A472
7.Engine: GRC 2500		8. Propeller: * N/A		
9. Maximum Take-Off Mass (kg) 72,000		10. Maximum Landing Mass(kg)* 64,500		11. Noise Certification Standard: ICAO Annex 16/I Chapter 3
12. Additional modifications incorporated for the purpose of compliance with the applicable noise certification standards:				
13. Lateral/Full-Power Noise Level: 93.7EPNdB	14. Approach Noise Level: 96.2 EPNdB	15. Flyover Noise Level: 85.2 EPNdB	16. Overflight Noise Level* N/A	17. Take-off Noise Level* N/A
Remarks				

Document 3B - 3

Approved noise configuration				
AFM/AOM number:	5. Manufacturer and Manufacturer's Designation Of Aircraft:			Config ID:
AOM 123	BOEBUS 740			A473
7.Engine: GRC 2500			8. Propeller: * N/A	
9. Maximum Take-Off Mass (kg) 78,00		10. Maximum Landing Mass(kg)* 64,500		11. Noise Certification Standard: ICAO Annex 16/I Chapter 3
12. Additional modifications incorporated for the purpose of compliance with the applicable noise certification standards:				
13. Lateral/Full-Power Noise Level: 93.8EPNdB	14. Approach Noise Level: 96.2 EPNdB	15. Flyover Noise Level: 83.1 EPNdB	16. Overflight Noise Level* N/A	17. Take-off Noise Level* N/A
Remarks				

Document 3B - 4

Approved noise configuration				
AFM/AOM number:	5. Manufacturer and Manufacturer’s Designation Of Aircraft:			Config ID:
AOM 123	BOEBUS 740			A465
7.Engine: GRC 2500			8. Propeller: * N/A	
9. Maximum Take-Off Mass (kg)		10. Maximum Landing Mass(kg)*		11. Noise Certification Standard:
68,000		63,000		ICAO Annex 16/I Chapter 3
12. Additional modifications incorporated for the purpose of compliance with the applicable noise certification standards:				
13. Lateral/Full-Power Noise Level:	14. Approach Noise Level:	15. Flyover Noise Level:	16. Overflight Noise Level*	17. Take-off Noise Level*
93.8EPNdB	96.0 EPNdB	83.1 EPNdB	N/A	N/A
Remarks				

Document 3B - 5

Approved noise configuration				
AFM/AOM number:	5. Manufacturer and Manufacturer's Designation Of Aircraft:			Config ID:
AOM 123	BOEBUS 740			A471
7.Engine: GRC 2500		8. Propeller: * N/A		
9. Maximum Take-Off Mass (kg) 77,000		10. Maximum Landing Mass(kg)* 64,500		11. Noise Certification Standard: ICAO Annex 16/I Chapter 3
12. Additional modifications incorporated for the purpose of compliance with the applicable noise certification standards:				
13. Lateral/Full-Power Noise Level: 93.6EPNdB	14. Approach Noise Level: 94.1 EPNdB	15. Flyover Noise Level: 86.4 EPNdB	16. Overflight Noise Level* N/A	17. Take-off Noise Level* N/A
Remarks				
MOD ABC123 (Inlet treatment)				

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Appendix 3, possible implementation for Option 3

Approved noise configuration				
AFM/AOM number:	5. Manufacturer and Manufacturer's Designation Of Aircraft:			Config ID:
AOM 123	BOEBUS 740			A462
7.Engine: GRC 2500			8. Propeller: * N/A	
9. Maximum Take-Off Mass (kg) 68,000		10. Maximum Landing Mass(kg)* 63,000		11. Noise Certification Standard: ICAO Annex 16/I Chapter 3
12. Additional modifications incorporated for the purpose of compliance with the applicable noise certification standards:				
13. Lateral/Full-Power Noise Level: 93.8EPNdB	14. Approach Noise Level: 93.9 EPNdB	15. Flyover Noise Level: 83.1 EPNdB	16. Overflight Noise Level* N/A	17. Take-off Noise Level* N/A
Remarks MOD ABC123 (Inlet treatment)				

Document 3B - 7

Approved noise configuration				
AFM/AOM number:	5. Manufacturer and Manufacturer's Designation Of Aircraft:			Config ID:
AOM 123	BOEBUS 740			A470
7.Engine: GRC 2500			8. Propeller: * N/A	
9. Maximum Take-Off Mass (kg) 77,5000		10. Maximum Landing Mass(kg)* 66,000		11. Noise Certification Standard: ICAO Annex 16/I Chapter 3
12. Additional modifications incorporated for the purpose of compliance with the applicable noise certification standards:				
13. Lateral/Full-Power Noise Level: 93.6EPNdB	14. Approach Noise Level: 96.4 EPNdB	15. Flyover Noise Level: 87.4 EPNdB	16. Overflight Noise Level* N/A	17. Take-off Noise Level* N/A
Remarks MOD CDE456 (JN Package)				

Document 3B – 8

For reasons of brevity only 8 different configurations have been given in this example. In reality there can be less, but also many more, up to several hundreds different configurations in Document 3B.

Historic Noise Configuration overview		
4. Nationality and Registration Marks: XX-YYY	5. Manufacturer and Manufacturer's Designation Of Aircraft: BOEBUS 740	6. Aircraft Serial Number: 45678
Date	Time	Config ID
01/01/01	4:00	A469
18/01/01	17:30	A472
20/01/01	4:00	A469
30/01/01	14:00	A473
Etcetera	Etcetera	Etcetera

Document 3C

A-NPA No 13-2006
Appendix 4, proposed implementation for Option 6

For use by State of registry	1. <State of Registry>		3. Document Number: 1 2 3 4 5	
2. NOISE CERTIFICATE				
4. Nationality and Registration Marks: XX-YYY	5. Manufacturer and Manufacturer's Designation Of Aircraft: BOEBUS 740		6. Aircraft Serial Number: 12345	
7.Engine: GRC 2500		8. Propeller: * N/A		
9. Maximum Take-Off Mass (kg) 77,000	10. Maximum Landing Mass(kg)* 64,000	11. Noise Certification Standard: ICAO Annex 16 Chapter 3		
12. Additional modifications incorporated for the purpose of compliance with the applicable noise certification standards: None				
13. Lateral/Full-Power Noise Level: 93.6 EPNdB	14. Approach Noise Level: 96.2 EPNdB	15. Flyover Noise Level: 87.4 EPNdB	16. Overflight Noise Level* N/A	17. Take-off Noise Level* N/A
Remarks EASA Noise TCDS ID: A469				
18. This Noise Certificate is issued pursuant to Annex 16, Volume I to the Convention on International Civil Aviation dated Dec. 7, 1944 and Regulation (EC) No. 1592/2002, Article 6 in respect of the above-mentioned aircraft, which is considered to comply with the indicated noise standard when maintained and operated in accordance with the relevant requirements and operating limitations.				
19-. Date of Issue dd mm yyyy Signature				

Document 6A.

Document 6A, the official Noise Certificate, identical to Option 1.

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Appendix 4, proposed implementation for Option 6

For use by State of registry	1. <State of Registry>		3. Document Number: 1 2 3 4 5	
2. SUPPLEMENTAL NOISE STATEMENT				
4. Nationality and Registration Marks: XX-YYY	5. Manufacturer and Manufacturer's Designation Of Aircraft: BOEBUS 740		6. Aircraft Serial Number: 12345	
7.Engine: GRC 2500		8. Propeller: * N/A		
9. Maximum Take-Off Mass (kg) 72,000	10. Maximum Landing Mass(kg)* 64,500		11. Noise Certification Standard: N/A	
12. Additional modifications incorporated for the purpose of compliance with the applicable noise certification standards: None				
13. Lateral/Full-Power Noise Level: 93.7 EPNdB	14. Approach Noise Level: 96.2 EPNdB	15. Flyover Noise Level: 85.2 EPNdB	16. Overflight Noise Level* N/A	17. Take-off Noise Level* N/A
Remarks Noise levels determined according to methods of ICAO Annex 16 Chapter 3 be it at lower than Maximum Take-off Mass EASA Noise TCDS ID: A472 18. This statement is not a noise certificate. This statement is an addition to the Noise Certificate issued for this aircraft and gives noise level determined as indicated above. The method used deviates from the applicable noise certification requirement. This statement is valid when the aircraft is maintained and operated in accordance with the relevant requirements and operating limitations.				
19-. Date of Issue dd mm yyyy Signature				

Document 6B

Document 6B, a supplemental, non mandatory, statement giving additional information pertaining to the noise characteristics of the particular aircraft. This would be issued only if requested by the owner or operator of the aircraft.