



European Union Aviation Safety Agency  
**Comment-Response Document 2020-02**

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RELATED NPA: 2020-02 — RMT.0379 — 3.8.2021

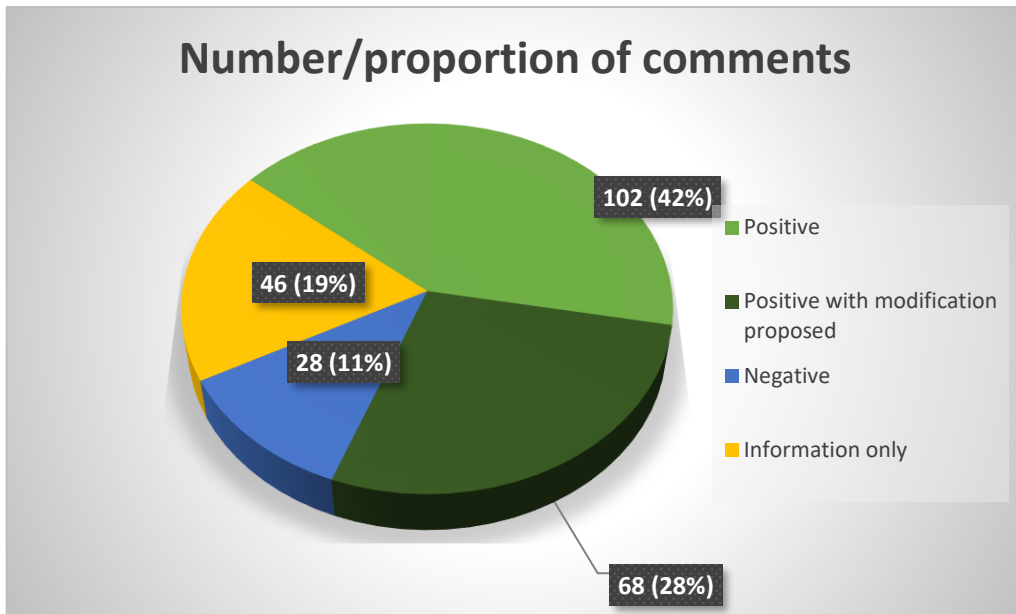
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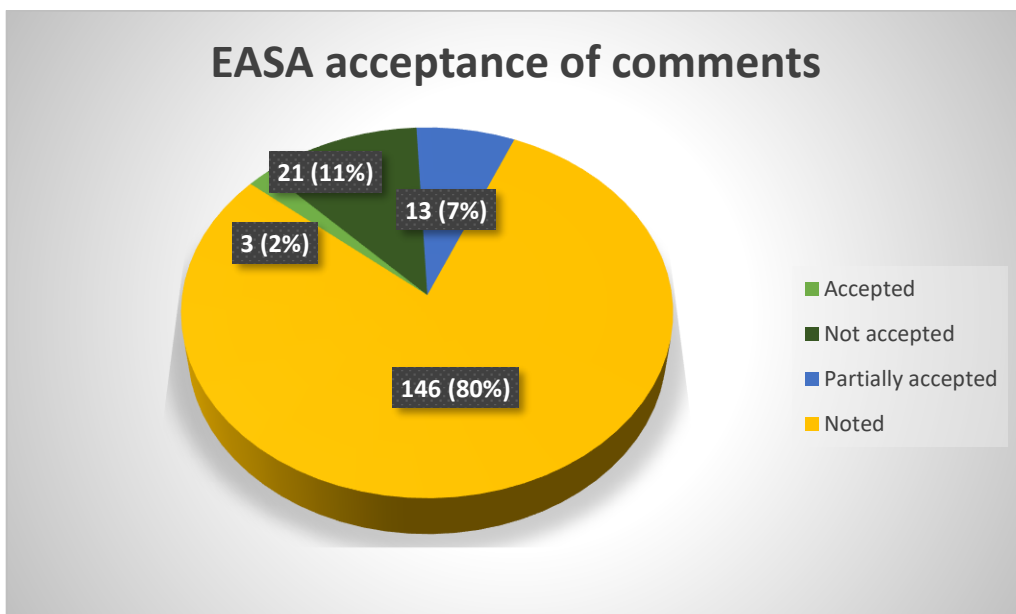


**1. Summary of the outcome of the consultation**

[NPA 2020-02](#) on changes to Annex VII (Part-NCO) to Regulation (EU) No 965/2012 (the ‘Air OPS Regulation’) addressing all-weather operations (AWOs) for non-commercial operations of other-than-complex motor-powered aircraft, received 262 comments from 35 commentators. The vast majority were supportive of the proposed changes, and many suggested constructive improvements to the proposed text. All comments on the objectives of the NPA were supportive.



The pie chart below shows the statistics on comment acceptance by EASA:



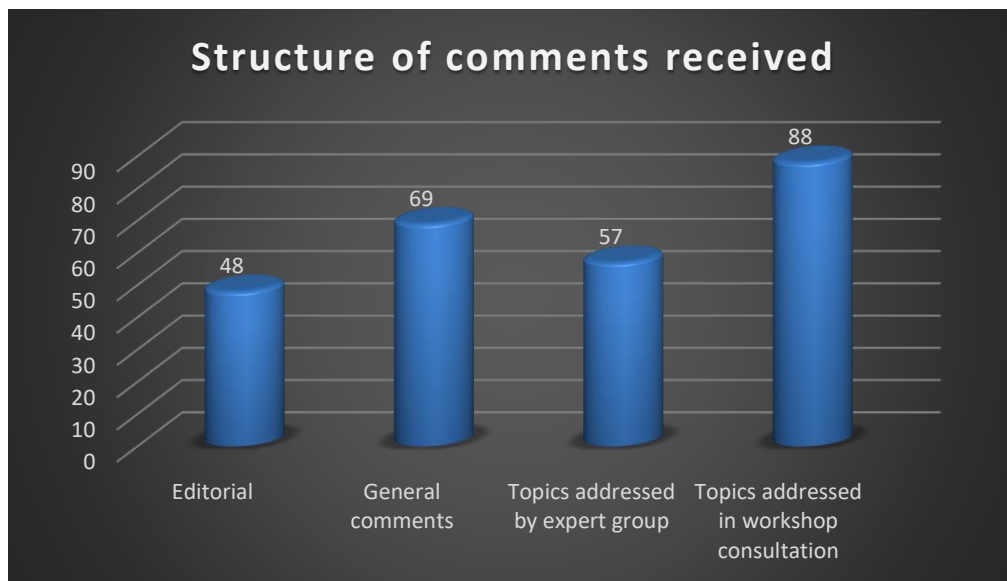
## 2. Methodology used to address the comments

The comments were reviewed principally by the group of experts that contributed to the development of the proposals in the NPA.

This group addressed all comments of editorial nature (48 comments), comments on the general principles presented in the introduction of the NPA as well as on IFR operating minima (69 overwhelmingly positive comments), and comments on the following topics:

- Approach bans and use of converted meteorological visibility: 26 comments
- Commercially available information for the determination of IFR operating minima: 9 comments
- Continuous descent into final approach (CDFA) versus conventional step down on final approach techniques and associated minima: 15 comments
- Helicopter operations: 7 comments, which were addressed in cooperation with helicopter experts that were also in charge of CAT, NCC and SPO regulations.

The group of experts prepared a number of significant changes on the most controversial topics, which were then presented in a consultation workshop.

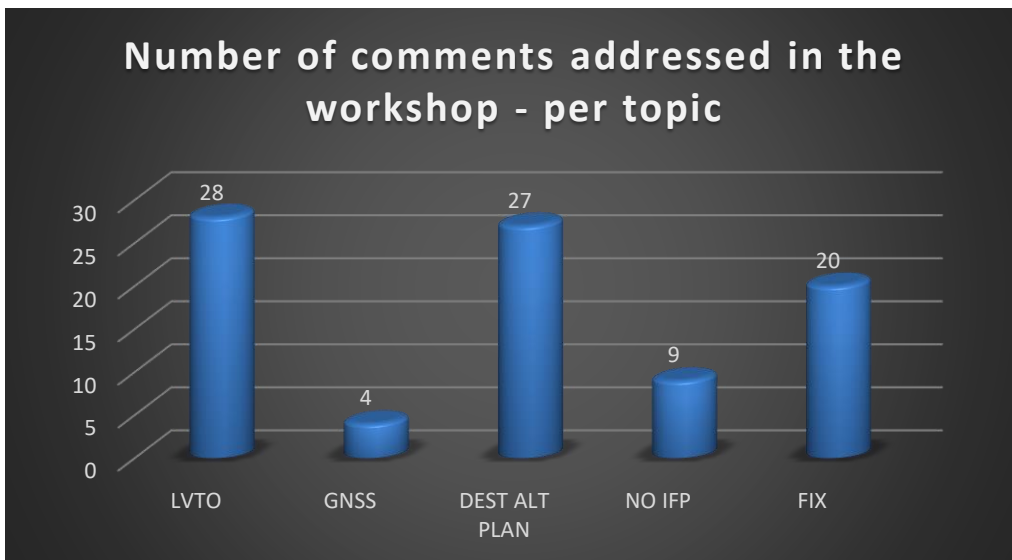


The workshop was attended by representatives of 10 different national aviation authorities (NAAs), representatives of 5 different associations representing the general aviation community, 4 representatives of the European GNSS Agency (GSA) as well as EASA experts. It was held on 1 October 2020, and provided a good forum for refinement, to converge on the final regulatory text proposed through Opinion No 02/2021.

The workshop was introduced by discussing the main principles behind the proposed amendment, and the ones that had been used to determine the IFR operating minima for NCO. Then the workshop focused on the following controversial topics :

- Low-visibility take-off (LVTO): 28 comments

- Destination and destination alternate aerodromes with only GNSS approaches (GNSS): 4 comments
- Destination alternate planning minima (DEST ALT PLAN): 27 comments
- Arrivals and departures where no instrument flight procedures (IFPs) are published (NO IFP): 9 comments
- RNAV substitution (FIX): 20 comments.



### 3. Summary of the decisions made following the workshop consultation

The explanatory notes below indicate where changes were made between the NPA and the Opinion. A summary of key themes from the comments is set out below.

#### **Low-visibility take-off for NCO operators**

Many commentators agreed with the NPA that the mechanism for obtaining a specific approval under SPA.LVO is disproportionate for non-commercial operators of non-complex aircraft who simply wish to conduct LVTO. However, there was a strong consensus among CAT operators and NAAs that, in a shared environment such as an aerodrome in low-visibility conditions, where other stakeholders with a lower acceptable level of risk might also be operating, some training in low-visibility operations is essential for all operators in that environment. There was a particular emphasis drawn to the taxiing phase.

As a result, EASA has decided to not retain the proposal to exclude Part-NCO operators from the need for a specific approval under SPA.LVO for LVTO. However, AMC will be developed to ensure that the requirements for obtaining such an approval are proportionate to the risk it poses, particularly the risk to other stakeholders. EASA envisages that this may include the use of novel simulation technologies.

#### **Destination alternate planning minima**

Many comments were received on NCO.OP.140 which sets the criteria, at the flight planning stage, for a destination alternate being required, and on NCO.OP.142/143, which sets the planning minima for those alternates. In each case, some commentators suggested that the criteria were too strict, others suggested they were too lax.

After extensive discussion and iteration of the proposed text, the NCO subgroup concluded that the criteria for a destination alternate being required should be fairly broad, because the destination alternate provides a valuable contingency. However, the planning minima for the destination alternate were relaxed to a certain extent compared to the initial proposal, particularly for the case where a precision approach procedure is available at the alternate. This resulted in a three-level set of planning minima, depending on the alternate having an instrument approach procedure (IAP) with DH < 250 ft, an IAP with a higher DH/MDH, or no IAP at all. EASA believes that this represents a balance between simplicity and the need to make the regulation flexible enough to be proportionate.

#### **Destination and destination alternate aerodromes with only GNSS approaches**

Currently, IFR operations require the availability of a conventional (non-GNSS-based) IAP at either the destination or the destination alternate, in order to cater for the complete loss of GNSS capability.

The inclusion in the NPA of a provision for helicopters to plan for a GNSS-based IAP at both destination and destination alternate led to many commentators asking why such a provision could not be extended to aeroplanes. An amended NCO.OP.142 and its AMC & GM were developed after in-depth discussion in the NCO subgroup, in order to allow an alternate with only a GNSS IAP to be considered for a destination with only a GNSS IAP provided that certain criteria are met.

Some of the criteria reflect the equivalent ones in the current FAA regulation, which requires SBAS availability for performance and integrity, but also requires an IAP based on GNSS without SBAS to be considered at the

alternate, in case SBAS becomes unavailable. The additional criterion in NCO.OP.142, as proposed in this Opinion, is a requirement for a contingency action, a plan to be executed in the event of complete loss of GNSS capability. This phrase echoes a similar requirement in NCO.IDE.A/H.195, which requires a contingency action to be available in case of the loss of any single item of navigation equipment.

Opinions differed at the consultation workshop as to whether or not the requirement for a contingency action needs to be included. EASA has decided to include it in the implementing rule proposed with this Opinion, but it is a requirement that should be reviewed after adequate operational experience with the new rule has accumulated.

### **Arrivals and departures where no instrument flight procedures (IFPs) are published**

Some commentators expressed concerns on the introduction of new GM offering advice on arrivals and departures under IFR where no IFPs are published.

Part-NCO does not require the existence of IFPs for arrivals and departures under IFR, and Part-SERA has no prohibition on IFR operations in class G airspace; EASA has no intention of proposing new implementing rules to change the status quo. Thus the GM simply recalls the responsibilities of the pilot-in-command with respect to the two hazards, controlled flight into terrain and mid-air collision, that are otherwise mitigated by the provision of IFPs and ATC respectively. As with any safety responsibility, it is neither required nor possible to eliminate all risk, only to mitigate it to an acceptable level, proportionate to the operation. The GM has been improved in response to comments, including by its separation into two paragraphs, each dealing with one of the hazards.

### **RNAV substitution**

The NPA proposed the introduction of an AMC allowing the substitution of GNSS-based navigation in place of conventional avionics under certain conditions. This was strongly welcomed by most commentators. However, the draft AMC in the NPA was based on rather outdated FAA regulatory material, and the NCO subgroup took the opportunity to revise the text completely (including by using the more appropriate terminology, RNAV substitution) on the basis of many constructive comments received.

One commentator drew attention to the need for consistency across the different parts of the Air Ops Regulation. While EASA agrees with the need for consistency where there is no substantive need for difference, different levels of acceptable risk in different parts make it appropriate to include certain alleviations in some parts and not in others. Thus ,RNAV substitution is initially introduced into Part-NCO.

The risks of using RNAV substitution for DME (as well as the undesirability of discouraging the installation of DME transceivers on aircraft) was also the subject of comment. The subgroup therefore included limitations on the use of RNAV substitution for DME in the AMC.



## 4. Comments received

(General Comments)		-
comment	16	comment by: <i>Rafly sàrl</i> This NPA goes in the right direction, allowing Part-NCO operators to take their own safety in their own hands, better balancing the risks envisioned by the regulator and those not envisioned by the regulator, and applying themselves limits and procedures better adapted to the performance levels of the planes they fly (such as e.g. short runway capacity).
comment	19	comment by: <i>Tomasz ORZECZOWSKI</i> I would like to express my support for this NPA and thank the Regulator for proposing it. I believe it will make the rules more clear and that it introduces welcome changes that bring European General Aviation closer to the XXI-st century by allowing GPS substitution for traditional navigational aids. Thank you!
comment	59	comment by: <i>PPL/IR Europe</i> Test comment
comment	69	comment by: <i>Uppsala Flying Club</i> This NPA is a major step forward for the safety and regularity of non-commercial GA. In principle I agree with all the suggestions, although I have some comments on detail. I applaud this very important step of EASA towards increasing safety and regularity of NCO GA.
comment	70	comment by: <i>Finnish Transport Safety Agency</i> Finnish Transport and Communications Agency Traficom supports the initiative to ease NCO flights taking place under IFR and recommends to proceed with proposal 1 and also praise the well-written NPA.  However one comment is placed:  Discussion item on PinS minima; what would be difference between PinS approach (to 250ft) and IR approach procedure according to the NPA? A PinS is understood a method to move from IMC (from cloud) to continue in VFR in any point where it has been planned a procedure for PinS. It could be somehow confusing to suggest PinS procedure to be similar with approach procedure to continue VFR if below VFR minima? Shouldn't it be used then IR approach procedures in all cases when IMC exists and to keep PinS as in original purpose to go through cloud to VMC?
comment	85	comment by: <i>FOCA Switzerland</i>



The Federal Office of Civil Aviation (FOCA) Switzerland support the adaption of the NCO rules to facilitate the access to IFR. Indeed, even if NCO IFR will not be as safe as CAT IFR, NCO IFR will be safer than NCO VFR, especially in marginal VMC.

comment 93 comment by: *DGAC France*  
 DGAC France thanks EASA for the quality of this NPA and the detailed rationals given throughout the text.

comment 95 comment by: *European Powered Flying Union*  
 European Powered Flying Union (EPFU), a specialised member organisation of Europe Air Sports (EAS), congratulates the Agency and those who prepared this NPA. We are satisfied with the proposals made, with the technical quality of the drafts, the clarity of nearly all texts, with the rationales presented, and with most of the points proposed in the impact assessment part.  
  
 The scope of RMT.0379 is, in our view attained.

comment 96 comment by: *European Powered Flying Union*  
 An adequate list presenting/explaining the abbreviations/acronyms would have been helpful.  
  
 Rationale:  
 The number of abbreviations/acronyms used is impressive. The document is difficult to read and to understand when one not is 1000/1000 familiar with all the terms and definitions.

comment 115 comment by: *OSM Aviation Academy*

comment 131 comment by: *DK/ATO/013*  
 A very much needed revision of Part-NCO and this revision is overall very well drafted and much more user friendly compared to the current Part-NCO.

comment 132 comment by: *Europe Air Sports*  
EAS appreciates the work done by EASA to deliver a more proportionate and appropriate regulation for private pilots conducting private operations under instrument flight rules.  
  
EAS welcomes the efforts made for converging with ICAO Annex 6 Part GA, for getting rid of useless provisions and for taking all the advantages of the GNSS infrastructure which enables fix substitution and more.  
  
EAS feels that furthermore some safety promotion actions should be undertaken to raise the pilots' awareness on the specific risks associated with IFR operations.



Lowering the requirements of regulatory nature should not lead to lowering standards of safety. Safety promotion may play a significant part in making sure that safety remains the priority. For instance, use of an autopilot under IFR should be strongly recommended.

The wording of some draft provisions should be refined:

- to ensure legal certainty,
- to comply with other regulatory provisions and
- to be consistent with the EASA wording.

Introducing words such as “cut-off” instead of “maximum” does not offer any advantage. Other examples are: “ban” instead of “decision point”, “go-around” instead of “missed approach”, “outer marker” instead of “equivalent position”.

This is also worthwhile to indicate that reference to the ground or the aerodrome (use of “height”) is too often made across the text. This is detrimental to reference to the mean sea level (use of “altitude”). Convergence with the FAA set of rules should enhance the broad use of the QNH setting currently observed in the EU and, by contrast, the waiver of the QFE setting.

comment 178

comment by: *Condor*

Condor is doubting that non commercial operators are able to safely perform LVO in RVRs less than 400m without a regulative approval. An approval ensures regulative oversight into critical operative areas such as training and compliance of an (non-commercial) operator. Non-conformance with LVO regulations in these areas would not only impose a serious threat to the NCO itself but also to other tactically involved commercial traffic at the relevant airports (see Milan Linate accident a few years ago).

comment 180

comment by: *FFA EUR*

#### **General comments**

FFA appreciates the work done by EASA to deliver a more proportionate and appropriate regulation for private pilots conducting private operations under instrument flight rules.

FFA welcomes the efforts made for converging with ICAO Annex 6 Part GA, for getting rid of useless provisions and for taking all the advantage of the GNSS infrastructure which enables fix substitution and more.

FFA feels that some safety provision actions should be undertaken to raise the pilots' awareness on the specific risks associated with IFR operations.

Lowering the requirements of regulatory nature should not lead to lowering the requirements of safety nature. Some kind of compensation should be sought in safety promotion of course but not only. For instance, use of an autopilot should be strongly recommended.

Wording of some draft provisions should be refined:

- to ensure legal certainty,
- to comply with other regulatory provisions and
- to be consistent with the EASA wording.

Introducing words such as “cut-off” instead of “maximum” does not offer any advantage. Other examples are: “ban” instead of “decision point”, “go-around” instead of “missed approach”, “outer marker” instead of “equivalent position”.



This is also worthwhile to indicate that reference to the ground or the aerodrome (use of “height”) is too often made across the text. This is detrimental to reference to the mean sea level (use of “altitude”). Convergence with the FAA set of rules should enhance the broad use of the QNH setting made in the EU and, by contrast, the waiver of the QFE setting.

comment 212 comment by: *IAOPA Europe*

IAOPA Europe welcomes the AWO initiative for General Aviation.

The recognition that the GA operating environment is very different from that of CAT and therefore needs different operating rules is a very important step forward.

Except for a few glitches that we believe can be corrected in the review process we fully support the initiative.

Together with the new Basic instrument Rating we believe that this will inspire more GA pilots to obtain an instrument rating and allow them to operate more safely. Also existing instrument rated pilots will benefit from operating rules more tailored to the environment that they operate in.

Altogether we see it as a big step forward towards improving flight safety for general aviation.

comment 221 comment by: *European Cockpit Association*

NPA-2020-02 proposes cancellation of the required approval for LVO take offs for Part-NCO operations with RVR between 150 and 400m, (rationale: difficulty for the NCO to get a LVO approval; many do not have an operational manual or a flight crew training program, and it is easier to react during take-off because of the lower rotation speed).

ECA believes OM procedures and the training is a quite important contributing factor to reduce the risk of a runway incursion (rolling onto the runway at the wrong time is totally independent of the aircraft’s speeds during take-off roll, shown by one accident at Linate airport 2001: <https://aviation-safety.net/database/record.php?id=20011008-0>).

comment 225 comment by: *Swiss Aeroclub*

Thank for submitting this NPA. The Aeroclub of Switzerland is satisfied with the contents of this NPA in general and has no specific comments. We would like to encourage EASA to continue its efforts to support GA by creating proportionate regulations.

However, reading a text with so many abbreviations without finding the meaning of them in the document itself is sometimes very burdensome. We would appreciate if EASA could complete the document with a list of abbreviations and acronyms.

comment 234 comment by: *European Business Aviation Association (EBAA)*

Thank you for the opportunity to provide comments on this NPA.

EBAA agrees objective of this NPA which are in line with the GA roadmap.

As an organisation we do not have any specific comments.

comment 235 comment by: *Austro Control*



Dear all,

Austria offers no comments to this NPA.

Best,  
Tanja Madsen

comment

239

comment by: *FNAM*

The FNAM (Fédération Nationale de l'Aviation Marchande) is the French Aviation Industry Federation/ Trade Association for Air Transport, gathering the following members: CSTA: French Airlines Professional Union (incl. Air France); SNEH: French Helicopters Operators Professional Union; CSAE: French Handling Operators Professional Union; GIPAG: French General Aviation Operators Professional Union; GPMA: French Ground Operations Operators Professional Union; EBAA France: French Business Airlines Professional Union.

FNAM thank EASA for updating applicable European requirements to improve Part-NCO by making it more consistent with the principles of the General Aviation (GA) Roadmap and the Basic Regulation (BR). The operational impacts are relatively positive; The proposal regulation will allow NCO operators to make IFR flight with fewer constraints than before. Thus, it would improve safety for GA flights under IFR conditions. You will find more details in the attached table which summarizes point by point the modifications and impacts assessed by the FNAM.

## Timelines

p. 1

comment

122

comment by: *Alan Crofts*

The content of this NPA covers some much needed areas. Implementation would ideally be rather sooner than 2+ years in the future - 2021/Q1 would be a more suitable target at the latest.

## 2.1. Why we need to change the rules—issue/rationale

p. 5

comment

30

comment by: *PPL/IR Europe*

Wholehearted support. Every barrier to Part-NCO pilots being trained to operate safely in IFR/IMC and to operating in an IFR environment is a CFIT or LoC waiting to happen.

## 2.2. What we want to achieve—objectives

p. 5-6

comment

11

comment by: *AOPA (UK)*

IAOPA (Europe) fully supports these objectives.

comment

31

comment by: *PPL/IR Europe*

Wholehearted agreement and support for every point.



comment 133 comment by: Europe Air Sports

EAS supports the step-by-step implementation of the “facilitate private pilots access to IFR” strategy decided at the Rome Safety Conference for enhancing the safety of GA operations. Please note that, from our perspective, this objective is clearly to increase the safety margin when flying in marginal VMC conditions and not to allow flying in marginal IMC conditions.

comment 181 comment by: FFA EUR

**\*Page 5/59 - Para. 2.2. What we want to achieve**

FFA supports the step-by-step implementation of the “facilitate private pilots access to IFR” strategy decided at the Rome Safety Conference for enhancing the safety of GA operations. Please note that, from our perspective, this objective is clearly to increase the safety margin when flying in marginal VMC conditions and not to allow flying in marginal IMC conditions. Flying according to IFR rules with a CB-IR rating and a limited number of flight hours, in single pilot operations, on a light aeroplane fits well with the picture of what we call “flying IFR in good weather conditions”.

In that respect, lowering some minima as proposed in the NPA could be misleading and misinterpreted.

### 2.3.1. Net Safety Benefit approach and alignment with NCO acceptable level of safety

p. 6

comment 32 comment by: PPL/IR Europe

We would add to this paragraph the concept of "policing by consent". *Some* pilots who find the rules burdensome or unacheivable may well choose to remain VFR, but others may decide to dismiss the rules as "silly" and not follow them. This leads both to a short term danger and, more importantly, a long term issue where non-compliance becomes normalised. It is better to have sensible rules that the community recognises as proportionate and sensible than excessive rules that the community tries to circumvent.

comment 62 comment by: Uppsala Flying Club

I agree completely. It is a particularly important realisation that easier access to IFR flight for non-commercial GA can reduce overall accidents by moving flight operations in marginal weather from VFR to IFR *even if* the safety of NCO IFR is lower that that of CAT IFR. Having the very successful US part 91 regulation as benchmark is good.

comment 134 comment by: Europe Air Sports

Convergence towards the FAA Part 91 is understood and welcomed, even if there are differences between the EU and the USA such as the yearly average number of hours flown by a private pilot, the level of complexity of airspace structure and ATC procedures, the on-board equipment.



Due to these differences, EAS believes that caution should be sometimes exercised when transposing US rules into the EU system.

comment 182

comment by: FFA EUR

**\*Page 6/59 - Para. 2.3.1. Net safety benefit approach**

Convergence towards the FAA Part 91 is understood and welcomed, even if there are differences between the EU and the USA such as the yearly average number of hours flown by a private pilot, the level of complexity of airspace structure and ATC procedures, the on-board equipment.

Due to these differences, cautious should be sometimes exercised when transposing US rules into the EU system.

**2.3.2. Consistency with VFR**

p. 6-7

comment 21

comment by: Tomasz ORZECHOWSKI

I strongly agree with re-aligning the IFR minima to the lower minima allowed by VFR and with the statement that the PIC is best equipped to determine actual conditions and converted meteorological visibility / reported visibility are less relevant and should be removed from regulations.

comment 34

comment by: PPL/IR Europe

Agreed

comment 108

comment by: Czech Technical University

It should be noted that flight visibility of 1 500 m can be used by VFR flight only under specific conditions. Although 1 500 m is likely sufficient for all instrument approach operations with category A and B aircraft, use of this value for planning minima may pose unwanted risks and should be used with caution. VFR navigation in visibility of 1 500 m is a relatively safe task for a proficient pilot when using significant landmarks (e.g. following a river or a highway), on the other hand, a transition from instrument flight to visual navigation may be extremely challenging especially when not established on a published instrument approach. Additionally, transition from IFR flight in class E Airspace to VFR flight at a visibility of 1 500 m is not legal.

comment 135

comment by: Europe Air Sports

The statement saying that "a VFR flight may be conducted in a flight visibility of 1 500 m" is correct. But this applies under certain conditions (refer to SERA) which are: "when prescribed by the competent authority", "by daylight", "at a speed lower than 140 kts IAS", "in areas of low volume traffic". Otherwise, the required flight visibility is 5 000 m.



Should they be accepted, the proposals made on page 7 should be supplemented by safety promotion provisions on the concept of pilot's own minima based on Article 4(2)(f) of the Basic Regulation, which requires that "the pilot shall exercise control over the risks involved in the operation".

comment 183

comment by: FFA EUR

**\*Page 6/59 - Para. 2.3.2. Consistency with VFR**

The statement saying that "a VFR flight may be conducted in a flight visibility of 1 500 m" is correct. But this applies under certain conditions (refer to SERA) as follows: when prescribed by the competent authority, by daylight, at a speed lower than 140 kts IAS, in areas of low volume traffic. Otherwise, the required flight visibility is 5 000 m.

Should they be accepted, the proposals made on page 7 should be supplemented by safety promotion provisions on pilot's own minima based on Article 4(2)(f) of the Basic Regulation, which requires that "the pilot shall exercise control over the risks involved in the operation".

**2.3.3. Consistency with the environments in which NCOs are conducted**

p. 7

comment 33

comment by: PPL/IR Europe

Agreed

comment 136

comment by: Europe Air Sports

Non-stabilised approaches are not the specificity of CAT operations. Let us be aware that non-stabilised approaches are also noted in NCO operations.

For EAS, the SDFA technique may be reintroduced for copying with specific circumstances, but the usual practice should remain the CDFA technique. These two methods – SDFA and CDFA - should be both permitted by the regulation but they should not be deemed as equivalent.

comment 184

comment by: FFA EUR

**\*Page 7/59 - Para. 2.3.3. Consistency with the environments in which NCOs are conducted**

Non-stabilised approaches are not the specificity of CAT operations. Let us be aware that non-stabilised approaches are also noted in NCO operations.

For FFA, the SDFA technique may be reintroduced for copying with specific circumstances, but the usual practice should remain the CDFA technique. These two methods – SDFA and CDFA - should be both permitted by the regulation but they should not be deemed as equivalent.

**2.3.4. Proportionality**

p. 7

comment 35

comment by: PPL/IR Europe



Agreed

comment 137 comment by: Europe Air Sports

The objectives of the NPA regarding the need for simplification where there are unnecessary complex rules and the need for clarification where there are ambiguous or not well understood rules are fully supported.

comment 185 comment by: FFA EUR

**\*Page 7/59 - Para. 2.3.4. Proportionality**

The objectives of the NPA regarding the need for simplification where there are unnecessary complex rules and the need for clarification where there are ambiguous or not well understood rules are fully supported.

#### 2.4. What are the expected benefits and drawbacks of the proposals

p. 7-8

comment 12 comment by: AOPA (UK)

IAOPA (Europe) agrees wholeheartedly with the regulatory changes proposed in this NPA and strongly supports their introduction as soon as this can be achieved.

comment 138 comment by: Europe Air Sports

Aligning NCO provisions with ICAO Annex 6 Part II General Aviation is very positive.

EAS supports this objective.

comment 186 comment by: FFA EUR

**\*Page 7/59 - Para. 2.4. What are the expected benefits and drawbacks of the proposals**

Aligning NCO provisions with ICAO Annex 6 Part II General Aviation is very positive.

FFA supports this objective.

#### 3.1. Draft regulation - Annex V - SPA.LVO.100

p. 9

comment 6 comment by: Prof. Filippo Tomasello

The drastic reduction of the number of cases in which the infamous "Specific Approval", which adds enormous burden on GA operators, is fully supported.

Same initiative should be taken by EASA to eliminate such approval for helicopter RNP 0.3 operations

comment 8 comment by: EuroUSC Italia



EuroUSC Italia thanks the Agency for offering the possibility to comment this NPA. The drastic reduction of the number of cases in which the infamous "Specific Approval", which adds enormous burden on GA operators, is fully supported. Same initiative should be taken by EASA to eliminate such approval for helicopter RNP 0.3 operations

comment 15 comment by: *autorouter AG*

In our view, this is a very welcome improvement and aligns EASA regulation with international regulation (e.g. FAA Part 91) and previous national regulation in Member States. A 400m RVR as of today is unnecessarily restrictive and limits the use of IFR privileges in GA. We do not anticipate safety issues as the existing 400m RVR already precludes a Cat I return to the takeoff aerodrome and a 150m RVR does not severely impact the PFs ability to see the runway markings as opposed to a 400m RVR.

comment 20 comment by: *Tomasz ORZECZOWSKI*

I very much welcome the option to conduct a take-off operation with RVR  $\geq$  150m without approval from a competent authority. Getting such an approval for a private operator is effectively impossible and this change correctly removes that limitation.

comment 36 comment by: *PPL/IR Europe*

Wholehearted agreement. While the 400m restriction may well be sensible and appropriate for some operations at some airfields, it is too restrictive for many others. In the Part-NCO environment we can and should leave this to the discretion of individual pilots. In our own internal discussions, it is clear that pilots are aware of their own limitations as well as those imposed by equipment and runways, and many will opt for an SOP considerably higher than 400m, but the more experienced pilots, flying more capable equipment from long, well lit runways will have an unnecessary and disproportionate curtailment removed.

comment 61 comment by: *Austrian Airlines*

EASA proposes to allow LVO departures for Part-NCO operations down to 150m RVR without LVO approval. On the other hand, approaches below 550m RVR still require prior approval.

Austrian Airlines considers this proposal as extremely critical.

This proposal poses a not yet assessable risk, not only for the NCO operators concerned, but also for the entire commercial aviation industry, especially when NCO operators have to return to the departure airport for technical reasons.

NCO operators may feel reaffirmed to still take off in very low VIS conditions without the necessary knowledge / training.

This is exacerbated by the fact, that the number of LVO departures will also increase, which is also an additional risk for pilots and additional workload for ATC.

Low visibility operations and the possible contingency handling requires appropriate training.





comment	63	comment by: <i>Uppsala Flying Club</i>
	It is very good that the current 400 m RVR requirement for takeoff is reduced. With the low takeoff speeds of typical NCO GA aircraft, visibility is not a major risk factor.	
comment	71	comment by: <i>DGAC France</i>
	<p><b>Page 9</b>  <b>SPA.LVO.100 Low-visibility operations and operations with operational credits</b></p> <p>(a) This proposal is supported. However, several conditions should be specified in Part-NCO (refer to DGAC comments in Part-NCO).</p> <p>(b) The proposal should be modified as proposed below:  “(b) instrument approach operations with visibility conditions less than 550 m RVR or DH less than 200ft”  Rational:  - It is proposed to keep a coherent regulation between aeroplane operations, helicopter operations and aerodrome operations. With a 550m RVR, the operational rules will avoid creating potential management issues at aerodromes. For example, with a 500m cut-off for helicopters, there will be situations where low-visibility procedures will not be in force at the aerodrome and the pilot-in-command will not be cleared to land.  - An LVO approval is necessary for CAT II operations with DH less than 200ft and RVR higher than 550m (refer to the definition of CAT II operations).</p>	
comment	97	comment by: <i>European Powered Flying Union</i>
	<p>SPA.LVO.100 Low visibility ops...</p> <p>(b)  text page 9/59</p> <p>Peanut question: Why do we have to differentiate between an aeroplanes and a helicopter value?</p> <p>We do not repeat the question when we find the figures later in the NPA's text.</p>	
comment	127	comment by: <i>Lufthansa German Airlines</i>
	<p>EASA proposes to allow LVO departures for Part-NCO operations down to 150m RVR without LVO approval. Lufthansa Group considers this proposal as extremely critical. Low visibility operations and the possible contingency handling requires appropriate training. Basically, we see the need for the same standards in the same system (safety level playing field). It is not understandable that different standards should apply to different actors in a highly regulated environment. In this context, we also refer to the ANSV investigation report on the accident in Milan Linate on October 8, 2001 (especially Chapter 4).</p>	
comment	179	comment by: <i>Vereinigung Cockpit</i>
	<p>VC suggests that an approval for Part-NCO operations with RVR between 150 and 400m remains mandatory. Flight crew training programs as well as LVO procedures defined</p>	

in operation manuals are an important contributing factor to reduce the risk of a runway incursion. This is independent of the aircraft's takeoff rotation speed.

comment 187

comment by: FFA EUR

**\*Page 9/59 - Annex V Specific Approvals (Part-SPA)**

FFA does not understand the reason why NCO low visibility operations would not be conducted with an approval while SPA low visibility operations would be. By nature and under any Part of the regulation, LVOs require a specific training, a specific operating procedure and a specific yearly assessment. We cannot ignore studies made by ICAO showing that the human performance is a key factor for safety: age, fatigue, human element in the use of ground visual aids and pilot's proficiency.

As a result, delete the words "except for operations under Annex VII" and the rationale.

comment 219

comment by: Luftfahrt-Bundesamt

**Comments relating to SPA.LVO.100 // AMC1 NCO.OP.110**

The proposed changes to exempt NCO LVTO 150 m operations from the approval requirements cause considerable safety concerns at the LBA. Our safety concerns relate largely to mixed operations at airports, i.e. NCO/CAT or NCC/NCO, and the risk of ground collisions and runway incursions due to loss of situational awareness of usually less experienced / less trained NCO pilots.

Furthermore, formally, the proposed alleviations seem not to be in alignment with the international standards and recommended practices entailed in ICAO Annex 6, Part II, whereas according to the Basic Regulation, Reg. (EU) 2018/1139, Article 31(2), they should actually be given special consideration.

The LBA therefore firmly rejects the proposals.

**Adequate training devices are not available for most NCO aircraft types**

LVO is an operation with additional risks. To mitigate those risks, inter alia, pilot training requirements have been introduced at ICAO level and into European legislation. The LBA as the competent authority for granting LVO approvals in Germany requires all LVTO operators to train ground and taxi operations in low visibility conditions during initial training and regularly during recurrent training. However, this training is practically feasible only with adequate training devices (i.e. FSTDs), since it is, amongst other things, not possible to control the minimum visibility requirements in an aircraft under real conditions.

The training requirements applicable nowadays were derived from aspects that have been contributing, inter alia, to the 1977 Tenerife-North and the 2001 Milano-Linate accidents and should raise the awareness of the flight crew of the more demanding operations related low visibility operating conditions. The training usually contains taxi training in FSTDs simulated at airports with a complex taxiway network in demanding visibility conditions as low as 75 m (since the local visibility on the taxiway can be lower than on the runway), practicing high crew workload during taxi (i.e. by handling system failures prior take-off), handling ambiguous clearances, monitoring other ground traffic, internalizing handling strategies when situational awareness is lost, etc.

It is unclear how this training shall be undertaken without suitable FSTDs being available for almost all NCO related aircraft types.

It also unclear how pilots should be trained the aircraft type specific take-off manoeuvres including failures of the critical engines currently required under AMC1 SPA.LVO.120 lit. (g)



no. (1) in lowest RVR conditions. The lowest RVR such as 150 m cannot be controlled in practice and is usually not prevailing when training would take place outside of an FSTD.

Given the above described shortcomings in the availability of adequate training means and given what the aviation industry has learned from accidents such as in Tenerife North, 1977 and in Milano-Linate, 2001, we come to the conclusion that pilots not being trained for LVO must not be subject to such operations as they pose a risk not only to themselves but also to others.

In view of the lacking training possibilities for most affected aircraft types, it seems irresponsible to exempt NCO LVO 150 m operations from the approval requirement.

#### **Missing elements of mitigating risks for third party aviation stakeholders**

The proposal does not contain adequate measures to mitigate the safety implications of NCO LVTO “approval-exempt” operations to third parties such as, for example, CAT operators and their passengers or aerodrome stakeholders.

#### **Ambiguity of the applicable requirements**

There is considerable ambiguity about which operational rule should be applicable to NCO LVTO 150 m operations. The NPA states to exempt NCO LVTO 150 m operations from the specific approval requirement according to SPA.LVO. Following this principle and also from the legislative structure of Regulation (EU) No 965/2012, all other provision of SPA.LVO would still be applicable to NCO LVTO 150 m operations. However, AMC1 NCO.OP.110 lit. c) contains specific runway light requirements for LVTO whereas the lighting requirements for LVTO are those put down in applicable AMC on lighting requirements in part SPA.LVO.

This ambiguity causes considerable concerns as to whether all remaining risk mitigation provisions in SPA.LVO (Flight / FSTD / LVP initial and recurrent training, ground training, take-off, performance consideration for lowest permissible take-off RVR) would remain applicable in future.

comment

224

comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

(a) Take-off with visibility less than 400 meters without authority approval **is not supported.**

**Rational:** Sweden does not agree with the rational in 4.3.1. In the EU-OPS regulation CAT OPS 1.450 Low visibility operations, included training and checking for flight crew but no approval. Furthermore the operator had to establish procedures and instructions in order to use LVTO. In the proposal the training and checking requirements etc. seems non-existing as the SPA requirements are not applicable for NCO. Other provisions for aircrew (FCL) are not included in the proposal. Hence alignment with CAT requirements is not adequate.

The reasoning on the difficulties regarding approvals should not be taken into account when discussing safety related matters. Instead mechanisms to alleviate the approval process as adapted for NCO should be included in the proposal. We do not agree that the lack of training facilities and possibilities should be recognised as a reason for removal of a specific approval. Instead the proposal should be lined up in the opposite direction.



In order to make an LVTO a pilot need to taxi out to the runway. Hence the pilot will interact with commercial air transport in a mixed environment. The competency level of the pilots regardless of NCO, NCC or CAT should be on an appropriate level for all pilot categories.

Initially when the project started the aim was a total system approach, where all domains could be taken into account. The proposal diverts in an unacceptable direction lowering the safety level.

We also need to take into account the situation when a pilot is forced by passengers to carry out the take-off in order to reach the destination.

Our position is coordinated with our AGA, ATM and OPS domains

comment

238

comment by: *FNAM*

#FNAM Comments:

Positive impact: Simplification of LVTO procedures for Part NCO.

**3.1. Draft regulation - Annex VII - NCO.OP.101**

p. 10

comment

92

comment by: *FOCA Switzerland*

FOCA supports the proposal as regards the altimeter check.

comment

139

comment by: *Europe Air Sports***\*Page 10/59 - NCO.OP.101 Altimeter check and settings**

Inclusion of this new provision stemming from ICAO (Doc 8168 Volume 1 Part III Section 1 Chapter 3 Paragraph 3.2) is understood by EAS.

Nevertheless, EAS wonders if it is appropriate to recommend a private pilot to accept a tolerance of +/- 60 feet of his altimeter, in "all stages of a flight".

EAS rather recommends leaving the decision to the pilot to take into account or to ignore the difference. If the altimeter does not exactly indicate the reference elevation but is within +/- 60 feet, the adjustment of the altimeter setting should be left to the pilot according to the phase of flight.



comment 188 comment by: FFA EUR

**\*Page 10/59 - NCO.OP.101 Altimeter check and settings**  
 Inclusion of this new provision stemming from ICAO (Doc 8168 Volume 1 Part III Section 1 Chapter 3 Paragraph 3.2) is understood by FFA.  
 Nevertheless, we wonder if it is appropriate to recommend a private pilot to accept a tolerance of +/- 60 feet of his altimeter, in "all stages of a flight".  
 FFA rather recommends leaving the decision to the pilot to take into account or to ignore the difference. If the altimeter does not exactly indicate the reference elevation but is within +/- 60 feet, the adjustment of the altimeter setting should be left to the pilot according to the phase of flight.

comment 240 comment by: FNAM

FNAM Comments:  
 Neutral impact: Implementation of these rules will not bring additional workload for pilots.

### 3.1. Draft regulation - Annex VII - AMC1 NCO.OP.101(a)

p. 10

comment 37 comment by: PPL/IR Europe

Agreed

comment 72 comment by: DGAC France

**Page 10**  
**AMC1 NCO.OP.101(a) Altimeter check and settings**

"If no altimeter setting is available at the aerodrome or operating site of departure, the altimeter should be set using the elevation of the aerodrome or operating site, and the altimeter setting should be verified with a local ATS unit as soon as practicable after departure?"

It is not understood why it is necessary to check the altimeter setting with ATS as soon as possible if the altimeter is set using the elevation of the departing site. The case when ATS should be contacted should be clarified and minimized to avoid other safety effect like frequency congestion.

comment 98 comment by: European Powered Flying Union

AMC1 NCO.OP.101(a) Altimeter check and settings  
 Draft text, third paragraph  
 text page 10/59

You propose "...should be verified with a local ATS unit...". We propose: "...should be verified with the nearest ATS unit..."

Rationale



Not all aerodromes accepting IFR traffic necessarily dispose of an ATS unit, if we interpret the proposed texts correctly.

comment 123

comment by: Alan Crofts

Good - this streamlines a wide number of individually taught/practised altimeter setting procedures into one simple method.

comment 140

comment by: Europe Air Sports

**\*Page 10/59 - AMC1 NCO.OP.101(a) Altimeter check and settings**

The text is recognised as from ICAO Doc 8168 Volume 1 Part III Section 1 Chapter 3 paragraph 3.2.

EAS rather recommends leaving the decision to the pilot to take into account or to ignore the difference. If the altimeter does not exactly indicate the reference elevation but is within +/- 60 feet, the adjustment of the altimeter setting should be left to the pilot according to the phase of flight.

Please rectify in the rationale the reference: change "ICAO Doc 8168 1<sup>st</sup> Edition (PANS OPS) Volume III Section 2 Chapter 3.2" into "ICAO Doc 8168 (PANS OPS) Volume I Part III Section 1 Chapter 3.2".

comment 189

comment by: FFA EUR

**\*Page 10/59 - NCO.OP.101 Altimeter check and settings**

Inclusion of this new provision stemming from ICAO (Doc 8168 Volume 1 Part III Section 1 Chapter 3 Paragraph 3.2) is understood by FFA.

Nevertheless, we wonder if it is appropriate to recommend a private pilot to accept a tolerance of +/- 60 feet of his altimeter, in "all stages of a flight".

FFA rather recommends leaving the decision to the pilot to take into account or to ignore the difference. If the altimeter does not exactly indicate the reference elevation but is within +/- 60 feet, the adjustment of the altimeter setting should be left to the pilot according to the phase of flight.

comment 241

comment by: FNAM

FNAM Comments:

Neutral impact: Implementation of these rules will not bring additional workload for pilots.

**3.1. Draft regulation - Annex VII - NCO.OP.110**

p. 10-12

comment 38

comment by: PPL/IR Europe



Agreed

comment

73

comment by: *DGAC France*

**Page 10**

**NCO.OP.110 Aerodrome operating minima — aeroplanes and helicopters**

- The difference between point (b)(9) and point (b)(14) is not obvious (“the competence and experience of the pilot-in-command” vs “relevant operational experience of the pilot-in-command”). If these 2 items are kept, a GM should be added to explain the differences. If they are merged, the notions of competence and experience should be kept.

- An AMC should be added to specify point (b)(9) in the case of low visibility take off (RVR < 400m). Indeed, it would not be appropriate to allow a single pilot without training and/or experience (initial training, recurrent training, general experience, recent experience) taking off with a RVR of 150m. Our flight operations inspectors stress the importance of such requirement, especially in NCO context, since many pilots have no or reduced experience of low visibility conditions. Several points need to be experienced (step by step, or as a passenger next to a trained/experienced pilot...) and/or simulated before (ex: tunneling effect when accelerating, management of engine failure...). This new AMC is essential to accept the modification of point SPA.LVO.100(a) proposed in this NPA.

- It may be useful to recall in this point NCO.OP.110 (in an AMC or a GM) that pilots with a BIR (basic instrument rating) shall also satisfy with the applicable minima defined in the FCL.

comment

110

comment by: *Czech Technical University*

With regards to (a) please clarify:

PIC is required to establish aerodrome operating minima for instrument approaches, however, PIC is not obliged to follow this minima since the ‘approach ban’ is set to 550 m?

comment

141

comment by: *Europe Air Sports*

**\*Page 11/59 - NCO.OP.110 Aerodrome operating minima - aeroplanes**

EAS negatively notes that the requirement in the existing implementing rules that:

“Such minima shall not be lower than any that may be established for such aerodromes by the Member State”.

has been deleted in both NCO.OP.110 and in the equivalent changes CAT.OP.MPA.110 appearing in NAP 2018-06(C).

This introduces a difference between EASA rules and the ICAO standards (Annex 6 Part II Paragraph 2.2.2.2) which the Agency should consider carefully before implementing.

This would jeopardize the whole AOM concept according to which the minima determined by the State are the lowest minima.



comment 142 comment by: *Europe Air Sports*

**\*Page 11/59 - NCO.OP.110 Aerodrome operating minima - aeroplanes**

Furthermore, it is noted that the existing penalty on the required RVR applicable to non-CDFA approaches has been deleted. EAS supports this.

comment 190 comment by: *FFA EUR*

**\*Page 11/59 - NCO.OP.110 Aerodrome operating minima - aeroplanes**

The new text is accepted provided the following sentence is added under Paragraph (a): “Such minima shall not be lower than any that may be established for such aerodromes by the Member State”.

Our reasons are the following:

- full compliance with the original ICAO text (Annex 6 Part II Paragraph 2.2.2.2),
- full compliance with the existing NCO.OP.110 Paragraph (a)(1) and
- consistency of the whole AOM concept according which the minima determined by the State are the lowest minima.

**\*Page 12/59 - NCO.OP.110 Aerodrome operating minima - aeroplanes**

Furthermore, it is noted that the existing penalty on the required RVR applicable to non-CDFA approaches has been deleted. FFA has no objection.

comment 242 comment by: *FNAM*

FNAM Comments:  
Neutral impact: A correlation table is available to identify future changes.

### 3.1. Draft regulation - Annex VII - NCO.OP.110 - correspondence table

p. 12-13

comment 243 comment by: *FNAM*

FNAM Comments:  
Neutral impact: A correlation table is available to identify future changes.

### 3.1. Draft regulation - Annex VII - AMC1 NCO.OP.110

p. 13-14

comment 1 comment by: *Bruno Herencic*

Paragraph 3) Low Visibility Take-off:  
- change the word SHOULD to SHALL in (1), (2), (3)

It will avoid ambiguity and it is not safe to take-off without CL markings or CL lights with less than 400m.

comment 39 comment by: *PPL/IR Europe*

Agreed.





comment 60 comment by: *Austrian Airlines*

EASA proposes to allow LVO departures for Part-NCO operations down to 150m RVR without LVO approval. On the other hand, approaches below 550m RVR still require prior approval.

Austrian Airlines considers this proposal as extremely critical.

This proposal poses a not yet assessable risk, not only for the NCO operators concerned, but also for the entire commercial aviation industry, especially when NCO operators have to return to the departure airport for technical reasons.

NCO operators may feel reaffirmed to still take off in very low VIS conditions without the necessary knowledge / training.

This is exacerbated by the fact, that the number of LVO departures will also increase, which is also an additional risk for pilots and additional workload for ATC.

Low visibility operations and the possible contingency handling requires appropriate training.

comment 74 comment by: *DGAC France*

**Page 13**  
**AMC1 NCO.OP.110 Aerodrome operating minima — aeroplanes and helicopters**  
**TAKE-OFF OPERATIONS**

Point (c):

- General comment:  
 This point c) should be at IR level since NCO.GEN.101 establishes the right of a pilot-in-command under Part-NCO to use alternative means of compliance and such possibility would not be appropriate for take-off with low visibility. Indeed, an approval for LVTO was necessary in France only for RVRs below 150 m, but there was an essential counterpart to mitigate the risk for take-off with low visibility (< 550 m): the runway/marks lights.

- Technical comment:  
 In table 1.A of NPA 2018-06 for CAT operation, runway end lights are necessary for RVR higher than 400m. For consistency, it wouldn't be appropriate to allow low visibility take-off without these runway end lights. See below the proposed changes, in particular to ensure that the end of the runway is illuminated with low visibility.  
 "Low visibility take-off:  
 (1) Runway centreline markings or lights should be available for any take-off in an RVR or visibility less than 400 m by day.  
 (2) Runway edge lights and end lights ~~or centreline lights~~ should be available for any take-off in an RVR less than 400 m by night.  
 (3) Runway edge lights, end lights and centreline lights should be available for any take-off in an RVR less than ~~300~~250 m."

comment 75 comment by: *DGAC France*

**Page 13**



**AMC1 NCO.OP.110 Aerodrome operating minima — aeroplanes and helicopters  
TAKE-OFF OPERATIONS**

In the context of low visibility take-off and more generally for take-off operation, an essential implementing rule is missing in part NCO: “The pilot-in-command shall not commence a take-off unless the weather conditions at the aerodrome of departure are at or above the applicable minima for landing at that aerodrome or an appropriate take-off alternate aerodrome is available.”. This proposed text should be added as a new point (c) of NCO.OP.115.

comment 99 comment by: *European Powered Flying Union*

AMC1 NCO.OP.110 Aerodrome operating minima-aeroplanes and helicopters  
Take off operations, draft text  
text page 13/59  
(a) General  
(1) Take-off minima...

We would add FATO behind the word runway on the second line.

Rationale  
The title of the AMC addresses aeroplanes and helicopters.

comment 126 comment by: *Lufthansa German Airlines*

EASA proposes to allow LVO departures for Part-NCO operations down to 150m RVR without LVO approval. Lufthansa Group considers this proposal as extremely critical. Low visibility operations and the possible contingency handling requires appropriate training. Basically, we see the need for the same standards in the same system (safety level playing field). It is not understandable that different standards should apply to different actors in a highly regulated environment. In this context, we also refer to the ANSV investigation report on the accident in Milan Linate on October 8, 2001 (especially Chapter 4).

comment 143 comment by: *Europe Air Sports*

**\*Page 13/59 - AMC1 NCO.OP.110 Aerodrome operating minima - aeroplanes**

Paragraph (a)(1): the term “cloud conditions” is recognised as an ICAO term.

Nevertheless, since it raises a lot of questions and it does not bring obvious operational benefit, the existing term “ceiling” should be kept.

comment 175 comment by: *Europe Air Sports*

**\*Page 14/59 - AMC1 NCO.OP.110 Aerodrome operating minima - aeroplanes**



In paragraph (b)(2), the word “sufficient” is too vague. So, the current wording should be kept since the use of “should” already offer some flexibility.

Besides, the use of ground lights is not limited to night time. Ground lights may be also switched on for low visibility operations during daylight.

comment 191

comment by: FFA EUR

**\*Page 13/59 - AMC1 NCO.OP.110 Aerodrome operating minima - aeroplanes**

Paragraph (a)(1): the term “cloud conditions” is recognised as an ICAO term. Nevertheless, since it raises a lot of questions and it does not bring obvious operational benefit, the existing term “ceiling” should be kept.

**\*Page 14/59 - AMC1 NCO.OP.110 Aerodrome operating minima - aeroplanes**

In paragraph (b)(2), the word “sufficient” is too vague. So, the current wording should be kept since the use of “should” already offer some flexibility.

Besides, the use of ground lights is not limited to night time. Ground lights may be also switched on for low visibility operations during daylight.

**\*Page 14/59 - AMC1 NCO.OP.110 Aerodrome operating minima - aeroplanes**

FFA disagrees with the application of the rule to NCO operations without approval. As a result, we propose to delete the sentence “Paragraph (c) is ... LVO approval”.

comment 230

comment by: German Aviation Association (BDL)

Draft stated: “(...) **Rationale** (...) Paragraph (c) is introduced because it is proposed elsewhere that **take-offs in RVRs between 150 m and 400 m be allowed for NCO without an LVO approval.**”

This proposed Paragraph (c) might be problematic. The operational risk for all operations rises and is not assessable at the time being, since an inflight return of a NCO aircraft in LVO with RVR < 550m poses an extrem risk to the flight itself and even so for all other participants in current LVO situation. This poses an additional risk to the entire CAT. NCO operators may feel reaffirmed to still take off in very low VIS conditions without the necessary knowledge / training. On the other hand, the regulations call for appropriate training before conducting LVO. This is exacerbated by the fact, that the number of LVO departures will also increase, which is also an additional risk for pilots and additional workload for ATC.

comment 244

comment by: FNAM

FNAM Comments:

Neutral impact: A correlation table is available to identify future changes.

**3.1. Draft regulation - Annex VII - AMC3 NCO.OP.110**

p. 14-19

comment 4

comment by: Bruno Herencic



Now that CMV was removed there is ambiguity in cases where the aerodrome does not report RVR.  
There is also no guidance material.  
Please add GM or modify AMC3 NCO.OP.110 for cases where there is no reported RVR.

comment

22

comment by: ESSP SAS

*There is a discrepancy between the current EU definition of “non-instrument runway” (stated in Regulation 139/2014) and the proposed modifications included in NPA 2020-02, with regard to the implementation of IFR procedures in this type of runways.*

*Current EU definition of “non-instrument runway” does not allow the implementation of IFR procedures in this type of runways (‘non-instrument runway’ means a runway intended for the operation of aircraft using visual approach procedures). However in accordance with NPA, it is clearly stated the possibility of developing instrument flight procedures in all runway types.*

*Many States are not implementing IFR procedures in non-instrument runways due to the ICAO definition has not been adopted yet in EU regulation. Has EASA established a date for the alignment of the definition of non-instrument runway with ICAO?*

Easy Access Rules for Aerodromes (Regulation 139/2014) - Revision from May 2019.

comment

40

comment by: PPL/IR Europe

In Table 1.A, it is disproportionate to require Circling minima to apply to non-instrument runways when using 3D approach guidance. An LPV approach will provide accuracy and assurance way in excess of the normal uncertainty of position elsewhere in a CTL. Although the runway may be less visible than an instrument runway, the pilot will know exactly where it is. This is particularly true of those civilian runways painted onto large ex-military runways, where there may be 800m of paving before the threshold.

comment

76

comment by: DGAC France

**Page 14**

**AMC3 NCO.OP.110 Aerodrome operating minima — aeroplanes and helicopters  
DETERMINATION OF RVR FOR INSTRUMENT APPROACH OPERATIONS – AEROPLANES**

- This section should be entitled “Determination of RVR or flight visibility for instrument...”, and points a), a.1), and b) modified consequently.

- Table 1.A mentions “flight visibility” which is not “VIS”. It is proposed to define clearly this notion with a definition in Annex I of AIROPS. It is suggested to use definition 80 of SERA (‘flight visibility’ means the visibility forward from the cockpit of an aircraft in flight). Moreover, a GM could potentially be added to explain the difference between “flight visibility” and “VIS” (individual perception of visibility vs visibility as defined by meteorological services). The same comment will not be repeated for the following IR, AMC or GM.



- Table 3.A should refer to 2D / 3D operations as introduced in other parts of AIROPS (CAT, NCC and SPO)

- Table 3.A should be clarified when RTZL or RCLL are available (this comment may also apply to other parts of AIROPS, but was not identified by DGAC during NPA 2018-06 and 2019-09 consultation). It is suggested to propose:

- RTZL and RCLL: no limitation
- Without RTZL and/or RCLL but using HUDLS or equivalent system; coupled auto-pilot or flight director to DH: no limitation
- Other cases: 750m

comment

77

comment by: *DGAC France***Page 16****AMC3 NCO.OP.110 Aerodrome operating minima — aeroplanes and helicopters  
DETERMINATION OF RVR FOR INSTRUMENT APPROACH OPERATIONS – HELICOPTERS**

- This section should be entitled “Determination of RVR or flight visibility for instrument...”, and points a) and a.1) modified consequently.

- An additional point (d) should be written to ensure that single pilot operation associated with low RVR have an adequate requirement for aircraft equipment (such requirement exist in current point (b)(2) of GM4 NCO.OP.110 and a similar requirement exists for aeroplane in table 3.A of this NPA). In NPA 2019-09 Part-CAT, NCC or SPO, there is a requirement to be equipped with a 3 axis / 4 axis autopilot (PA). A more global reflexion on equipment for single operations may be needed, but as an initial proposal, it could be specified that: “(d) A RVR of less than 800 m should not be used except when using a suitable and coupled autopilot to DH”.

- Table 4.H: It should be checked whether VIS refers here to visibility or flight visibility.

comment

109

comment by: *Czech Technical University*

The rationale is perfectly understood and valid. However, we see some obstacles to successful implementation:

Many EASA Member States publish national aerodrome operating minima. These are often based on ICAO Doc 9365, however, 1 500 m cut-off is not always applied. Although, some states allow operators to use lower minima than those published, some do not. Minima based on the new AMC3 NCO.OP.110 thus may not be available throughout all EASA Member States. EASA should focus on standardization and/or removal of state minima.

comment

116

comment by: *OSM Aviation Academy*

Very logic and good to have 1500m as the highest required RVR. The flight safety impact for our operation is negligible. This change will most likely have a positive impact on flight safety as you can fly IFR-procedures with the built-in safety nets instead of VFR in marginal weather.



comment 245 comment by: FNAM  
 FNAM Comments:  
 Neutral impact: A correlation table is available to identify future changes.

### 3.1 Draft Regulation - Annex VII - AMC4 NCO.OP.110

p. 19-20

comment 41 comment by: PPL/IR Europe  
 Agreed

comment 146 comment by: Europe Air Sports  
**\*Page 20/59 - AMC4 NCO.OP.110 Aerodrome operating minima - aeroplanes**  
 The type of procedure considered in paragraph (c) is seldom met across the EU.  
 How many procedures are still based on an outer marker? How many outer markers are used to determine the FAF? Why is there a need for adding a provision which is of general nature?  
EAS suggests to delete paragraph (c).

comment 192 comment by: FFA EUR  
**\*Page 20/59 - AMC4 NCO.OP.110 Aerodrome operating minima - aeroplanes**  
 The type of procedure considered in paragraph (c) is seldom across the EU.  
 How many procedures are still based on an outer marker? How many outer markers are used to determine the Final Approach Fix? Why is there a need for adding a provision which is of general nature?  
FFA suggests to delete paragraph (c).

comment 246 comment by: FNAM  
 FNAM Comments:  
 Neutral impact: A correlation table is available to identify future changes.

### 3.1 Draft Regulation - Annex VII - deleted GM1 NCO.OP.110

p. 20

comment 193 comment by: FFA EUR  
**\*Page 20/59 - GM1 NCO.OP.110 Aerodrome operating minima - aeroplanes**  
FFA supports the deletion of this item.

### 3.1 Draft Regulation - Annex VII - GM1 NCO.OP.110

p. 20-21



comment 147 comment by: *Europe Air Sports*

**\*Page 20/59 - GM1 NCO.OP.110 Aerodrome operating minima - aeroplanes**

EAS supports the deletion of this item.

comment 223 comment by: *Flying Club President*

The calculations regarding stall speed do not apply to helicopters because they do not have a stall speed.

Aircraft Category 'H' is proposed.

Applicable speeds for helicopters might be 70kts - under this methodology permitting reduced minima. One consideration might be the Min Control Speed which is a concept used for flying a helicopter as if it were an aeroplane (ie using translation dependant instrument interfaces etc etc). This is sometimes referred to as V(mini).

comment 247 comment by: *FNAM*

FNAM Comments:

Neutral impact: A correlation table is available to identify future changes.

### 3.1 Draft Regulation - Annex VII - GM2 NCO.OP.110

p. 21

comment 42 comment by: *PPL/IR Europe*

Agreed

comment 117 comment by: *OSM Aviation Academy*

Very good explained text that make logic sense. Positive impact in all aspects on our current operations.

comment 248 comment by: *FNAM*

FNAM Comments:

Neutral impact: A correlation table is available to identify future changes.

### 3.1 Draft Regulation - Annex VII - GM3 NCO.OP.110

p. 22-23

comment 249 comment by: *FNAM*

FNAM Comments:

Neutral impact: A correlation table is available to identify future changes.

### 3.1 Draft Regulation - Annex VII - GM4 NCO.OP.110

p. 23-27



comment

7

comment by: *Prof. Filippo Tomasello*

Text of proposed GM4 NCO.OP.110 Aerodrome operating minima —aeroplanes and helicopter, includes:  
 "When a pilot-in-command uses information provided by a third party for aerodrome operating minima, the pilot-in-command remains responsible for compliance with the implementing rules".

It is really unfortunate that the Agency does not make sufficient efforts to harmonise terminology across various domains and with the Basic Regulation.

The correct term should in fact be "service provider" and not, too generically, "third party". Service Providers are not only defined in aviation, but more in general in the ISO Unified Modelling Language (UML).

However, it is acknowledged that several commercial service providers of aeronautical information for NCO may not be certified according to Commission Regulation 2017/373.

Consequently two proposals are submitted to the the kind attention of the Agency: one in the short term, to fix the text of the proposed amendment; the second in the medium term to amend 2017/373, which is beyond the scope of the NPA, but which the commentator may nevertheless like to raise.

**PROPOSAL 1 (SHORT TERM)**

Modify proposed text of this GM to read:  
 "When a pilot-in-command uses information provided by a Service Provider (SP) of Aeronautical Information for aerodrome operating minima, the pilot-in-command remains responsible for compliance with the implementing rules, including in the case that the SP is not certified based on EC Regulation 2017/373".

Justification: the semantics would be more in line with other legislation, while not preventing the pilot to take advantage of non-certified AIS Providers.

**PROPOSAL 2 (MEDIUM TERM):**

Amend EC Regulation 2017/373 following the risk-based approach introduced by NBR in 2018 and hence making a distinction between "safety critical" SPs, which should indeed be certified by the Authority and "safety related" ones, for which a certification by a "notified body" or "Qualified Entity" (ref. Art. 69 NBR) would be sufficient.

Justification: When the "common requirements" for ANSPs were drafted in 2005 there was not yet clear idea of the need to reduce the Lol for Authorities and therefore all ANSPs were put under direct oversight by the aviation Authority. This tradition continued until 2017/373. Meanwhile, in its Communication 613 of 2015, when proposing the NBR, the Commission highlighted the need to reduce the Lol of Authorities through several means. This is now law. Regulation 2017/373 is neither performance-based nor risk -based in particular for SPs of COM, NAV, SUR, AIS and MET. None of this SPs is subject to certification according to Annexes 3, 10 and 15 to the Chicago Convention. One may therefore think that 373 went too far.

In fact, the obligation to be certified was always escaped by entities such as Galileo, Inmarsat and SITA. And the text of NBR adjusted to allow Galileo to continue to do so.

EASA might probably outsource a mid-term evaluation of 2017/373 which could identify and compare several options for its evolution.

comment

9

comment by: *EuroUSC Italia*



EuroUSC Italia thanks the Agency for offering the possibility to comment this NPA. Text of proposed GM4 NCO.OP.110 Aerodrome operating minima —aeroplanes and helicopter, includes:

"When a pilot-in-command uses information provided by a third party for aerodrome operating minima, the pilot-in-command remains responsible for compliance with the implementing rules".

It is really unfortunate that the Agency does not make sufficient efforts to harmonise terminology across various domains and with the Basic Regulation.

The correct term should in fact be "service provider" and not, too generically, "third party". Service Providers are not only defined in aviation, but more in general in the ISO Unified Modelling Language (UML).

However, it is acknowledged that several commercial service providers of aeronautical information for NCO may not be certified according to Commission Regulation 2017/373.

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In fact, the obligation to be certified was always escaped by entities such as Galileo, Inmarsat and SITA. And the text of NBR adjusted to allow Galileo to continue to do so.

EASA might probably outsource a mid-term evaluation of 2017/373 which could identify and compare several options for its evolution.

comment 43

comment by: PPL/IR Europe

The rationale seems to suggest that if the third party is certified, then the considerations don't apply. This should be more explicit in the text.



Either:

"When a pilot-in-command uses uncertified information provided by a third party for aerodrome operating minima, the pilot-in-command remains responsible for compliance with the implementing rules."

Or:

"When a pilot-in-command uses information provided by an uncertified third party for aerodrome operating minima, the pilot-in-command remains responsible for compliance with the implementing rules."

comment 64

comment by: *Uppsala Flying Club*

I'm not sure this GM is an improvement over the current GM1. How can the pilot in practise check if a commercial product is certified? I assume Jeppesen's products are, and their products are likely the commercial products NCO GA pilots will use.

comment 124

comment by: *Alan Crofts*

A useful addition. Misunderstandings continue to exist between the use of source data eg AIP and commercial publications, with occasional disagreements between the two.

comment 148

comment by: *Europe Air Sports*

**\*Page 26/59 - GM4 NCO.OP.110 Aerodrome operating minima - aeroplanes**

In the rationale, EAS thinks that the last sentence should be modified as follows: "... the pilot remains responsible for ensuring the AOM used are compliant with the AOM established by the State, if any".

comment 194

comment by: *FFA EUR*

**\*Page 26/59 - GM4 NCO.OP.110 Aerodrome operating minima - aeroplanes**

In the rationale, we think that the last sentence should be modified as follows: "... the pilot remains responsible for ensuring the AOM used are compliant with the AOM published by the State, if any".

comment 250

comment by: *FNAM*

FNAM Comments:

Neutral impact: A correlation table is available to identify future changes.

### 3.1 Draft Regulation - Annex VII - deleted GM5 NCO.OP.110

p. 27

comment 149

comment by: *Europe Air Sports*

**\*Page 27/59 - GM5 NCO.OP.110 Aerodrome operating minima - aeroplanes**



The CMV method is useful at the pre-flight stage for selecting the aerodromes and during the cruise for checking visibility/RVR prevailing on the selected aerodromes.

As a result, EAS is of the opinion to keep GM5 NCO.OP.110 regarding “Conversion of reported visibility to RVR” as it is.

comment 195

comment by: FFA EUR

**\*Page 27/59 - GM5 NCO.OP.110 Aerodrome operating minima - aeroplanes**

As explained elsewhere in this file, the existing text including Table 5 should not be deleted and the whole CMV provisions should be kept.

The CMV method is useful at the pre-flight stage for selecting the aerodromes and during the cruise for checking visibility/RVR prevailing on the selected aerodromes.

As a result, FFA is of the opinion to keep GM5 NCO.OP.110 regarding “Conversion of reported visibility to RVR” as it is.

**3.1 Draft Regulation - Annex VII - deleted GM7 NCO.OP.110**

p. 28-29

comment 150

comment by: Europe Air Sports

**\*Page 28/59 - GM7 NCO.OP.110 Aerodrome operating minima - aeroplanes**

EAS thinks that the existing GM7 NCO.OP.110 should be rationalised but not deleted.

A short text should describe the CDFA technique and then the SDFA technique, as two methods of conducting the final segment of a 2D operations NPA.

Provisions laid down in subparagraph (3) dealing with SAP may be deleted. The issue of stabilisation of approaches would be tackled under the CDFA related text.

comment 196

comment by: FFA EUR

**\*Page 28/59 - GM7 NCO.OP.110 Aerodrome operating minima - aeroplanes**

FFA thinks that the existing GM7 NCO.OP.110 should be rationalised but not deleted.

A short text should describe the CDFA technique and then the SDFA technique, as two methods of conducting the final segment of a 2D operations NPA.

Provisions laid down in subparagraph (3) dealing with SAP may be deleted. The issue of stabilisation of approaches would be tackled under the CDFA related text.

**3.1 Draft Regulation - Annex VII - GM5 NCO.OP.110**

p. 29-30

comment 251

comment by: FNAM

FNAM Comments:

Neutral impact: A correlation table is available to identify future changes.



**3.1 Draft Regulation - Annex VII - GM1 NCO.OP.110(b)(5)**

p. 30

- comment 151 comment by: *Europe Air Sports*
- \*Page 30/59 - GM1 NCO.OP.110(b)(5) Aerodrome operating minima - aeroplanes**
- The second sentence saying "... required operating minima should be determined" calls for some guidance on determination of revised AOM when a required visual aid or non-visual aid is not available.
- comment 197 comment by: *FFA EUR*
- \*Page 30/59 - GM1 NCO.OP.110(b)(5) Aerodrome operating minima - aeroplanes**
- The second sentence saying "... required operating minima should be determined" needs to draft guidance on determination of revised AOM when a required visual aid or non-visual aid is not available.
- comment 252 comment by: *FNAM*
- FNAM Comments:  
Neutral impact: A correlation table is available to identify future changes.

**3.1 Draft Regulation - Annex VII - NCO.OP.111**

p. 30-32

- comment 44 comment by: *PPL/IR Europe*
- Agreed
- comment 118 comment by: *OSM Aviation Academy*
- Good that both CDFA and non-CDFA may be used and that the minima is adjusted accordingly (DH vs MDH).
- comment 152 comment by: *Europe Air Sports*
- \*Page 30/59 - NCO.OP.111 Aerodrome operating minima – 2D and 3D operations**
- EAS recommends to stick to ICAO Doc 8168 (PANS OPS) Volumes 1 and 2 where both "height" and "altitude" are referred to:
- Change "obstacle clearance height (OCH)" into "obstacle clearance altitude/height (OCA/H)"
  - Change "decision height (DH)" into "decision altitude/height (DA/H)"
  - Change "minimum descent height (DH)" into "minimum descent altitude/height (MDA/H)".



The revised Table 1 “System minima” is supported by EAS.

comment 198

comment by: FFA EUR

**\*Page 30/59 - NCO.OP.111 Aerodrome operating minima – 2D and 3D operations**

FFA recommends to stick to ICAO Doc 8168 (PANS OPS) Volumes 1 et 2 where both “height” and “altitude” are referred to:

- Change “obstacle clearance height (OCH)” into “obstacle clearance altitude/height (OCA/H)”
- Change “decision height (DH)” into “decision altitude/height (DA/H)”
- Change “minimum descent height (DH)” into “minimum descent altitude/height (MDA/H)”.

The revised Table 1 “System minima” is fine for EAS.

comment 253

comment by: FNAM

FNAM Comments:  
Neutral Impact: No remarks.

### 3.1 Draft Regulation - Annex VII - deleted AMC1 NCO.OP.111

p. 32

comment 45

comment by: PPL/IR Europe

Wholeheartedly agreed. This has been a bugbear ever since its inception, and is probably the most ignored element of Part NCO IFR regulations. It is completely disproportionate to the risks, and in marginal cases may add significantly to the risk (if it results in an otherwise unnecessary go around and diversion.) It should go.

comment 65

comment by: Uppsala Flying Club

The deletion of this AMC is good, but given the widespread opinion that you must determine a DDA higher than the MDA, I would suggest adding a GM that explicitly says that is not the case. The text of the proposed GM8 to NCC.OP.110 from NPA 2018-06(C) could be used.

comment 125

comment by: Alan Crofts

Good - a source of much discussion and misunderstanding of the IR over the last few years, even at NAA level.

### 3.1 Draft Regulation - Annex VII - GM1 NCO.OP.111

p. 32-33

comment 2

comment by: Bruno Herencic

Second paragraph that relates to 2D CDFA is not clear even to a group of TRI/TREs analysing it:



...There is no MDH for a non-precision approach (NPA) flown using CDFA. An aircraft may descend briefly below the DH on an NPA using CDFA..

OK, so does EASA want an add-on, i.e. Derived Decision Height (DDH) or not?

Please change the paragraph to make it very clear and unambiguous.

- |   |     |                               |
|---|-----|-------------------------------|
| comment   | 46  | comment by: PPL/IR Europe     |
| <p>While we agree with every word and endorse it, there is a tendency to overstep the mark into training. "During a 2D instrument approach operation (using lateral navigation guidance only) flown, using the CDFA technique, the vertical path should be approximated continuously by choosing an appropriate vertical speed, crosschecking level against position along the approach, and adapting the vertical speed as required." would be better in an instrument flying text book than the regulations. No harm is done, but it does jar with the tenor of the rest of the regulations.</p>        |     |                               |
| comment   | 153 | comment by: Europe Air Sports |
| <p><b>*Page 33/59 - GM1 NCO.OP.111 Aerodrome operating minima – 2D and 3D approach operations</b></p> <p><u>EAS recommends</u> to stick to ICAO Doc 8168 (PANS OPS) Volumes 1 et 2 where both words "height" and "altitude" are referred to.</p> <p>Change all references made to the ground level into references to the MSL. Namely, change "DH" into "DA" or "DA/H", "MDH" into "MDA" or "MDA/H", "height" into "altitude" or "altitude/height".</p> <p>Add the following text: "The CDFA technique should be chosen in NCO operations unless it may be advantageous to apply the SDFA technique".</p> |     |                               |
| comment   | 199 | comment by: FFA EUR           |
| <p><b>*Page 33/59 - GM1 NCO.OP.111 Aerodrome operating minima – 2D and 3D approach operations</b></p> <p><u>FFA recommends</u> to stick to ICAO Doc 8168 (PANS OPS) Volumes 1 et 2 where both words "height" and "altitude" are referred to.</p> <p>Change all references made to the ground level into references to the MSL. Namely, change "DH" into "DA" or "DA/H", "MDH" into "MDA" or "MDA/H", "height" into "altitude" or "altitude/height".</p> <p>Add the following text: "The CDFA technique should be chosen in NCO operations unless it may be advantageous to apply the SDFA technique".</p> |     |                               |
| comment   | 254 | comment by: FNAM              |
| <p>FNAM Comments:<br/>Neutral Impact: No remarks.</p>   |     |                               |

## 3.1 Draft Regulation - Annex VII - NCO.OP.112

p. 33-34

- comment 154 comment by: *Europe Air Sports*
- \*Page 33/59 - NCO.OP.112 Aerodrome operating minima – circling operations with aeroplanes**
- The wording “a circling approach operation” is recognised as an ICAO term and is supported.
- Please add that “the required visual reference is the runway environment” for executing a circling approach operation.
- comment 200 comment by: *FFA EUR*
- \*Page 33/59 - NCO.OP.112 Aerodrome operating minima – circling operations with aeroplanes**
- The wording “a circling approach operation” is recognised as an ICAO term and is accepted.
- Please add that “the required visual reference is the runway environment” for executing a circling approach operation.
- comment 255 comment by: *FNAM*
- FNAM Comments:  
Neutral impact: No remarks.

## 3.1 Draft Regulation - Annex VII - GM1 NCO.OP.112

p. 34

- comment 78 comment by: *DGAC France*
- Page 34**  
**GM1 NCO.OP.112 Aerodrome operating minima — circling operations with aeroplanes**  
**SUPPLEMENTAL INFORMATION**
- In point (b)(3), it should be clearly indicated that in the case a meteorological visibility is reported (by ATC and an automatic system), this information shall be taken into account instead of the flight visibility.
- Proposed text: "(3) for these procedures, the applicable visibility is the flight visibility unless a meteorological visibility is reported."
- comment 155 comment by: *Europe Air Sports*
- \*Page 34/59 - GM1 NCO.OP.112 Aerodrome operating minima - circling operations with aeroplanes**
- The revision of the text is supported.



comment 201 comment by: FFA EUR

**\*Page 34/59 - GM1 NCO.OP.112 Aerodrome operating minima - circling operations with aeroplanes**  
The revision of the text is accepted.

comment 256 comment by: FNAM

FNAM Comments:  
Neutral impact: No remarks.

### 3.1 Draft Regulation - Annex VII - AMC1 NCO.OP.115

p. 35

comment 47 comment by: PPL/IR Europe

Agreed. There is inconsistency between States about the nature of IFR operations in the absence of instrument procedures and this is a good opportunity to start moving towards more consistency.

comment 66 comment by: Uppsala Flying Club

This new AMC is very important. The right of a pilot to use "do it yourself" approaches under IFR to any airport where official approaches are not available needs to be spelled out. Numerous individuals, organisations and authorities have tried to explain away this implication of NCO.OP.115 or pretended that it isn't there at all. In most cases, when making an approach to a familiar airport pilots can without difficulty assess if the obstacle situation makes a safe "do it yourself" instrument approach possible. Again, the possible risks of "do it yourself" instrument approaches must be weighted against the risk of VFR flight in marginal weather conditions.

comment 79 comment by: DGAC France

**Page 35**  
**AMC1 NCO.OP.115 Departure and approach procedures — aeroplanes and helicopters**  
**ARRIVALS AND DEPARTURES UNDER IFR WHERE NO INSTRUMENT FLIGHT PROCEDURES ARE PUBLISHED**

It is suggested to add a GM to explain that the pilot is responsible for ensuring that the trajectory chosen is safe and that applying VMC minima is recommended to reach a minimum safe altitude (in particular to be cleared of potential obstacles and to be cleared of possible interfering aircrafts (no FIS is available, radio not mandatory...)).

comment 121 comment by: OSM Aviation Academy

Very good that it is emphasized that IFR operations *are* permitted also at airports without instrument flight procedures and without any ATC. The positive impact of this clarification is significant for our operations, since the majority of our operation takes place when the ATS is closed. To clearly be allowed to use the available procedures when ATS is closed will increase flight safety for GA. It is also very beneficial for our operations to be able to depart





from non-instrument aerodromes under IFR after determination of appropriate obstacle clearance. The positive impact is very high, since pilots will have the opportunity to avoid to depart as VFR in marginal conditions. This will clearly increase flight safety.

comment 156 comment by: *Europe Air Sports*

**\*Page 35/59 - AMC1 NCO.OP.115 departure and approach procedures - aeroplanes**

The new text is fully supported. Some guidance might be given at national level.

comment 202 comment by: *FFA EUR*

**\*Page 35/59 - AMC1 NCO.OP.115 departure and approach procedures - aeroplanes**

The new text is fully supported. Some guidance might be given at national level.

comment 220 comment by: *Luftfahrt-Bundesamt*

**Comments relating to AMC1 NCO.OP.115**

The proposed amplification raises considerable safety concerns at the LBA as the text undermines current and standardised practises of maintaining obstacle clearance and separation to other airspace users.

The LBA therefore advises to clarify the text considering the following aspects:

Except for controlled aerodromes, most of the lower part of the lower airspace (in Germany) is class G airspace. Most aerodromes used for general aviation (GA) are located in class G airspace and do not have instrument procedures available. There is no clearance required to enter class G airspace and there is no clearance required for take-off and landing. Departing and arriving traffic can currently only be operated under VFR. Obstacle clearance and separation are maintained by the pilot according to class G airspace requirements. There is no requirement for airspace users to operate ACAS or other technology mitigating the risk of mid-air collisions. The proposal intends to change the principle without clarifying how separation to other aircraft can be maintained in concrete terms. It also leaves unclear how obstacle clearance could be maintained. How would a pilot know whether there was put up an obstacle (i.e. crane) at short notice in the vicinity of the aerodrome? There is usually no requirement to notify airspace users about relevant obstacles in the vicinity of smaller aerodrome used mainly by GA.

The proposed text should thus be clarified and the following is to be considered:

If there is no published IFR procedure, take-off and departure need to be conducted according to VFR rules for that airspace. However, if a flight plan was filed and accepted, a flight may transfer from VFR to IFR (so called "IFR-pickup", Z flight plan). It must be clear that until the "IFR-pickup", the operations take place in accordance with VFR in VMC according to the requirements of the airspace and that the pilot remains responsible for obstacle clearance and separation by means of visual reference.

For arrival and landing, accordingly, it must be clear, that as soon that the controller acknowledges the cancellation of IFR (IFR-cancellation, Y flight plan), the operation continues under VFR in VMC according to the requirements of the airspace and that the pilot remains responsible for obstacle clearance and separation by means of visual information.



comment 226 comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Arrivals under IFR with no published procedures, allowing the pilot-in-command to investigate the obstacle situation **is not supported**.

**EASA rationale:** “NCO.OP.115 is amplified to clarify that IFR operations are permitted in the absence of instrument flight procedures, but the pilot is responsible for ensuring that the trajectory chosen is safe” **is not supported**.

**SE rationale**  
This is not supported if the approach is intended to be flown in IMC. It needs to be clarified if the final part is to to be flown in IMC or VMC.

comment 257 comment by: *FNAM*

FNAM Comments:  
Positive impact: NCO operators can now operate in IFR on aerodromes without a published IFR procedure.

### 3.1 Draft Regulation - Annex VII - NCO.OP.140

p. 35

comment 48 comment by: *PPL/IR Europe*

Agreed

comment 80 comment by: *DGAC France*

**Page 35**  
**NCO.OP.140 Destination alternate aerodromes — aeroplanes**

The proposed text gives prescriptive values and in particular a visibility of at least 1 500 m by day. This visibility could be insufficient for some IFR flights to plan an alternate on a non-precision approach runway with a cat C or D aeroplane (the minimum RVR is 2400 meters). Moreover, a margin should be added to values given in AMC 3 of NCO.OP.110 to determine the necessity to plan a destination alternate aerodrome

Proposal: “a ceiling of at least 1 000 ft above the DH/MDH for an available instrument approach procedure and a visibility of at least the greatest of ~~1 500 m by day~~, 5 000 m ~~by night~~.” (a single limit is also more simple).

comment 111 comment by: *Czech Technical University*

We suggest keeping the original wording: “the approach and landing may be made under visual meteorological conditions (VMC)”. At some airports ceiling of 1 000 ft above the DH/MDH may not allow transition to visual approach in the event of equipment failure and at other airports the same ceiling requirement may be unnecessary limiting. PIC should be able to determine whether reduced flight visibility provision or SVFR is available or standard VMC minima apply.



Alternatively, please, consider: “ceiling above minimum safe IFR height and visibility 5 000 m”  
This is more limiting, however, operations without an alternate aerodrome require a certain margin for an unexpected weather deterioration.  
For further reasoning please refer to comment #108.

comment 128 comment by: *DK/ATO/013*

We see no reason for the 5000 m requirement at night. We fully concur that it is sensible to designate an alternate aerodrome, but do not understand the rationale for more than triple requirement at night.

comment 157 comment by: *Europe Air Sports*

**\*Page 35/59 - NCO.OP.140 Destination alternate aerodromes - aeroplanes**

The simplified text is supported.

This gives the opportunity to confirm that day and night operations do not require the same visibility.

comment 203 comment by: *FFA EUR*

**\*Page 35/59 - NCO.OP.140 Destination alternate aerodromes - aeroplanes**

The simplified text is accepted.

This gives the opportunity to confirm that day and night operations do not require the same visibility.

comment 236 comment by: *FOCA Switzerland*

FOCA Switzerland suggests to clarify whether the "instrument approach" mentioned in the last paragraph is a conventional approach or not. FOCA supports the idea that this exemption should only apply for non-GNSS approach.

comment 258 comment by: *FNAM*

FNAM Comments:

Negative Impact: More restrictive rule on the choice of destination airports.

### 3.1 Draft Regulation - Annex VII - NCO.OP.141

p. 36

comment 81 comment by: *DGAC France*

**Page 35**

**NCO.OP.141 Destination alternate aerodromes — helicopters**

The proposed text gives prescriptive values and in particular a visibility of at least 3 000 m by night. This value is below VMC requirement of SERA.5005 3) ii) and would be more appropriate for destination alternate planning minima. The minimum visibility criteria, to



determine if by day a destination alternate should be specified, should also be increased but could remain below 5 000m.

Alternative Proposal: “a ceiling of at least 1 000 ft above the DH/MDH for an available instrument approach procedure and a visibility of at least 3 000 m by day or 5 000 m by night.”

comment 259

comment by: FNAM

FNAM Comments:

Negative Impact: More restrictive rule on the choice of destination airports.

**3.1 Draft Regulation - Annex VII - GM1 NCO.OP.142**

p. 36-37

comment 23

comment by: ESSP SAS

*Propose to remove the obligation for the pilot-in-command of non-selecting an aerodrome as a destination alternate aerodrome if only an instrument approach procedure that does rely on GNSS is available for aeroplane operations. The possibility of using alternate destination aerodromes with only GNSS procedures, it is only indicated for helicopter operations in the NPA.*

*On the other hand, the wording of GM1 NCO.OP.142 seems to be a bit confused with regard to the use of GNSS procedures at the destination aerodrome or at the destination alternate aerodrome: is it allowed the operation at destination aerodrome or at the destination alternate aerodrome for aeroplane in aerodromes with only GNSS procedures?*

*Why additional guidance has been provided only for helicopter operations regarding GNSS reliability and integrity?*

*The existence of GNSS procedures with “sufficient reliability and integrity” should be included as well for aeroplanes. Small aerodromes (GA scenarios) with GNSS procedures may be used for destination aerodrome or destination alternate aerodrome.*

comment 82

comment by: DGAC France

**Page 36****GM1 NCO.OP.142 Destination aerodromes — instrument approach operations  
PBN OPERATIONS - AEROPLANES**

It is preferred for clarity and coherence with the requirement of demonstration in point (b) to split point (a) in two parts, one applicable to aeroplanes, and the second to helicopters. For helicopters, a formulation derived from AMC1 CAT.OP.MPA.192(d) is proposed:

**“PBN OPERATIONS - AEROPLANES**

(a) By ‘sufficient means’ it is understood that the pilot-in-command should only select an aerodrome as a destination alternate aerodrome if an instrument approach procedure that does not rely on GNSS is available either at that destination aerodrome or at the destination alternate aerodrome.

**~~GNSS RELIABILITY AND INTEGRITY — HELICOPTERS~~****~~PBN OPERATIONS - HELICOPTERS~~**

**(b) By ‘sufficient means’ it is understood that:**



1° The pilot-in-command may demonstrate that the GNSS provides sufficient reliability and integrity; or,  
2° the pilot-in-command should only select an aerodrome as a destination alternate aerodrome if an instrument approach procedure that does not rely on GNSS is available either at that destination aerodrome or at the destination alternate aerodrome.  
 (c) The pilot-in-command may demonstrate sufficient reliability and integrity if all of the following criteria are met: [...]"

comment 83 comment by: DGAC France

**Page 36**

**GM1 NCO.OP.142 Destination aerodromes — instrument approach operations  
 PBN OPERATIONS - AEROPLANES**

Point (b)(5):

RAIM is one possibility to perform ABAS function. The point (b)(5) is too prescriptive. An ABAS can be performed with an AAIME (with inertial equipment...). In general, SBAS avionics do not require an RAIM prediction.

This comment may also apply to other parts of AIROPS, but was not identified by DGAC during NPA 2018-06 and 2019-09 consultation.

comment 228 comment by: Swedish Transport Agency, Civil Aviation Department  
 (Transportstyrelsen, Luftfartsavdelningen)

comment 260 comment by: FNAME

FNAME Comments:

Negative Impact: More restrictive rule on the choice of destination airports.

### 3.1 Draft Regulation - Annex VII - NCO.OP.143

p. 38

comment 3 comment by: Bruno Herencic

Please avoid Type A and Type B instrument approach operations.  
 It is yet another invention which makes the text difficult to read.

Just replace Type A and Type B with the actual approach types that everybody understands immediately when reading this text.

comment 49 comment by: PPL/IR Europe

Agreed

comment 84 comment by: DGAC France

**Page 37**



**NCO.OP.143 Destination alternate aerodromes planning minima — aeroplanes**

The issue of visibility raised in NCO.OP.140 applies here also. The minimum visibility of 1500m by day could be insufficient in some cases:

- Example 1 : AD with IAP but without lights => minimum RVR could increase up to 2400m
- Example 2 : AD without IAP, non instrument runway, class D aeroplane => circling minima of 3600m

Proposal (points (a)(2) and (b)(2)): it is proposed to apply a certain level of proportionality in the implementing rule: “a visibility of at least 1 500 m by day for CAT A and B aeroplanes, or 2 400 m by day for CAT C aeroplanes, or 3 600 m by day for CAT D aeroplanes, or 5 000 m by night”

comment

86

comment by: *DGAC France***Page 37****NCO.OP.143 Destination alternate aerodromes planning minima — aeroplanes**

Type A and B instrument approach is a terminology that is currently challenged at ICAO level (European initiative). This remark applies for the entire amendment package of AIROPS dealing with AWO.

Proposed text if type A and B instrument approach is removed from AIROPS: point (a)(1) could be replaced by a table or by the following text:

“(1) a ceiling of at least:

(i) 400 ft above the decision height or minimum descent height associated with an available instrument approach operation with a decision height or minimum descent height above 250 ft ; or,

(ii) 200 ft above the decision height associated with an available instrument approach operation with a decision height equal or below 250 ft ;

and”

comment

112

comment by: *Czech Technical University*

We suggest using:

(a)(2) a visibility of at least 1 500 m;

Since instrument approach is available, there is no need to apply higher visibility at night.

(b)(2) a visibility of at least 5 000 m.

NCO diversions are rare events which put significant pressure on the pilot. An alternate aerodrome must provide a safe alternative. A flight in visibility of 1 500 m to aerodrome without an instrument approach is very demanding. Addition of low fuel state during diversion and potential unforecasted deterioration of weather below 1 500 m may become fatal. For further reasoning please refer to comment #108.

comment

119

comment by: *OSM Aviation Academy*

Good text. Relevant minimums. This will further increase the flight safety for all GA with generally only minor decreases in the facilitation of flight planning. However, the relevance of 5000 meter visibility during night time for an alternate aerodrome with instrument procedures can be discussed. This type of aerodrome will have some type of lighting systems, and with lights you are less impaired by decreased visibility by night compared to daytime. In this case a requirement of more than 3 times the required visibility compared today seem to be a bit excessive. This point will also give a significantly higher negative impact to operators in the Nordics, since during wintertime the majority, or even the entire calendar day will be in darkness. We agree it is reasonable to differentiate the visibility requirements for non-instrument aerodromes but for instrument aerodromes, 1500 meters would be sufficient in this case as well. The negative operational impact for higher visibility is greater than the negative safety impact of lower visibility.

comment 129

comment by: *DK/ATO/013*

For **NCO.OP.143 (a) (2)**, we have the same comment as for NCO.OP.140: We see no reason for the 5000 m requirement at night. We fully concur that it is sensible to designate an alternate aerodrome, but do not understand the rationale for more than triple requirement at night.

comment 158

comment by: *Europe Air Sports*

**\*Page 37/59 - NCO.OP.143 Destination alternate aerodromes planning minima - aeroplanes**

The proposal is supported.

In the first line of the draft text, the verb “specified” should be changed into “selected”.

comment 204

comment by: *FFA EUR*

**\*Page 37/59 - NCO.OP.143 Destination alternate aerodromes planning minima - aeroplanes**

The proposal is accepted.

In the first line of the draft text, the verb “specified” should be change into “selected”.

comment 213

comment by: *IAOPA Europe*

We welcome the proposed addition of regulation of planning minimums for destination alternates, and we agree with the rationale as stated in section 4.3.5 of the NPA. We also acknowledge that planning destination alternate minimums should be somewhat higher compared to operational minimums, mainly to cater for the uncertainty of weather forecasts.

Additionally, we welcome the option of formally using aerodromes without instrument approaches as destination alternatives when the weather is fine there.

Our main expertise lies with the operation of aeroplanes, but of course, maintaining consistency with the equivalent new rule for helicopters, NCO.OP.144, should be observed in any case.



comment

214

comment by: IAOPA Europe

Re.: NCO.OP.143(a)(2) & (b)(2)

In the current NPA proposal the same alternate planning visibility minimums (1500 m / 5 km) apply whether the alternate aerodrome has an instrument approach procedure or not. This means that the planning minimums for a VFR airfield can be right at the operational limit whereas the IFR airfields always have a very big margin.

That is unfortunate. The guiding principle for an alternate should be that it is still possible to operate if the weather turns out to be somewhat worse than forecasted.

With the current proposal it would be legal for a pilot to chose as alternate a VFR airfield reporting 1500 m visibility (day) or 5 km (night) but it would not be legal to chose a well equipped IFR airport reporting a visibility of 1400m (day) or 4 km (night).

Obviously the latter would almost always be the safer choice, and the regulation should not drive a pilot towards the less safe choice.

For that reason, we suggest that alternate planning minima should in both cases be somewhat, but not excessively elevated compared to (typical) operational minima.

As there is no difference between day and night regarding operational VIS/RVR requirements for instrument approaches, we think the same should apply for planning minima for destination alternates.

Besides appearing unproportionate, we fear that requiring 5 km visibility for night instrument alternates would make it unduly difficult to plan night IFR flights in certain quite benign IFR weather conditions, e.g. warm fronts with widespread areas of 2-4 km ground visibility.

We suggest (a)(2) to read: "a visibility of at least 1500 m (by day or by night)".

For alternates without an IAP, operational minima would with the current proposal be 1500m by day and 5 km by night. To allow for a slight deterioration compared to the weather forecast, we suggest reasonably elevated planning minima.

We suggest (b)(2) to read: "a visibility of at least 3 km by day or 8 km by night".

comment

215

comment by: IAOPA Europe

Re: NCO.OP.143(a)(1)

For destination alternates the NPA proposes to let the alternate requirement for ceiling depend depend on whether the approach is type A or type B.

We would suggest not to differentiate the values unless that is specifically warranted by a risk analysis. We see such a complication in the rules as a potential risk in itself, and suggest a simple rule, e.g.





“(1) a ceiling of at least 200 ft above the decision height or minimum descent height for the planned instrument approach operation; ”

The type A approach already has higher minimums, so even without an additional margin the planning minima will be higher than for a type B approach.

Although all IFR pilots with PBN training should fully understand the type A/B nomination, we suspect they do in fact not. Just as the NPA purposefully avoids referring to runway classification, because that is considered an unnecessary complication, we believe that type A/B classification should rather be formulated with reference to MDH and DA.

comment

261

comment by: *FNAM*

FNAM Comments:

Neutral Impact: Details on the criteria for selecting an alternate aerodrome at the flight preparation stage.

comment

273

comment by: *European Powered Flying Union*

NCO.OP.143 Destination alternate aerodromes planning minima-aeroplanes

Draft

text

(a)

(a) is in our opinion quite too restrictive. A better solution would be to make use of what applies to CAT. If the provision in place/in future in place for CAT then the provision for our operations should be adjusted too

Rationale

The provisions in place for CAT are in our view simpler: If a precision approach is available at your destination, then one could pick the second best for your alternate minimum. In modern days it would be LPV or, if not available, non-precision approach minima. When this formula is chosen there is no need to specify what is stated in the points (a) 1 and 2 as presented today.

### 3.1 Draft Regulation - Annex VII - GM1 NCO.OP.143

p. 38

comment

159

comment by: *Europe Air Sports*

**\*Page 38/59 – GM1 NCO.OP.143 Destination alternate aerodromes planning minima - aeroplanes**

For consistency with SERA.5015(b) Minimums levels, EAS suggests to:



- Change “MINIMUM SAFE IFR HEIGHT” into “MINIMUM FLIGHT ALTITUDE”.
- Change “the minimum safe IFR height is the height above the aerodrome of” into “the minimum flight altitude is the altitude of”.

comment 205 comment by: FFA EUR

**\*Page 38/59 – GM1 NCO.OP.143 Destination alternate aerodromes planning minima - aeroplanes**

For consistency with SERA.5015(b) Minimums levels, FFA suggests to:

- Change “MINIMUM SAFE IFR HEIGHT” into “MINIMUM FLIGHT ALTITUDE”.
- Change “the minimum safe IFR height is the height above the aerodrome of” into “the minimum flight altitude is the altitude of”.

comment 262 comment by: FNAM

FNAM Comments:

Neutral Impact: Details on the criteria for selecting an alternate aerodrome at the flight preparation stage.

**3.1 Draft Regulation - Annex VII - NCO.OP.144**

p. 38-39

comment 87 comment by: DGAC France

**Page 38  
NCO.OP.144 Destination alternate aerodromes planning minima — helicopters**

- The issue of visibility raised in NCO.OP.141 applies here also. The point (b)(2) of the implementing rule should be modified by “visibility of at least 1 500 m by day or 5 000 m by night”.

- The notion of “minimum safe IFR height” is precised by a GM for aeroplanes, but not for helicopters.

comment 263 comment by: FNAM

FNAM Comments:

Neutral Impact: Details on the criteria for selecting an alternate aerodrome at the flight preparation stage.

**3.1 Draft Regulation - Annex VII - NCO.OP.175**

p. 39



comment 130 comment by: DK/ATO/013

Consider in (a) to include a 'Take-off alternate consideration', if weather at the departure airport is below approach minima, at the time of departure.

comment 160 comment by: Europe Air Sports

**\*Page 39/59 - NCO.OP.175 Take-off conditions - aeroplanes**

EAS thinks that the verb “verify” is more appropriate than the verb “be satisfied”.

The latter is an understatement which might mean that the pilot can compromise with the safety rule. So, the wording should make the pilot’s decision clear.

Let us use “verify”, which is a positive and unambiguous term.

comment 206 comment by: FFA EUR

**\*Page 39/59 - NCO.OP.175 Take-off conditions - aeroplanes**

FFA thinks that the verb “verify” is more appropriate than the verb “be satisfied”.

The latter is an understatement which might mean that the pilot can compromise with the safety rule. So, the wording should make the pilot’s decision clear.

Let us use “verify”, which is a positive and unambiguous term.

comment 264 comment by: FNAM

FNAM Comments:  
Neutral Impact: No remarks.

### 3.1 Draft Regulation - Annex VII - NCO.OP.205

p. 39-40

comment 265 comment by: FNAM

FNAM Comments:  
Neutral Impact: No remarks.

### 3.1 Draft Regulation - Annex VII - NCO.OP.206

p. 40

comment 266 comment by: FNAM

FNAM Comments:  
Neutral Impact: No remarks.

### 3.1 Draft Regulation - Annex VII - NCO.OP.210

p. 41-42

comment 18 comment by: autorouter AG



It is a very welcome improvement to only rely on RVR for the approach ban. This is a clear definition and in line with CAT.

comment 50 comment by: PPL/IR Europe  
Agreed

comment 67 comment by: Uppsala Flying Club  
According to 4.3.7 the intention is that if RVR is not available, there should be no approach ban. However, some readers will interpret the existence of a regulation about an operation as implying that if the regulation is not applicable, then the operation is not allowed. When RVR is not available then NPO.OP.210(a) is not applicable. It should be clarified in the implementing rule or AMC/GM that if RVR is not available, then it is always permitted to carry out the approach to (M)DA.

comment 161 comment by: Europe Air Sports  
  
**\*Page 40/59 - NCO.OP.210 Commencement and continuation of approach - aeroplanes**  
  
The existing paragraph (a) saying “The pilot in command may commence ... (RVR/VIS).” should be kept since it is a key provision when crossing over the IAF.  
  
This provision is needed for limiting the effect of NCO.OP.160 Meteorological conditions which requires in paragraph (b) that “a pilot shall only ... continue an IFR flight to the destination aerodrome if the latest available meteorological information indicates that ... the weather conditions ... are at or above the applicable aerodrome operating minima.”.

comment 162 comment by: Europe Air Sports  
  
**\*Page 41/59 - NCO.OP.210 Commencement and continuation of approach - aeroplanes**  
  
Regarding proposed paragraphs (a), (b) and (c), the text should be re-written to recall:

- what to do when reaching the MDA/H including the role of the MAPt and
- what to do when reaching the DA/H,

unless this is done somewhere else in Part-NCO.

comment 163 comment by: Europe Air Sports  
  
**\*Page 41/59 - NCO.OP.210 Commencement and continuation of approach - aeroplanes**  
  
Page 41:  
The term “controlling RVR” should be changed into “reported RVR”.



The term “go-around” should be changed into “missed approach” because “go-around” refers to a manoeuvre while “missed approach” refers to an established and published procedure (see Doc 8168 (PANS OPS) Volume II).

comment 207

comment by: FFA EUR

**\*Page 40/59 - NCO.OP.210 Commencement and continuation of approach - aeroplanes**

The existing paragraph (a) saying “The pilot in command may commence ... (RVR/VIS).” should be kept since it is a key provision when transiting over the IAF.

This provision limits the effect of NCO.OP.160 Meteorological conditions which requires in paragraph (b) that “a pilot shall only ... continue an IFR flight to the destination aerodrome if the latest available meteorological information indicates that ... the weather conditions ... are at or above the applicable aerodrome operating minima.”.

**\*Page 41/59 - NCO.OP.210 Commencement and continuation of approach - aeroplanes**

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- what to do when reaching the DA/H.

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**\*Page 41/59 - NCO.OP.210 Commencement and continuation of approach - aeroplanes**

The term “controlling RVR” should be changed into “reported RVR”.

The term “go-around” should be changed into “missed approach” because “go-around” refers to a manoeuvre while “missed approach” refers to an established and published procedure (see Doc 8168 (PANS OPS) Volume II).

comment 216

comment by: IAOPA Europe

Suggest to delete "on":

"If a deterioration in RVR is reported once the aircraft is below 1 000 ft **on** in the final approach segment"

comment

229

comment by: Swedish Transport Agency, Civil Aviation Department  
(Transportstyrelsen, Luftfartsavdelningen)

The deletion of Approach ban **is not supported**.

**Rationale:** Approach ban is standard in Annex 6, Part II

comment

267

comment by: FNAM

FNAM Comments:

Neutral Impact: Details on the conditions for continuing an approach.

### 3.1 Draft Regulation - Annex VII - AMC1 NCO.OP.210

p. 42

comment

51

comment by: PPL/IR Europe

Agreed



comment 268 comment by: *FNAM*  
 FNAM Comments:  
 Neutral Impact: Details on the conditions for continuing an approach.

### 3.1 Draft Regulation - Annex VII - AMC2 NCO.OP.210

p. 43

comment 52 comment by: *PPL/IR Europe*  
 Agreed

comment 177 comment by: *Europe Air Sports*  
**\*Page 42/59 – AMC2 NCO.OP.210 Commencement and continuation of approach - aeroplanes**  
 With reference to the rationale, EAS does not see any good reason to delete the CMV concept.

comment 208 comment by: *FFA EUR*  
**\*Page 42/59 – AMC2 NCO.OP.210 Commencement and continuation of approach - aeroplanes**  
 With reference to the rationale, FFA does not see any good reason to delete the CMV concept.

comment 269 comment by: *FNAM*  
 FNAM Comments:  
 Neutral Impact: Details on the conditions for continuing an approach.

### 3.1 Draft Regulation - Annex VII - GM1 NCO.OP.210

p. 43

comment 53 comment by: *PPL/IR Europe*  
 Agreed

comment 165 comment by: *Europe Air Sports*  
**\*Page 43/59 – GM1 NCO.OP.210 Commencement and continuation of approach - aeroplanes**  
 Paragraph (b) should be completed by the following words: “or at MDA/H”.  
 Paragraph (d) should be re-written for clarification or deleted. Should it be kept, the word “go-around” should be replaced by the words “missed approach procedure”.

comment 209 comment by: *FFA EUR*



**\*Page 43/59 – GM1 NCO.OP.210 Commencement and continuation of approach - aeroplanes**

Paragraph (b) should be completed by the following words: “or at MDA/H”.

Paragraph (d) should be re-written for clarification or deleted. Should it be kept, the word “go-around” should be replaced by the words “missed approach procedure”.

comment 270

comment by: *FNAM*

FNAM Comments:

Neutral Impact: Details on the conditions for continuing an approach.

**3.1 Draft Regulation - Annex VII - AMC1 NCO.IDE.A.195(a)**

p. 43-45

comment 17

comment by: *autorouter AG*

Fix substitution with RNAV is a long overdue regulatory improvement. Teaching pilots and legally forcing pilot to use outdated, inaccurat and unsafe equipment such as ADF is detrimental to safety. Approved RNAV devices provide integrity monitoring and guaranteed performance whereas ADF and DME do not. Especially ADF is subject to numerous outside interference that limit its performance.

comment 24

comment by: *UK CAA*

**Page No:** 43

**Paragraph No:** AMC1 NCO.IDE. A.195(a) Navigation equipment

**Comment:** In developing AMC guidance in Part-NCO for the use of RNAV equipment to provide a means of substituting conventional navigation aid information, we recommend similar action should be taken to address this subject in Parts CAT, NCC and SPO. In particular, Part-CAT AMC2 to CAT.IDE.A.345 (d)(2) is much more restrictive. We suggest guidance equivalent to Part-CAT is also needed

With 3 NPAs so far published dealing with differing aspects of AWO, it is recommended that a consolidation exercise be conducted to harmonise wherever possible and to use the best procedures across the domains.

**Justification:** Standardisation and equivalence

comment 25

comment by: *UK CAA*

**Page No:** 43

**Paragraph No:** AMC1 NCO.IDE. A.195(a) Navigation equipment

**Comment:** The heading under AMC1 (Fix Substitution) is considered inappropriate and misleading. UK CAA recommends that the heading “RNAV Substitution” is used in its place and the term RNAV Substitution is used throughout the AMC1.



*Note: The FAA comparable guidance contained in Advisory Circular AC 90-108 Change 1, is titled "Use of Suitable Area Navigation (RNAV) Systems on Conventional Routes and Procedures. The AC talks of "Use of a suitable RNAV system as a Substitute Means of Navigation" or "Use of a suitable RNAV system as an Alternate Means of Navigation".*

**Justification:** In the opening sentence, AMC1 talks to Area Navigation systems. A "Fix" is defined by EUROCAE and RTCA as a generic name for a geographical position. A fix is referred to as either a fix, a waypoint, intersection or reporting point etc. AMC 1 is clearly speaking to the navigation equipment to fly either to/from a Fix or else a route or procedure. A more suitable heading is RNAV Substitution reflecting the fact that it is the use of RNAV equipment that allows the substitution to be made and enables navigation via RNAV Fix(es).

comment

26

comment by: UK CAA

**Page No:** 43**Paragraph No:** AMC1 NCO.IDE. A.195(a) Navigation equipment

**Comment:** Notwithstanding the UK CAA comment on AMC1 NCO.IDE. A.195(a) subparagraph (e) regarding practicality and viability of the pilot-in-command responsibilities, it is unclear whether there are any plans to develop additional training to be defined before a pilot-in-command can apply RNAV substitution

In providing a means of substituting conventional guidance, we recommend there should at least be Theoretical Knowledge and practical training identified for such applications. If nothing else, the pitfalls from mis-application of RNAV Substitution need to be incorporated in relevant training programmes as well as "specific-to-type" equipment familiarisation

**Justification:** Assurance of correct and safe application of procedures

comment

27

comment by: UK CAA

**Page No:** 44**Paragraph No:** AMC1 NCO.IDE. A.195(a) Navigation equipment subparagraph (e)

**Comment:** Without the use of specialised navigation data base tools, the UK CAA questions the practicality and viability of the pilot-in-command responsibilities regarding assuring either the correctness of the coordinates of any fix or verifying waypoint sequence, reasonableness of track angles, and distances of any overlay procedure used. On more modern equipment with full depiction of procedures on moving map displays, this may indeed be possible, but accounting for early models of (E)TSO-C129a and (E)TSO-C146() equipment, it is difficult to see how this can be achieved.

**Justification:** Clarity of purpose and intent

comment

54

comment by: PPL/IR Europe

We agree wholeheartedly.





However, in our opinion, the value of the NDB/ADF should be separated from the value of the DME.

NDB/ADF is unreliable, inaccurate and error-prone and C129/C146 equipment is clearly safer, more reliable, more accurate, easier to interpret. NDB should be eschewed in favour of RNAV at all times (in our opinion, that includes the Final Approach Segment, but we will let that pass on this occasion as being "too difficult.")

However DME is reliable, accurate and easy to interpret. For the reasons given in paras (e) and (f), among others, the safety offered by the DME is equivalent to and may, at times, exceed that of an RNAV fix-substitution.

We think that this distinction could and should be better drawn, perhaps in the form of a new GM, making it clear that they should not be thought of in the same breath, and that the wise and cautious pilot might choose to remove or not fit an ADF, but would be advised to fit or fix a DME. It could be pointed out in the same GM that DME is part of most ILSs, and that, as fix-substitution is not permitted on the lateral element of a final approach, pilots may consider it unwise to use fix-substitution for the distance to threshold element.

We also agree that general PBN training is sufficient to allow the pilot to use fix-substitution. Generally, it simply consists of putting in a two or three character waypoint name as opposed to a five character one. In the case of conventional aids in the missed approach, the pilot will already have the overlay as part of the IAP waypoint list and will have been trained to activate it as part of the MA procedure. No further training is required.

comment 68

comment by: *Uppsala Flying Club*

This AMC is perhaps the single most important of the proposed changes. The mention in 4.3.8 of anecdotal evidence that fix substitution is already applied illegally is an understatement. Some aircraft such as the SR22 which are used for serious IFR flying are not even equipped with ADF and DME from the factory.

(d)(1) of this AMC seems needlessly restrictive when it comes to NDB approaches. According to PANS-OPS vol ii (6 ed.), Part II Section 2, para. 4.4.4.1, the protected area of an NDB approach is 2.5 NM wide at its narrowest point (at the beacon). On the contrary, according to Part III Section 1, para. 2.2.3.1, the protected area of an LNAV RNP APCH is only 1.9 NM wide. In other words, if an NDB approach is flown using an LNAV overlay provided by a GPS navigator, the aircraft will at all times remain within the area protected for the NDB approach. Given the difficulty of correctly flying an NDB approach and the many error sources for the NDB/ADF system, it seems clear to me that permitting the substitution of an NDB providing lateral guidance on final approach can only serve to increase safety. (Provided that the overlay approach is loaded from the navigator database just like a regular LNAV approach.)

Please note that by "overlay" I don't mean a published overlay procedure, but a database overlay where the NDB procedure is coded as if it were an LNAV procedure.

comment 89

comment by: *DGAC France*

**Page 43**  
**AMC1 NCO.IDE.A.195(a) Navigation equipment**



- The interest of keeping RNAV5 in point (a) could be challenge in this context taking into account the low level of requirement of this standard.

- It seems necessary to keep here a certain level of coherence with other part of AROPS and precise the impact of this AMC regarding point NCO.IDE.A.195(b). Therefore, it is proposed to specify in the AMC that the pilot should ensure/demonstrate that there is a redundancy of on-board navigation systems or that a contingency plan is defined before departure in particular in the case of in-flight GNSS signal disruption.

comment 113 comment by: *Czech Technical University*  
This is a significant improvement. We appreciate EASA effort on this matter.

comment 166 comment by: *Europe Air Sports*

**\*Page 43/59 – AMC1 NCO.IDE.A.195(a) Navigation equipment**

EAS fully supports this proposal.

The title should be modified as follows: change “FIX SUBSTITUTION” by “CONVENTIONAL AID ENHANCEMENT” since the scope of the proposed text is not limited to fix substitution.

Proposed text:

“CONVENTIONAL NAVAID ENHANCEMENT

(a) A GNSS system that meets the requirements of NCO.OP.116(a) for RNAV 5, RNAV 1, RNP 1 or RNP APCH may be used as a substitute to:

- (1) determine aircraft position relative to a VOR, a DME (including a DME associated to an ILS)
- (2) check aircraft position overhead a named fix defined by conventional navigation aid(s)
- (3) navigate to or from a VOR or a NDB
- (4) hold over a holding fix defined by conventional navigation aid(s)
- (5) fly a DME arc”.

(b) With regard to provisions (a)(1) to (a)(5), the ground station need not to be operative and/or the corresponding on-board equipment need not to be operative or even installed unless otherwise required in the MEL

(c) Where an overlay (departure, arrival or approach) procedure can be retrieved from the navigation database, it may be loaded and used in addition to the conventional procedure under the following provisions:

(d) The GNSS system should not be used as the primary source: ...”

comment 210 comment by: *FFA EUR*  
**\*Page 43/59 – AMC1 NCO.IDE.A.195(a) Navigation equipment**



FFA fully supports this proposal.

The title should be modified as follows: change “FIX SUBSTITUTION” by “CONVENTIONAL AID ENHANCEMENT” since the scope of the proposed text is not limited to fix substitution.

Proposed text:

“CONVENTIONAL NAVAID ENHANCEMENT

(a) A GNSS system that meets the requirements of NCO.OP.116(a) for RNAV 5, RNAV 1, RNP 1 or RNP APCH may be used as a substitute to:

(1) determine aircraft position relative to a VOR, a DME (including a DME associated to an ILS)

(2) check aircraft position overhead a named fix defined by conventional navigation aid(s)

(3) navigate to or from a VOR or a NDB

(4) hold over a holding fix defined by conventional navigation aid(s)

(5) fly a DME arc”.

(b) With regard to provisions (a)(1) to (a)(5), the ground station need not to be operative and/or the corresponding on-board equipment need not to be operative or even installed unless otherwise required in the MEL

(c) Where an overlay (departure, arrival or approach) procedure can be retrieved from the navigation database, it may be loaded and used in addition to the conventional procedure under the following provisions:

(d) The GNSS system should not be used as the primary source: ...”

comment

217

comment by: *IAOPA Europe*

We warmly support the proposal to address the topic of fix substitution and to formally define when a fix substitution is allowed.

Fix substitution is something pilots already deal with in the real world today. It is good to have it clearly specified when fix substitution is appropriate and when it is not.

comment

218

comment by: *IAOPA Europe*

We propose to merge AMC1 NCO.IDE.A.195(a) and NCO.IDE.H.195(a) into one single AMC for both aeroplanes and helicopters.

There are minor editorial differences in the two texts, but there seems to be no substantial differences. It therefore seems redundant to have the text twice.

comment

231

comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

(a) TACAN should not be used as a substitute (TACAN is mentioned at other pages in this NPA. Should also be removed)

comment

271

comment by: *FNAM*

FNAM Comments:

Neutral Impact: Details on the conditions for continuing an approach.



**3.1 Draft Regulation - Annex VII - AMC1 NCO.IDE.H.195(a)**

p. 45-46

comment 90 comment by: DGAC France**Page 43****AMC1 NCO.IDE.H.195(a) Navigation equipment**

- The interest of keeping RNAV5 in point (a) could be challenge in this context taking into account the low level of requirement of this standard.

- It seems necessary to keep here a certain level of coherence with other part of AROPS and precise the impact of this AMC regarding point NCO.IDE.H.195(b). Therefore, it is proposed to specify in the AMC that the pilot should ensure/demonstrate that there is a redundancy of on-board navigation systems or that a contingency plan is defined before departure in particular in the case of in-flight GNSS signal disruption.

comment 272 comment by: FNAM

FNAM Comments:

Neutral Impact: Details on the conditions for continuing an approach.

**4.1 IA - What is the issue**

p. 47-49

comment 55 comment by: PPL/IR Europe

Agreed in full

**4.2 IA - What we want to achieve—objectives**

p. 49

comment 56 comment by: PPL/IR Europe

Agreed

**4.3 IA - How it could be achieved—optio**

p. 49-54

comment 13 comment by: AOPA (UK)

IAOPA (Europe) strongly supports Option 1 and thanks the Agency for their excellent work in developing this excellent NPA.

comment 28 comment by: UK CAA**Page No:** 52**Paragraph No:** 4.3.8, Introduction of AMC on GNSS fix substitution

**Comment:** In this element of the IA, mention is made of the FAA experience. Whilst the FAA AC 90-108 Change 1 is still applicable, it should be noted that there are some fundamental differences between the US and Europe that has made use of RNAV substitution under FAA rules, easier. Firstly, the US has tended to additionally provide GPS procedures for their non-precision approach procedures, so an RNAV equivalent is available, removing the need for conventional navigation aid guidance. It also means that the procedures have been obstacle assessed and the lateral and vertical guidance validated by the FAA themselves. Secondly, the FAA is the State body responsible for promulgation of routes and procedures and is in the position to control and maintain them. In Europe, with different States and different departments and responsibilities, there is much greater variance. Therefore the assurance that the FAA have gained in applying RNAV Substitution does not directly translate into a European environment.

**Justification:** Correctness of statements and assumptions in determining risks of change.

comment

57

comment by: PPL/IR Europe

Table 1 has a missing reference.

We accept all the reasoning in this section as informing our acceptance without comment of the bulk of the changes being proposed.

Some small additions:

*"There is also ample anecdotal evidence that GNSS is used as the primary means of en-route and terminal navigation in Europe, with little attention paid to conventional aids, even on routes that are, technically, conventional routes."*

We wonder if even this strong statement is strong enough. We are in contact with hundreds of members who fly IFR ATS routes across Europe on a regular basis, and cannot remember the last time any of them reported using ground based aids for enroute navigation. Since the requirement to carry, at a minimum, RNAV 5 equipment, it simply doesn't happen any more. The proposed regulations are simply playing catch-up on a situation that already exists.

*"Any requirement to install and maintain conventional equipment that is not used in practice has a safety disbenefit."*

While this is true, it does not go on to say that having equipment that is less accurate and reliable than GNSS based RNAV can cause confusion and disorientation. In the event that an ADF points in a different direction to RNAV, it is reason to check the RNAV set-up, but after that, it is much more likely to be caused by ADF error or failure than GNSS. To tell the pilot to use the aid that is known to be less accurate and reliable instead of the more reliable one simply brings the regulator into disrepute and reinforces the normalisation of non-compliance mentioned earlier.

comment

88

comment by: DGAC France

**Page 49**

**4.3.1. Removal of the requirement for an approval for LVTO in RVRs between 150 m and 400 m**

Another important mitigation risk is not mentioned: the runway markings/lights. This should be at IR level since NCO.GEN.101 establishes the right of a pilot-in-command under Part-NCO to use alternative means of compliance and such possibility would not be appropriate for take-off with low visibility.

comment 91 comment by: FOCA Switzerland

FOCA supports the proposals to remove the requirements for an approval for LVTO in RVRs between 150 m and 400 m, to revise the GM on vertical path control and to remove the reference to CMV (simplification of RVR minima).

comment 94 comment by: FOCA Switzerland

FOCA proposes to remove the approach ban for training flights under NCO. This would allow training of approaches, decision making and go around execution even if the meteo is below the minima (as long as alternate is available). A second alternate aerodrome has maybe to be selected in that case.

comment 114 comment by: Czech Technical University

Ref. 4.3.6  
We welcome the simplification of the approach ban and we fully support the proposed NCO.OP.210.  
However, we believe that a go around presents higher risk for NCO than for CAT. CAT routinely trains go arounds during recurrent training. Exposure of a GA pilot to go arounds after initial IR training is very rare. EASA should promote correct go around techniques. EASA should consider revision of FCL.625.A: only section 3b of a proficiency check is required to revalidate IR(A); a go around is mandatory in section 4.

comment 120 comment by: OSM Aviation Academy

**RVR 150 - 400m**

We fully agree to the proposal of allowing takeoff down to 150m RVR. Due to the low rotation speed, the safety impact is far less compared to CAT.

**Simplification of the “approach ban”:** Highly relevant simplification and we agree fully on the arguments. In many cases the RVR can vary very rapidly, making the RVR when passing 1000' irrelevant, especially with slower GA aircraft, where it can be approximately 1,5-2 min from 1000' to minima. During this time the RVR can change significantly. We see no negative impact on this change.

**GNSS** *fix* *substitution*

**Comment:** We agree to option 1 – to permit GNSS fix substitution. Most of the times, the GNSS fix has higher precision compared to conventional navigation aids. Since the introduction of mandatory training or previous experience of PBN operations we see no need



for extra training or familiarization to be allowed to use GNSS fix substitution, the PBN training should fulfill this requirement.

comment 167 comment by: *Europe Air Sports*

**\*Page 49/59 - Para. 4.3.1. Removal of the requirement for an approval for LVTO in RVRs between 150 m and 400 m**

It should be recalled that the objective of the NPA is to facilitate PPL holders to fly IFR when and where the weather conditions become critical to continue to fly VFR. EAS notes that the objective can be achieved without a change to the existing requirement for an approval for LVTO with RVR below 400 m.

comment 168 comment by: *Europe Air Sports*

**\*Page 49/59 - Para. 4.3.2 Application of a cut-off RVR (1500 m for all instrument approaches)**

EAS agrees with the proposal to apply a maximum RVR requirement of 1 500 m for Cat A and B.

However, for legal reasons, EAS supports the proposal as long as the approach charts are accordingly modified, either by NOTAM or by updating.

comment 169 comment by: *Europe Air Sports*

**\*Page 49/59 - Para. 4.3.3 Removal of references to single-pilot operations**

EAS agrees with the proposal to delete references to “single pilot” in Part-NCO since most of NCO operations are conducted by a single pilot.

Due consideration should be given to flying alone in a light aeroplane at low altitude. A GM should strongly recommend – not require – to be assisted by an autopilot.

comment 170 comment by: *Europe Air Sports*

**\*Page 50/59 - Para. 4.3.4 Tailoring guidance on vertical path control for operations involving non-complex motor powered aircraft**

At the opposite of the statement made in the text, EAS thinks that “touchdowns 500 m or 1000 m beyond the threshold...” are not deemed “normal” even if they are performed on long runways.



This would impair safety on runways designed for General Aviation. This would also impair the essential message of all flight instructors to student IR pilots about strict adherence to the published track in all approach segments and in the landing phase.

EAS agrees with the proposal for re-introducing the SDF technique into Part-NCO. But this should not weaken the general recommendation for the CDFA technique since GA pilots are also prone to non-stabilised approaches.

comment 171

comment by: Europe Air Sports

**\*Page 50/59 - Para. 4.3.5 Introduction of planning minima in Part-NCO**

EAS supports a change in planning requirements for the destination alternate aerodrome, as proposed (i.e. DH/MDH + 400 feet and visibility of 1 500 m).

Our reasons are that the risk of worse-than-forecast meteorological conditions and the risk of downgraded ground equipment are thus mitigated.

comment 172

comment by: Europe Air Sports

**\*Page 50/59 - Para. 4.3.6 Simplification of the approach ban**

As far as we know, the “go-around rate of no more than 5 %” is not set especially “for the need of CAT”.

PANS-OPS provisions pertaining to design of instrument approach procedures are based on a 10 minus 7 target for the protection of the nominal tracks. There is one exception: the protection of the missed approach segment. This segment is protected on the basis of a 10 minus 5 probability. This requires to have only one missed approach for every 100 final approaches for meeting the global 10 minus 7 target.

Having said that, EAS has no objection for modifying the “approach ban” provided:

- the proposal is re-written for the sake of clarity, consistency and completeness and
- the alleviation of the current approach ban at 1 000 feet AAL is not intended to delay stabilisation of the approach.

comment 173

comment by: Europe Air Sports

**\*Page 51/59 - Para. 4.3.7 Removal of reference to CMV**

EAS disagrees with the proposal to remove the CMV concept and the associated table.

We understand that the flight visibility estimated by the pilot may be a useful reference in many cases. Nevertheless, the reported visibility should not be ignored for NCO operations.





One point is about changing the reference in a rule from “reported visibility” to “flight visibility”, another point is about taking advantage of the “reported visibility” or “reported RVR” when available.

We are of the opinion to keep the CMV concept which allows to obtain a reported RVR from any reported aerodrome visibility for the following reasons:

- this is a useful information not to be neglected and
- this allows comparison with the RVR minima published by the State, if any.

The “flight visibility” estimated by the pilot and the “reported visibility/RVR” are both valuable information, which can be both used fruitfully.

comment

174

comment by: *Europe Air Sports*

**\*Page 52/59 - Para. 4.3.8 Introduction of AMC on GNSS fix substitution**

EAS is truly in favour for widening the use of the GNSS infrastructure and procedures.

Let us take full benefit of GNSS :

- for positioning the aeroplane and
- as a secondary means of lateral/vertical guidance when the primary means is a conventional navigation aid.

The writing of this paragraph could be improved (see our proposal).

comment

211

comment by: *FFA EUR*

**\*Page 49/59 - Para. 4.3.1. Removal of the requirement for an approval for LVTO in RVRs between 150 m and 400 m**

FFA objects to removing the requirement for a special approval because this is not in line with the initial safety objective.

It should be recalled that the objective of the NPA is to facilitate PPL holders to fly IFR when and where the weather conditions become critical to continue to fly VFR. The objective is not at all to perform low visibility procedures as professional pilots do. These pilots fly in a crew environment where CRM (task sharing) applies, they are specially trained to do so, they operate on pretty well-equipped airports and they are required to hold a LVTO approval.

**\*Page 49/59 - Para. 4.3.2 Application of a cut-off RVR (1500 m for all instrument approaches)**

FFA agrees with the proposal to apply a maximum RVR requirement of 1 500 m for Cat A and B.

However, our agreement is subject to updating of the approach plates which will have to reflect this new provision. In other terms, EAS supports the proposal as long as the approach plates are accordingly modified. either by NOTAM or by updating the approach plate.

**\*Page 49/59 - Para. 4.3.3 Removal of references to single-pilot operations**

FFA agrees with the proposal to delete references to “single pilot” in Part-NCO since most of NCO operations are conducted by a single pilot.



However, due consideration should be given to flying alone in a light aeroplane at low altitude. A GM should strongly recommend – not require – to be assisted by an autopilot.

**\*Page 50/59 - Para. 4.3.4 Tailoring guidance on vertical path control for operations involving non-complex motor powered aircraft**

At the opposite of the statement made in the text, we think that “touchdowns 500 m or 1000 m beyond the threshold...” are not deemed “normal” even if they are performed on long runways.

This would impair safety on runways on GA aerodromes. This would also impair the essential message of all flight instructors to student IR pilots about strict adherence to the published track in all approach segments and in the landing phase.

FFA agrees with the proposal for re-introducing the S DFA technique into Part-NCO. But this should not weaken the general recommendation for the CDFA technique since GA pilots are also prone to non-stabilised approaches.

**\*Page 50/59 - Para. 4.3.5 Introduction of planning minima in Part-NCO**

FFA supports a change in planning requirements for the destination alternate aerodrome, as proposed (i.e. DH/MDH + 400 feet and visibility of 1 500 m).

Our reasons are that the risk of meteorological conditions worse than forecast and the risk of downgraded ground equipment are thus mitigated.

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Having said that, FFA has no objection for modifying the “approach ban” provided:

- the proposal is re-written for the sake of clarity, consistency and completeness and
- the alleviation of the current approach ban at 1 000 feet AAL is not intended to delay stabilisation of the approach.

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We understand that the flight visibility estimated by the pilot may be a useful reference in many cases. Nevertheless, the reported visibility should not be ignored for NCO operations. One point is about changing the reference in a rule from “reported visibility” to “flight visibility”, another point is about taking advantage of the “reported visibility” or “reported RVR” when available.

We are of the opinion to keep the CMV concept which allows to obtain a reported RVR from any reported aerodrome visibility for the following reasons:

- this is a useful information not to be neglected and
- this allows comparison with the RVR minima published by the State, if any.

The “flight visibility” estimated by the pilot and the “reported visibility/RVR” are both valuable information, which can be both used fruitfully.

**\*Page 52/59 - Para. 4.3.8 Introduction of AMC on GNSS fix substitution**

FFA is truly in favour of widening the use of the GNSS infrastructure and procedures.

Let us take full benefit of GNSS :

- for positioning the aeroplane and
- as a secondary means of lateral/vertical guidance when the primary means is a conventional navigation aid.

The writing of this paragraph could be improved (see our proposal).



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comment 237 comment by: FOCA Switzerland

FOCA Switzerland believes that the full substitution with a GPS fix for a conventional fix must be carefully considered. In case of a failure of the GPS-based navigation system, there should be a possibility to navigate based on conventional navigation aids. Clear mitigation measures should be included in the proposal.

#### 4.4 IA - What are the impacts

p. 54-55

comment 58 comment by: PPL/IR Europe

**4.4.2 Environmental Impact** omits the environmental benefit that generally IFR operates higher than VFR and thereby creates less noise and more fuel efficiency.

#### 4.5 IA - Conclusion

p. 55-56

comment 102 comment by: European Powered Flying Union

4.5 Conclusion  
4.5.1 Comparison of options  
text page 55/59

Option 1 is the preferred option, we fully agree. We think, however, that the impact on the safety of the operations are better than "low positive".

Rationale  
Reading the entire chapter 4 we think "positive" fits better as regards "safety" as well as regards the "total".

comment 227 comment by: Swiss Aeroclub

Option 1 is our preferred solution.

#### 4.6 IA - Monitoring and evaluation

p. 56

comment 29 comment by: UK CAA

**Page No:** 55

**Paragraph No:** 4.6 Monitoring and evaluation - Table

**Comment:** We believe NCO accident rates under IFR should also be monitored

**Justification:** In order to monitor the effectiveness of these changes, NCO accident rates under IFR should also be monitored to ensure that there isn't an increase in accident rates here to balance against any decrease in NCO VFR in marginal VMC accident rates.



**Proposed Text:** Add:

Number of accidents with other-than complex aircraft under IFR	Reports in ECCAIRS and information collected at Member State level	EASA and NAAs	Every 2 years
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**5. Proposed actions to support implementation**

p. 57

comment 103

comment by: *European Powered Flying Union*

5. Proposed actions to support implementation  
text page 57/59

We support the actions the Agency proposes.

