



European Aviation Safety Agency  
**Comment-Response Document 2016-10**

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Appendix  
to ED Decision 2017/017/R

RELATED NPA 2016-10 — RMT.0591 — 10.07.2017

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## 1. Summary of the outcome of the consultation

EASA received 55 comments in total from all interested parties. The distribution of the commentators and the comments is presented in the Explanatory Note to ED Decision 2017/017/R. In paragraph 2.4. of the Explanatory Note, the stakeholders' views are presented along with the position taken by EASA.



## 2. Individual comments (and responses)

In responding to comments, a standard terminology has been applied to attest EASA's position. This terminology is as follows:

- (a) **Accepted** — EASA agrees with the comment and any proposed amendment is wholly transferred to the revised text.
- (b) **Partially accepted** — EASA either agrees partially with the comment, or agrees with it but the proposed amendment is only partially transferred to the revised text.
- (c) **Noted** — EASA acknowledges the comment but no change to the existing text is considered necessary.
- (d) **Not accepted** — The comment or proposed amendment is not shared by EASA.

### 2.1. CRD table of comments, responses and resulting text

(General Comments)		-
comment	7	comment by: <i>Federal Office of Civil Aviation (FOCA), Switzerland</i> The Federal Office of Civil Aviation (FOCA) appreciates the opportunity to comment on this NPA and congratulates the Agency for this great work.
response		Noted.
comment	17	comment by: <i>CAA-NL</i> First of all the CAA Netherlands would like to thank EASA for the opportunity to comment on the NPA 2016-10 with amendment 2 of the AMC/GM for aerodromes. The CAA NL considers it important that the ICAO Annex 14, Vol. I, standards and recommended practices are implemented in the EASA Aerodrome Regulation in due time and supports this activity by EASA.
response		Noted.
comment	34	comment by: <i>UAF (Union des Aéroports Français)</i> <a href="#">Attachment #1</a> <b><u>UAF comments (comments are in French due to very limited time to answer)</u></b>  L'UAF regrette, une nouvelle fois le peu de temps donné (1 mois) pour la consultation.  Il est à noter que les amendements proposés relatifs à la sécurité opérationnelle en période de travaux s'intéressent à un domaine sensible pour les opérations en vol pour lesquels les aéroports ne disposaient à ce jour d'aucune aide pratique. Cependant, sur le principe, une concertation globale et proactive avec l'industrie – qui a pallié d'elle-même à ce vide réglementaire en développant des pratiques communes – sur la publication de standards sur ces aspects auraient dû être menée plus en amont.

	<p>Il est joint un guide relatif à la sécurité des travaux rédigé par les spécialistes aéroportuaires. Ce guide vise à améliorer la sécurité lors de travaux afin de garantir aux opérations aérienne un niveau de sécurité élevé. Ce guide rappelle les différentes réglementations et textes en la matière (ICAO, EASA, FAA, ..) et est complété de bonnes pratiques qui ont faites leur preuves.</p>
response	<p>Noted.</p> <p>EASA decided to have a one (1) month consultation period because the changes were very few and non-controversial. The only proposal that triggered some comments was the introduction of ARIWS. In this case, for reasons explained in the response provided by EASA, the introduction of ARIWS has been consulted again though NPA 2017-04 for CS-ADR-DSN Issue 4.</p> <p>Concerning the attached document containing proposals for apron markings and markings during construction works, EASA is of the opinion that they are not relevant to the content of this NPA and that they are mainly related to Certification Specifications.</p>
comment	<p>45 <span style="float: right;">comment by: <i>Groupe ADP</i></span></p> <p>Groupe ADP support those amendements (with a few comments).</p> <p>As far as ARIWS is concerned, we would like to mention the need to introduce new items in the relevant rules on recommandations for flight crew actions and Air Traffic services consistent with ch. 21.2 and 21.4 of Attachment A of Annex 14 7th Ed.</p>
response	<p>Noted</p> <p>EASA will examine the possibility of including the relevant recommendations for air operations and air traffic services at a later stage</p>

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comment	<p>21 <span style="float: right;">comment by: <i>Flughafen Berlin Brandenburg GmbH</i></span></p> <p>While this NPA addresses AMC/GM only (as per title), changes (should) relate to the CS part as well. Consequently, deletions/modifications within the CS belong to this NPA.</p> <p>Furthermore, FBB advocates for a consolidated approach to all those future rulemaking tasks within the aerodrome rules that affect both, AMC and CS.</p>
response	<p>Accepted</p> <p>EASA will not include in this Decision the proposed AMC and GM for ARIWS. In order to ensure a more complete and transparent picture on the subject, the provisions have been consulted again in the NPA 2017-04 for CS-ADR-DSN Issue 4.</p>

<b>2. Explanatory Note - 2.4. Overview of the proposed amendments</b>	p. 5-6
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comment	<p>22 <span style="float: right;">comment by: <i>Flughafen Berlin Brandenburg GmbH</i></span></p> <p><i>"The lights characteristics have already defined in ICAO Annex 14 and are in the process of</i></p>
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	<p><i>being transposed into EASA CS-ADR.DSN."</i></p> <p>In the future it would be beneficial to cover the technical and organisational aspects of new infrastructure components within a single NPA.</p>
response	<p>Accepted</p> <p>EASA will not include in this Decision the proposed AMC and GM for ARIWS. In order to ensure a more complete and transparent picture on the subject, the provisions have been consulted again in the NPA 2017-04 for CS-ADR-DSN Issue 4.</p>
comment	<p>31 <span style="float: right;">comment by: <i>Airbus</i></span></p> <p><u>GM1 ADR-OPS.A.005 Aerodrome data</u></p> <p>Current NPA 2016-10 proposes only introduction of data regarding the installation of an aircraft arresting system.</p> <p>Airbus would propose to have also introduction of data related to the runways and taxiways shoulder characteristics such as width and nature (paved, stabilized).</p> <p>It has to be noted that such width and associated precision are mentioned in (b) of AMC1 ADR.OPS.A.010 "GENERAL REQUIREMENTS" paragraph:</p> <p>"(b) The aerodrome operator should determine and report aerodrome-related aeronautical data in accordance with the accuracy and integrity requirements set in the following tables:"</p> <p>Then shoulders width accuracy is mentioned in Table 5 – Length/distance/dimension of AMC1 ADR.OPS.A.010.</p> <p>If this addition cannot be done upon the opportunity of this NPA, we would recommend to have this topic discussed in a next NPA.</p>
response	<p>Noted</p> <p>The purpose of this NPA is to introduce provisions stemming from ICAO Annex 14, Amendment 13. The proposal to provide also information on runway and taxiway shoulders will be assessed by EASA, and, if it is considered necessary, it will be included in a future rulemaking task.</p>
comment	<p>33 <span style="float: right;">comment by: <i>daa - Dublin &amp; Cork airports</i></span></p> <p><u>Guidance should be provided by EASA with regard to what constitutes: "short duration" (Is this less than 6 months for example?). Adequate warning can be facilitated generally through NOTAMs and other operational notices but what provisions are in place for emergency works under this AMC?</u></p> <p>Greater clarity should be given as to when these requirements apply and adequate provision for emergency works to be undertaken where these requirements cannot be taken into account made.</p>
response	<p>Noted</p> <p>EASA wishes to thank DAA for raising this issue. EASA believes that the determination of the 'short duration' of the runway and taxiway closures needs to be discussed with the stakeholders, therefore, additional guidance material will be provided in the next amendment (3) of the AMC/GM.</p>

**3. Proposed amendments - GM1 ADR.OPS.A.005**

p. 7

comment	8	comment by: <i>French CAA</i>
	France agrees with this amendment	
response	Noted.	
comment	31 ❖	comment by: <i>Airbus</i>
	<p><u>GM1 ADR-OPS.A.005 Aerodrome data</u></p> <p>Current NPA 2016-10 proposes only introduction of data regarding the installation of an aircraft arresting system.</p> <p>Airbus would propose to have also introduction of data related to the runways and taxiways shoulder characteristics such as width and nature (paved, stabilized).</p> <p>It has to be noted that such width and associated precision are mentioned in (b) of AMC1 ADR.OPS.A.010 “GENERAL REQUIREMENTS” paragraph:</p> <p>“(b) The aerodrome operator should determine and report aerodrome-related aeronautical data in accordance with the accuracy and integrity requirements set in the following tables:”</p> <p>Then shoulders width accuracy is mentioned in Table 5 – Length/distance/dimension of AMC1 ADR.OPS.A.010.</p> <p>If this addition cannot be done upon the opportunity of this NPA, we would recommend to have this topic discussed in a next NPA.</p>	
response	<p>Noted.</p> <p>The purpose of this NPA is to introduce provisions stemming from ICAO Annex 14, Amendment 13. The proposal to provide also information on runway and taxiway shoulders will be assessed by EASA, and, if it is considered necessary, it will be included in a future rulemaking task.</p>	

**3. Proposed amendments - AMC2 ADR.OPS.B.030**

p. 7

comment	2	comment by: <i>Brussels Airport</i>
	<p>The NPA 2016-10 says in §2.3 concerning ARIWS, “the installation of the system is not a requirement. The decision to install such a system depends on local conditions...”</p> <p>But in the regulation itself AMC2 ADR.OPS.B.030, you can’t find back this way of thinking from the explanatory note and what is written in Amendment 13 already taken over by the new published ICAO Annex 14 7<sup>th</sup> edition of July 2016.</p> <p>Annex 14 is very clear in their new inserted § 9.12 about ARIWS : note 1 says “the inclusion of detailed specification for an ARIWS in this section is not intended to imply that an ARIWS has to be provided at an aerodrome”.</p> <p>§ 9.12.1 and §9.12.2 starts even stronger with the wording “<b>Where an ARIWS is installed at an aerodrome, ...</b>”</p> <p>Why has EASA (forgotten?) to take this over in their AMC2 ADR.OPS.B.030....???</p> <p>So I believe we have to add this wording also to the AMC because nobody will later remember the intention as mentioned in the explanatory note of this NPA.</p>	



My proposition is to add the ICAO Annex 14 wording to be in line with ICAO and to change the text as follows :

**AMC2 ADR OPS.B.030 Surface movement guidance and control system**

AUTONOMOUS RUNWAY INCURSION WARNING SYSTEM (ARIWS)

**Where an ARIWS is installed at an aerodrome,** an ARIWS:

(a) should provide autonomous detection of a potential incursion or of the occupancy of an active runway and a direct warning to a flight crew or vehicle operator;

(b).....

response

Noted

EASA will not include the proposed AMC and GM for ARIWS in this Decision. In order to ensure completeness of the proposal, the provisions have been consulted again in the NPA 2017-04 for CS-ADR-DSN Issue 4. Nevertheless, the comment will be taken into consideration.

comment

3

comment by: *Jan Loncke*

The currently proposed text may give the incorrect impression that a ARIWS is (or will be mandated), which is not at all the case.

When the AMC will be approved and incorporated in the regulation, the text in the explanatory note (§ 2.3) stating that the system is not a requirement, may be forgotten altogether.

The idea behind the fact that EASA has decided to include this AMC with the purpose to ensure that if such a system is installed, its functionality should meet the operational needs mentioned, is commendable. But in my humble opinion, the proposed text in the AMC2 ADR.OPS.B.030, which is the text that will show up in the regulations (annexes to decisions, published in consolidated versions, etc.) will not mention the fact that such a system is not mandatory.

Therefore, I believe that the original text as mentioned in the ICAO Annex 14 amendment reflects the true intention in a better way.

Subsequently, I'd like to suggest the following to change the text of AMC2 ADR.OPS.B.030 :

**AMC2 ADR.OPS.B.030 Surface movement guidance and control system**

AUTONOMOUS RUNWAY INCURSION WARNING SYSTEM (ARIWS)

Where an ARIWS is installed at an aerodrome, an ARIWS :

(a) ...

response

Noted

EASA will not include the proposed AMC and GM for ARIWS in this Decision. In order to ensure completeness of the proposal, the provisions have been consulted again in the NPA 2017-04 for CS-ADR-DSN Issue 4. Nevertheless, the comment will be taken into consideration.

comment

5

comment by: *Swedish Transport Agency*

EASA has added new AMC (AMC2 ADR.OPS.B.030) containing operational requirements for an autonomous runway incursion warning system (ARIWS). This concept is a major leap in the right direction to reduce runway incursions and Sweden fully supports the idea with ARIWS.



	<p>EASA state in the RIA that the installation of the system is not a requirement. Sweden fully supports this idea. The need to install an ARIWS must be performance based. However, this is not fully stated in the AMC. Therefore Swedish Transport Agency's proposes to change the beginning of the paragraph to:</p> <p><b>AUTONOMOUS RUNWAY INCURSION WARNING SYSTEM (ARIWS)</b> Where an ARIWS is installed, the system:</p>
response	<p>Noted</p> <p>EASA will not include the proposed AMC and GM for ARIWS in this Decision. In order to ensure completeness of the proposal, the provisions have been consulted again in the NPA 2017-04 for CS-ADR-DSN Issue 4. Nevertheless, the comment will be taken into consideration.</p>
comment	<p>6 <span style="float: right;">comment by: <i>Federal Office of Civil Aviation (FOCA), Switzerland</i></span></p> <p><i>Comment FOCA:</i> The description of the function of an ARIWS in an AMC means that Aerodrome Operator have to implement this system. In a same way as for stopways in ICAO regulation, we would like to specify that such warning system is not mandatory but in case an aerodrome owns one, it has to fulfill some requirements.</p> <p><b>Proposed Text:</b> AUTONOMOUS RUNWAY INCURSION WARNING SYSTEM (ARIWS) Where provided, an ARIWS: [...]</p>
response	<p>Noted</p> <p>EASA will not include the proposed AMC and GM for ARIWS in this Decision. In order to ensure completeness of the proposal, the provisions have been consulted again through NPA 2017-04 for CS-ADR-DSN Issue 4. Nevertheless, the comment will be taken into consideration.</p>
comment	<p>9 <span style="float: right;">comment by: <i>French CAA</i></span></p> <p>The ICAO sentence from article 9.12.1 should have been kept.</p> <ul style="list-style-type: none"> <li>- At first to enhance conspicuity that this installation is not mandatory, France proposes adding the following sentence at the beginning of this AMC : "Where an ARIWS is installed at an aerodrome ...". Indeed such a system could be implemented at very big aerodromes only, they should not be mandatory at every aerodrome.</li> <li>- In (b), we propose deleting the terms "be powered which are not in the iCAO text and they can be misleading (What is intended by "independently powered" : separate circuits ? separate feeders ? separate power plants ?)</li> <li>- in (c) replace "failure or of a part of it" by "failure of part or all of it"</li> </ul>
response	<p>Noted</p> <p>EASA will not include the proposed AMC and GM for ARIWS in this Decision. In order to ensure completeness of the proposal, the provisions have been consulted through NPA 2017-04 for CS-ADR-DSN Issue 4. Nevertheless, the comment will be taken into consideration.</p>



comment	16	comment by: <i>Amsterdam Airport Schiphol - AMS/EHAM (and D.A.A)</i>
	An ARIWS <b>when installed</b>	
response	Noted. EASA will not include the proposed AMC and GM for ARIWS in this Decision. In order to ensure completeness of the proposal, the provisions have been consulted through NPA 2017-04 for CS-ADR-DSN Issue 4. Nevertheless, the comment will be taken into consideration.	
comment	18	comment by: <i>CAA-NL</i>
	<b>AMC2 ADR OPS.B.030 surface movement guidance and control system</b>	
	In the ICAO Annex 14, Vol. I, paragraph 9.12 is clearly stated that an ARIWS does not have to be provided at an aerodrome. This is mentioned in note 1 and 9.12.1 using the phrase "Where an ARIWS is installed at an aerodrome it shall ...".	
	The AMC2 ADR OPS.B.030 is not so clear however whether an ARIWS should be provided at aerodromes. GM ADR OPS.B.030 suggests in sub d that an aerodrome operator should at least assess the need for installing an ARIWS. This is not in line with the ICAO requirement. CAA Netherlands suggests to alter the text of AMC2 ADR OPS.B.030 into "Where an ARIWS is installed at an aerodrome it should ...".	
response	Noted. EASA will not include the proposed AMC and GM for ARIWS in this Decision. In order to ensure completeness of the proposal, the provisions have been consulted through NPA 2017-04 for CS-ADR-DSN Issue 4. Nevertheless, the comment will be taken into consideration.	
comment	20	comment by: <i>Zürich Airport</i>
	Change the wording "detection" within para (a).	
	Justification: The term 'detection of a potential incursion [...] on an active runway' may be misleading. It is understood that ARIWS provides a <u>warning to a flight crew/vehicle operator</u> when a departing/arriving/crossing aircraft or vehicle is present on the runway, regardless of having the required ATC clearance or not.	
response	Noted. EASA will not include the proposed AMC and GM for ARIWS in this Decision. In order to ensure completeness of the proposal, the provisions have been consulted through NPA 2017-04 for CS-ADR-DSN Issue 4. Nevertheless, the comment will be taken into consideration.	
comment	23	comment by: <i>Flughafen Berlin Brandenburg GmbH</i>
	It is common practice for aviation authorities to use the published AMC as an audit base in order to check if an airport fulfills the requirements of the basic regulation and the implementing rule.	

	<p>Hence, it should be clarified that the new AMC2 ADR.OPS.B.030 provides information for those cases where an ARIWS is installed and that it does not require such an installation.</p> <p>The proposal is to either modify the wording "Where provided, an ARIWS: (a) ... (b)...." or to transfer the contents of AMC2 ADR.OPS.B.030 to a new section within the guidance material.</p>
response	<p>Noted.</p> <p>EASA will not include the proposed AMC and GM for ARIWS in this Decision. In order to ensure completeness of the proposal, the provisions have been consulted through NPA 2017-04 for CS-ADR-DSN Issue 4. Nevertheless, the comment will be taken into consideration.</p>
comment	<p>24 <span style="float: right;">comment by: <i>Flughafen Berlin Brandenburg GmbH</i></span></p> <p><i>"Information on ARIWS characteristics and status should be provided to the appropriate aeronautical information services for promulgation in the Aeronautical Information Publication (AIP)."</i></p> <p>It should be considered if the training syllabus for flight crews - see e.g. AMC2 FCL.615 (b) - could be amended in the long term in order to contain information on ARIWS characteristics.</p> <p>Rationale: Initial flight crew training should cover information on (additional/new) safety components and their functioning.</p> <p>The same applies for subject 11: aerodromes within AMC1 ATCO.D.010(a)(2)(i) to AMC1 ATCO.D.010.(a)(2)(v).</p>
response	<p>Noted.</p> <p>EASA will not include the proposed AMC and GM for ARIWS in this Decision. In order to ensure completeness of the proposal, the provisions have been consulted through NPA 2017-04 for CS-ADR-DSN Issue 4. Nevertheless, the comment will be taken into consideration.</p>
comment	<p>29 <span style="float: right;">comment by: <i>Ministry of Economics, Energy, Transport and Regional Development, State of Hessen</i></span></p> <p><u>AMC2 ADR.OPS.B.030 Surface movement guidance and control system</u></p> <p>ICAO states in the corresponding new regulation Annex 14 - 9.12 Note 1 that the detailed specifications in this section are not intended to imply that an ARIWS has to be provided at an aerodrome. The EASA draft for AMC2 misses a concrete statement, in which cases an installation is required. Whereas ICAO consequently connects the specification for the cases by wording "where an ARIWS is installed", the AMC-wording misses a comparable dependence to the installation of an ARIWS. Nevertheless the scope of application and obligation of installation remains subject of interpretation and the legal basis might lead to</p>

further discussions between competent authorities and aerodrome operators.

On the other hand the non-binding draft of GM2 ADR.OPS.B.030 states that not every entrance or threshold needs to be equipped with warning lights and that the operator should assess its needs individually depending on the characteristics of the aerodrome. It is juridical inconsistent to define a requirement in an AMC but to reduce the scope of application in a non-binding GM simultaneously. GM2 ADR.OPS.B.030 lit. (d) should rather get implemented into AMC2 ADR.OPS.B.030.

response

Noted.

EASA will not include the proposed AMC and GM for ARIWS in this Decision. In order to ensure completeness of the proposal, the provisions have been consulted through NPA 2017-04 for CS-ADR-DSN Issue 4. Nevertheless, the comment will be taken into consideration.

comment

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comment by: *ACI Europe*

As the Explanatory Note of NPA 2016-10 states that “concerning the ARIWS, the installation of the system is not a requirement. The decision to install such a system depends on local conditions...,” ACI Europe strongly recommends EASA to clarify the intention not to require the system in the text of the corresponding AMC. ACI Europe proposes to amend the text of the AMC as follows:

#### **AMC2 ADR OPS.B.030 Surface movement guidance and control system**

##### **AUTONOMOUS RUNWAY INCURSION WARNING SYSTEM (ARIWS)**

**Where an ARIWS is installed at an aerodrome,** an ARIWS:

- (a) should provide autonomous detection of a potential incursion or of the occupancy of an active runway and a direct warning to a flight crew or vehicle operator;
- (b).....

Thereby the text would be better in line with ICAO Annex 14: An ARIWS is only a note in Annex 14. Note one clarifies that there is no intention of ICAO that such a system has to be installed at an aerodrome. Therefore 9.12.1 and 9.12.2 start with the wording “Where an ARWIS is installed at an aerodrome”.

As the Explanatory Note of an NPA is not part of the later AMC-text the wording proposed by EASA could be understood by in a way which was obviously not intended: As an AMC describes how to comply with the Essential Requirements of the Basic Regulation and its Implementing Rules, it could be interpreted that there has to be an ARIWS in order to achieve compliance.

response

Noted.

EASA will not include the proposed AMC and GM for ARIWS in this Decision. In order to ensure completeness of the proposal, the provisions have been consulted through NPA 2017-04 for CS-ADR-DSN Issue 4. Nevertheless, the comment will be taken into consideration.

comment

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comment by: *Belgian CAA*

1. Instead of adding ARIWS in a new AMC2 ADR.OPS.B.030 it is preferred to make it guidance



	<p>e.g. “GM2 ADR.OPS.B.030. ARIWS” since ARIWS is not to be mandatory.</p> <p>2. It should be clear that all rulemaking on ARIWS is well foreseen of a part describing the “applicability”. As it is not the objective to make ARIWS mandatory, but if used, to have uniform installation throughout the EU, the addition of e.g. “Where an ARIWS is installed at an aerodrome....” is needed.</p>
response	<p>Noted.</p> <p>EASA will not include the proposed AMC and GM for ARIWS in this Decision. In order to ensure completeness of the proposal, the provisions have been consulted through NPA 2017-04 for CS-ADR-DSN Issue 4. Nevertheless, the comment will be taken into consideration.</p>
comment	<p>38 <span style="float: right;">comment by: <i>Bavarian Aviation Authority</i></span></p> <p>EASA arranged the specifications concerning ARIWS within the chapter „surface movement guidance and control system“ (SMGCS), whereas ICAO arranged it within a separate chapter resident at the same level as SMGCS (not as a subitem).</p> <p>The placement of this chapter chosen by EASA is very unfortunate, because the ARIWS needs to be separated from the SMGCS, since it deals primarily with the prevention of runway incursions. Additionally the placement within the rules may initiate that the ARIWS is part of the SMGCS or even needed in order to fulfil the requirement. Since this is not the case, it should be listed as a separate chapter.</p> <p>It would be very helpful, if Note 1 from the ICAO Annex 14 would be integrated in the European set of rules as well (<i>“The inclusion of detailed specifications for an autonomous runway incursion warning system (ARIWS) in this section is not intended to imply that an ARIWS has to be provided at an aerodrome.”</i>).</p> <p>EASA stated that not every aerodrome needs to provide an ARIWS within the explanation of the NPA, yet it would be helpful to have that statement present within the regulations at all time in order to prevent future misunderstandings.</p> <p>Furthermore it would be worth thinking about adding this sentence to all the requirements that have to be fulfilled when a certain infrastructural element is provided at an aerodrome, but do not mean that this certain element has to be provided at every aerodrome.</p> <p>Following text from ICAO Annex 14 should also be added to the EASA requirements, to achieve a compliance within the different regulations and in order to prevent extensive rectification once those text passages will be applied:</p> <p><i>c) its visual aid components, i.e. lights, shall be designed to conform with the relevant specifications in 5.3. +</i></p> <p><i>Note 1.— An ARIWS may be installed in conjunction with enhanced taxiway centre line markings, stop bars or runway guard lights.</i></p>
response	<p>Noted.</p> <p>EASA will not include the proposed AMC and GM for ARIWS in this Decision. In order to ensure completeness of the proposal, the provisions have been consulted through NPA</p>

2017-04 for CS-ADR-DSN Issue 4. Nevertheless, the comment will be taken into consideration.

comment 41 comment by: *TRANSPORT AUTHORITY, Slovak republic*

As AMCs are understood as a way how to comply with ADR.OPS.B.030 we would suggest adding parameter under which visibility conditions ARIWS should be used (as defined for SMGCS radar - RVR less than 350 m in GM1 ADR.OPS.B.030) otherwise our understanding of ADR.OPS.B.030 and AMC 2 would be that ARIWS must be installed at the aerodrome, and if AD is not ARIWS equipped, AltMOC must be issued. Or we suggest changing the status from AMC2 to GM.

response Noted.  
EASA will not include the proposed AMC and GM for ARIWS in this Decision. In order to ensure completeness of the proposal, the provisions have been consulted through NPA 2017-04 for CS-ADR-DSN Issue 4. Nevertheless, the comment will be taken into consideration.

comment 44 comment by: *Groupe ADP*

To clarify the optional requirement of ARIWS (as in Annex 14) we propose to add on 3rd line:  
"Where installed at an aerodrome, an ARIWS :  
(a) should ..."

response Noted  
EASA will not include the proposed AMC and GM for ARIWS in this Decision. In order to ensure completeness of the proposal, the provisions have been consulted through NPA 2017-04 for CS-ADR-DSN Issue 4. Nevertheless, the comment will be taken into consideration.

comment 48 comment by: *ADV - German Airports Association*

Die Einordnung im Abschnitt SMGSC ist sehr unglücklich gewählt, da das ARIWS nicht grundsätzlich als Rollführungssystem, wie es nach ADR.OPS.B.030 gefordert wird, zu verstehen ist, sondern eher in Verbindung mit der Verhinderung von Runway Incursions zu verbinden ist.

Die ICAO betrachtet das ARIWS ebenfalls separat und nicht als Teil des SMGCS. Die Eingruppierung ist vor allem verwirrend, weil sie impliziert, dass man das ARIWS für das SMGCS benötigen würde. Dem ist jedoch nicht so, daher sollte das ARIWS auch strukturell vom SMGCS getrennt und gesondert aufgeführt werden.

response Noted.  
EASA will not include the proposed AMC and GM for ARIWS in this Decision. In order to ensure completeness of the proposal, the provisions have been consulted through NPA 2017-04 for CS-ADR-DSN Issue 4. Nevertheless, the comment will be taken into consideration.

comment 49 comment by: *ADV - German Airports Association*



Die EASA hat zwar in der einleitenden Erklärung zu dem NPA erwähnt, dass durch die Integration der Vorgabe nicht jeder Flugplatz ein ARIWS haben muss, jedoch wäre eine Erwähnung dieser Tatsache in den Vorgaben selbst immer präsent und könnte etwaig entstehenden Missverständnissen bei Zertifizierung und Aufsicht vorbeugen. Die entsprechende "Note 1" im ICAO Annex 14 9.12 bildet eine sinnvolle Grundlage und sollte ergänzt werden.

Eine klare Aussage, dass ein ARIWS keine Verpflichtung darstellt ist unverzichtbar. Die operativen Implikationen, die technische Komplexität, die extrem herausfordernde Implementierung und nicht zuletzt der wirtschaftliche Aufwand eines solchen Systems stehen in der Regel in keinem Verhältnis zur beabsichtigten Wirkung.

response

Noted.

EASA will not include the proposed AMC and GM for ARIWS in this Decision. In order to ensure completeness of the proposal, the provisions have been consulted through NPA 2017-04 for CS-ADR-DSN Issue 4. Nevertheless, the comment will be taken into consideration.

comment

50

comment by: *ADV - German Airports Association*

Die autonome Arbeitsweise des ARIWS ist in der Praxis kaum umsetzbar. Es fehlt an Vorgaben auch für die Flugsicherung zur Integration in deren Verfahren und Systeme. Die Aussage der "Note 2" des ICAO Annex 14 9.12 ist daher zu ergänzen.

response

Noted.

EASA will not include the proposed AMC and GM for ARIWS in this Decision. In order to ensure completeness of the proposal, the provisions have been consulted through NPA 2017-04 for CS-ADR-DSN Issue 4. Nevertheless, the comment will be taken into consideration.

comment

51

comment by: *Copenhagen Airports A/S*

In its current form the proposed AMC must be followed unless an alternative (AltMoC) is approved by the competent authority. Note 1 from ICAO Annex 14 regarding the use of ARIWS as an option/tool if necessary to prevent runway incursions should be reflected in the ADR.

The proposed text should be presented as a GM with the introduction:

"ARIWS may form part of aerodrome operators runway incursion prevention measures."

The proposed ARIWS should be implemented at the aerodrome from a risk-based approach.

response

Noted.

EASA will not include the proposed AMC and GM for ARIWS in this Decision. In order to ensure completeness of the proposal, the provisions have been consulted through NPA 2017-04 for CS-ADR-DSN Issue 4. Nevertheless, the comment will be taken into consideration.

comment	<p>4</p> <p>comment by: UK CAA</p> <p><b>Page No:</b> 7 and 8</p> <p><b>Paragraph No:</b> GM2 ADR.OPS.B.030 Surface movement guidance and control system – General Description, sub-paragraph (d)</p> <p><b>Comment:</b> The ARIWS are not considered to be an ICAO SARP. Therefore the systems are not mandatory and are only required when all other runway incursion interventions have failed.</p> <p><b>Justification:</b> Clarity.</p> <p><b>Proposed Text:</b> The General Description, sub-paragraph (d) should be amended to include the Agency’s words used in paragraph 2.3 on page 5 of the NPA, as follows:</p> <p>“Concerning the ARIWS, the installation of the system is not a requirement. The decision whether to install such a system depends on local conditions and it may be implemented when cost is justified and other measures to mitigate the risk of runway incursions have been ineffective.”</p>
response	<p>Noted.</p> <p>EASA will not include the proposed AMC and GM for ARIWS in this Decision. In order to ensure completeness of the proposal, the provisions have been consulted through NPA 2017-04 for CS-ADR-DSN Issue 4. Nevertheless, the comment will be taken into consideration.</p>
comment	<p>10</p> <p>comment by: French CAA</p> <p>France agrees with this amendment</p>
response	<p>Noted.</p>
comment	<p>25</p> <p>comment by: Flughafen Berlin Brandenburg GmbH</p> <p><i>“red warning lights at the entrances will illuminate,...”</i> For standardisation purposes it might be beneficial to describe location and characteristics of those red warning lights using a structure like</p> <ul style="list-style-type: none"> <li>(a) Applicability</li> <li>(b) Location and positioning</li> <li>(c) Characteristics</li> </ul>
response	<p>Noted.</p> <p>EASA will not include the proposed AMC and GM for ARIWS in this Decision. In order to ensure completeness of the proposal, the provisions have been consulted through NPA 2017-04 for CS-ADR-DSN Issue 4. Nevertheless, the comment will be taken into consideration.</p>

comment	<p data-bbox="359 235 383 280">1</p> <p data-bbox="1093 235 1484 280" style="text-align: right;">comment by: <i>Martins Freibergs</i></p> <p data-bbox="359 291 1484 470">The annotation part for this amendment states that the respective part of the CS-ADR.DSN.R.855 is transferred to Part-ADR.OPS as AMC4 ADR.OPS.B.070 with the same wording. However if find it impossible to find an effective version of the CS-ADR-DSN document in which the CS-ADR.DSN.R.855 (e) would stipulate that unserviceability markings should be placed across the entrance to the closed area at intervals not exceeding 3 m.</p> <p data-bbox="359 504 1484 582">I find that both CS-ADR.DSN.R.855 (e) and ICAO Annex 14 v1 7.1.7 contain a provision that only unserviceability lights shall be placed across the entrance to the closed area.</p> <p data-bbox="359 616 1484 896">Futhermore, unlike CS-ADR.DSN.R.855 (e) which specifies the design characteristics of unserviceability lights via reference to CS-ADR.DSN.R.870 (c)(2), the proposed AMC4 ADR.OPS.B.070 does not provide a reference to the specification of the unserviceability lights or unserviceability markings. One might infer that CS-ADR.DSN.R.870 are to be applied but this particular CS defines only unserviceability lights and unserviceability markers (i.e. conspicuous upstanding devices such as flags, cones, or marker boards). A specification of the marking to be used as the unserviceability markings would be necessary given that CS-ADR-DSN chapter L (markings) does not specify the unserviceability marking.</p>
response	<p data-bbox="359 918 446 952">Noted.</p> <p data-bbox="359 963 1484 1142">EASA considers that there is a difference between a permanently and a temporarily closed runway or taxiway. Temporarily closures of runways and taxiways address operational issues, therefore, reference is made to the Part-ADR.OPS. The specifications of the markings, lights and markers are included in CS-ADR-DSN. Concerning the distance between the unserviceability markings the comment is correct and the text will be updated.</p>
comment	<p data-bbox="359 1187 391 1220">11</p> <p data-bbox="1165 1187 1484 1220" style="text-align: right;">comment by: <i>French CAA</i></p> <p data-bbox="359 1254 1484 1400">We agree with this amendment but it must be completed by mentioning CS ADR.DSN.R.855 (c) and CS ADR.DSN.R.870 (c) related to the characteristics of closed markings and unserviceability lights and markings in order to be in compliance with ICAO standards. So we suggest the following sentences :</p> <p data-bbox="359 1400 1484 1467">(a) closed marking defined in CS ADR.DSN.R.855 (c) is displayed on a temporarily closed runway, ....</p> <p data-bbox="359 1467 1484 1579">c) In addition to closed markings, when the runway, or taxiway, or portion thereof, is closed and is intercepted by a usable runway or taxiway which is used at night, unserviceability lights and markings defined in CS ADR.DSN.R.870 (c) ...</p> <p data-bbox="359 1579 1484 1724">In addition, we suggest to complete this AMC with requirements concerning the possibility to use lighted visual aid to indicate temporary runway closure ( in the shape of letter " X" crossed at 90°) . This system prevents runway confusions in parallel runway configuration and it is used in several countries.</p>
response	<p data-bbox="359 1747 478 1780">Accepted.</p> <p data-bbox="359 1780 1484 1859">Text is updated accordingly. Concerning the use of lighted visual aids to indicate temporary closure of runway, EASA will further assess the proposal.</p>
comment	<p data-bbox="359 1904 391 1937">26</p> <p data-bbox="861 1904 1484 1937" style="text-align: right;">comment by: <i>Flughafen Berlin Brandenburg GmbH</i></p> <p data-bbox="359 1971 1101 2004">This is not a 1:1-transfer of the wording of CS-ADR-DSN.R.855.</p>



	Without knowing the resulting new text of CS-ADR-DSN.R.855 a comment on this NPA is not complete.
response	Noted.
comment	28 <span style="float: right;">comment by: <i>Ministry of Economics, Energy, Transport and Regional Development, State of Hessen</i></span>
	<p><b><u>AMC4 ADR.OPS.B.070 Closed Runways and Taxiways, or parts thereof</u></b></p> <p>It is appreciated to supplement the AMC corresponding to ADR.OPS.B.070 with the CS-contents. However, the scope of regulations regarding closed taxiways and runways or parts thereof should be clearly separated. The draft of AMC4 refers to closed taxiways as well as AMC3 ADR.OPS.B.070 already does (Marking and lightning of unserviceable areas comprises taxiways). The contents of AMC3 and AMC4 should either get combined or divided into an AMC dealing with closed runways and an AMC dealing with other unserviceable areas.</p>
response	<p>Partially accepted</p> <p>The AMC has been updated to make reference to the relevant CSs. Concerning the proposal to combine the existing AMC3 ADR.OPS.B.070 with the new proposed AMC4 this is not accepted because AMC3 refers to cases where the portion of the taxiway is unserviceable but it is still possible for the aircraft to pass safely, while AMC4 refers to cases where the taxiway is closed totally for aircraft traffic.</p>
comment	32 <span style="float: right;">comment by: <i>Airbus</i></span>
	<p><b><u>Paragraph (b):</u></b></p> <p>“(b) Lighting on a closed runway, or taxiway, or portion thereof is not operated, except as required for maintenance purposes; and”</p> <p>What occurs during periods of time when lighting is operated for maintenance and when closed runway markings are not necessarily visible since not illuminated?</p>
response	<p>Noted.</p> <p>EASA cannot describe all the cases. It is considered that the aerodrome operator will take all the necessary actions to avoid possible take-offs and landings from the closed runway or taxiway. The measures that should be applied depend on the duration of the closure and the operational characteristics of the aerodrome.</p>
comment	36 <span style="float: right;">comment by: <i>UAF (Union des Aéroports Français)</i></span>
	<p><b><u>UAF comments (comments are in French due to very limited time to answer)</u></b></p> <p>L’UAF soutient ce nouvel AMC.</p>
response	Noted.
comment	39 <span style="float: right;">comment by: <i>Bavarian Aviation Authority</i></span>
	<p>The placement of the part “closed runways and taxiways or parts thereof” as a subchapter of “aerodrome works safety” is seen very critically, because not every closing is due to work in progress at an aerodrome (such as emergencies, operational special provisions on short</p>

	<p>notice or displaced thresholds for example).</p> <p>This could lead to a failure to comply with the given requirements, because they are only connected, found and followed in conjunction with works safety. If it is needed to use those regulations for closings of different nature, one would have to apply a set of rules that actually are not applicable. Above named problem seems to contradict the thought of safety.</p> <p>Rearranging that item (closed runways, taxiways or parts thereof) in a separate chapter according to ICAO Annex 14 would be very helpful.</p>
response	<p>Noted.</p> <p>EASA acknowledges the fact that markings of closed runways or taxiways are not necessarily related with works. For the time being EASA decided to link the AMC with the rule referring to aerodrome works safety, however, EASA will examine the possibility to introduce a new rule in a future rulemaking task.</p>
comment	<p>52 <span style="float: right;">comment by: <i>ADV - German Airports Association</i></span></p> <p>Die neue Eingliederung des Punktes „Closed Runways and Taxiways, or Parts thereof“ unter dem Punkt „Aerodrome Works Safety“ wird als kritisch gesehen, da nicht alle Sperrungen von Pisten oder Rollwegen im Bezug zu Arbeiten auf dem Flugplatz stehen (z.B. Notlagen, versetzte Schwelle, kurzfristige betriebliche Sonderregelungen oder –verfahren). Dies könnte dazu führen, dass notwendige Vorgaben nicht eingehalten werden, weil diese fälschlicherweise nur in Verbindung mit Arbeiten auf dem Flugplatz verbunden, gesucht und eingehalten werden. Will man jedoch auch bei anderweitigen Sperrungen diese Vorgaben berücksichtigen, müsste man ein dafür nicht zutreffendes Kapitel anwenden. Beide beschriebenen Wege führen nicht zu einer Erhöhung der Sicherheit.</p> <p>Analog der Vorgaben des ICAO Annex 14 ist dieser Punkt in gesondert aufzuführen.</p>
response	<p>Noted.</p> <p>EASA acknowledges the fact that markings of closed runways or taxiways are not necessarily related with works. For the time being EASA decided to link the AMC with the rule referring to aerodrome works safety, however EASA will examine the possibility to introduce a new rule in a future rulemaking task.</p>
comment	<p>54 <span style="float: right;">comment by: <i>Copenhagen Airports A/S</i></span></p> <p>Item (c) introduces an addition with "markings" across the entrance to the closed area when the runway or taxiway is intercepted by a runway or taxiway used to night operations. It is assumed that the wording "marking" is related to "closed marking" and if not, it should be "Unserviceability markers".</p> <p>If the reference is "closed markings" it should be possible to use other measures, as mentioned in ICAO Annex 14 under item 7.1.4 note:  <i>"When an area is temporarily closed, frangible barriers or markings utilizing materials other than paint or other suitable means may be used to identify the closed area."</i></p> <p>And the interval of the markers should be "sufficiently close" and not with the maximum of 3 meters as proposed.</p>

	This way its harmonized with AMC3 ADR.OPS.B.070.
response	Accepted. Point (c) has been revised and aligned with ICAO Annex 14 Standard 7.1.7. The specified distances refer to unserviceability lights when the closed runway or taxiway is intercepted by a usable runway or taxiway during night.

**3. Proposed amendments - GM5 ADR.OPS.B.070**

p. 8-9

comment	12	comment by: <i>French CAA</i>
	France agrees with this amendment	
response	Noted.	
comment	27	comment by: <i>Ministry of Economics, Energy, Transport and Regional Development, State of Hessen</i>
	It is not comprehensible why derogations of certain specifications are implemented in GM and not directly in an AMC. On this way the system of AMC defining the acceptable means and GM explaining how to interpret the AMC gets disordered. It is not comprehensible why to implement an exception from a mean not directly in an AMC.	
response	Noted. EASA transferred points (c), (d) and (e) of GM1 ADR.DSN.L.520 to a new GM5 ADR.OPS.B.070 because these markings are not meant to be used in the Certification Basis of the aerodrome. Also because they do not originate from ICAO Annex 14 it was not considered appropriate to be included as an AMC.	
comment	37	comment by: <i>UAF (Union des Aéroports Français)</i>
	<b><u>UAF comments (comments are in French due to very limited time to answer)</u></b>	
	Même si cette disposition n'est qu'un GM, nous la jugeons dangereuse. La mise en place de marquages opérationnels sur une piste en travaux ne devrait être recommandée que lorsque cette piste doit être utilisée pendant les travaux (ex. piste réduite). Or la GM ne fait pas mention de cette utilisation.	
	Régulièrement, des atterrissages ont lieu sur des pistes fermées en travaux (ex. : MAH, 2011 ; KTW, 2014 ; ELP, 2015 ; KRR, 2015). La mise en place de marquages caractéristiques comme ceux listés au §(a), pour certains recommandés "le plus tôt possible", est de nature à compromettre la sécurité aéronautique et celle du chantier. Au contraire, il est préférable de peindre les marquages opérationnels le plus tard possible pendant les travaux, et ce jusqu'aux dernières heures avant la réouverture aux opérations aériennes, afin de prévenir les atterrissages sur la piste encore en travaux et non prête à recevoir des vols.	
	L'UAF propose de soit supprimer cette GM, soit de renommer le GM : au lieu de <del>USE OF TEMPORARY MARKINGS</del> , écrire <b>MINIMUM MARKINGS LIST WHEN REOPENING A RUNWAY AFTER CONSTRUCTION</b> et de rajouter :	



	<p>(a) Circumstances may occur when it is not practicable to install permanent markings, for example during runway resurfacing. In order to provide sufficient visual guidance to aircraft, the following markings should be considered as a minimum markings list when a runway is re-commissioned for operations.</p>
response	<p>Not accepted.</p> <p>When the runway is closed for maintenance purposes (e.g. resurfacing) it is necessary to use the closed runway marking. There are many cases where the runway is resurfaced in parts, for example during the night, and used by aircraft during the day. In these cases, and in order to ensure flight safety, it is necessary to use some temporary markings as suggested in the GM.</p>
comment	<p>40 <span style="float: right;">comment by: <i>Bavarian Aviation Authority</i></span></p> <p>The placement of the part “use of temporary markings” as a subchapter of “aerodrome works safety” is also seen very critically, because not every temporary marking is connected to work in progress at an aerodrome (such as operational special provisions on short notice for example).</p> <p>This could lead to a failure to comply with the given requirements, because they are only connected, found and followed in conjunction with works safety. If it is needed to use those regulations for temporary markings in another content, one would have to apply a set of rules that actually are not applicable. Above named problem seems to contradict the thought of safety.</p> <p>Rearranging that item (use of temporary markings) in a separate chapter according to ICAO Annex 14 would be very helpful.</p> <p>Additionally it would be helpful, to arrange that chapter within the Certification Specifications as a subchapter of “markings”. Splitting up the rules for markings (CS as well as AMC) might make the regulations itself more confusing and unclear and lead to a practice of non-compliance.</p> <p>Should the splitting up of the rules be still within the interest of the EASA, there should be at least cross references from AMC to CS and vice versa.</p>
response	<p>Not accepted.</p> <p>EASA believes that temporary markings are mainly connected with aerodrome works. The specific GM refers to runways and taxiways only and not to aprons where temporary markings may be used to facilitate, apart from works, temporary operational requirements. Furthermore, EASA decided to transfer points (c), (d) and (e) of GM1 ADR.DSN.L.520 to a new GM5 ADR.OPS.B.070 because these temporary markings are not meant to be used for the Certification Basis of the aerodrome.</p>
comment	<p>46 <span style="float: right;">comment by: <i>Groupe ADP</i></span></p> <p>In subparts (c) and (d) : the meaning of "...as soon as practicable ..." is unclear. We understand it as " ...as soon as practicable just before or right after the re-opening.." but it should be clarified.</p>
response	<p>Noted.</p>

EASA is in the opinion that, upon completion of the works, the markings referred in points (c) and (d) should be made available.

comment	53	comment by: <i>ADV - German Airports Association</i>
	See Comment 52.	
	This Provision should be moved to CS. At least there need to be cross references.	
response	Noted. Temporary markings are not part of the Certification Basis.	

### 3. Proposed amendments - AMC1 ADR.OPS.B.080

p. 9

comment	13	comment by: <i>French CAA</i>
	France agrees with this amendment	
response	Noted.	
comment	42	comment by: <i>TRANSPORT AUTHORITY, Slovak republic</i>
	Please specify, which are the applicable CSs for flags used to mark mobile objects. Only CSs for flags used to mark objects are present - CS ADR-DSN.Q845.	
response	Accepted. The AMC has been revised to include the characteristics of the flags.	

### 3. Proposed amendments - AMC1 ADR.OPS.C.010

p. 9

comment	14	comment by: <i>French CAA</i>
	France agrees with this amendment	
response	Noted.	
comment	19	comment by: <i>Zürich Airport</i>
	Move (g) to AMC1 ADR.OPS.B.070 (f)	
	Justification: ZRH supports this amendment regarding the aerodrome operator's responsibility to "ensure the work site is returned to operational use in a safe [...] manner" – see AMC1 ADR.OPS.B.070 (f). To determine, that the surface friction characteristics of a paved runway after construction or resurfacing achieve the design objectives should be a part of Aerodrome works safety within AMC1 ADR.OPS.B.070.	
response	Noted. EASA considers that the resurface of the runway is part of the maintenance activities with	



the aim to ensure that runway surface friction characteristics achieve the design objectives.


### 3. Proposed amendments - GM3 ADR.OPS.C.010(b)(2)

p. 9-11

comment	15	comment by: <i>French CAA</i>
	France agrees with this amendment	
response	Noted.	
comment	43	comment by: <i>TRANSPORT AUTHORITY, Slovak republic</i>
	(2) We suggest specifying what is meant by "should be repaired within reasonable period".	
response	Noted. The guidance provides further information to the aerodrome operator on how to deal with surface irregularities. The intent of the phrase in question is to provide an indication that surface maintenance should be scheduled. EASA expects that, as soon as these irregularities have been identified, the aerodrome operator should put in place a maintenance plan.	
comment	47	comment by: <i>Groupe ADP</i>
	In subpart (a)1 the sentence "The runway may remain in service." does not have any interest from our point of view. We propose to delete it.	
response	Noted. EASA considers this as additional information for the aerodrome operator, however this does not prevent the aerodrome operator to close down the runway in order to fix the irregularities.	



**3. Appendix A - Attachments**

 AlfaACI\_Guide\_SignaTRA\_V1-0.pdf  
Attachment #1 to comment [#34](#)

