

**United Kingdom
Civil Aviation Authority
Official Record Series 9**



**CAA Decision to adopt [AMC, GM and CS] for UK Reg (EU) XXX/XXXX
pursuant to Article 76(3) UK Reg (EU) 2018/1139**

DECISION No. XX

Publication date: XX Month YYYY

Decision [amending] Acceptable Means of Compliance (AMC) and Guidance Material (GM) for UK Reg (EU) No 139/2014 supporting the implementation of All Weather Operations at aerodromes.

Background

CAA UK-EU Transition Decision No. 1 adopted a form of Acceptable Means of Compliance (“AMC”) as means by which the requirements in Regulation UK (EU) No 1139/2018 as retained (and amended in UK domestic law) under the European Union (Withdrawal) Act 2018 (“UK Reg (EU) No 139/2014”) could be met. That decision also adopted Guidance Material (“GM”) as non-binding explanatory and interpretation material on how to achieve the requirements in UK Reg (EU) No 139/2014. The CAA has decided to adopt revised AMC and GM in respect of UK Reg (EU) No 139/2014.

Decision

1. The CAA, under Article 76(3) of Regulation (EU) No 2018/1139 as retained (and amended in UK domestic law) under the European Union (Withdrawal) Act 2018, has decided to adopt the AMC and GM attached at Schedule 1.
2. This AMC and GM supplements and/or replaces that which was adopted for UK Reg (EU) No 139/2014 [Annex 1 Part-XXXX] by CAA UK-EU Transition Decision No. 1 dated 22 December 2020.

This Decision will remain in force unless revoked or amended by the CAA.

The AMC and GM attached at Schedule 1 to this Decision came into force on XX Month YYYY should be read in conjunction with this Decision.

Definitions

All references to *Regulations* are to the UK law bearing that title or number, being EU retained law as retained (and amended in UK domestic law) pursuant to the European Union (Withdrawal) Act 2018.

Rob Bishton
For the Civil Aviation Authority and the United Kingdom

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UK Civil Aviation Authority

Official Record Series 9, Decision No. XX

Date of Decision: XX Month YYYY

Date of Decision Coming into force: XX Month YYYY

Schedule 1

Acceptable Means of Compliance (AMC) and Guidance Material (GM) documents referenced below.

The text of the amendment is arranged to show deleted text, new or amended text as shown below:

- (a) ~~Text to be deleted is shown struck through~~;
- (b) New text is highlighted in grey;
- (c) ~~Text to be deleted is shown struck through~~ followed by the replacement text which is highlighted in grey.

ADR - Aerodromes CS ADR DSN Aerodromes Regulation No 139/2014

GM1 Annex 1 Definitions

DEFINITIONS FOR TERMS USED IN THE ACCEPTABLE MEANS OF COMPLIANCE AND GUIDANCE MATERIAL

For the purpose of the Acceptable Means of Compliance and Guidance Material to Regulation UK (EU) No 139/2014, the following definitions apply:

- (1) 'Enhanced flight vision system 200 (EFVS 200) operation' means an operation with an operational credit in which visibility conditions require an EFVS to be used down to 200 ft above the FATO or runway threshold. From that point to land, natural vision is used. The RVR is not less than 550 m.
- (2) 'Enhanced flight vision system (EFVS) - Approach (EFVS-A)' means a system that has been demonstrated to meet the criteria to be used for approach operations from a decision altitude/height (DA/H) or a minimum descent altitude/height (MDA/H) to 100 ft (30m) threshold elevation while all system components are functioning as intended but may have failure modes that could result in the loss of EFVS capability. It should be assumed for an EFVS-A that:
 - (a) the pilot will conduct a go-around at or above 100 ft threshold elevation, in the event of an EFVS failure; and
 - (b) descent below 100 ft above the threshold elevation through to touchdown and roll-out should be conducted using natural vision, so that any failure of the EFVS does not prevent the pilot from completing the approach and landing.
- (3) 'Enhanced flight vision system - landing (EFVS-L)' means a system that has been demonstrated to meet the criteria to be used for approach and landing operations that rely on sufficient visibility conditions to enable unaided roll-out and to mitigate for loss of EFVS function.
- (4) 'Obstacle clearance height (OCH)' means the lowest height above the elevation of the relevant runway threshold or the aerodrome elevation, as applicable, used in establishing compliance with appropriate obstacle clearance criteria. Obstacle clearance height is referenced to the threshold elevation or in the case of non-precision approach procedures to the aerodrome elevation or the

threshold elevation if that is more than 2 m (7 ft) below the aerodrome elevation. An obstacle clearance height for a circling approach procedure is referenced to the aerodrome elevation.

- (5) 'Special authorisation category I (SA CAT I) operation' means a CAT I approach operation with a decision height not lower than 45 m (150 ft) and an RVR not less than 400 m and requires special authorisation.

CS ADR DSN.A.002 Definitions

(16a) 'decision altitude' ('DA') or 'decision height' ('DH') means a specified altitude or height in a 3D instrument approach operation at which a missed approach procedure must be initiated if the required visual reference to continue the approach has not been established;

(22) 'Instrument runway' means one of the following types of runways intended for the operation of aircraft using instrument approach procedures:

1.

'non-precision approach runway': a runway served by visual aids and at least one non-visual aid, intended for landing operations following a type A instrument approach operation; and visibility not less than 1000 m.

2.

'precision approach runway, category I': a runway served by visual aids and at least one non-visual aid, intended for landing operations following a type B CAT I instrument approach operation; with a decision height (DH) not lower than 60 m (200ft) and either a visibility not less than 800 m or a runway visual range of not less than 550 m.

3.

'precision approach runway, category II': a runway served by visual aids and at least one non-visual aid, intended for landing operations following a type B CAT II instrument approach operation; with a decision height (DH) lower than 60 m (200 ft) but not lower than 30 m (100 ft) and a runway visual range of not less than 300 m.

4.

'precision approach runway, category III': a runway served by visual aids and at least one non-visual aid, intended for landing operations following a type B CAT III A, ~~III B~~ or ~~III C~~ instrument approach operation ~~to and along the surface of the runway; and~~ with a decision (DH) lower than 30 m (100ft) or no decision height and a runway visual range less than 300 m, or no runway visual range limitations.

~~A — intended for operations with a decision height (DH) lower than 30 m (100 ft), or no decision height and a runway visual range (RVR) not less than 175 m; or~~

~~B — intended for operations with a decision height (DH) lower than 15 m (50 ft), or no decision height and a runway visual range (RVR) less than 175 m but not less than 50 m; or~~

~~C~~ intended for operations with no decision height (DH) and no runway visual range (RVR) limitations

(25) ~~'low visibility procedures' means procedures applied at an aerodrome for the purpose of ensuring safe operations during lower than Standard Category I, other than Standard Category II, Category II and III approaches and low visibility take-offs;~~ low-visibility procedures' means procedures applied at an aerodrome for the purpose of ensuring safety during low-visibility operations;

(25a) 'low-visibility operations (LVOs)' means approach or take-off operations on a runway with a runway visual range less than 550 m or a decision height less than 200 ft;';

(26) ~~'low visibility take-off (LVTO)' means a take-off with a runway visual range (RVR) lower than 400 m but not less than 75 m'~~ 'low-visibility take-off (LVTO)' means a take-off with a runway visual range less than 550 m

(27) ~~'lower than Standard Category I operation' means a Category I instrument approach and landing operation using Category I decision height (DH), with a runway visual range (RVR) lower than would normally be associated with the applicable decision height (DH) but not lower than 400 m.~~

(35) ~~'other than Standard Category II operation' means a precision instrument approach and landing operation using ILS or MLS where some or all of the elements of the precision approach Category II light system are not available, and with: — decision height (DH) below 200 ft but not lower than 100 ft; and — runway visual range (RVR) of not less than 350 m;~~

(47b) 'type B instrument approach operation' means an instrument approach operation with a decision height below 75 m (250 ft). Type B instrument approach operations are categorised as follows:

1. Category I (CAT I) : a decision height not lower than 60 m (200 ft) and with either a visibility not less than 800 m or a runway visual range not less than 550 m;

2. Category II (CAT II) : a decision height lower than 60 m (200 ft), but not lower than 30 m (100 ft) and a runway visual range not less than 300 m;

3. Category IIIA (CAT IIIA) : a decision height lower than 30 m (100 ft) or no decision height and a runway visual range not less than 175 m;

4. Category IIIB (CAT IIIB) : a decision height lower than 15 m (50 ft) or no decision height and a runway visual range less than 175 m, but not less than 50 m; 5. Category IIIC (CAT IIIC) : no decision height and no runway visual range limitation;

1. Type B instrument approach operation' means an instrument approach operation with a decision height below 75 m (250 ft) categorised as follows:

2. Category I (CAT I): a decision height not lower than 60 m (200 ft) and with either a visibility not less than 800 m or a runway visual range not less than 550 m;

3. Category II (CAT II): a decision height lower than 60 m (200 ft), but not lower than 30 m (100 ft) and a runway visual range not less than 300 m;

4. Category III (CAT III): a decision height lower than 30 m (100 ft) or no decision height and a runway visual range less than 300 m or no runway visual range limitations.”;

AMC, GM for Aerodromes (Regulation (EU) No 139/2014

GM1 ADR.AR.C.035(e) Issuance of certificates

MODEL FOR THE TERMS OF THE CERTIFICATE TO BE ATTACHED TO THE CERTIFICATES

[...]

⁶ To be specified: approval of the runway for non-instrument, instrument, non-precision approach. In case of precision approach(es), it is to be indicated, which of the following precision approach(es) is (are) approved:

- EFVS 200 operation;
- EFVS-A operation;
- EFVS-L operation;
- Standard category I;
- ~~Lower than standard category I;~~
- Special authorisation category I;
- Precision approach category II;
- Special authorisation category II;
- Precision approach category III
- ~~Precision approach category III-A;~~
- ~~Precision approach category III-B;~~
- ~~Precision approach category III-C~~

GM2 ADR.AR.C.035(e) Issuance of certificates

EFVS 200 OPERATION

A runway is suitable for EFVS 200 operation when:

- (a) an instrument approach procedure providing at least lateral guidance in which the final approach track is offset by a maximum of 3° from the extended centre line of the runway is established; and
- (b) either an obstacle free zone (OFZ) is established or the visual segment surface (VSS) is not penetrated by obstacles, and an instrument departure procedure is established.

AMC1 ADR OPS A 005 Aerodrome data

[...]

- (12) Information on the parts of the aerodrome lighting system where light units are light emitting diode (LED) lights.

[...]

- (g) The aerodrome operator should ensure, either directly or through arrangements with third parties, that information on visual segment surface penetration is provided to the aeronautical information services, including procedure and procedure minima affected. If the VSS is penetrated, the information to be provided to the AIS provider, to publish it under AD 2.25, should clearly indicate the name of the affected procedure and the procedure minima affected.

- (h) The aerodrome operator, either directly or through arrangements with third parties, should ensure that charts relevant to the aerodrome are published in the AIP by the aeronautical information service provider.

SUBAPRT B – AERODROME OPERATIONAL SERVICES, EQUIPMENT AND INSTALLATIONS (ADR.OPS.B.)

AMC1 ADR.OPS.B.030 (a) Surface movement guidance and control system

GENERAL PARAMETERS TO BE CONSIDERED FOR THE DESIGN AND OPERATION OF A SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM

- (a) A surface movement guidance and control system should take into account:

(1-a) the density of air traffic, and the operational needs of air traffic services;

(2-b) the visibility conditions under which operations are intended;

(3-c) the need for pilot, vehicle and pedestrians orientation;

(4-d) the complexity of the aerodrome layout; and

(5-e) movements of vehicles.

(a) The surface movement guidance and control system should be designed to assist in the prevention of inadvertent incursions of aircraft and vehicles onto an active runway;

(b) The system should be designed to assist in the prevention of collisions between aircraft, and between aircraft and vehicles or objects, on any part of the movement area.

(c) Where a surface movement guidance and control system is provided by selective switching of stop bars and taxiway centre line lights, the following requirements should be met:

(1) taxiway routes which are indicated by illuminated taxiway centre line lights should be capable of being terminated by an illuminated stop bar;

- ~~(2) the control circuits should be so arranged that when a stop bar located ahead of an aircraft is illuminated, the appropriate section of taxiway centre line lights beyond it is suppressed; and~~
- ~~(3) the taxiway centre line lights are activated ahead of an aircraft when the stop bar is suppressed.~~
- ~~(e) The aerodrome operator should develop the surface movement guidance and control system (SMGCS) procedures in cooperation with the aerodrome air traffic services provider.~~

GM1 ADR.OPS.B.030(a) Surface movement guidance and control system

GENERAL

- ~~(a) The SMGCS system should comprise an appropriate combination of visual aids, non-visual aids, procedures, control, regulation, management and information facilities. Systems range from the very simple at small aerodromes, with light traffic operating in good visibility conditions, to the complex systems necessary at large aerodromes with heavy traffic operating in low visibility conditions. The system selected for an aerodrome will be appropriate to the operational environment in which that aerodrome will operate.~~
- ~~(b) Surface movement radar for the manoeuvring area could be provided at an aerodrome intended for use in runway visual range conditions less than a value of 350 m.~~
- ~~(c) Surface movement radar for the manoeuvring area could be provided at an aerodrome other than that in (b) above when traffic density and operating conditions are such that regularity of traffic flow cannot be maintained by alternative procedures and facilities.~~

The SMGCS is an appropriate combination of visual aids, non-visual aids, procedures, control, regulation and information facilities. Systems range from a very simple SMGCS at small aerodromes, with light air traffic operating in good-visibility conditions, to complex systems necessary at large aerodromes with heavy air traffic operating in low-visibility conditions. The system selected for an aerodrome will be appropriate to the operational environment in which the aerodrome will operate.

- (a) The aerodrome operator shall ensure that a surface movement guidance and control system (SMGCS) is provided at the aerodrome. The SMGCS shall:
- (1) take into account the design characteristics and the operational and meteorological conditions of the aerodrome, as well as human factors principles;
 - (2) designed to assist in the prevention of:
 - (i) inadvertent incursions of aircraft and vehicles on an active runway; and
 - (ii) collisions between aircraft as well as between aircraft and vehicles or objects on any part of the movement area; and
 - (iii) be supported by appropriate means and procedures.”;
- (b) The aerodrome operator shall coordinate with the air traffic services provider the development of the SMGCS procedures at the aerodrome.”;

AMC1 ADR.OPS.B.030(a)(1) Surface movement guidance and control system

USE OF VISUAL AIDS FOR SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM (SMGCS)

Where an SMGCS is provided by selective switching of stop bars and taxiway centre line lights, the following should apply:

- (a) taxiway routes, which are indicated by illuminated taxiway centre line lights, are capable of being terminated by an illuminated stop bar;
- (b) the control circuits are so arranged that when a stop bar located ahead of an aircraft is illuminated, the appropriate section of taxiway centre line lights beyond it is suppressed; and
- (c) the taxiway centre line lights are activated ahead of an aircraft when the stop bar is suppressed.

GM1 ADR.OPS.B.030(a)(1) Surface movement guidance and control system

SURFACE MOVEMENT RADAR AND OTHER SURVEILLANCE EQUIPMENT

- (a) Surface movement radar or any other suitable surveillance equipment for the manoeuvring area is used at an aerodrome intended for use in runway visual range (RVR) conditions less than a value of 350 m.
- (b) Surface movement radar or any other suitable surveillance equipment for the manoeuvring area may also be used at an aerodrome other than that in (a), when the traffic density and operating conditions are such that regularity of traffic flow cannot be maintained by alternative procedures and facilities.

AMC1 ADR.OPS.B.045(a)(1) Low-visibility procedures

LOW VISIBILITY TAKE-OFF (LVTO) WITH AN RVR LESS THAN 125 M

In addition to the low-visibility procedures which are required for LVTOs, the following should also apply to LVTOs with an RVR less than 125 m:

- (1) if an ILS signal is used for lateral guidance, the ILS localiser signal meets the requirements for category III operations including the availability of a standby transmitter; and
- (2) if an ILS signal is used, the low-visibility procedures should include protection of the ILS-sensitive area.

AMC1 ADR.OPS.B.045(a)(2) Low-visibility procedures**SUITABILITY OF RUNWAYS — APPROACH AND LANDING OPERATIONS**

- (a) CAT II instrument approach operations may be conducted on a precision approach category II or III runway, using a CAT II instrument approach procedure.
- (b) CAT III instrument approach operations may be conducted on a precision approach category III runway, using a CAT III instrument approach procedure.
- (c) SA CAT I approach operations may be conducted in accordance with the following:
- (1) the runway is a precision approach category I runway and an obstacle free zone (OFZ) is established;
 - (2) a CAT I instrument approach procedure that includes an OCH based on a radio altimeter is used;
 - (3) where an ILS/MLS is used, it is not promulgated with any restrictions affecting its usability and is not offset from the extended runway centre line;
 - (4) where a GBAS landing system (GLS) is used, it is not promulgated with any restrictions affecting its usability and should not be offset from the extended centre line;
 - (5) the glide path angle is 3.0;⁰
 - (6) the pre-threshold terrain is surveyed and either a precision approach terrain chart (ICAO Annex 4, Chapter 6) is published in the AIP or the required information is included in the aerodrome terrain and obstacle chart – ICAO (Electronic) (ICAO Annex 4, Chapter 5).
- (d) SA CAT II approach operations may only be conducted in accordance with the following:
- (1) the runway is a precision approach category I runway and an OFZ is established, and for operations with an RVR of less than 400 m, runway centre line lights are installed;
 - (2) a CAT II instrument approach procedure is used;
 - (3) where an ILS/MLS is used, it is not offset from the extended runway centre line and no restrictions affecting its usability are published in the AIP;
 - (4) where a GLS is used, it is not offset from the extended runway centre line and no restrictions affecting its usability are published in the AIP;
 - (5) where an ILS is used, it is certified to class II/D/2;
 - (6) the pre-threshold terrain is surveyed and either a precision approach terrain chart (ICAO Annex 4, Chapter 6) has been published or the required information is included in the aerodrome terrain and obstacle chart – ICAO (Electronic) (ICAO Annex 4, Chapter 5).

- (d) The switch-over times of the different lighting elements on runways supporting SA CAT I/II approach operations should be as follows:

ELEMENT	SWITCH-OVER TIME
Approach lighting system	15 sec
Runway edge light	1 sec
Visual approach slope indicators	15 sec
Runway threshold light	1 sec
Runway end light	1 sec
Stopway end	1 sec
Stopway edge	15 sec
Obstacle light	15 sec

- (f) The switch-over time for runway edge lights may be increased to 15 sec if runway centre line lights are provided. In this case, the switch-over time for runway centre line lights should be 1 sec.

AMC1 ADR.OPS.B.045(a)(2) Low-visibility procedures

SUITABILITY OF RUNWAYS FOR EFVS APPROACH AND LANDING OPERATIONS

- (a) An EFVS-A operation may be conducted on a runway if:
- (1) it is served by a straight-in instrument approach procedure in accordance with Part-FPD of Regulation (EU) 2017/373;
 - (2) an OFZ is established or a VSS is not penetrated by obstacles, and an instrument departure procedure is established;
 - (2) the touchdown zone (TDZ) RVR is available;
 - (3) low-visibility procedures are in effect;
 - (4) the switch-over time for runway edge, threshold and end lights meets the specifications in CS ADR-DSN.S.880 for CAT II/III runways.
- (b) An EFVS-L operation may be conducted on a runway when, in addition to point (a):
- (1) an aerodrome obstacle chart – ICAO Type A is published in the AIP; and
 - (2) a precision approach terrain chart – ICAO is published in the AIP.

AMC1 ADR.OPS.B.045(b) Low-visibility operations procedures

- (a) The aerodrome operator should, in collaboration with air traffic services provider and the provider of apron management services, if applicable, establish procedures for low visibility operations when lower than Standard Category I, other than Standard Category II, Category II and III approaches and low visibility take-offs are conducted.
- (b) When low visibility procedures (LVP) are in effect, the aerodrome operator should make available to aeronautical information services and/or air traffic services, as appropriate, information on the status of the aerodrome facilities.

~~(ca) The aerodrome operator should establish and implement procedures to ensure that wWhen low-visibility procedures (LVPs) are in effect;~~

~~(1) persons and vehicles operating on the movement area are should be restricted to the essential minimum;~~

~~(2) the critical and sensitive areas of ILS/MLS/GLS should be safeguarded.~~

~~(b) The aerodrome operator should, in coordination with air traffic services, establish low-visibility taxi routes.~~

~~(d) The procedures to be established by the aerodrome operator to ensure safe aerodrome operations during low visibility conditions should cover the following subjects:~~

~~(1) physical characteristics of the runway environment, including pre-threshold, approach and departure areas;~~

~~(2) obstacle limitation surfaces;~~

~~(3) surveillance and maintenance of visual aids;~~

~~(4) safeguarding of non-visual aids essential to low-visibility procedures;~~

~~(5) secondary power supplies;~~

~~(6) movement area safety;~~

~~(7) RFFS.~~

AMC2 ADR.OPS.B.045(b) Low-visibility procedures

CRITERIA FOR THE PREPARATION OF LVPs

When establishing the RVR and cloud ceiling values below which LVPs should be prepared, the aerodrome operator should consider:

(a) the aerodrome layout and its complexity;

(b) the location of the control tower;

(c) the facilities and equipment available; and

(d) the density of traffic.

AMC3 ADR.OPS.B.045 Low-visibility procedures

(a) The aerodrome operator should ensure that the aerodrome is provided with appropriate aerodrome equipment and facilities, and that appropriate low-visibility procedures are established and implemented where it is intended to be used for any of the following operations:

- (1) low-visibility take-offs;
- (2) approach and landing operations with visibility conditions less than 550 m RVR or DH less than 200 ft (60 m);

The low-visibility procedures should coordinate the movement of aircraft and vehicles and shall restrict or prohibit activities on the movement area.

(b) The aerodrome operator should establish and implement the low-visibility procedures in cooperation with the air traffic services provider. The low-visibility procedures shall include criteria for their preparation, initiation and termination. The criteria shall be based on RVR and cloud ceiling values.

(c) The aerodrome operator should inform the aeronautical information services provider and air traffic services provider, as appropriate, of any change on the status of the aerodrome equipment and facilities that have an impact on low-visibility operations.

EQUIPMENT FAILURE TO BE REPORTED – LOW-VISIBILITY DEPARTURE OPERATIONS		
SYSTEM CONSIDERED	FAILURE TO BE REPORTED	EFFECT ON FLIGHT OPERATIONS
ILS (Where used for guided take-off)	ILS localiser downgraded to CAT II	No take-off guidance. Guided take-off not allowed
	ILS localiser downgraded to CAT I	No take-off guidance. Guided take-off not allowed
	ILS out of service	No take-off guidance. Guided take-off not allowed
MLS (Where used for guided take-off)	MLS downgraded to CAT II	No take-off guidance. Guided take-off not allowed
	MLS downgraded to CAT I	No take-off guidance. Guided take-off not allowed
	MLS out of service	No take-off guidance. Guided take-off not allowed
GBAS (Where used for guided take-off)	GBAS downgraded to CAT II	No take-off guidance. Guided take-off not allowed
	GBAS downgraded to CAT I	No take-off guidance. Guided take-off not allowed

	GBAS out of service	No take-off guidance. Guided take-off not allowed
RVR	Touchdown RVR system unserviceable	Restrictions depending on flight operations rules
	Other RVR systems unserviceable	Restrictions depending on flight operations rules
Lighting Systems	Runway lighting unserviceable	Restrictions depending on flight operations rules
	Runway centre line lighting unserviceable	Restrictions depending on flight operations rules
	Runway edge lighting unserviceable	Restrictions depending on flight operations rules
	Taxiway lighting system unserviceable	Restrictions depending on flight operations rules
Ancillary	Stop bars unserviceable	No effect if runway protection is ensured by other means
	Ceilometer unserviceable	No effect
	Anemometer unserviceable	No effect if other sources available; otherwise, restrictions depending on flight operations rules

EQUIPMENT FAILURE TO BE REPORTED – APPROACH AND LANDING OPERATIONS	
FAILURE TO BE REPORTED	EFFECT ON FLIGHT OPERATIONS
ILS localiser downgraded to CAT II	Flight operations limited to CAT II
ILS localiser downgraded to CAT I	Flight operations limited to CAT I
ILS out of service	Restricted to non-precision ion approach (or other precision approach if available)
Outer marker unserviceable	No limitation if replaced with other published equivalent position; otherwise restricted to non – precision approach
Glide path out of service	Restricted to non – precision approach (e.g. localiser only)
MLS downgraded to CAT II	Flight operations restricted to CAT II
MLS downgraded to CAT I	Flight operations restricted to CAT I
MLS out of service	Restricted to non- precision approach (or other precision approach aid if available)
GBAS downgraded to CAT II	Flight operations restricted to CAT II
GBAS downgraded to CAT I	Flight operations restricted to CAT I
GBAS out of service	Restricted to non- precision approach (or other precision approach aid if available)
DME (as alternative to marker beacons) unserviceable	No limitation if replaced by published equivalent position; otherwise restricted to non- precision approach
Touchdown RVR system unserviceable	Restrictions depending on flight operations rules
Other RVR systems unserviceable	Restrictions depending on flight operations rules
Approach lighting unserviceable	Restrictions depending on flight operations rules
Runway lighting unserviceable	Restrictions depending on flight operations rules
Runway centre line lighting unserviceable	Restrictions depending on flight operations rules
Runway edge lighting unserviceable	Restrictions depending on flight operations rules
TDZ lighting unserviceable	Restrictions depending on flight operations rules
Taxiway lighting system unserviceable	Restrictions depending on flight operations rules

Stop bars unserviceable	No effect if runway protection is ensured by other means
Ceilometer unserviceable	No effect
Anemometer unserviceable	No effect if other sources available; otherwise, restrictions depending on flight operations rules