►This RA has been substantially re-written; for clarity no change marks are presented – please read RA in its entirety◄

# RA 3292 - Instrument Landing System - Approach Monitoring

**Rationale**

*Instrument Landing System (ILS) is a navigation system that helps Aircraft approach a Runway by providing both vertical and lateral path guidance. The associated Hazards are the unintentional deviation from approach path, and unexpected traffic in the vicinity of the approach path. Monitoring the ILS approach provides an additional layer of Safety and could therefore form part of Aviation Duty Holders' (ADHs) and Accountable Manager (Military Flying)'s (AM(MF)) platform Risk mitigation. When ILS approaches are not monitored, and the Aircraft is transferred to the Aerodrome Controller instead, pilots can benefit from enhanced situational awareness by being able to monitor visual circuit voice communications. This Regulatory Article sets out the requirements where a need for ILS approach monitoring has been identified.*

**Contents**



**Regulation 3292(1)**

## Requirement for Instrument Landing System Approach Monitoring

3292(1) ADHs / AM(MF)s **shall** determine which Aircraft within their Area of Operation require ILS approach monitoring.

**Acceptable Means of Compliance 3292(1)**

## Requirement for Instrument Landing System Approach Monitoring

1. ADHs / AM(MF)s **should** utilize extant Safety Management processes[1] to determine the requirement for ILS approach monitoring.

2. ADHs / AM(MF)s **should** assess the Hazards and Risk associated with occasions when ILS approach monitoring is not available and determine the required procedures.

**Guidance Material 3292(1)**

## Requirement for Instrument Landing System Approach Monitoring

3. Nil.

**Regulation 3292(2)**

## Establishment of Instrument Landing System Approach Monitoring

3292(2) ADH-Facing Organizations and AM(MF) – Facing Organizations (AA-Facing Organizations)[2], in consultation with ADHs / AM(MF)s, **shall** determine the Aerodromes at which ILS approach monitoring is to be provided.

[1] Refer to RA 1200 – Air Safety Management.
[2] Refer to RA 1032 – Aviation Duty Holder-Facing Organizations and Accountable Manager (Military Flying)-Facing Organizations - Roles and Responsibilities. Throughout this RA, the term AA-Facing Organizations refers to Internal AA-Facing Organizations in accordance with (iaw) RA 1032(1): Aviation Duty Holder-Facing Organizations and Accountable Manager (Military Flying)-Facing Organizations (Internal).

**Acceptable Means of Compliance 3292(2)**

## Establishment of Instrument Landing System Approach Monitoring

4. AA-Facing Organizations **should** consult with the relevant ADHs / AM(MF)s and utilize extant Safety Management processes[3] to determine which Aerodromes are to provide ILS approach monitoring.

5. AA-Facing Organizations **should** consult with relevant Front Line Commands (FLCs), Contractor Flying Approved Organization Scheme (CFAOS) Organizations and Heads of Establishment (HoE) to implement and maintain the provision of ILS approach monitoring.

**Guidance Material 3292(2)**

## Establishment of Instrument Landing System Approach Monitoring

6. Nil.

**Regulation 3292(3)**

## Provision of Instrument Landing System Approach Monitoring

3292(3) AA-Facing Organizations **shall** ensure that the provision of ILS approach monitoring is effective.

**Acceptable Means of Compliance 3292(3)**

## Provision of Instrument Landing System Approach Monitoring

7. If the approach Runway has a serviceable Precision Approach Radar (PAR), it **should** be used by the Controller to monitor the ILS approach.

8. The HoE **should** ensure that effective procedures are in place to inform users when monitoring equipment becomes unserviceable.

9. When a Controller is monitoring an ILS approach, they **should**:

a. Set appropriate Decision Height / Decision Altitude as obtained from the pilot.

b. **Prior to Descent**.

(1) Obtain readback of correct altimeter setting from the pilot.

(2) Obtain positive confirmation that the Aircraft has acquired the localiser and is descending on the glidepath.

c. **During Descent**. Prior to obtaining a clearance, obtain a positive notification that the undercarriage is down. There is no requirement to check fixed undercarriage Aircraft, but if the Controller is in any doubt a 'check gear, acknowledge' instruction **should** be given.

d. **Unless the provisions of para 12 apply, for Clearance**.

(1) Obtain a clearance from the Aerodrome Controller using the Radar Clearance Line (RCL).

(2) The clearance **should** be obtained and repeated verbatim to the pilot.

(3) The Controller **should** request an acknowledgement of the clearance from the pilot.

(4) Use the RCL and the Talkdown frequency simultaneously for the readback of the clearance. If there is a failure of the RCL, the Controller **should** request a clearance using the channel intercom on the Aerodrome frequency.

(5) In the event of the clearance being delayed, make a further attempt to obtain a clearance, or an instruction to break off the approach; this clearance or break-off instruction **should** be passed to the pilot not less than 2 Nautical Miles (NMs) from touchdown or the minimum specified in local / unit orders if greater.

[3] Refer to RA 1200 – Air Safety Management.

**Acceptable Means of Compliance 3292(3)**

(6) Instruct the pilot to break-off the approach if a clearance has not been passed to the pilot by 2 NMs or the minimum specified in local / unit orders.

(7) Unit orders **should** detail the range at which a clearance **should** be obtained.

e. **Approaching / Passing Decision Height / Decision Altitude.**

(1) Controllers **should** warn the pilot that they are approaching their Decision Height / Decision Altitude.

(2) The pilot **should** also be informed when the Aircraft's radar return passes through the Decision Height / Decision Altitude cursor line.

10. **Royal Navy (RN) Units**. Specific methods of obtaining and passing a clearance are employed at RN units and Controllers operating at these units **should** adhere to local / unit orders.

11. **PAR Radar Fault / Failure**. When a major alert, or a Maintenance type minor alert such as "RADAR WORKING WITH ALERTS" is received, the Maintenance Personal Computer **should** be checked immediately, in order to assess the status of the PAR system and its suitability for continued use. Controllers **should** report indications other than 'Green' to the appropriate engineering service authority.

12. Where ILS approach monitoring is mandatory, in the event that an approach has to be terminated due to a radar Fault / failure the pilot **should** be informed and the following actions **should** be taken, dependent on the stage of the approach:

a. **At Any Stage**. Handover the Aircraft to the Director / Approach Controller with appropriate radiotelephony instructions.

b. **Early in the Procedure**. Where time allows, arrange for the approach to continue as a Surveillance Radar Approach (SRA), or resume the precision approach if the Fault is rectified.

c. **Before a Positive Final Clearance Has Been Issued**. Instruct the pilot to contact the Tower Controller for clearance to join the visual circuit, make straight in approach or break off the approach and execute the Missed Approach Procedure, or to 'fly-through dead-side' (if local procedures permit), depending upon whether the pilot is visual with the Aerodrome.

d. **After a Positive Final Clearance Has Been Issued**. Instruct the pilot to continue iaw the issued clearance, or execute the Missed Approach Procedure; depending upon whether the pilot is visual with the Aerodrome or not.

13. **Loss of Radar Contact**. In the majority of cases, a loss of radar contact will be accompanied with an appropriate equipment alert / Fault message. If a radar contact is lost for more than 3 seconds, the Controller **should** inform the pilot, and further action **should** be taken in the same manner as for a radar Fault / failure.

14. If a radar contact is regained within 3 seconds, control of the Aircraft **should** be resumed provided the Aircraft is within 1 NM of the position that the contact was lost, is correlated and the new contact's track can be directly matched / related to that of its history trails.

15. If a radar contact is regained after 3 seconds and / or outside 1 NM of the position that the contact was lost, the ILS approach monitor **should** only be resumed as follows:

a. **Outside 4 NMs**. Outside 4 NMs, control of the Aircraft **should** only be resumed once the Aircraft has been formally re-identified. Identification **should** only take place if the Controller considers there is sufficient time to do so. In order to effect identification, the Aircraft's position **should** be confirmed to the Controller by the Director, or if it can be checked, a specific operation of the Aircraft's transponder.

b. **Inside 4 NMs**. If radar contact is regained within 4 NMs of touchdown, action **should** be taken in the same manner as for a radar Fault / failure.

**Acceptable Means of Compliance 3292(3)**

16. **On Completion of the ILS Approach**. On completion of the ILS approach, the Controller **should** use the appropriate facility to inform Director 'Talkdown free'. Prior to conducting the next ILS approach, the Controller **should** select the appropriate range scale.

17. Where PAR is being used for ILS approach monitor the Reset Default button **should not** be used to reset the display as the obstruction mapping will automatically be selected. In the event of an Aircraft painting on the display prior to the Controller stating 'Talkdown free' the Controller **should** select the Aircraft's Data Block and state *"Talkdown free, contact …* (range of the radar return)".

18. **Localiser Only Procedure.** This non-precision approach does not incorporate ground-based electronic descent guidance, and will require Distance Measuring Equipment (DME) or navigational fixes for the pilot to fly a safe vertical profile. Mandatory monitoring **should** be conducted using PAR. If PAR is not available, then SRA equipment can be used.

19. Local / unit orders **should** dictate whether vertical guidance information, and Minimum Decent Height / Altitude, **should** be offered to the pilot.

20. Local / unit orders **should** clearly state the procedures for both ILS approach monitoring and Localiser Only procedures; for both ATC and pilots.

**Guidance Material 3292(3)**

## Provision of Instrument Landing System Approach Monitoring

21. Local / unit orders on ILS approach monitoring will vary depending on several factors such as local terrain, ADH / AM(MF) and HoE requirements, and Aircraft type.

22. The Localiser Only Procedure relies on the pilot being in a position to cross the Final Approach Fix at the locally published procedure altitude / height in order to safely complete the approach.

23. ADH / AM(MF) and HoE will consider scrutinising ILS-related parametric values within offloaded flight data recordings in support of ILS approach monitoring activity alongside any extant Flight Data Monitoring programme[4].

[4] Refer to RA 1208 – Flight Data Monitoring.