

## New Airfield Risk Assessment / Categorisation

### Airfield Risk Assessment

Prior to commencing operations to a new airfield, airfield risk assessment and categorisation will take place.

For continued operations to an airfield which has undergone a significant change to systems or procedures, a new risk assessment will be completed.

The procedures for carrying out airfield risk assessments are based on the guidance material on the Seven-Step Risk Assessment and Mitigation Process published in CAP 760, and airfield categorisation as detailed in Part C Section 10.

The airfield categorisation and risk assessment must be checked and authorised by the fleet managers and chief pilots office.

Operations to airfields with identified hazards which have a risk classification following mitigation, at review must be authorised by the Flight Operations Director.

Operations will not be conducted to airfields with a risk classification following mitigation of unacceptable.

Completed risk assessment templates and airfield categorisation checklists should be returned to the flight operations supervisor for filing.

### Airfield Risk Assessment

Airfield risk assessment is carried out by completing the Airfield Risk Assessment Template using the following guidance.

#### Step 1 – System Description

Describe in detail the airfield, and facilities available. In particular the runway characteristics, approach aids, lighting, PCN, rescue and fire services, and associated operational environment. The operational environment would include security, alternates, meteorology local topography and ATC considerations, looking at both Arrivals and Departures. Pre-existing contingency procedures and other non normal operations should be considered.

As an aid to this, a list of items to be considered is included with the system description for the risk assessment, however, this list may not include all items and any items not included should be added. At this stage hazards should have been identified.

#### Step 2-6 – Hazard Identification and Mitigation Table

The Hazard Identification and Mitigation Table allows the assessor to carry out steps 2-6 of the risk assessment in a concise and ordered manner, from hazard identification through risk classification and result to mitigation and reassessment.

#### Step 2 - Hazard Identification and Consequence

From the system description list the possible hazards associated with operations to the airfield. Hazards can be identified using historical analysis, brainstorming or a systematic review. Appropriate staff should be consulted in identifying hazards including pilots, training staff, operations flight safety and navigation / performance.

The consequences of hazards are determined by analysing what could happen if the hazard manifests itself into an accident or incident.

Each hazard identified, should be recorded on the risk assessment template. The consequences of each hazard should be detailed and the severity of hazard consequences entered.

### **Step 3 – Estimation of the Severity of the Hazard Consequences**

Once the hazards and consequences have been identified, the severity of hazard consequences should be estimated using the severity classification scheme detailed below. The hazard severity is entered on the risk assessment template.

<b>Hazard consequence category:</b>	<b>Description</b>
<b>Catastrophic</b>	Accident  Serious loss or substantial damage to aircraft or facilities. Serious injury or death.
<b>Significant</b>	An event where an accident nearly occurs. No safety barriers remaining. The outcome is not under control and could very likely lead to an accident. Damage to aircraft or facilities.
<b>Moderate</b>	An incident in which the safety of the aircraft may have been compromised.  A large reduction in safety margins. The outcome is controllable by use of existing non normal procedures and or equipment. Safety barriers are very few approaching none.  Minor injuries or minor damage may occur.
<b>Minor</b>	An accident, serious or major incident could have occurred if the risk had not been managed within safety margins or if another aircraft had been in the vicinity.  A significant reduction in safety margins may occur but several barriers remain to prevent an accident.  There will be a reduction in the ability of the flight crew to cope with the increased workload as a result of the conditions impairing their efficiency.  Only on rare occasions would the occurrence develop into an accident.  A nuisance to occupants or others in the vicinity occurs.
<b>Negligible</b>	No immediate effect on safety.  Existing safety barriers come into play to avoid the event turning into a significant incident.

#### Step 4 – Probability of Hazard Consequences Occurring

Once the hazards and consequences have been identified, and the severity of hazard consequences estimated, the probability of the hazard consequences occurring should be classified. Probability classification is detailed in the table below.

Where several hazards lead to the same consequence the probability of occurrence for each hazard should be summed to get an overall likelihood of the hazard occurring.

The probability classification associated with Hazard Consequences is entered in the risk assessment template.

Probability of Occurrence Definitions				
Inconceivable	Rare	Unlikely	Likely	Frequent
Almost inconceivable that the event will occur, or it is eradicated by control measures.	Very Unlikely to occur	Unlikely to occur during the total operational life of the system	May occur once during the total operational life of the system	May occur several times during operational life

#### Step 5 – Evaluation of the Risk

At this stage the hazard number is entered into the Risk Classification / Tolerability Matrix on the risk assessment template in order to evaluate the risk. Once stage 6 is completed and the item is reassessed this should be re-entered on the matrix and an arrow added showing the movement from initial to final risk assessment.

The consequence will fall in one of the three regions:

**Acceptable** – the consequence is so unlikely or not severe enough to be of concern. The risk is tolerable and the Safety Objective has been met.

**Review** – the consequence and or likelihood is of concern. Measures to mitigate the risk should be sought. The risk may be acceptable provided that the risk is understood and has the endorsement of the Flight Operations Director.

**Unacceptable** – the likelihood and or severity of the consequence is intolerable.

## **Step 6 –Risk Mitigation and Safety Requirements**

At this stage attempts are required to mitigate any risks identified as unacceptable. The hazards resulting in unacceptable risks are entered into the Risk Mitigation section of the **Hazard Identification and Mitigation Table**, and boundaries identified such that the risk is mitigated to a suitable level are recorded.

Examples of the systems boundaries to be enforced such that risks are mitigated as acceptable include:

- Modification of operational procedures
- Training
- Developing emergency or contingency procedures
- Changes to staffing arrangements
- Not commencing / ceasing operations

Proposed risk mitigation measures must be assessed closely to ensure new hazards are not introduced.

It may be necessary to repeat previous steps in an iterative manner such that the optimised outcome is achieved.

## **Step 7 Risk Summary and Operating requirements**

At this stage the airfield risk assessment should be summarised with details of any mitigating requirements. The overall airfield assessment is detailed as acceptable, review or unacceptable.

Requirements to be met prior to operations must be clearly stated.

The assessor should then sign off the document and forward it to the relevant fleet manager and chief pilot.

The responsibility of the fleet manager and chief pilot is to check the document for mistakes and errors and ensure that it is acceptable prior to final sign off. If it is not so then it should be returned with guidance for corrective action.

Once it has been signed off by the fleet manager and chief pilot the assessment is then passed to the Director of Flight Operations for final approval.

The authorising signatories are included in this section.

## **Airfield Categorisation**

The Airfield Risk Assessment together with the Airfield Categorisation guidance list below should be used to categorise the Airfield. The Airfield Risk Assessment and Airfield Categorisation should tie closely together and any items highlighted during the categorisation that have not been included in the Airfield Risk Assessment should result in a review of the Risk Assessment.

The Airfield Risk Summary and Specific Operational Requirements as listed in the Airfield Risk Assessment should be used to drive the airfield brief. If the airfield brief is coming from the BA route manual, then careful consideration must be given to ensure that any items highlighted during the Airfield Risk Assessment in addition to those already listed in the brief are included.

Airfields are categorised as detailed in the Part C section 10.0, as either a Category A, Category B or Category C airfield.

A Category A airfield satisfies all of the following requirements:

- (a) An approved instrument approach procedure.
- (b) At least on runway with
- (c) Published circling minima not higher than 1000ft
- (d) Night operations capability

A Category B airfield is an airfield which does not satisfy all of the Category A airfield requirements, or which requires extra considerations such as:

- (a) Non Standard Approach aids and / or approach patterns, or
- (b) Unusual local weather conditions or
- (c) Unusual characteristics or performance limitations, or
- (d) Any other relevant considerations including obstructions, physical layout, lighting etc.

A Category C airfield requires additional considerations to a Category B aerodrome and is considered to pose certain problems for the approach and / or landing and / or take-off.

Airfield categorisation is authorised by the Chief pilot, or in his absence the fleet manager.

### **Steps required for airfield categorisation**

- (1) Review airfield charts, meteorology, ATC services and Vistair Briefing
- (2) Request airfield performance information from Nav / Performance manager
- (3) Complete the airfield categorisation checklist
- (4) Produce an airfield brief (Cat A or B airfields).
- (5) Disseminate the airfield brief by Notice to Aircrew or manual amendment as required. The Notice or manual amendment should include all information required for inclusion in Part C sections 12.3 and 12.4.
- (6) Have the airfield categorisation authorised.

System Description	Date
<p><b>1) Within AOC Region</b></p> <p><b>2) Instrument Approach</b> (review both ends)</p> <p><b>3) PCN satisfactory</b> (include taxiways and apron)</p> <p><b>4) Night Ops</b></p> <p><b>5) Terrain considerations within SID/STARS and 25nm</b></p> <p><b>6) SID</b></p> <p><b>7) STAR</b></p> <p><b>8) Missed Approach climb gradient</b></p> <p><b>9) RFF</b></p> <p><b>10) Opening Hours</b></p> <p><b>11) Weather Considerations</b></p> <p><b>12) Cat III capability</b></p> <p><b>13) Performance Restrictions for T/O and Landing</b></p> <p><b>14) Emergency Turns</b></p> <p><b>15) Special Procedures-i.e. missed approaches/visual approaches/noise abatement etc.</b></p> <p><b>16) EGPWS Database</b></p> <p><b>17) Alternates for T/O and Landing</b></p> <p><b>18) Circling minima &gt; 1000ft</b></p> <p><b>19) Class of Airspace</b></p> <p><b>20) FMC database</b></p> <p><b>21) Political Situation</b></p> <p><b>22) Fuel availability</b></p> <p><b>23) De-icing facilities</b></p> <p><b>24) Incident/Accident Review</b></p> <p><b>25) Runway and Apron Layout</b></p> <p><b>26) Variation</b></p> <p><b>27) Radar</b></p> <p><b>28) Other</b></p>	

		Risk Classification / Tolerability Matrix				
		Probability of Occurrence Definitions				
		Inconceivable	Rare	Unlikely	Likely	Frequent
Catastrophic	Review	Review	Unacceptable	Unacceptable	Unacceptable	Unacceptable
Significant	Acceptable	Review	Review	Unacceptable	Unacceptable	Unacceptable
Moderate	Acceptable	Acceptable	Review	Review	Unacceptable	
Minor	Acceptable	Acceptable	Acceptable	Review	Review	Review
Negligible	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Review

**Hazard Identification and Mitigation Table**

Hazard No.	Hazard Description	Hazard Consequence	Hazard Consequence Severity	Probability	Result	Mitigation	Revised Hazard Consequence Severity	Revised Probability	New Result
1									
2									
3									
4									
5									

## Risk Assessment Template

<b>Risk Summary and Operating requirements</b>	
<b>Risk Summary</b>	
<b>Specific Operational Requirements</b>	
<b>Airfield Risk Assessment Prepared by:</b>	
<b>Airfield Risk Assessment Reviewed by: (Chief Pilot / Fleet Manager)</b>	
<b>Airfield Risk Assessment Approved by: (Director of Flight Operations)</b>	

## Categorisation Checklist

Airfield Details	ICAO	IATA		Y	N
Runway Details:					
Airfield is within AOC (Part A section 1.1.1)				(A)	
Approved instrument procedure exists				(A)	
Runway performance restricted. (Take-off and landing)				(A)	
Published Circling minima higher than 1000ft above aerodrome.				(A)	
Night operations capability.					
<b>Airfield categorised as Cat A</b>					

(A) Cat A airfield requirements

		<b>Y</b>	<b>N</b>
<b>Non Standard approach aids or approach patterns</b>	Details:		
<b>Unusual local weather conditions</b>	Details:		
<b>Unusual characteristics or performance limitations.</b>	Details: .		
<b>Other considerations (obstructions, physical layout, lighting etc)</b>	Details:		
<b>Airfield Categorised as Cat B</b>			
<b>Additional Considerations</b>			
<b>Airfield Categorised as Cat C</b>			
<b>Categorisation authorised by:</b>			