

# Aerodrome Surveys

## Airside Operational Instruction 17

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**A. AMENDMENTS**

This document will be subject to a routine review, over a period not exceeding 18 months. The latest version will be included in the annual reissue of the Aerodrome Manual; interim reviews are carried out as deemed necessary.

Only operational related amendments will prompt the issue of a new Version; pertinent amendments being highlighted in green text & indicated by a green bar in the right margin. Indication of any amendment of an administrative nature will be listed below.

**B. REVIEW / AMENDMENT HISTORY**

REVIEW SUMMARY			
<b>VERSION / REVIEW REF:-</b>	1.1	<b>REVIEW COMPLETED BY:-</b>	CATHY WILLOUGHBY-CRISP
<b>DATE:-</b>	SEP 16	<b>ROLE:-</b>	AIR TRAFFIC & OPERATIONS MANAGER

PARAGRAPH	AMENDMENT
Various	Change of CAP 168 to ICAO Annex 14
Appendix 1	Revised Form
Appendix 2	Declaration of Compliance (Sample)

REVIEW SUMMARY			
<b>VERSION / REVIEW REF:-</b>	V2.0	<b>REVIEW COMPLETED BY:-</b>	CATHY WILLOUGHBY-CRISP
<b>DATE:-</b>	DEC 17	<b>ROLE:-</b>	AIR TRAFFIC & OPERATIONS MANAGER

PARAGRAPH	AMENDMENT
	New ownership
Various	Role title change; General Manager now Managing Director

## **1. INTRODUCTION**

### **1.1 PURPOSE**

The purpose of the Aerodrome survey is to enable the Aerodrome Certificate holder to meet the safety responsibilities and to provide the specific data required by the CAA.

Bournemouth Airport (BOH), using the guidance in CAP 232, will determine what information is required from the Aerodrome Survey to enable it to comply with the CAP 232 requirements.

### **1.2 CHECK SURVEY**

BOH has been the subject of full CAP 232 and Geodetic Connection Surveys and therefore requires an annual Check Survey to identify any changes, including significant tree growth or reduction since the previous survey.

The completed Check Survey is notified to the CAA by means of a Declaration of Compliance Form. In addition, the Survey data must be given to the CAA by the Survey Company in the appropriate format. Following the Survey, any remedial action must be carried out and the Aerodrome plan updated and re-issued.

## **2. PROCEDURES**

### **2.1 PRE-SURVEY**

Approximately 2 months prior to the Survey due date, the BOH Managing Director (MD) will contact the nominated Survey Company to arrange a date. The Survey will take 2 to 3 days in total, including Airside duration of approximately 1 day.

The MD will review the previous survey and any subsequent remedial action taken, to identify any items to be re-surveyed or removed from the survey.

The MD will consult with the relevant department Managers to determine what elements need to be included in the Survey and will raise an Airfield Survey Assessment Form, which will chart the progress of the Survey and provide a written trail to confirm that the survey process has been followed to completion.

### **2.2 POST-SURVEY**

Following the Survey, the Survey Company will send a copy of the Survey data in both printed and Electronic format. Copies of the electronic data will be made available to the Safeguarding officer; they will use the OLS software to assess the data and produce a report detailing obstacles that penetrate any Obstacle Limitation Surface (OLS) or Navaid obstacles relative to the 1:10 slope.

The report will be reviewed by the MD. Obstacles penetrating the OLS or the 1:10 surface must be treated in accordance with the requirements of ICAO Annex 14, including removal if necessary. When satisfied that the Survey data is correct, the MD will sign the Declaration of Compliance Form, returning one copy to the Survey Company and the other to CAA DAP.

CAA DAP will return a Type A Chart for proof reading and a Type A Obstacle Booking Form, which lists any Type A obstacles. The Senior Air Traffic Control Officer (SATCO) will review the Survey data against that listed for the Airport in the UK AIP; AD-2 Section and amend as required.

A copy of the Survey Assessment form is contained in Appendix 1.

A copy of the Declaration of Compliance is contained at Appendix 2.

### **3. TREATMENT OF OBSTACLES**

#### **3.1 IDENTIFIED OBSTACLES**

Obstacles that have been identified as penetrating the OLS or Navaid surfaces will be assigned a unique reference number that provides details on:-

- The Type of Obstacle; eg. trees, vegetation or temporary, such as vehicles
- The Location of the Obstacle (Easting and Northing) and Height in metres above sea level
- OLS affected, together with Clearance / Infringement Data

Identified obstacles should be treated in accordance with the requirements listed in ICAO Annex 14, using the guidance in the following paragraphs.

The Air Traffic & Operations Manager (ATOM) will assemble a team to assess the obstacles and determine what corrective action should be taken. That team should include a representative of Asset Management and Safeguarding, who will be responsible for any remedial action. They will carry out a simple Risk Assessment using the guidance below; identified hazards being presented as Green, Yellow or Red in accordance with the ratings listed below and dealt with accordingly.

In relation to the treatment of obstacles, reference should be made to the Bournemouth Airport drawing, E7-7\*, ensuring that the correct version at the time of survey, is utilised.

#### **3.2 FACTORS IN ASSESSING RISK**

##### **3.2.1 THE LOCATION OF THE OBSTACLE:-**

- The closer to a Runway, the greater the safety risk
- Obstacles in the Approach Surface (APPS) or Take-Off & Climb Surface (TOCS) are a higher risk than in the Transitional Surface, because they are routinely overflown
- Obstacles penetrating the Transitional Surface or Inner Horizontal Surface are not routinely over-flown at low level and therefore considered a lesser risk
- Obstacles, which are located further from the Aerodrome; e.g. trees on distant hills, will be assessed as Green i.e. no safety significance
- If an obstacle is shadowed by another promulgated obstacle, the safety risk of the shadowed obstacle is reduced.

## 3.2.2 THE NATURE OF THE OBSTACLE:-

- Non-frangible structures are assessed as a high risk
- Frangible structures and vegetation are assessed as a lower safety risk

## 3.2.3 THE DEGREE OF PENETRATION OF THE OLS:-

- Greater penetration generally equals greater risk. Obstacles, which penetrate surfaces by more than 2 metres, will trigger a Yellow, or possibly a Red rating, unless mitigating factors apply; such as obstacle nature, terrain, lighting or promulgation
- Where the penetrated OLS is the Transitional, Conical, Inner or Outer Horizontal; trees and bushes, which have grown to less than 5 metres above local terrain level, are considered to be a negligible risk compared to the terrain itself. Penetration of the TOCS or APPS should trigger a Red rating

## 3.2.4 THE FREQUENCY OF EXPOSURE TO THE RISK:-

- How often is the flight path flown for which the obstacle is relevant; e.g. Runway 08 is used less frequently than Runway 26

## 3.2.5 OBSTACLE PROMULGATION:-

- If promulgated on Type A Chart, risk is reduced
- NOTAM action reduces risk
- Un-promulgated obstacles equate to a higher risk

## 3.2.6 HAZARD RATINGS:-

Hazard Ratings are colour coded according to the perceived risk associated with the obstacle:-

<b>GREY</b>	Negotiated agreement for the cropping / removal of critical & severe
<b>GREEN</b>	The obstacle is considered to have no safety implications and no action is considered necessary to remove or mitigate this obstacle
<b>BLUE</b>	The obstacle presents no significant safety risk. However, it will be monitored and continually reviewed with each annual Check Survey
<b>RED</b>	The object may present a safety risk and will be monitored closely. Steps will be taken where possible to remove or reduce the obstacle. It will be considered for promulgation

## 3.3 OBSTACLE REDUCTION

To comply with Aerodrome Certification requirements, the objective should ideally be to remove any obstacles, which penetrate any OLS. In practice though, this can be impracticable, disproportionately expensive or environmentally unsound; therefore, a risk-based approach is taken. Obstacles should be reduced as much as possible in number &/or height, in accordance with the result of the Risk Assessment. Where the outcome of this assessment is acceptable, the obstacle may remain untreated, subject to promulgation by NOTAM or in the AIP. Where the outcome is not acceptable, the obstacle must be removed, reduced, or some other mitigating action taken, such as limiting operations.

### 3.3.1 TREES AND HEDGEROW:-

Trees, which are assessed as a safety risk should be removed or cut back to a level whereby they will not penetrate the OLS for several years. Once a decision has been taken to remove or reduce trees, the best course of treatment will be determined by Asset Management, in consultation with tree specialists and landowners. Records of action taken will be kept and a forecast of any future penetrations produced, thus enabling pre-emptive treatment at an appropriate time.

Should the tree reduction process impact on local communities; i.e. trees shielding Airport infrastructure or providing noise abatement, details of the proposed works should be forwarded to Community Relations.

Evidence of reduction or removal should be gathered by photographing the tree before and after treatment. Each picture should be labelled by quoting the 4-digit Obstacle Reference Number from the Survey, date stamped and recorded on the appropriate database.

Currently, the only Tree Preservation Order (TPO) at BOH relates to the stretch of trees around Hanger 600 and therefore, works can only be carried out to these trees with the consent of Christchurch Council.

In accordance with the Wildlife Countryside Act 1981, trees and hedges can only be cut outside the UK bird nesting and breeding season, defined as 1st March- 31st July.

Under the BOH Landscape Strategy, any coppicing or cutting back of trees, shrubs or bushes should, prior to any works being undertaken, be passed to the BOH Environment, Health & Safety Manager to enable Wildlife Countryside Act / ISO14001 regulatory register checks to be carried out.

In accordance with the Hedgerow Regulations 1997, permission must be sought to cut a tree within a hedgerow.

### 3.3.2 OTHER OBSTACLES:-

Opportunities should be sought to remove or reduce in height, any existing structures which penetrate OLS. Where this is possible, evidence should be gathered in the same way as for trees.

The Aerodrome Safeguarding process should prevent any new structures from penetrating the OLS but it is not unknown for this process to be by-passed or to fail. Any such new obstacles, revealed by the annual Check Survey, must be followed-up in consultation with the Safeguarding and Planning Departments, with a view to their removal or reduction. Interim promulgation and notification to CAA Aerodrome Standards may be required.

## 3.4 PROMULGATION

Trees and other obstacles, which cannot be quickly removed or reduced, should be considered for promulgation. In deciding which are to be promulgated, all of the above factors should be taken into account. Obstacles in the Take-Off & Climb Surface will typically be promulgated by the Type A Chart. The most significant or representative obstacles in the Approach and Transitional Surfaces will be selected for promulgation in the AD2 Section of the UK AIP.

Where the obstacle is part of a group or cluster, as is often the case with trees, data for the highest obstacle will be used. Obstacles on high ground, away from the Aerodrome, are considered to be covered by en-route and Instrument Approach Procedure Charts, published in the UK AIP.



**APPENDIX 1**

 <b>Bournemouth Airport</b> <small>Part of Bournemouth &amp; City Airport</small>	<b>SURVEY ASSESSMENT FORM</b>
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**Part 1:- Pre-Survey**

CONSULTED	DATE	ELEMENTS REQUESTED TO BE INCLUDED (SPECIFY IF "NONE")
ATOM		
AEM		

<b>PRE-SURVEY CONSULTATION COMPLETE</b>			
<b>SIGNED (MD):-</b>			
<b>DATE:-</b>		<b>DATE OF SURVEY REQUEST:-</b>	


## Part 2:- Post-Survey

CONSULTED	DATE	ACTIONS REQUESTED FROM SURVEY REPORT (SPECIFY IF "NONE")
SATCO		
ATOM		
ATEM		
Safe-Guarding		

ACTION	YES	N/A	DATE
RELEVANT NOTAM ACTION COMPLETE			
UK AIP DATA SUBMITTED FOR UPDATE			
SURVEY DATA SUBMITTED TO CAA			
DECLARATION OF COMPLIANCE COMPLETED & SUBMITTED TO CAA			

POST-SURVEY ACTION COMPLETE			
<b>SIGNED:-</b>		<b>DATE:-</b>	
<b>NAME:-</b>		<b>ROLE:-</b>	

## APPENDIX 2

 <b>Bournemouth Airport</b> <small>Part of Regional &amp; City Airports</small>	<b>DECLARATION OF COMPLIANCE; AERODROME OPERATOR</b>
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<b>THIS DECLARATION IS MADE IN ACCORDANCE WITH COMMISSION REGULATION, ON AERODROME DESIGN AND OPERATION:-</b>	<b>(EC) No.</b> /
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<b>AERODROME NAME:-</b>	Bournemouth International Airport	<b>ICAO LOCATION INDICATOR:-</b>	EGHH
<b>AERODROME OPERATOR:-</b>	Bournemouth International Airport (Part of Regional & City Airports)	<b>CERTIFICATE REF:-</b>	UKEGHH - 001

<b>ACCOUNTABLE MANAGER:-</b>	<b>NAME:-</b>	Paul Knight	<b>ROLE:-</b>	Managing Director
	<b>E-MAIL:-</b>	paul.knight@bournemouthairport.com	<b>TEL:-</b>	01202 364174

STATEMENTS
<ul style="list-style-type: none"> <li>▪ The Certification Basis is complied with; the Aerodrome, its Obstacle Limitation &amp; Protection Surfaces and other areas associated with the Aerodrome, have no features or characteristics rendering it unsafe for operations</li> </ul>
<ul style="list-style-type: none"> <li>▪ All personnel are qualified, competent and trained in accordance with the applicable requirements</li> </ul>
<ul style="list-style-type: none"> <li>▪ The Management System documentation, including the Aerodrome Manual, comply with The applicable requirements detailed in Part-ADR.OR and Part-ADR.OPS</li> </ul>
<ul style="list-style-type: none"> <li>▪ The operation and maintenance of the Aerodrome will be conducted in accordance with the requirements of Regulation (EC) No. 216/2008 and its Implementing Rules; the terms of the Certificate and the procedures &amp; instructions specified in the Aerodrome Manual</li> </ul>
<ul style="list-style-type: none"> <li>▪ The Aerodrome Operator confirms that the information disclosed in this declaration is correct</li> </ul>

<b>ACCOUNTABLE MANAGER:-</b>	<b>SIGNATURE:-</b>		<b>DATE:-</b>
	<b>NAME:-</b>	Paul Knight	