

Aerodrome Surveys

Airside Operational Instruction (AOI) 17

DOCUMENT REVIEW HISTORY		
AOI 17	CURRENT VERSION:-	V2.0
ISSUE DATE:-	DECEMBER 2017	

VERSION	REVIEW	DATE
V1.0		September 2015
	1.1	September 2016
V2.0		December 2017
	2.1	October 2019
	2.2	August 2021
	2.3	April 2024

❖ **AMENDMENTS**

This document will be subject to a routine review, over a period not exceeding 24 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.

❖ **REVIEW / AMENDMENT HISTORY**

REVIEW SUMMARY			
VERSION / REVIEW REF:-	1.1	REVIEW COMPLETED BY:-	CATHY WILLOUGHBY-CRISP
DATE:-	SEP 16	ROLE:-	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			
VERSION / REVIEW REF:-	V2.0	REVIEW COMPLETED BY:-	CATHY WILLOUGHBY-CRISP
DATE:-	DEC 17	ROLE:-	AIR TRAFFIC & OPERATIONS MANAGER

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

REVIEW SUMMARY			
VERSION / REVIEW REF:-	V2.1	REVIEW COMPLETED BY:-	CATHY WILLOUGHBY-CRISP
DATE:-	OCT 19	ROLE:-	AIR TRAFFIC & OPERATIONS MANAGER

PARAGRAPH	AMENDMENT
2	New role; Airfield Safety & Compliance Officer
Appendix 1	Form withdrawn

REVIEW SUMMARY			
VERSION / REVIEW REF:-	V2.2	REVIEW COMPLETED BY:-	CATHY WILLOUGHBY-CRISP
DATE:-	AUG 21	ROLE:-	AIR TRAFFIC & OPERATIONS MANAGER

PARAGRAPH	AMENDMENT
Various	CAP 232 now CAP 1732

REVIEW SUMMARY			
VERSION / REVIEW REF:-	V2.3	REVIEW COMPLETED BY:-	KEITH JEWITT
DATE:-	APRIL 24	ROLE:-	AIRFIELD SERVICES MANAGER

PARAGRAPH	AMENDMENT

❖ CONTENT

SECTION	PARAGRAPH	TITLE	PAGE
1	Introduction		1
	1.1	Purpose	1
	1.2	Check Survey	1
2	Procedures		1
	2.1	Pre-Survey	1
	2.2	Post-Survey	1
3	Treatment of Obstacles		2
	3.1	Identified Obstacles	2
	3.2	Risk Assessment	2
	3.3	Obstacle Reduction	3
	3.4	Promulgation	5
Appendix 1		Sample Form; Declaration of Compliance	6

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, in accordance with the guidance of CAP 1732; Aerodrome Survey Guidance.

1.2 CHECK SURVEY

BOH has been the subject of full CAP 1732 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 Operations Director ⁽¹⁾ 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 previous survey data and any subsequent remedial action taken will be reviewed, to identify any items to be re-surveyed or removed from the survey.

⁽¹⁾ Action typically delegated to the Airfield Safety and Compliance Officer (ASCO)

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 ASCO. 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 Operations Director 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 ASCO will review the Survey data against that listed for the Airport in the UK AIP; AD-2 Section and arrange for amendments to be notified, as required.

A copy of the Declaration of Compliance is contained at Appendix 1

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 Operations Director will co-ordinate a team to assess the obstacles and determine what corrective action should be taken. That team should include representatives from Airfield Operations, 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 RISK ASSESSMENT

3.2.1 THE LOCATION OF THE OBSTACLE:-

The following factors should be considered

- 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
- 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:-

The nature of an obstacles will general determine the level of associated risk:-

- 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:-

The amount by which an obstacle penetrates any OLS, together with the purpose of the particular OLS, will determine the level of associated risk:-

- 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:-

Consider should be given as to how often the subject obstacle is overflown; for example:-

- Runway 08 is used less frequently than Runway 26
- Obstacle situated on specified routes; e.g. Standard arrival or departure routes

3.2.5 OBSTACLE PROMULGATION:-

Un-promulgated risks will generally equate to a higher risk factor; promulgating an obstacle via NOTAM or the Type A Chart will reduce the level of risk.

3.2.6 HAZARD RATINGS:-

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

GREY	Negotiated agreement for the cropping / removal of critical & severe
GREEN	The obstacle is considered to have no safety implications and no action is considered necessary to remove or mitigate this obstacle
BLUE	The obstacle presents no significant safety risk. However, it will be monitored and continually reviewed with each annual Check Survey
RED	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 obstacle, which penetrates any OLS. However, in practice, 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 in the surrounding area of the Airport will all grow at a known rate for the species of tree and over the period of a year, many will grow to a degree where they penetrate one or more of the Runway safety surfaces (OLS)

A robust management plan is implemented to manage the penetration risk; ensuring that whenever possible, subject trees are cropped or remove before they present a significant risk, based on the following priority levels:-

PRIORITY LEVEL	TARGET ACTION	PARAMETERS
CRITICAL	Removal or cropping at earliest; within maximum < 3 months	Identified as a hazard to flight safety or with a penetration height of 8 metres or more
SEVERE	Removal or cropping within maximum < 6 months	With a penetration height of 5 metres or more
MINOR	Removal or cropping within programmed clearance plan	With a penetration height of less than 5 metres
KNOWN OBJECTION	Negotiated agreement for the cropping / removal of Critical & Severe	Trees within the Critical & Severe parameter not on BOH landholding and where the landowner objects to reduction / removal

Trees, which are assessed as a safety risk should be removed or cut back to a level such that 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 ASCO, in consultation with tree specialists and landowners. Records of action taken will be kept and a forecast of any future penetrations produced, thus enabling subsequent 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 the Local Authority.

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 Environmental Officer 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, taking all of the above factors into account when making a decision whether or not to do so.

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 SAMPLE FORM

 Bournemouth Airport <small>Part of Regional & City Airports</small>	DECLARATION OF COMPLIANCE; AERODROME OPERATOR
--	--

THIS DECLARATION IS MADE IN ACCORDANCE WITH COMMISSION REGULATION, ON AERODROME DESIGN AND OPERATION:-	(EC) No. /
---	-------------------

AERODROME NAME:-	Bournemouth International Airport	ICAO LOCATION INDICATOR:-	EGHH
AERODROME OPERATOR:-	Bournemouth International Airport (Part of Regional & City Airports)	CERTIFICATE REF:-	UKEGHH - 001

ACCOUNTABLE MANAGER:-	NAME:-		ROLE:-	
	E-MAIL:-		TEL:-	

STATEMENTS	
▪	The Certification Basis is complied with; the Aerodrome, its Obstacle Limitation & Protection Surfaces and other areas associated with the Aerodrome, have no features or characteristics rendering it unsafe for operations
▪	All personnel are qualified, competent and trained in accordance with the applicable requirements
▪	The Management System documentation, including the Aerodrome Manual, comply with The applicable requirements detailed in Part-ADR.OR and Part-ADR.OPS
▪	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 & instructions specified in the Aerodrome Manual
▪	The Aerodrome Operator confirms that the information disclosed in this declaration is correct

ACCOUNTABLE MANAGER:-	SIGNATURE:-		DATE:-
	NAME:-		