

# AIRPORT OPERATORS ASSOCIATION

&

# GENERAL AVIATION AWARENESS COUNCIL

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# CIVIL AVIATION AUTHORITY

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## SAFEGUARDING OF AERODROMES

### Advice Note 4

#### Cranes and Other Construction Issues

##### 1. Introduction

Aerodrome safeguarding ensures the safety of aircraft and their occupants when in the vicinity of an aerodrome by controlling potentially hazardous development and activity around it. An overview of the Safeguarding process is given in the first Advice Note in this series. Safeguarding concerns in respect of a proposed development may not end with the grant of Planning Permission. This Note considers in particular the methods to be employed during construction, especially the use of cranes or other tall plant, as these tend to be taller than the building under construction. In appropriate cases, these methods may be the subject of conditions on any planning permission that may be granted.

##### 2. Cranes (and other Tall Construction Equipment)

Should a crane be required on, or in the vicinity of, an aerodrome the attention of the Crane Operator should be brought to the British Standard Institute Code of Practice for the safe use of Cranes, BS 7121: Part 1. In particular paragraph 9.3.3 *Crane control in the vicinity of aerodromes/airfields*, which states:

“The appointed person should consult the aerodrome/airfield manager for permission to work if a crane is to be used within 6km of the aerodrome/airfield and its height exceeds 10m or that of the surrounding structures or trees.

NOTE The Air Navigation Order makes it an offence to act recklessly or negligently in a manner likely to endanger aircraft.”

The developer should contact the aerodrome/airfield at least **one month** before the crane (or other tall construction equipment) is expected on site as, sometimes; other bodies have to be consulted. The following details will be required:

- The **exact location** of the crane, as an OS Grid reference (to at least 6 figures for each of eastings and northings), or marked on a map showing the OS Grid;
- The **maximum operating height** in metres Above Ordnance Datum (AOD), or the height of crane Above Ground Level (AGL) plus ground level in AOD (see Note below);
- The **type** of crane/equipment (e.g. Tower Crane, Mobile Crane, etc.);
- The **radius** of the jib/boom of a fixed crane/the **area of operation** of a mobile crane;
- The intended **dates** and **times** of operation;
- **Applicant's** name and contact details.

NOTE: Heights “Above Ordnance Datum (AOD)” are those shown on Ordnance Survey maps as “above mean sea level” (amsl).

Once these details have been considered it will be determined whether the operation can proceed and whether restrictions will apply. Any of the following may be imposed to ensure the safety of aircraft:

- the fitting of obstacle lights (see section 3 below);
- restrictions on crane operating times;
- crane operations dependant on the runway(s) in use;
- restrictions on crane operating height;
- restrictions during poor visibility (whether caused by fog or low cloud).

When the design of crane allows, it should normally be lowered when not in use, or when requested by an aerodrome official, such as during periods of low visibility. Where it cannot be lowered, it may be necessary for the jib to be parked in a particular direction when not in use.

Some aerodromes have a procedure for issuing an **Authorization Permit** for the operation of crane/equipment on or in the vicinity of the aerodrome. As stated earlier, the developer should approach the aerodrome at least one month before the start date to check whether any restrictions are likely. Once details have been finalised, formal application for the Permit must be made at least **three days** before the crane/equipment arrives on site. It will set out any restrictions that have been agreed earlier. A copy must remain with the crane for the duration of its operation and must be produced if requested by an aerodrome official or a police officer.

### 3. Obstacle Lights

Where it is deemed necessary that obstacle lights are required, the characteristics for the light(s) would be specified. Normally, they would be steady red lights of either 200 or 2,000 candelas, depending on height, visible from all directions and located on the highest point of the crane/equipment. For a tower crane, they should be provided on top of the tower and at the end of the jib. They should be illuminated at all times. Unserviceable lamps should be replaced as soon as possible after failure and in any event within 24 hours. The 24-hour requirement can be relaxed if pairs of lights are fitted and one is still working.

### 4. Construction Management Strategy

For a project close to an aerodrome or under approaches to its runways, it may be necessary for a **Construction Management Strategy** to be produced and agreed with the aerodrome that ensures construction does not prejudice the safe operation of the aerodrome. A Construction Management Plan might be required as a condition on any planning permission that may be granted.

In particular, but not exclusively, the construction management strategy should address the following issues:

- Use of cranes or other tall construction equipment (see above);
- Control of activities likely to produce dust or smoke clouds;
- The design of temporary lighting to avoid distracting pilots (see Advice Note 2);
- Storage of materials, particularly compliance with height limits;
- Control and disposal of waste, to prevent attraction of birds;
- Site restoration, to prevent attraction of birds.

This Advice Note has been produced for information only jointly by the Airport Operators Association, the General Aviation Awareness Council with the support of the Aerodrome Standards Department of the Civil Aviation Authority. Its contents may be reproduced as long as the source is acknowledged. The other Aerodrome Safeguarding Advice Notes available are:

Advice Note 1: Safeguarding - An Overview

Advice Note 2: Lighting near Aerodromes

Advice Note 3: Potential Bird Hazards from Amenity Landscaping and Building Design

Advice Note 5: Potential Bird Hazards from Landfill Sites

Advice Note 6: Potential Bird Hazards from Sustainable Urban Drainage Schemes (SUDS)

Advice Note 7: Wind Turbines and Aviation