Information Sheet 6 – Guidance & Advice for Applicants Considering Developments that may Impact on Gibraltar Airport

Department of Town Planning and Building Control
HM Government of Gibraltar

Introduction

Development proposals within the vicinity of Gibraltar Airport have the potential to impact on the safe operation of the airport and therefore special considerations apply when considering whether to grant planning permission. The Aerodrome Authority (AA), on behalf of Ministry of Defence, and the Director of Civil Aviation (DCA) consider any proposals for development that may affect aviation activity at Gibraltar Airport and advise the Development and Planning Commission accordingly.

Aeronautical Studies

For most projects, particularly building developments, an aeronautical study will be necessary, the findings of which will need to demonstrate that the proposed development will not prejudice the safe operation of Gibraltar Airport. Applicants should bear in mind that whilst the AA will endeavour to assess any study within 28 days, on occasions this may take longer particularly if the study is a complex one.

Matters for Consideration

Although not an exhaustive list, applicants will normally be expected to demonstrate consideration of the following subjects:

a) **Physical safeguarding requirements** – The development proposal complies with international standards in respect to physical safeguarding and is identified as representing no physical threat or impediment to aircraft operations. For Gibraltar, a bespoke safeguarding profile has been developed and Developers can view the maximum permitted height of buildings by using the safeguarding overlay tool on the Gibraltar GeoPortal Website (http://www.geoportal.gov.gi/index.php/map-viewer/3d-obstacle-limitation-surfaces). Please note it is important to read the "How to Use" section on the page before attempting to use the overlay. While the Overlay provides vertical accuracy to ± 3 metres, if greater accuracy is required please contact the DCA. Full details of the OLS are available via the DCA and guidance is contained within CAP 168 (Licensing of Aerodromes | Publications | About the CAA) and the Military Aviation Authority, Manual of Aerodrome Design and Safeguarding (MAA MADS - regulation-mads.pdf) for OLS standards.

b) **The use of cranes** – The use of cranes during construction can be expected to lead to infringements of the physical safeguarding characteristics. If cranes are to be employed, then any infringements will need to be temporary and subject to

management control to avoid conflict with airport operations. Those responsible should establish a crane management plan with the airport operator. It should not be assumed that all such temporary infringements will be acceptable.

c) **Bird strike hazard** – Any features of the development, both during construction and after completion, that could increase the bird strike risk should be avoided. A management plan to prevent bird attraction during construction should be included in construction method statements. Features that may attract birds include standing water, food sources, potential nest or roosting sites and should be avoided.

d) **Foreign Object Debris (FOD)** – FOD (which can be any loose article, such as a small metal bolt, cardboard, plastic bag, etc.) arising from construction activities is a potential concern requiring the adoption of appropriate management practices. A plan for FOD management during, and post construction, should be included in construction method statements. This should include covering of skips and vehicles and fencing designed to minimise FOD being blown off site.

e) **Lighting** – Pilot distraction and confusion caused by lighting in the vicinity of an airport is a potential concern. In accordance with standard practices it is recommended that lighting in or around the building/development/structure is designed to avoid strong light beams directed towards the airfield and along the line off approach and departure flight paths. If floodlights are to be employed during construction, management practices to avoid direct light towards the airfield and flight paths should be included in construction method statements.

f) **Obstruction lighting** – CAP 168 and MAA MADS define the requirement for the lighting of obstructions (including fixed or mobile cranes) in the vicinity of airfields. This includes the type of light, luminescence, configuration and requirements based on height. Close liaison will be required with the AA for the installation of obstruction lights on any structure (if lighting is required) and should be included in the construction method statement.

g) **Wind and turbulence** – Given the prominence of the Rock and the wind conditions in the local vicinity, wind and associated turbulence can have a significant effect on aircraft operations at the airport. Any additional new structures can also influence the effects of wind. When planning the location and design of the building, developers should consider wind and turbulence effects on aircraft flight paths and demonstrate this with a wind study if necessary.

h) **Reflectivity** – Pilot distraction caused by reflection of sun light from building surfaces in the vicinity of an airport is a concern. Developers are to indicate that they have

considered the various types of surface material, the actual design of the building and how it may affect or increase the likelihood of reflectivity in the vicinity of the airport. In addition to aircraft flight paths, the potential for reflection from the development affecting the staff in Air Traffic Control (located next to the Air Terminal) is to be considered, as their observations of flight safety hazards when aircraft operations are taking place are fundamental to a safe airfield. Developers may need to consider the use of non-reflective glass (or similar), the angles that windows open, etc., when designing structures in the vicinity of the airport.

In Summary

In summary, flight safety and the mitigation of identified hazards in the vicinity of the airfield is a paramount concern for the both the DCA and the AA and as such, all opportunities to reduce potential risks from new developments close to Gibraltar Airport must be considered. Applicants are advised to seek early discussions with the DCA to enable early identification of potential issues arising from a development proposal.

Further Advice

If you want to further advice on any matter relating to aeronautical issues please contact:

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Annex A

SAFEGUARDED AND OBSTACLE LIMITATION SURFACES GIBRALTAR AIRPORT – BEST PRACTICE

Introduction

Gibraltar Airport is made up of RAF Gibraltar and Gibraltar Civil Airport. The Airport is not licensed in accordance with civilian requirements as the manoeuvring area is operated by RAF Gibraltar to military regulations. The Airport has been offered by the United Kingdom Ministry of Defence for use by civilian aircraft and scheduled aircraft operations have been conducted at the Airport for over 50 years.

The normal conceptual safeguarding surfaces as defined in the Military Aviation Authority (MAA) Manual of Airfield Design and Safeguarding (MADS), are applicable at Gibraltar Airport. The airport is overshadowed by the Rock of Gibraltar which rises from ground level, just 450m to the south of the runway centreline, to a maximum height of 432m, (1,420ft) Above Mean Sea Level. The Rock clearly infringes the normal inner horizontal surface. Therefore a bespoke regime has been suggested as best practice by the Director of Civil Aviation (DCA) to safeguard the area affected by the infringement.

Purpose

The purpose of this document is to identify and define the best practice arrangements for the safeguarding of the Inner Horizontal Surface to the south of Gibraltar Airport.

Scope

The inner horizontal surface to the south of Gibraltar Airport described in this document substitutes the surface described in MADS Chapter 5. However, all other requirements specified in the Document remain applicable.

Assumptions

The following assumptions and criteria are to be used: - The inner horizontal surface safeguarding area extends to 4 km from the mid-point of the runway. - The elevation datum of 3.27m (the elevation of the lowest landing threshold) is to be used for all calculations detailed below. - Any height limitations imposed by the Gibraltar Town Planning Act take precedence over the relaxations offered in this document. Therefore, these relaxations only apply up to the maximum building heights above ground level permitted by the Gibraltar Town Planning Act.

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Aerodrome Safeguarding Map (Scale 1:50,000)

In accordance with the criteria detailed in this document, Gibraltar Airport has produced an Aerodrome Safeguarding Map, which is attached to this document. It should be noted that the safeguarding map does not indicate the height of the safeguarded surfaces or any height limitations that may be imposed. It is used only as a means of determining whether RAF Gibraltar Authorities and the DCA need to be consulted on a planning application.

Inner Horizontal Surface – South of Gibraltar Airport

The rationale for creating a bespoke safeguarding scheme in Gibraltar is to allow a pragmatic approach to development projects in the shadow of the Rock. The scheme is based on two imaginary horizontal lines that follow the 45m contour line from the northernmost point of the rock and are then extended to the outer harbour wall in the west and the shoreline in the east. The eastern line then turns south to follow the shoreline to Europa Point, while the western line also turns south to follow the outer harbour wall and then the shoreline to Europa Point.

The line on the map looks like the wave produced by the bow of a ship; henceforth in this document the line is known as the "Bow Wave". The Bow Wave line is drawn at the height of the lowest landing threshold and is thus 3.27m above the Alicante Datum. In the area north of the Bow Wave the full requirements of MADS Chapter 5 are to be strictly adhered to unless an aeronautical study proves that an infringement of the safeguarding surface will not affect the safe operation of Gibraltar Airport. Within the area of Gibraltar bounded by the Bow Wave it is agreed that the normal 45m Inner Horizontal Surface is relaxed to allow buildings to be constructed which would normally infringe the surface as described in MADS Chapter 5.

An amended OLS is prescribed by drawing a line from an imaginary point 45m above the relevant part of the Bow Wave at the same latitude as the planned development to the ridgeline on top of the rock at the same latitude. To cater for the fact that there is no easily defined ridgeline to the South of the Rock of Gibraltar, a virtual ridge has been agreed, which joins a line drawn from the ridge at O'Hara's battery to a point 45m above the Bow Wave at the southernmost point of Europa Point. Within this amended OLS, developments will meet the OLS requirement provided no part of the development:

- Breaches the surface created by joining line drawn from the virtual ridge to an imaginary point 45m above the relevant part of the Bow Wave at the same latitude as the planned development; or

- If the development is built on the Buffadero or Europa Point "flat" areas of land, it is no higher than 45m above the surface upon which it is built. Diagrammatic representations of the virtual

ridge line and how differing cross sections through the Rock would look are attached to this document.

Implementation & Conclusions

Despite pressures to maximise building opportunities to develop Gibraltar, it is vital that the Obstacle Limitation Surfaces surrounding Gibraltar Airport are protected in order to ensure safe aircraft operations to and from the Airport. Should a proposed development infringe any of the Obstacle Limitation Surfaces, including the surface specifically described in this document, an assessment of the potential impact of that development is required. Should an assessment indicate an impact on aircraft operations, then an "objection on aeronautical safety grounds" will be raised with the Development and Planning Commission by the Airport Authorities.

This Document has been drawn up as best practice by the Director of Civil Aviation and is awaiting ratification and approval by the MAA. Should further information be required regarding the information contained in this document, these should be addressed in the first instance to the Director of Civil Aviation by e-mail to: chris.purkiss@gibraltar.gov.gi

Important Note: Compliance with the Obstacle Limitation Surfaces does not override the need to comply with any stated height restrictions issued by the Development and Planning Commission. Click on the relevant drawing to view: