



Australian Government
Civil Aviation Safety Authority

OFFICE OF THE CHIEF EXECUTIVE OFFICER

CASA Ref: G17/125

6 March 2017

Dr Jane Thomson
Committee Secretary
Senate Rural and Regional Affairs and Transport
Legislation Committee
PO Box 6100, Parliament House
CANBERRA ACT 2600

Dear Dr Thomson

Airports Amendment Bill 2016

Thank you for your email of 10 February 2017 inviting the Civil Aviation Safety Authority (CASA) to make a submission addressing all or some of the issues identified in the Airports Amendment Bill 2016.

CASA has noted the changes proposed in the Bill and has no detailed comments to make that would require a full submission. CASA currently assesses the safety aspects of draft Master Plans and Major Development Plans for federal leased airports on formal referral from the Department of Infrastructure and Regional Development and provides this assessment in accordance with the mandated timelines. CASA is usually involved with discussions with the proponents of such plans prior to their formal lodgement.

The changes in the proposed Bill (a different submission cycle for a number of federal leased airports, inclusion of a new Australian Noise Exposure Forecast, an increase in the current \$20 million monetary trigger for Major Development Plans to \$35 million and other timeline changes) should not affect the safety assessment processes in which CASA is already engaged. An outline of the matters CASA considers is attached for the Committee's information.

There is a possibility that the increase in the dollar trigger may permit larger buildings to be constructed under that trigger which may inadvertently have an effect on aviation safety. This risk would be remediated by continued monitoring by the Department of Infrastructure and Regional Development as the relevant agency and advice to all federal leased airport managers that any construction (even if below the current or proposed dollar trigger) should be discussed with CASA for possible safety implications prior to proceeding.

Yours sincerely

Shane Carmody
Acting Chief Executive Officer and
Director of Aviation Safety

Attachment A

Matters considered by CASA when providing advice on safety aspects of planning proposals at leased federal airports

Pursuant to the *Airports Act 1996* (the Act), the Minister must take account of comments from CASA on the safety aspects of master plans and major development plans. The Department of Infrastructure and Regional Development (DIRD), as the agency responsible for administering the Act, is obliged to refer draft master plans and draft major development plans to CASA for comment.

DIRD and operators of leased federal airports also normally circulate preliminary drafts/exposure drafts of plans for CASA comment at an early stage of the process. CASA's experience is that operators of leased federal airports generally understand the safety aspects that need to be considered and ensure these matters are addressed during the preparation of their plans. Matters that CASA considers on referral are as follows:

- airspace protection;
- wildlife hazards;
- lighting and reflection;
- plume rises;
- building induced wind effects; and
- overall compliance with Civil Aviation Safety Regulations 1998 (CASR) Part 139.

Airspace protection under the *Airports Act 1996*

International standards have been adopted which define two sets of invisible surfaces above the ground around an airport. The airspace above these surfaces forms the airport's protected airspace. These two surfaces are the Obstacle Limitation Surface (OLS) and Procedures for Air Navigational Services—Aircraft Operations (PANS-OPS) surface. The OLS is generally the lowest surface and is designed to provide protection for aircraft flying into or out of the airport when the pilot is flying by sight. The PANS-OPS surface is generally above the OLS and is designed to safeguard an aircraft from collision with obstacles when the aircraft's flight may be guided solely by instruments, in conditions of poor visibility.

Any activity that infringes an airport's protected airspace is called a controlled activity, and requires approval from DIRD before it can be carried out. Controlled activities include:

- permanent structures, such as buildings, intruding into the protected airspace
- temporary structures such as cranes intruding into the protected airspace
- any activities causing intrusions into the protected airspace through glare from artificial light or reflected sunlight, air turbulence from stacks or vents, smoke, dust, steam or other gases or particulate matter.

Pursuant to the Act, CASA will provide an assessment of the impact on aviation safety.

Infringements of prescribed surfaces (by buildings, cranes, vegetation etc.) are either not tolerated or, in some cases, permitted under identified and documented conditions. Airport operators are required to establish obstacle control mechanisms under CASR Part 139. It would be expected that Master Plans/Major Development Plans will normally be consistent with the obstacle control mechanisms established for airports under CASR Part 139. Depending on the complexity of the proposed infringement, CASA will ask the airport operator to provide a safety case.

In the event of an airport operator proposing an on-airport infringement, CASA will consider whether the infringement is acceptable, with or without risk mitigation eg. lighting and marking. Under the Airports (Protection of Airspace) Regulations 1996, if CASA advises

DIRD that a proposal would have an unacceptable risk to the safety of air transport operations, DIRD will not approve the proposal.

On referral, CASA will also provide advice to DIRD regarding the acceptability of structures located off the airport which infringe prescribed airspace surfaces, such as billboards and buildings.

Wildlife hazards

CASA will consider whether the plans will be consistent with the need to prevent the attraction of wildlife to the airport. Airports have established wildlife hazard management plans (WHMP) and it can be expected that the Master Plans/Major Development Plans will be consistent with the WHMP.

Lighting and reflection

CASA provides advice on the installation of lighting to address the risk of distractions to pilots. It can be expected that the Master Plans/Major Development Plans will be consistent with Part 139 provisions relating to light control zones which permit graduated levels of lighting intensity as a function of distance from runways. CASA will also provide advice on the potential for reflection from solar installations generating unacceptable glare.

Plume rises

CASA provides advice on the potential for exhaust plumes from buildings and other structures to affect aircraft operations. CASA will conduct an initial screening if an exhaust plume source below a prescribed airspace is identified. In the unlikely event that the screening determines that plumes may be of a velocity that can affect aircraft operations, CASA will recommend plume rise modelling to be conducted.

Building generated wind shear and turbulence

This is an issue that has emerged in recent years due to the growing trend of constructing buildings to a height that will sit just below prescribed airspace at the site.

Where applicable, CASA will provide advice based on Guideline B of the National Airports Safeguarding Framework (NASF) and additional criteria developed by the Netherlands Aeronautical Research Laboratory (NLR).

NASF and NLR criteria are used because CASA, like every other aviation safety regulator, does not have standards relating to this matter.

Overall compliance with CASR Part 139

As appropriate, CASA will consider whether the plans will be consistent with matters such as compliance with safety standards protecting operations on runways/taxiways and standards relating to the provision of aerodrome rescue and firefighting services.