



AC 139-08(0)

APRIL 2005

REPORTING OF TALL STRUCTURES

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1. REFERENCES

- CASR 139.360 and CASR 139.365
- MOS – Part 139 Aerodromes, Chapter 7-Obstacle Restriction and Limitation, Section 7.1 – General
- Airports (Protection of Airspace) Regulations 1996

2. PURPOSE

2.1 The purpose of this AC is to provide some guidance to those authorities and persons involved in the planning, approval, erection, extension or dismantling of tall structures so that they may understand the vital nature of the information they provide.

2.2 Information on tall structure is held centrally by the Royal Australian Air Force (RAAF) Aeronautical Information Service (AIS) who maintain a tall structure database. Information is also provided to a range of aviation organisations so that they can be identified on aeronautical charts, etc.

3. STATUS OF THIS AC

3.1 This is the first AC to be issued on this subject, however the content of this AC updates information previously published in CAAP 89W-2(0) — Reporting of Tall Structures.

Advisory Circulars are intended to provide advice and guidance to illustrate a means, but not necessarily the only means of complying with the Regulations, or to explain certain regulatory requirements by providing informative, interpretative and explanatory material.

Where an AC is referred to in a 'Note' below the regulation, the AC remains as guidance material.

ACs should always be read in conjunction with the referenced regulations.

4. BACKGROUND

4.1 The Australian aviation community has identified a need to have information on tall structures available for publication on aeronautical charts.

4.2 The RAAF Aeronautical Information Service (AIS) has been assigned the task of maintaining a database of tall structures, the top measurement of which is:

- 30 metres or more above ground level — within 30 kilometres of an aerodrome; or
- 45 metres or more above ground level elsewhere

4.3 The database of tall structures will generally capture more information than what is required to be reported by the regulations.

4.4 The database will also be available for use by mapping agencies such as Australian Surveying and Land Information Group, and domestic and international aviation organisations.

5. WHY REPORT TALL STRUCTURES

5.1 Inadvertent collision with tall structures is a significant cause of aircraft accidents involved in low level flying operations. The risk posed by a tall structure to aircraft safety can be minimised if information on the tall structure is conveyed to pilots so that they can fly at a safe margin above the structure.

5.2 Low level flying operations are typically conducted during:

- approach, landing and take-off operations
- specialist flying activities (such as crop-dusting, cattle mustering, pipeline inspection, fire-fighting)
- search and rescue operations
- military low-level flying operations

5.3 Except for approach, landing and take-off operations (which are normally conducted in the vicinity of an aerodrome) low level operations can be conducted anywhere across Australia (subject to regulatory conditions/limitations).

5.4 In addition to the safety of aircraft operations, an inadvertent collision with a tall structure poses a number of other risks:

- business continuity if the services provided from the tall structure are unavailable e.g. communications services
- costs associated with the erection of a new structure
- liability issues

5.5 In the event of an aircraft hitting a tall structure, the role of persons and/or organisations associated with the operation of the tall structure would be a matter for the courts.

6. WHAT ARE THE AVIATION REGULATIONS THAT APPLY TO TALL STRUCTURES?

6.1 CASR 139.360 requires the operator of a certified or registered aerodrome to notify CASA of any development or proposed construction in the vicinity of the aerodrome (normally 15km) that is likely to be a hazard to air navigation.

6.2 In the vicinity of major capital city airports, the *Airports (Protection of Airspace) Regulations 1996* also apply. Under these regulations, the operator of such an aerodrome has to notify the Department of Transport and Regional Services (DOTARS) of any potential infringement to the prescribed airspace established for that aerodrome. DOTARS has the power to prohibit or limit erection of tall structures within the prescribed airspace of a Federal Airport covered by the *Airports (Protection of Airspace) Regulations*.

6.3 In areas remote from an aerodrome, CASR 139.365 requires the owner of a structure (or proponents of a structure) that will be 110m or more above ground level to inform CASA. This is to allow CASA to assess the effect of the structure on aircraft operations and determine whether or not the structure will be hazardous to aircraft operations.

7. WHAT DO I NEED TO REPORT?

7.1 Details should be provided on the construction, extension or dismantling of tall structures the top of which is:

- 30 metres or more above ground level (within 30 kilometres of an aerodrome); and
- 45 metres or more above ground level elsewhere.

7.2 Information provided to the database should be accurate and readily interpreted. The “TALL STRUCTURE REPORT FORM” at Attachment A has been designed to help owners and/or developers in this respect.

8. WHERE WILL THE INFORMATION BE HELD?

8.2 The information on all tall structures is held in a central database that is managed by the RAAF AIS.

9. HOW DO I REPORT?

9.1 Information on tall structures and any queries in regard to the database should be directed to:

Aeronautical Data Officer
RAAF AIS (VBM-M2)
Victoria Barracks
St Kilda Road
Southbank Vic 3006
Tel: (03) 9282-6400
Fax: (03) 9282-6695
Email: ais.charting@defence.gov.au

9.2 To assist all organisations to provide all of the necessary and complete information, use of the standard “Tall Structure Report” form attached to this AC (Attachment A) is encouraged.

Richard Macfarlane
Acting Executive Manager
Aviation Safety Standards

Zone: _____ Positional Accuracy \pm (metres) (if available) : _____

Date of last survey (if known): _____ / _____ / _____ Year of erection: _____ / _____ / _____

Height of structure: _____ Height Accuracy \pm FT (if available): _____

Ground level elevation* at the base of the Structure (if known): _____

Height from ground level to the top most point of the obstruction in metres (including all antennae, aerials and other attachments) : _____

Elevation* to the top of the structure in metres, including all antennae, aerials and other attachments: _____

Note: *Elevation values are referenced to Mean Sea Level (AMSL) or the Australian Height Datum (AHD) and values are requested in feet or to 1/10th of a metre.

Value Code: How was the data captured? (1) (2) (3) (4) (5) (6) (*Please circle*)

- | | |
|------------------------------|---------------------------|
| 1. 1st order survey | 2. Stereo photogrammetric |
| 3. Mono photogrammetric | 4. Chart/map derived |
| 5. Handheld GPS (non survey) | 6. Reported |

Guy-wire footprint: _____ metres (*Lateral distance from structure*)

MARKING

Obstacle marking (e.g. painted red or orange and white) Yes / No

Obstacle lighting (e.g. flashing red obstacle light) Yes / No

Other obstacle markers (e.g. orange balls on guy wires) Yes / No

Is the Obstacle Permanent or Temporary ? Perm / Temp

If Temporary, what is the intended removal date: _____ / _____ / _____

OTHER REMARKS

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CONTACT DETAILS

Name of person making report: _____

Organisation and position within organisation: _____

Tel or Fax contact : Tel: . _____ Fax: _____

Email: _____

ELECTRONIC SUBMISSION OF DATA

An online Vertical Obstruction Report Form is available at www.raafais.gov.au/obstr_form.htm or via the RAAF Web site at www.raafais.gov.au
 Products Vertical Obstruction Report Form.

SITE SKETCH

Site sketch showing the proximity to roads, streets, tracks, buildings, creeks, trig points and any other suitable or relevant features to locate the obstruction.



Will forward details to AIS website:

Yes / No

If you are able to provide RAAF AIS with site drawings or construction plans in a zipped format, it would add to data integrity and completeness whilst lessening the need to make follow up calls to confirm any missing data.

Attachment Data can be sent to: ais.charting@defence.gov.au