



**Civil Aviation
Advisory Publication
April 2001**

Reporting of Tall Structures

This publication is only advisory. It gives the preferred method for complying with the Civil Aviation Regulations 1988 (CAR 1988).

It is not the only method, but experience has shown that if you follow this method you will comply with CAR 1988.

Always read this advice in conjunction with the appropriate regulations.

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The relevant regulations

Regulations 89W, 89X, 89Y and 89Z of CAR 1988 apply to the notification of tall structures becoming obstacles and hazards to aviation.

Who this CAAP applies to

- Organisations and persons involved in the planning, construction or provision of tall structures, such as towers, antennas, chimneys, transmission lines and their supports, or the vertical extension of existing tall structures.
- Authorities and persons involved in the:
 - approval of tall structures, or
 - vertical extension of tall structures, or
 - dismantling of tall structures.

Why this publication was written

The Australian aviation community has identified an ongoing need to obtain and maintain accurate information about tall structures so that risks associated with inadvertent collision by low flying aircraft can be reduced.

This CAAP relates to the reporting arrangements associated with tall structures anywhere. It is not intended to address matters associated with marking and lighting of the structure itself, nor does the CAAP supersede other existing requirements to report certain structures to CASA.

Status of this CAAP

This is the first issue of CAAP 89W-2.

For further information

Contact the CASA office closest to you.

1. General

1.1 In the context of this CAAP, tall structures are defined as being those structures, the top of which is above:

- 30 metres above ground level, that are within 30 kilometres of an aerodrome, and
- 45 metres above ground level elsewhere

1.2 The purpose of this CAAP is to provide guidance for authorities and persons involved in the erection, extension or dismantling of tall structures about the need for accurate information, and how that advice can be provided to a central database to enable information relating to tall structures to be marked on aeronautical charts. Marking tall structures on charts will assist pilot navigation and enhance safety, particularly for low level operations.

1.3 Of course safety can be further enhanced if the tall structures are made conspicuous by marking and/or lighting

2. Why Report

2.1 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 of the tall structure is conveyed to pilots so that they can fly at a safe margin above the structure.

2.2 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, etc.
- search and rescue operations;
- military low-level flying operations.

2.3 Except for operations under (a) that are normally conducted in the vicinity of an aerodrome, low level operations can be conducted anywhere across Australia.

2.4 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.

2.5 In the event of an aircraft collision with a tall structure, the role of persons and/or organisations associated with the operation of the tall structure would be a matter that would be examined by the courts.

3. What are the aviation Regulations that apply?

3.1 In the vicinity of an aerodrome, Civil Aviation Regulations require aerodrome operators to notify CASA of any existing or potential structure that infringes or will infringe the aerodromes' obstacle limitation surfaces. Depending on its location, a structure of height lower than 30M may be an obstacle to aircraft operations. Proponent of any tall structures in the vicinity of an aerodrome (normally within 15 KM) should consult the relevant aerodrome operator regarding the development proposal.

3.2 In the vicinity of major capital city airports, the Federal Airports (Control of Airspace) Regulations apply. Under these regulations, the operator of such an aerodrome has to notify the Department of Transport and Regional Services (DOTRS) of any potential infringement to the prescribed airspace established for that aerodrome. DOTRS has the power to prohibit or limit erection of tall structures within the prescribed airspace of a federal airport covered by the above regulations.

3.3 In areas remote from an aerodrome, under the Civil Aviation Regulations, proponents of any tall structure 110 M or more above local ground level are required to notify CASA of such proposals. This is to allow CASA to assess the effect of the structure on aircraft operations and determine whether there is a need for the structure to be provided with obstacle marking and/or lighting.

3.4 However, for aeronautical charting purposes, the aeronautical data bank of tall structures needs to capture more information than what is captured in regulations.

4. What do I report and where will the information be held?

4.1 As noted earlier, the information required by the central database relates to the erection, extension or dismantling of tall structures the top of which is above:

- 30 metres above ground level, that are within 30 kilometres of an aerodrome, and
- 45 metres above ground level elsewhere

4.2 The information provided will be held in a central database that is managed by RAAF.

4.3 Information provided to the database must be accurate and able to be clearly interpreted. Inaccurate depiction of a structure can create just an equally risky situation as the failure to provide information of tall structures.

5. How do I report?

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

Business Development and Data Manager
RAAF AIS (VBM-M2)
Victoria Barracks
St Kilda Road
Southbank Vic 3006
Tel: (03) 9282-5426
Fax: (03) 9282-6630
Email: RAAF.AIS@defence.gov.au

5.2 This database is also available for use by other mapping agencies such as the Australian Surveying and Land Information Group, and domestic and international aviation organisations.

5.3 To assist organisations to provide the necessary and complete information to the RAAF database, a standard Tall Structure Report Form is provided in Attachment A.

Richard G. Yates
Assistant Director
Aviation Safety Standards

Attachment A

TALL STRUCTURE REPORT FORM

To: RAAF Business Development and Data Manager
Date:.....
Tel: (03) 9282-5426
Fax: (03) 9282-6630
Email: RAAF.AIS@defence.gov.au

NOTIFICATION OF NEW/REMOVAL OF/CHANGES MADE TO TALL
STRUCTURES (*Delete as appropriate*)

LOCATION and DESCRIPTION OF STRUCTURE

Identification of the Structure (if known) e.g. Company Reference No. State or Territory

Nearest town or prominent landmark Locality or feature name:

Description of structure:

Owner of structure:

SURVEY DATA

Survey Datum
WGS84/GDA94
or
AGD

Latitude: Longitude:

(Degrees, minutes and seconds to 1/100th of a second) (if available) (DD:MM:SS.SS) or (DD.DDDD)

Or Grid Reference:

Positional Accuracy ± (metres) (if available)

Date of last survey (if known):

Height of structure: Year of erection:

Height Accuracy ± FT (if available):

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

Height from ground level to the top of the including all antennae and aerials:

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

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/GPS | 2. Stereo photogrammetric |
| 3. Mono photogrammetric | 4. Chart/map derived |
| 5. Reported | 6. Temporary |

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

MARKING

Obstacle marking: Yes/No

Obstacle lighting: Yes/No

OTHER REMARKS

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CONTACT DETAILS

Name of person making report:

Organisation and position within organisation:

Tel or Fax contact:

