

## NOTAM DATA QUALITY REQUIREMENTS FOR UNMANNED AIRCRAFT OPERATORS



## NOTAM Data Quality Requirements for Unmanned Aircraft Operators

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## Change summary

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	General editorial updates throughout the document Section 2.3 – Mailing Address updated Section 6 – Requesting a NOTAM updated Section 7.4 – Cross Referencing updated Section 11.1 – ICAO Format updated Section 11.2 – Briefing Format updated Section 12.1 – NOTAM Subject and Status updated New section 12.2.1 – UA operating within a radius of position (preferred) added New section 12.2.2 – UA operating within defined points added New section 12.2.3 – Tethered UA added Section 13 – Definitions table updated

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## Table of contents

1	Purpose	. 4
2	NOTAM Office Contact Details	. 4
2.1	Advice of Errors	. 4
2.2	Email, Telephone, and Fax	. 4
2.3	Mailing Address	. 4
3	NOTAM Issuance	. 5
3.1	NOTAM Promulgation Criteria	. 5
3.2	Non-NOTAMable Circumstances	. 5
3.3	Information not to be included in NOTAM	. 6
4	Aeronautical Information Regulation and Control (AIRAC)	. 6
4.1	Permanent Changes	. 6
4.2	Permanent NOTAM	. 6
5	NOTAM Originators	. 7
5.1	NOTAM Authorised Persons	. 7
5.2	NOTAM Authorised Persons Verification	. 7
6	Requesting a NOTAM	. 8
6.1	Notification Times	. 8
6.2	Verifying Information	. 8
6.3	Checking NOTAM	. 8
6.4	NOTAM Duplication or Confliction	. 9
7	NOTAM Conventions	. 9
7.1	Abbreviations	. 9
7.2	Latitude and Longitude	. 9
7.3	Units of Measurement	. 9
7.4	Cross Referencing	
7.5	Distribution Criteria	10

7.6	Timing Conventions	10
8	NOTAM Types	12
8.1	NOTAMN	12
8.2	NOTAMR	12
8.3	NOTAMC	12
8.4	Determining NOTAM Type	13
9	NOTAM Locations	14
9.1	Aerodromes	14
9.2	FIR (YBBB or YMMM)	15
9.3	Dual FIR (YMMM/YBBB)	15
9.4	Multiple FIR (YMMM and YBBB)	16
10	NOTAM Request Form	16
10.1	Mandatory Fields	16
10.2	Group Name	16
10.3	Contact Details	16
10.4	NOTAM Summary (NWS only)	17
10.5	NOTAM Type (PDF only)	17
10.6	Item A) – Location	17
10.7	Item B) – Start Period	17
10.8	Item C) – End Period	18
10.9	Item C) – Estimated End Period	18
10.10	Item D) – Hours of Activation	18
10.11	Item E) – NOTAM Text	19
10.12	Item F) – Lower Limit and Item G) – Upper Limit	19
11	NOTAM Format	19
11.1	ICAO Format	19
11.2	Briefing Format	20
12	NOTAM Examples	20
12.1	NOTAM Subject and Status	20
12.2	Unmanned Aircraft NOTAM	20
13	Definitions	24
Appendix A	Time Conversion Chart	26

## 1 Purpose

The purpose of this document is to establish the aeronautical data and information exchange protocols between *NOTAM Authorised Persons* and the *NOTAM Office (NOF)* for the issuance, replacement, and cancellation of NOTAM, as part of the Integrated Aeronautical Information Package (IAIP).

This document forms part of the *Data Product Specification (DPS)* that Airservices must provide to all *Aeronautical Data Originators (ADO)* under *CASR Part 175 – Aeronautical Information Management* and is designed to assist NOTAM Authorised Persons to provide aeronautical data and information that is published via NOTAM in a controlled and standardised manner.

## 2 NOTAM Office Contact Details

#### 2.1 Advice of Errors

Notify the NOTAM Office of corrections or suggestions to this specification via email to: nof@airservicesaustralia.com.

#### 2.2 Email, Telephone, and Fax

Email (preferred):	nof@airservicesaustralia.com
Telephone:	02 6268 5063
Fax:	02 6268 5044

#### 2.3 Mailing Address

ATTN: NOTAM Office Airservices Australia National Operations Management Centre Airservices Australia, Tower Road Melbourne Airport, VIC 3045

## 3 NOTAM Issuance

As per ICAO Doc 10066 – Procedures for Air Navigation Services Aeronautical Information Management (PANS-AIM) and ICAO Annex 15 – Aeronautical Information Services, a NOTAM is a notice distributed by means of telecommunications containing information concerning the establishment, condition or change in any aeronautical facility, service, procedure or hazard, the timely knowledge of which is essential to personnel concerned with flight operations.

NOTAM should be originated, issued, and distributed promptly when:

- information is of a temporary nature, unplanned, and of short duration
- operationally significant permanent changes, or temporary changes of long duration, are made at short notice.

Information that is of short duration, but which contains extensive text and/or graphics, is to be published as an AIP Supplement (AIP SUP).

As per CASR Part 175.B Aeronautical Information Management – AIS Providers, the NOTAM Office is required to promulgate NOTAM on behalf of Aeronautical Data Originators in the following circumstances:

- the request meets any of the circumstances mentioned in Annex 15 Aeronautical Information Services (refer <u>3.1 NOTAM Promulgation Criteria</u>)
- it is required by Australian law
- it is deemed necessary in the interest of aviation safety.

#### 3.1 NOTAM Promulgation Criteria

As per Annex 15 – Aeronautical Information Services, NOTAM should be originated and issued when concerning the following information:

- presence of hazards not otherwise promulgated, which affect air navigation (including obstacles, military exercises and operations, intentional and unintentional radio frequency interferences, rocket launches, displays, fireworks, sky lanterns, rocket debris, races, and major parachuting events)
- establishment or discontinuance (including activation or deactivation) as applicable, or changes in the status of prohibited, restricted or danger areas.

#### 3.2 Non-NOTAMable Circumstances

As per Annex 15 – Aeronautical Information Services, the following information shall not be notified by NOTAM:

- temporary obstructions in the vicinity of aerodromes/heliports that do not affect the safe operation of aircraft
- limitations to airport facilities or general services with no operational impact
- national regulations not affecting general aviation
- announcement or warning about possible/potential limitations, without any operational impact
- general reminders on already published information
- other non-operational information of a similarly temporary nature.

#### 3.3 Information not to be included in NOTAM

A NOTAM should not contain information that:

- relates to an aerodrome or heliport and its vicinity, but does not affect its operational status
- is not of direct operational significance
- does not impact the safe operation of aircraft
- is not likely to influence a pilot or operators' decision to divert a flight.

# 4 Aeronautical Information Regulation and Control (AIRAC)

As specified in the DPS, aeronautical data and information is managed and published in a controlled manner through the internationally adopted Aeronautical Information Regulation and Control (AIRAC) system to determine a series of common dates and associated publication procedures for effective coordination of amendments.

Airservices utilises a quarterly amendment calendar for the updating and production of the IAIP and aeronautical chart products. This requires that aeronautical data and information is submitted to Airservices in a timely manner to ensure that changes can be processed and published in the appropriate products for the required effective date.

Cut-off dates for the submission of data or information for each production cycle can be found at the following link: <u>https://www.airservicesaustralia.com/industry-</u> info/aeronautical-information-management/document-amendment-calendar/.

#### 4.1 Permanent Changes

As per *ICAO Doc* 8126 – Aeronautical Information Services Manual, operationally significant changes to published aeronautical information and data are to be made using the AIRAC system.

Permanent changes that are deemed to be operationally significant must be published as an AIRAC AIP amendment (either as a permanent NOTAM or AIP SUP).

Permanent changes that are not considered to be significant to flight operations are to be processed as an AIP amendment only, which is published on the next available AIRAC date, and is not subject to NOTAM promulgation.

#### 4.2 Permanent NOTAM

When information to be disseminated is of permanent nature and is considered operationally significant (refer <u>3.1 NOTAM Promulgation Criteria</u>), the AIP Responsible Person should issue a permanent (PERM) NOTAM to notify industry that the content is to be incorporated into the IAIP.

PERM NOTAM must only be requested by the AIP Responsible Person or AIP Nominee for the listed Subject Owner (refer to the <u>Data Originators Custodians</u> document and the Data Product Specification issued for your operations).

PERM NOTAM will remain valid until it is incorporated into the appropriate documentation, after which it will be cancelled by the NOTAM Office. No further notification from the originator is required.

PERM NOTAM should not be issued with an immediate start time (exceptions apply) and should instead provide sufficient notification to industry (<u>refer 6.1 Notification</u> <u>Times</u>).

For further guidance on the issuance of permanent NOTAM, refer to the <u>Data</u> <u>Originators Custodians</u> document or contact the NOTAM Office.

## 5 NOTAM Originators

#### 5.1 NOTAM Authorised Persons

NOTAM which meets the criteria specified in <u>3.1 NOTAM Promulgation Criteria</u> may be requested by a NOTAM Authorised Person.

RPAS operators who hold a current Remotely Piloted Aircraft Operator's Certificate (ReOC) and who have been issued a DPS by Airservices are considered NOTAM Authorised Persons.

If you do not have a DPS in place, please contact the CASA RPAS Office for the promulgation of NOTAM for your operations.

NOTAM that permanently amend aeronautical data or information published in the IAIP may only be requested by CASA (refer <u>4.2 Permanent NOTAM</u>).

#### 5.2 NOTAM Authorised Persons Verification

NAIPS Internet Service (NIS) NOTAM Group management has been established as a method for the NOTAM Office to confirm that a NOTAM request has been submitted by a NOTAM Authorised Person.

Under CASR Part 175.D – Aeronautical Information Management – Aeronautical Data Originators, an ADO has a responsibility to advise Airservices of the names of all nominated NOTAM Authorised Persons for the ADO.

All nominated NOTAM Authorised Persons are required to create a NIS user account and provide the username to the nominated Group Manager for addition to the NOTAM Group.

The nominated Group Manager is responsible for ensuring that the group details remain up to date with all current NOTAM Authorised Persons.

The originating NOTAM Authorised Person must ensure that their NIS username and NOTAM Group name is recorded on all emailed NOTAM request forms.

NOTAM submitted via the NOTAM Web Service (NWS), available through NIS, are automatically linked to the NOTAM Group from which it was submitted, however, the contact details of the originating NOTAM Authorised Person must be recorded in the Originating Authority section.

## 6 Requesting a NOTAM

NOTAM requests are to be submitted via the NWS (preferred method), or on the latest version of the NOTAM Request Form available on the Airservices website: <u>http://www.airservicesaustralia.com/wp-content/uploads/NOTAM-Request-Form.pdf</u>.

NOTAM will only be accepted over the phone when the matter is urgent, or in an emergency.

**Note:** Access to the NWS can be arranged by contacting <u>NWS@airservicesaustralia.com</u>.

#### 6.1 Notification Times

When requesting a NOTAM, the following times should be allowed (where practicable) for the NOTAM to be processed and issued by the NOTAM Office:

- immediately in emergency situations
- eight hours for airspace published in *Designated Airspace Handbook* (DAH) and by AIP Sup e.g., military exercises.

Non-urgent NOTAM will be processed in order of effective time (see <u>10.7 Item B)</u> - <u>Start Period</u>). This may at times result in delays during periods of high workload in the NOTAM Office.

#### 6.2 Verifying Information

The NOTAM Office will contact the originating NOTAM Authorised Person in the following situations:

- if a NOTAM is to be published with substantive differences from the way it was requested. This does not include minor changes such as abbreviations or changing the order of the information for standardisation purposes
- where the information or the intent of a NOTAM request differs from or cannot be verified within an official document
- when the request comes from an unauthorised originator
- when there are errors in the NOTAM request, including but not limited to, incorrect abbreviations, lack of detail, mismatched time periods, duplicated information, and typos.

**Note:** It is the responsibility of the ADO to ensure a NOTAM Authorised Person is available to verify the above information if required.

#### 6.3 Checking NOTAM

It is the responsibility of the ADO to ensure that information promulgated by the NOTAM Office is correct. All NOTAM will be available via NIS after publication and any discrepancies must be raised with the NOTAM Office by phone as soon as the error has been discovered.

### 6.4 **NOTAM Duplication or Confliction**

It is the responsibility of the originating NOTAM Authorised Person to ensure that NOTAM requests do not cause duplication or confliction of already published NOTAM.

Active NOTAM can be viewed via NIS, either in the Active NOTAM Directory (for users with access to the NWS) or via a Location Briefing.

Location Briefings will only provide NOTAM that are active during the specified validity period (maximum of 336 hours).

The NOTAM Office can provide guidance on published NOTAM commencing more than 14 days (336 hours) in the future.

## 7 NOTAM Conventions

#### 7.1 Abbreviations

A list of permitted abbreviations to be used in NOTAM is available in the *AIP GEN 2.2 General and Meteorological Abbreviations.* 

Abbreviations marked with '•' must not be used in NOTAM which are promulgated internationally. If you are unsure of your aerodrome's distribution status, please contact the NOTAM Office.

The list of abbreviations is updated every three months and should be checked on a regular basis.

#### 7.2 Latitude and Longitude

Any latitude and longitude positions used in a temporary or permanent NOTAM are required in degrees, minutes and seconds, followed by a cardinal point.

Example: 324620S 1382405E.

If more precision is required, such as for ICAO data accuracy and resolution requirements, seconds will be followed be a decimal and tenths or hundredths of seconds.

Example: 324620.2S 1382405.1E or 324620.27S 1382405.15E.

#### 7.3 Units of Measurement

Units of Measurement commonly required in NOTAM are as follows:

- Horizontal Distance:
  - Nautical Miles (NM) for distances greater than 2NM
  - Shorter distances: metres (M)
- Vertical distance (altitudes, elevations, and heights): feet (FT)
- Bearings (from an AD or navaid): degrees magnetic (MAG)
- Weight (Mass): Metric tonnes or kilograms (KG).

## 7.4 Cross Referencing

To avoid the publication of erroneous information, a NOTAM will not be issued containing a reference to another NOTAM, AIC or SUP number. This is to avoid situations where the original NOTAM, AIC or SUP is reviewed or cancelled, which amends the original number, resulting in the associated NOTAM referencing an incorrect NOTAM, AIC or SUP number.

Where cross-referencing between NOTAM is deemed necessary, the phrase 'SEPARATE NOTAM REFERS' will be used.

#### 7.5 Distribution Criteria

All domestic NOTAM issued will be held in the Australian NOTAM database and can be accessed via NIS. Some NOTAM will also be distributed to international NOTAM offices and accessed by international pilots flying to or through Australian airspace.

NOTAM will be sent internationally if the operations affect:

- Special Use Airspace (SUA) higher than FL245, or below FL245 if affecting international routes
- international aerodromes or international alternate aerodromes (as per AIP GEN 2. Designated International Airports - Australia)
- controlled airspace or airspace within 10NM of an international aerodrome or international alternate aerodromes (as per *AIP GEN 2. Designated International Airports Australia*).

#### 7.6 Timing Conventions

All NOTAM are published in UTC (Zulu) time. UTC is the preferred convention as it decreases the likelihood of errors during the conversion process.

UTC is the only time convention available in the NWS. Local time can be converted to UTC using the Time Zone Converter, available within the NOTAM form on the NWS.

If an emailed NOTAM request is submitted using local time (not preferred), this must be clearly marked on the NOTAM Request Form, including which time zone has been used. If a different time convention has been used on the form, the NOTAM Office will convert it to UTC before issuing.

**Note:** Extra care should be taken during daylight savings periods. Refer <u>Appendix A</u> <u>Time Conversion Chart</u>.

#### 7.6.1 Time format

The ICAO NOTAM format specifies that the timing convention used to indicate Item B) and Item C) (refer <u>10 NOTAM Request Form</u>) is a ten-digit date-time group 24-hour format (year, month, day, hours, and minutes i.e., YYMMDDHHMM).

There are multiple time formats that may be used for Item D) (refer <u>10.10 Item D) -</u> <u>Hours of Activation</u>).

Days of the week are referenced in Australian NOTAM as the 'Local Day using UTC Time' e.g., MON-WED 2300-0900 means the NOTAM is active for three days (MON, TUE, and WED) from 2300 UTC in the morning until 0900 UTC in the afternoon on each day.

The beginning of the day is specified as 0000 UTC and the use of the times xx59 and xx01 in NOTAM can create an anomaly within the Air Traffic Control systems.

For example, a NOTAM that finishes at 2359 UTC will be removed from the ATC systems at 2359 and 01 second, not at 2359 and 59 seconds. Where possible, the times xx59 and xx01 should be avoided, and rounded up/down to xx00.

#### 7.6.2 NOTAM validity

A NOTAM is valid when it is published (i.e., date and time of NOTAM origination), whereas it is active and comes into force at the date-time specified in Item B) (refer 10.7 Item B) – Start Period).

#### 7.6.3 NOTAM duration

A temporary NOTAM must never be active for more than three months.

NOTAM with an estimated end time that unexpectedly exceeds the maximum threemonth period may be extended for a further period of up to three months.

If it is expected that the extension is to exceed a period of three months, an AIP SUP shall be issued instead.

Temporary changes of long duration (exceeding three months) must be published as an AIP SUP. When required, a temporary NOTAM may be issued to bridge the period between required notification and AIP SUP publication.

Permanent changes require the relevant IAIP section to be amended, with an appropriate permanent NOTAM to bridge the period between notification and incorporation into the IAIP (refer <u>4.2 Permanent NOTAM</u>).

#### 7.6.4 Daylight Saving Time

Daylight Saving Time is observed in the Australian summer in some Eastern and Central time zones.

Care must be taken to ensure that times are correct for NOTAM that will be active over the time change.

## 8 NOTAM Types

NOTAM types are identified by the following suffixes: 'N' (New), 'R' (Replacement) and 'C' (Cancellation) and the resulting identifier appears after the reference number as follows:

- NOTAMN (New NOTAM)
- NOTAMR (Replacement NOTAM)
- NOTAMC (Cancellation NOTAM)

Example: C0123/22 NOTAMN

C0124/22 NOTAMR C0123/22

C0125/22 NOTAMC C0124/22.

#### 8.1 NOTAMN

A NOTAMN is when a NOTAM is first issued. A NOTAMN should be requested if the NOTAM is regarding an event for which there is no current NOTAM.

#### 8.2 NOTAMR

A NOTAMR allows an existing NOTAM to be amended. A NOTAMR immediately replaces the previous NOTAM.

Item B) of a NOTAMR must be the actual date-time group that the NOTAMR is created. The NOTAMR will take effect immediately, and no future coming into force is permitted. This is to avoid potential misinterpretation about further changes or existence of multiple NOTAM.

When requesting a NOTAMR, the following conditions apply:

- if the condition described in an active NOTAM is to remain valid for a period before being changed, then a NOTAMR shall be issued for the period up to the intended date and time of the change. This NOTAMR shall immediately replace the existing NOTAM and shall notify the same conditions but with a changed finish time. A NOTAMN detailing the intended change in condition shall then be issued with a future date and time in Item B).
- if the NOTAM to be replaced is not active at the time of replacement, the NOTAM is to be cancelled WIE and a NOTAMN is to be issued with amended information and commencement time.

For further guidance, refer to <u>8.4 Determining NOTAM Type</u>.

#### 8.3 NOTAMC

NOTAMC allows an existing NOTAM to be cancelled. Any NOTAM which is no longer required must be cancelled with a NOTAMC.

A NOTAM can only be cancelled with immediate effect and no future cancellation of NOTAM is permitted.

If you require a NOTAM to finish at a future end period, the NOTAM should instead be replaced (NOTAMR) with a confirmed finish time in Item C).

## 8.4 Determining NOTAM Type

The below table should be used to determine the correct procedure and NOTAM type required for the following circumstances:

Circumstances	Required action
NOTAM is currently active with the conditions to cease now and resume in the future	The current NOTAM is to be cancelled with immediate effect and a new NOTAM issued with the amended start time
NOTAM is currently active with conditions to stay in effect but change in the future	The current NOTAM is to be reviewed to amend the finish time and a new NOTAM is to be issued specifying the new conditions
NOTAM is not yet in effect, but conditions are now commencing at a different time (including WIE)	The current NOTAM is to be cancelled and a new NOTAM issued with the amended commencement time
NOTAM not yet in effect, subject and start time remain the same but conditions change (e.g., RWY WIP changes to RWY NOT AVBL)	The current NOTAM is to be cancelled and a new NOTAM issued with the new conditions
NOTAM within the current period of activity, conditions to cease now and resume in the future	The current NOTAM is to be cancelled and a new NOTAM issued with the amended start time
Any changes to a NOTAM which has already been in effect but is outside of a period of activity	The current NOTAM is to be cancelled and a new NOTAM issued with the amended conditions or timings
Changes to a NOTAM that is outside a period of activity and has not yet been in effect	The current NOTAM is to be cancelled and a new NOTAM issued with the amended conditions or timings
NOTAM is currently active with the conditions to cease now and resume in the future	The current NOTAM is to be cancelled with immediate effect and a new NOTAM issued with the amended start time

## 9 NOTAM Locations

#### 9.1 Aerodromes

NOTAM regarding aerodrome facilities, or events and hazards that have a direct impact on aerodrome operations, are issued by the NOTAM Authorised Persons nominated by the ADO for the aerodrome.

However, relevant CASA staff may originate a NOTAM regarding aerodrome facilities or operations if the originating authority is not available, and the information is essential for flight safety and/or conduct of flight operations.

#### 9.1.1 Certified aerodromes

A NOTAM service is provided for certified aerodromes, military aerodromes, certain other aerodromes regulated under *CASR Part 139 – Aerodromes,* and specialised helicopter operations with published terminal instrument flight procedures under *CASR Part 173 – Instrument Flight Procedure Design.* 

A NOTAM will be issued on an aerodrome if it is about a facility, event or hazard that has a direct effect on aerodrome operations (within 5NM of an aerodrome with a NOTAM service), on the ground or within the airspace associated with that aerodrome.

#### 9.1.2 Uncertified aerodromes

Limited information is published in *En Route Supplement Australia (ERSA)* for some aircraft landing areas (ALAs) and a NOTAM service is not provided except for the following circumstances:

Subject	Events or Hazards	Responsible entity
Aerodrome	<ol> <li>Certification status changes</li> <li>Contact detail - limited to phone number change</li> <li>Closure – permanent</li> </ol>	<ol> <li>CASA</li> <li>Aerodrome *</li> <li>CASA</li> </ol>
Aerial works	<ul> <li>Aerobatics</li> <li>Air displays</li> <li>Flight inspections</li> <li>Ocular hazards</li> <li>Surveying</li> </ul>	CASA, or approved NOTAM originators
Flight procedures	Limited to circuit direction changes for safety reasons	CASA
Communication	<ol> <li>Limited to frequency changes (CTAF with or without an AFRU)</li> <li>UNICOM</li> </ol>	<ol> <li>CASA</li> <li>Aerodrome *</li> </ol>
Instrument Flight Procedures	Any changes to instrument flight procedure	Certified Procedure Designers, under CASR Part 173

Subject	Events or Hazards	Responsible entity
Lighting facilities	Limited to frequency changes (PAL)	Aerodrome *
Meteorological services	Limited to TAF changes	ВоМ
Navaid	Unserviceable or frequency changes	Airservices, or navaid owner
Sports aviation	<ul><li>Balloons</li><li>Gliders</li><li>Model rockets</li><li>Parachuting</li></ul>	CASA
Unmanned aircraft activities	<ol> <li>Model aircraft</li> <li>RPAS</li> </ol>	<ol> <li>CASA</li> <li>CASA, or approved NOTAM originators</li> </ol>
Other activities	<ol> <li>Blasting</li> <li>Fireworks</li> <li>Gas plumes</li> <li>Laser light displays</li> </ol>	<ol> <li>CASA</li> <li>CASA, or approved NOTAM originators</li> <li>CASA</li> <li>CASA, or approved NOTAM originators</li> </ol>

\* Only for those Aerodromes with a Data Product Specification (DPS) in place with Airservices AIS.

#### 9.2 FIR (YBBB or YMMM)

A NOTAM will be issued on a single FIR if it refers to a:

- hazard occurring more than 5NM from an aerodrome
- hazard for which an aerodrome NOTAM has already been issued, but the hazard extends to a height or distance from the aerodrome which may affect pilots overhead or nearby not using the aerodrome. This need is determined by CASA or Airservices.

#### 9.3 Dual FIR (YMMM/YBBB)

A NOTAM will be issued as a dual FIR NOTAM if:

- the conditions for an FIR NOTAM are fulfilled
- the hazard or facility extends across the FIR boundary
- the affected QNH areas are shared by the boundary.
- **Note:** If required, contact the NOTAM Office for guidance on QNH areas and FIR boundaries.

#### 9.4 Multiple FIR (YMMM and YBBB)

A NOTAM will be issued on both FIR if:

- the conditions for an FIR NOTAM are fulfilled
- the hazard or facility extends across the FIR boundary
- the affected QNH areas are **not** shared by the boundary.
- **Note:** If required, contact the NOTAM Office for guidance on QNH areas and FIR boundaries.

## 10 NOTAM Request Form

Refer below for detailed instructions on completing the NOTAM Request Form. Where applicable, instructions relevant to the NWS or emailed NOTAM Request Form has been identified.

Refer to the <u>NOTAM Web Service User Guide</u> for detailed guidance on NOTAM submission using the NWS.

#### 10.1 Mandatory Fields

NOTAM type	Mandatory fields
NOTAMN	Items A), B), C) and E)
NOTAMR	Items A), B), C) and E)
NOTAMC	Items A), B) (WIE), and E)

#### **10.2 Group Name**

Select the required NOTAM Group for the ADO from the drop-down box on the NWS or annotate the Group Name and NIS username of the originating NOTAM Authorised Person at the bottom of the NOTAM Request PDF form.

Refer to <u>5.2 NOTAM Authorised Persons Verification</u> for more information regarding NOTAM Groups.

#### **10.3 Contact Details**

Provide the name and contact number of the originating NOTAM Authorised Person.

Contact details are essential as the NOTAM Office may need to contact the originator prior to issuing a NOTAM.

Refer to <u>6.2 Verifying Information</u> and <u>5 NOTAM Originators</u> for further information.

## 10.4 NOTAM Summary (NWS only)

Provide a short (maximum fifty characters) summary of the purpose of the NOTAM.

NOTAM summaries are to be as concise as possible as certain briefing products available via NIS (e.g., SPFIB and AVFAX) will only display the summary line for any NOTAM that has been active for more than seven days (i.e., commencement DTG is more than seven days in the past).

If unable to specify the exact contents of the NOTAM in the summary, provide a general description. This must include a general location of the subject of the NOTAM if issued under the FIR.

Ensure that the summary line contains enough information so pilots can easily determine if the NOTAM is relevant to their operations.

Examples of NOTAM summaries can be found in <u>12 NOTAM Examples</u>.

#### 10.5 NOTAM Type (PDF only)

NOTAMN, NOTAMR or NOTAMC.

Refer <u>8 NOTAM Types</u> for more information on which type of NOTAM is required depending on the desired outcome.

**Note:** If NOTAMR or NOTAMC is selected, include the NOTAM number that is to be replaced or cancelled.

#### 10.6 Item A) – Location

This is the location under which the NOTAM will be issued.

Refer <u>9 NOTAM Locations</u> for more information.

#### 10.7 Item B) – Start Period

Item B) specifies the beginning of the occurrence or activity in a ten-digit date-time group (YYMMDDHHMM).

The time in Item B) must be WIE or in the future. NOTAM cannot be issued retrospectively.

If a NOTAM is required immediately or as soon as possible, WIE may be selected instead of a specifying start period. In this instance, the NOTAM Office will process the NOTAM request as soon as practicable, and the published NOTAM will list the publication time in Item B).

Care must be taken to ensure that NOTAM requests do not cause duplication or confliction of currently published NOTAM (refer to <u>6.4 NOTAM Duplication or</u> <u>Confliction</u>).

**Note:** Item B) for NOTAMC will have a default time stamp of the date and time that the NOTAMC was created and cannot be amended (refer <u>8.3 NOTAMC</u>).

#### 10.8 Item C) – End Period

Item C) specifies the end of the occurrence or activity in a ten-digit date-time group (YYMMDDHHMM).

If the information is of a permanent nature (refer <u>4.2 Permanent NOTAM</u>), then the abbreviation PERM is inserted instead of the ten-digit date-time group.

If the end period of the NOTAM is uncertain, or the NOTAM duration is for a period exceeding three months, an approximate end period within three months must be indicated followed by the abbreviation EST (refer <u>7.6.3 NOTAM duration</u>).

Refer <u>10.9 Item C) - Estimated End Period</u> for more information regarding NOTAM with an estimated finish time.

#### 10.9 Item C) – Estimated End Period

NOTAM with an estimated (EST) end period must be replaced or cancelled prior to the finish time.

It is the responsibility of the ADO to ensure that a nominated NOTAM Authorised Person contacts the NOTAM Office to extend or cancel an EST NOTAM, and a minimum of one hour notice is appreciated.

If a NOTAM is not replaced or cancelled prior to the estimated end period, the details of the originating ADO will be forwarded to CASA for record of non-compliance.

Refer below to determine if the dates specified in Item D) are permitted to have an EST finish time:

- NOTAM with specific dates in Item D) (i.e., 1808150100 to 1808150200), an EST finish time is not permitted.
- NOTAM with daily periods in Item D) (i.e., DAILY 0100/0200, HJ, HN), an EST finish time is permitted.

#### **10.10** Item D) – Hours of Activation

This field should only be used if the NOTAM will not be active continuously from the start period to the end period e.g., if the NOTAM will only apply during daylight hours.

The first date-time group in Item D) should correspond to the date-time group in Item B). The last date-time group in Item D) should correspond to the date-time group in Item C).

These activation times could be in any of the following formats:

- date/time periods in the format YYMMDDHHMM e.g., 1808020200 to 1808021400
- the same time each day e.g., DAILY 0200-0400 for the period of the NOTAM
- combination of several time frames on various days of the week. e.g., MON TUE FRI 0900-1300 1400-1430, WED THU 1000-1100 1230-1300 or MON-FRI 2000-2200, SAT SUN 2300-0500
- night-time hours (HN) for the period of the NOTAM
- daytime hours (HJ) for the period of the NOTAM.

## 10.11 Item E) – NOTAM Text

Item E) specifies the text of NOTAM, including the Subject, Status, and any additional information, in plain language complemented, where necessary, by ICAO abbreviations, indicators, identifiers, designators, call signs, frequencies, and digits.

The text in Item E) should be kept as short as possible, containing all the essential information needed for the safe conduct of flight.

For guidance on NOTAM formatting requirements, refer to <u>12 NOTAM Examples</u>.

Refer to <u>3 NOTAM Issuance</u> for guidance on circumstances that can and cannot be notified by NOTAM.

#### 10.12 Item F) – Lower Limit and Item G) – Upper Limit

These fields are used to indicate the lower and upper limits of airspace affected by the activity and are mandatory for NOTAM regarding navigation warnings and airspace restrictions.

Item F) is the lower limit expressed as an altitude either in metres (M) or feet above mean sea level (AMSL), a height above ground level (AGL), a flight level (FL), or surface level (SFC).

Item G) is the upper limit expressed as an altitude either in M, AMSL, AGL, FL, or as UNL (unlimited) if applicable.

Items F) and G) are mandatory for NOTAM regarding UAV activities.

#### 11 NOTAM Format

NOTAM are presented in NIS in either the ICAO format or the NAIPS briefing format.

#### 11.1 ICAO Format

The ICAO format presents all fields with the corresponding letter (as outlined in <u>10</u> <u>NOTAM Request Form</u>).

- Item A) YMMM
- Item B) 2412012100
- **Item C)** 2412150800
- Item D) HJ
- Item E) UA OPS (MULTI-ROTOR BLW 20KG) WILL TAKE PLACE WI 180M RADIUS OF PSN 373731S 1450922E BRG 280 MAG 11NM FM LILYDALE AD (YLIL) OPR WILL BCST ON ML CENTRE FREQ 135.7 15MIN PRIOR LAUNCH AND AT 10MIN INTERVALS WHILST AIRBORNE OPR CTC TEL: 04\*\* \*\*\*
- Item F) SFC
- Item G) 1650FT AGL

## 11.2 Briefing Format

The NAIPS briefing format presents NOTAM in the following format:

MELBOURNE FIR (YMMM)

C297/24

UA OPS (MULTI-ROTOR BLW 20KG) WILL TAKE PLACE WI 180M RADIUS OF PSN 373731S 1450922E BRG 280 MAG 11NM FM LILYDALE AD (YLIL) OPR WILL BCST ON ML CENTRE FREQ 135.7 15MIN PRIOR LAUNCH AND AT 10MIN INTERVALS WHILST AIRBORNE OPR CTC TEL: 04\*\* \*\*\* SFC TO 1650FT AGL FROM 12 012100 TO 12 150800 HJ

## 12 NOTAM Examples

The following are examples of how to compose Item E) of a NOTAM. These examples are provided as a guide only.

If required, contact the NOTAM Office for assistance and guidance.

#### 12.1 NOTAM Subject and Status

The subject and status of a NOTAM refer to the subject for the which the NOTAM is be raised and the status of that subject (refer <u>3.1 NOTAM Promulgation Criteria</u> and <u>10.11</u> <u>Item E) – NOTAM Text</u>).

The NOTAM subject and status for UA operations is as follows:

Subject	Status
UA OPS ( <drone type="">BLW<weight><other identifiers if required&gt;)</other </weight></drone>	WILL TAKE PLACE

#### 12.2 Unmanned Aircraft NOTAM

The term UA (Unmanned Aircraft) must be used in NOTAM as the abbreviations 'RPA,' 'RPAS' and 'UAV' are currently not approved by ICAO.

UA NOTAM requests must come from a NOTAM Authorised Person who has been issued a Remotely Piloted Aircraft Operators Certificate (ReOC) by CASA and must be submitted via the NWS.

Hours of activation should be as specific as possible, so that inactivity is not included. This reduces the impact to other airspace users.

The text of the NOTAM in Item E) will need to include the following:

- the type (multi-rotor, fixed wing etc.) and weight of the UA (to allow other airspace users an indication of the size)
- any specific identifying characteristics e.g., strobe, high visibility markings, fluorescent paint, reflective surfaces etc.

- the area of operations expressed as either:
  - a radius from a position or
  - a distance either side of a line between two positions
- details of broadcasts to be made and/or frequencies that will be monitored
- the operator's identification and contact number (for ATC and other airspace users who may have enquirers or need to de-conflict).

The following table describes the NOTAM text required to describe the UA according to the ReOC:

Type (as per ReOC)	NOTAM text
Multirotor	Multirotor
Aeroplane	Fixed-wing
Powered-lift	Fixed-wing
Helicopter (Single-rotor)	Helicopter
Airship	Airship

UA NOTAM will require Item F) to be surface (SFC) and Item G) level and datum (AGL, AMSL, or FL) to be specified. However, larger UA's can operate in block levels, for example F120-F150.

Positions should be expressed both as a latitude/longitude and as a bearing and distance from a defined position that can be found in the En Route Supplement Australia (ERSA), e.g., an AD, a NAVAID, or a VFR waypoint.

The most useful points for pilots are those that are identified on charts. Smaller ALA or HLS sites which are defined in ERSA but not on charts are not recommended. If possible, reference to a certified HLS or ALA would be preferable.

#### 12.2.1 UA operating within a radius of position (preferred)

	UA OPS – FIR		
Subject	UA OPS (MULTI-ROTOR BLW 2KG, RED AND WHITE STRIPES)		
Status	WILL TAKE PLACE		
Additional Info	OPR WI 0.5NM RADIUS OF PSN [LAT/LONG] BRG 042 MAG 8NM FM SYDNEY AD (YSSY). OPR WILL BCST ON FREQ ***. * 15MIN PRIOR TO LAUNCH AND AT 15MIN INTERVALS WHILST AIRBORNE OPR CTC TEL: ****		
Lower Limit	SFC		
Upper Limit	450FT AMSL		
Summary Line	UA OPS BRG 042 MAG 8NM FM YSSY		

UA OPS – AD	
Subject	UA OPS (MULTI-ROTOR BLW 20KG)
Status	WILL TAKE PLACE
Additional Info	OPR WI 600M RADIUS OF PSN [LAT/LONG] BRG 270 MAG 3.9NM FM ARP. OPR WILL MNT TOWER FREQ ***. * OPR CTC TEL: ****
Lower Limit	SFC
Upper Limit	450FT AMSL
Summary Line	UA OPS BRG 270 MAG 3.9NM FM ARP

## **12.2.2 UA operating within defined points**

UA OPS – FIR						
Subject	UA OPS (FIXED WING BLW 2KG, RED AND YELLOW STRIPES)					
Status	WILL TAKE PLACE					
Additional Info	WI 1.5NM EITHER SIDE OF A LINE BTN PSN [LAT/LONG] BRG 135 MAG 7.5NM FM REDCLIFFE AD (YRED) AND [LAT/LONG] BRG 225 MAG 9NM FM YRED OPR WILL BCST ON CTAF ***. * 15MIN PRIOR TO LAUNCH AND AT 15MIN INTERVALS WHILST AIRBORNE OPR CTC TEL: ****					
Lower Limit	SFC					
Upper Limit	450FT AMSL					
Summary Line	UA OPS BTN BRG 135-225 MAG 7.5NM-9NM FM YRED					

UA OPS – AD						
Subject	JA OPS (MULTI-ROTOR BLW 20KG)					
Status	WILL TAKE PLACE					
Additional Info	OPR WI 500M EITHER SIDE OF A LINE BTN PSN [LAT/LONG] BRG 135 MAG 1.5NM FM ARP AND [LAT/LONG] BRG 225 MAG 3NM FM ARP OPR WILL MNT TWR FREQ ***. * OPR CTC TEL: ****					
Lower Limit	SFC					
Upper Limit	450FT AMSL					
Summary Line	UA OPS BTN BRG 135-225 MAG 1.5NM-3NM FM YRED					

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#### 12.2.3 Tethered UA

UA OPS						
Subject	UA OPS TETHERED BLW OLS (MULTI-ROTOR BLW 20KG)					
Status	WILL TAKE PLACE					
Additional Info	OPR AT PSN [LAT/LONG] BRG 270 MAG 2.1NM FM ARP or OPR WI 500M EITHER SIDE OF A LINE BTN PSN [LAT/LONG] AND [LAT/LONG] etc.					
Lower Limit	SFC					
Upper Limit	450FT AMSL					
Summary Line	UA OPS TETHERED BLW OLS BRG 270 MAG 2.1NM FM ARP					

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## 13 Definitions

Within this document, the following abbreviations will be used:

Term	Definition				
AD	Aerodrome				
ADO	Aeronautical Data Originator				
AGL	Above Ground Level				
AIC	Aeronautical Information Circular				
AIP	Aeronautical Information Publication				
AIP SUP	AIP Supplement				
AIRAC	Aeronautical Information Regulation and Control				
AIS	Aeronautical Information Services				
ALA	Aircraft Landing Area				
AMSL	Above Mean Sea Level				
ARP	Aerodrome Reference Point				
ATC	Air Traffic Control				
AVFAX	Aviation Facsimile				
BRG	Bearing				
CASA	Civil Aviation Safety Authority				
CASR	Civil Aviation Safety Regulations				
CTAF	Common Traffic Advisory Frequency				
СТС	Contact				
DAH	Designated Airspace Handbook				
DPS	Data Product Specification				
DTG	Date Time Group				
ERSA	En Route Supplement Australia				
EST	Estimated				
FIR	Flight Information Region				
FL	Flight Level				
HJ	Hours of Day				
HN	Hours of Night				
IAIP	Integrated Aeronautical Information Package				
ICAO	International Civil Aviation Organization				
MAG	Magnetic				
NAIPS	National Aeronautical Information Processing System				

Term	Definition				
NAVAID	Navigation Aid				
NIS	NAIPS Internet Service				
NOF	NOTAM Office				
NOTAMC	NOTAM Cancellation				
NOTAMN	NOTAM New				
NOTAMR	NOTAM Replacement				
NWS	NOTAM Web Service				
OPS	Operations				
PANS-AIM	Procedures for Air Navigation Services Aeronautical Information Management				
PERM	Permanent				
PSN	Position				
ReOC	Remotely Piloted Aircraft Operators Certificate				
RPA	Remotely Piloted Aircraft				
RPAS	Remotely Piloted Aircraft System				
SFC	Surface				
SPFIB	Special Pre-Flight Information Bulletin				
SUA	Special Use Airspace				
UA	Unmanned Aircraft				
UAV	Unmanned Aerial Vehicle				
UNL	Unlimited				
UTC	Coordinated Universal Time				
VFR	Visual Flight Rules				
WIE	With Immediate Effect				

## Appendix A Time Conversion Chart

STANDARD TIME			DAYLIGHT SAVINGS			
EST		сѕт	WST		EDT	CDT
υтс	QLD, NSW VIC, ACT TAS	NT, SA	WA	υтс	NSW, VIC, ACT, TAS	SA
0000	1000	0930	0800	0000	1100	1030
0100	1100	1030	0900	0100	1200	1130
0200	1200	1130	1000	0200	1300	1230
0300	1300	1230	1100	0300	1400	1330
0400	1400	1330	1200	0400	1500	1430
0500	1500	1430	1300	0500	1600	1530
0600	1600	1530	1400	0600	1700	1630
0700	1700	1630	1500	0700	1800	1730
0800	1800	1730	1600	0800	1900	1830
0900	1900	1830	1700	0900	2000	1930
1000	2000	1930	1800	1000	2100	2030
1100	2100	2030	1900	1100	2200	2130
1200	2200	2130	2000	1200	2300	2230
1300	2300	2230	2100	1300	0000	2330
1400	0000	2330	2200	1400	0100	0030
1500	0100	0030	2300	1500	0200	0130
1600	0200	0130	0000	1600	0300	0230
1700	0300	0230	0100	1700	0400	0330
1800	0400	0330	0200	1800	0500	0430
1900	0500	0430	0300	1900	0600	0530
2000	0600	0530	0400	2000	0700	0630
2100	0700	0630	0500	2100	0800	0730
2200	0800	0730	0600	2200	0900	0830
2300	0900	0830	0700	2300	1000	0930