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# **ROYAL AUSTRALIAN AIR FORCE**



## **RAAF BASE WILLIAMTOWN**

### **BASE AIRCRAFT NOISE MANAGEMENT PLAN**

Approved by:

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## AMENDMENT CERTIFICATE

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## **RAAF BASE WILLIAMS TOWN AIRCRAFT NOISE MANAGEMENT PLAN**

### **References:**

- A. Environment Impact Statement for the Flying Operations of the F-35A - 2014
- B. Approval Decision for the Flying Operations of the F-35A - 2015
- C. Hawk Lead-In Fighter Environment Impact Statement - 2002
- D. Consent Conditions for the Hawk Lead-In Fighter - 2003

### **Introduction**

1. Aircraft noise is an unavoidable consequence of Air Force operations and training. The impact of aircraft noise affects communities in different ways. Air Force has an obligation to reduce the effects of aircraft noise on local communities to the maximum extent possible, whilst achieving operational and training outcomes for Government. Consequently, aircraft noise is managed locally by personnel who know and understand community concerns.
2. RAAF Base Williamtown Base Aircraft Noise Management Plan (BANMP) informs and aims to improve public understanding of aircraft noise management strategies in the vicinity of RAAF Base Williamtown (WLM).
3. Located 30 kilometres north of Newcastle, RAAF Base WLM is Australia's premier fighter base. It is the home base for the tactical fighter element of Air Combat Group (ACG), and the Airborne Surveillance, Control and Intelligence (ASCI) element of Surveillance and Response Group (SRG).
4. RAAF Base WLM is responsible for the Salt Ash Air Weapons Range (SAAWR), which is located approximately 6km to the northeast of the base. SAAWR is used for air-to-surface gunnery and bombing training.
5. The primary users of SAAWR are ACG flying squadrons, which include Hawk 127 Lead-In Fighter, PC-21 and F-35A.

### **Background and scope**

6. The BANMP has been raised in compliance with the Air Force Aircraft Noise Management Strategy. The BANMP applies to all flying and ground operations involving Air Force aircraft, civil-registered aircraft leased by the Air Force, Defence contracted aircraft operated by external service providers and foreign military aircraft operating from RAAF Base WLM.
7. Newcastle Airport Proprietary Limited (NAPL) is located on the southern area of RAAF Base WLM and all civilian Regular Public Transport (RPT) and approved operator aircraft are required to comply with the RAAF Base WLM BANMP. All noise related RPT complaints are managed by NAPL.

### **Description of standard aircraft operations**

8. RAAF aircraft permanently based at RAAF Base WLM include:

- a. F-35A single jet engine fighter aircraft
- b. BAE Hawk 127 single jet engine, twin seat Lead-In-Fighter training aircraft
- c. Boeing E-7A twin turbofan engine, AEW&C aircraft<sup>1</sup>
- d. Pilatus PC-21 single turboprop engine, twin seat training aircraft
- e. Learjet 35/36 two pilot, 10 passenger, twin turbofan engine training support aircraft
- f. Augusta Westland AW139 turbo shaft helicopter operated by Canadian Helicopter Corporation for Search and Rescue (SAR).

9. Military aircraft hours of operation are Monday to Friday from 0600 to 2200 Australian Eastern Standard Time (AEST), and up to 2300 during Australian Eastern Daylight Time (AEDT) with most flying occurring after 8:00am. Night flying can be conducted at SAAWR until 2100 AEST and 2230 AEDT. Night flying is restricted to the minimum required to achieve training targets. Flying before and after these hours can occur, including on weekends, without notice.

10. RAAF Base WLM maintains an airfield curfew from 2200 to 0600 daily for civilian RPT aircraft movements. RAAF Base WLM is available 24 hours each day for all emergency services aircraft (Careflight, Westpac Rescue, NSW Air Ambulance, Royal Flying Doctors, NSW Rural Fire Service, NSW Police, etc) and these aircraft are authorised to operate at any time.

11. RAAF Base Williamtown utilises six primary training areas indicated at Figure 1. To reduce localised noise impacts, aircraft are dispersed across different training areas to achieve a fair distribution of noise across local communities. The majority of training (~70%) is conducted in the Eastern Training Area located overwater.

12. Where possible, RAAF Base WLM will advise the local community of non-routine flying events. This is not always possible due to changes in weather conditions or operational restrictions, which may require aircraft to operate over land training areas more frequently. Members of the public can access information regarding planned and non-routine flying via the Williamtown Flying Operations web site.

13. RAAF Base WLM has a single runway (see diagram in Annex A) 12/30 aligned south-east/north-west. Raymond Terrace is north-west of RAAF Base WLM, close to the aircraft routes for Runway 30 departures and Runway 12 arrivals. Runway 12 is serviced by an Instrument Landing System used to guide pilots to a safe landing in poor weather.

14. Preferred runway use is determined primarily by wind direction and is stipulated by Air Traffic Control (ATC) to ensure safety of flight. When ATC is not active, pilots determine the most suitable runway by examining the wind conditions from weather reports and windsocks located at the airfield.

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<sup>1</sup> E-7A aircraft generate similar noise levels of normal domestic Boeing 737 aircraft.

## **Variations to standard aircraft operations**

15. The most common foreseeable variation to the regular flying schedule at RAAF Base Williamtown is visiting aircraft from other Bases. At times, aircraft may operate outside normal airfield operating hours with approval granted by the Williamtown Air Base Executive Officer. Attempts will be made where possible to advertise changes to the community.

16. Defence has an extensive range of aircraft with differing engine configurations including:

- a. F/A-18F Super Hornet, twin jet engine
- b. EA-18G Growler, twin jet engine
- c. C-17A Globemaster III, four turbofan engines
- d. Boeing B737 Business Jet, two turbofan engines
- e. C-130J Hercules, four turboprop engines
- f. C-27J Spartan, two turboprop engines
- g. Dassault Falcon 7X, Tri- turbofan engines
- h. P-8A Poseidon, two turbofan engines
- i. P-3C Orion, four turboprop engines
- j. B350 King Air, two turboprop engines
- k. Various single and multi-rotor aircraft, single and twin turboshaft engines
- l. Visiting aircraft types from International Defence Forces.

17. Unforeseeable variations (caused by inclement weather and aircraft serviceability issues) will occur from time to time. Noise control minimisation measures will be implemented as required where possible.

## **Williamtown noise minimisation**

18. RAAF Base WLM maintains guidelines such as Base Standing Instructions and Range Standing Instructions, designed to provide a baseline for aircraft operations on Defence managed lands. All operators adhere to these instructions. Some of these instructions are designed to reduce noise impacts from aircraft operations. Air Combat Group (ACG) also has Standing Instructions, which provide the basis for aircraft operations flown by all ACG aircrew. These include:

- a. **Fly Neighbourly procedures.** ACG has developed fly neighbourly practices and guidance for subordinate units, including those that will operate the F-35A. The policy provides specific guidance for RAAF Base Williamtown, however a summary

of the main generic noise management guidelines are as follows:

- (1) Noise management is a briefing item for all flying activity. ACG aircrew conduct operations with due cognisance of the impact of noise on communities and residents under or in the vicinity of the flight path.
- (2) Departure and arrival measures include:
  - (a) The majority of departures to the north should occur over Grahamstown Dam and out over Medowie State Forest and Conservation Area.
  - (b) Pilots should not fly over Medowie below 1066m (3500 ft), and where practical avoid direct over flight of Medowie, Tanilba Bay, Lemon Tree Passage and Raymond Terrace.
  - (c) Jet aircraft will climb quickly to, or descend from 762 metres (2500 ft) at the 3.7km (2 nm) limit from the base, so there should be a decrease in noise levels for people living under the flight paths in and out of the Base.
- (3) Noise abatement procedures are adhered to within 10 nautical miles (18.5 kilometres) of the airfield, which complements extant local procedures.
- (4) Low-level coastal transits are flown such that all aircraft remain at least 1nm (1.8 kilometres) off shore in the vicinity of urban areas. The exception to this is coastal corridors near the Airbase – whereby aircraft are required to conduct coastal transits to assist airspace management and as directed by Air Traffic Control.
- (5) These noise abatement departure procedures are cancelled in the event of air traffic management directions or unsuitable weather conditions. In these circumstances, standard visual or instrument departure and arrival procedures apply, as safety remains the primary consideration.

b. **Aircraft engine maintenance ground operations.** Post-aircraft maintenance may require installed engine ground testing across all power settings. This particular type of testing is performed during the day wherever possible, but may at times be during the evening for operational reasons. The following time restrictions apply to all fast jet engine runs at RAAF Base WLM:

- (1) Between 0700hr to 2200hr - no restrictions
- (2) Between 2200hr and 2359hr, any engine runs are not to exceed a 75% power setting with sustained 75% run durations of no longer than 20 minutes with a 15 minute break between runs
- (3) Ground idle runs can be carried out until 2359hr with no set duration
- (4) Squadron B-shift ENGO / B-shift COORDs will be responsible for the validity and approval of all runs after 2200hr (ie required to bring the aircraft up as

serviceable for the morning flying).

### **F-35A noise management**

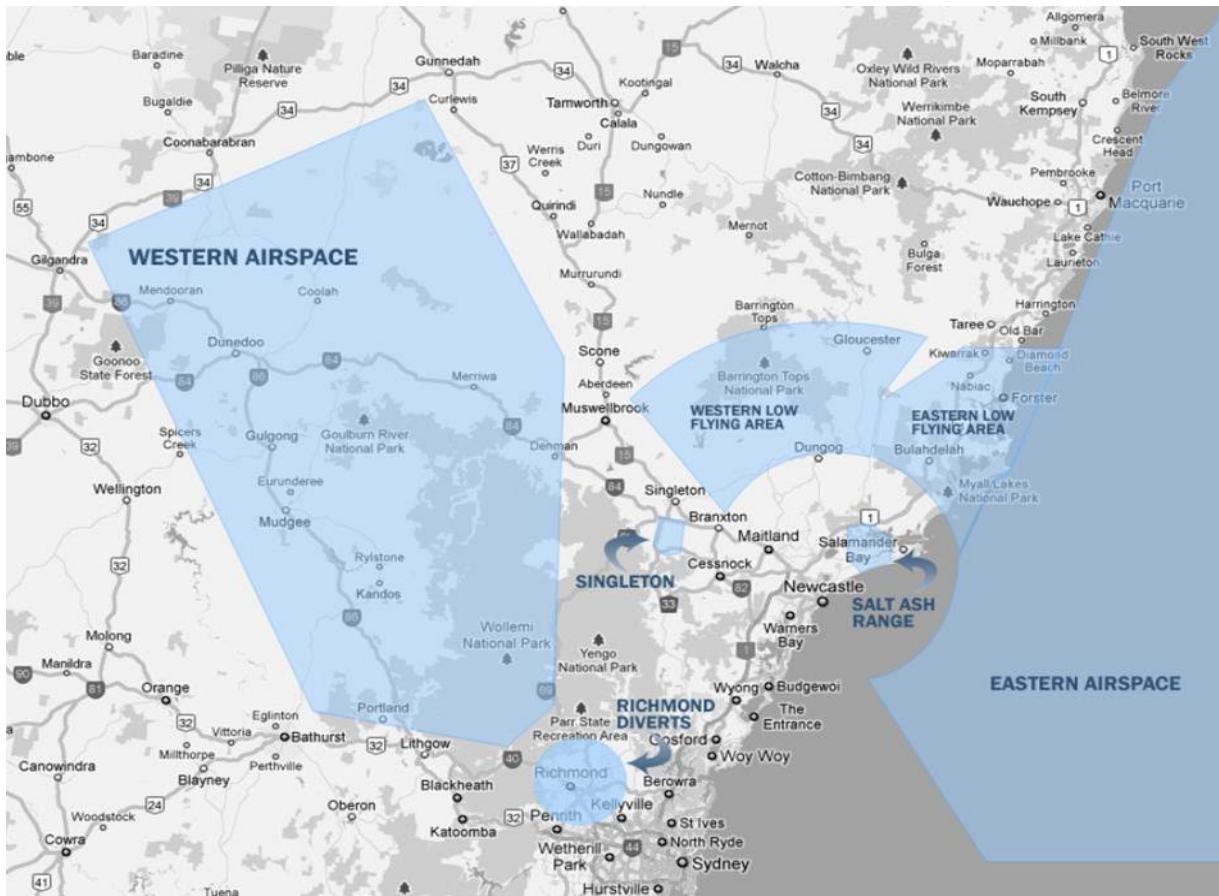
19. **Departure power settings.** As a condition of operating the F-35A at WLM, Air Force has determined specific departure power settings in order to limit noise exposure to affected communities. The guidelines for Engine Thrust Request (ETR) settings during departures by F-35A include:
  - a. For most departures off Runway 30, afterburner will be selected for take-off and then reduce settings quickly and as safely as possible back to military thrust (100% ETR) for initial climb. This combined with tight flight tracking up Grahamstown Dam has the effect of minimising noise for local sensitive receivers and residents by placing maximum distance between the aircraft and residential communities below.
  - b. For Runway 12, where possible military thrust is to be used, except when additional thrust is required for operational or safety reasons, such as heavyweight operations and adverse runway surface conditions.
20. Enclosure 1 contains details on the way in which F-35A operations will comply with the EPBC 2010/5747 Conditions of Approval.

### **Low flying**

21. Low flying is defined as flight below 500 ft. (152m) over a non-built up area or 1,000 ft (304m) over a built up area, above obstacles within 968 ft. (600m).
22. Designated low flying training areas are north of Williamtown and are named the Eastern and Western Low Flying Areas and Western Training Area. Refer to the [Williamtown Flying Operations](#) web site for more details.
23. Aircraft are approved to operate down to 150' (45m) AGL to support effective weapon employment training on SAAWR.

### **RAAF Base Williamtown Airspace**

24. In addition to the SAAWR, aircraft operating from RAAF Base Williamtown utilise nearby General Flying Training Areas (GFTAs) and Low Flying Areas (LFAs) for training and exercises. The locations of the local training areas are shown in Figure 1.



**Figure 1: RAAF Base Williamtown Airspace**

### Working with Community

25. Residents should consider the [Australian Noise Exposure Forecast \(ANEF\)](#) map for RAAF Base Williamtown, which provides information about aircraft noise exposure. ANEF maps provide a forecast of anticipated noise for a future period, for that location. The ANEF does not show every flight path and homeowners with properties outside of the ANEF map zones may still experience aircraft noise. The Noise and Flight Path Monitoring Systems (NFPMS) has been developed to provide a more accurate and useful record of flight paths of all aircraft and noise events. The [Environmental Impact Statement](#) for the F-35A aircraft, which will commence flying as from December 2018 should also be referred to for additional information regarding noise exposure.

26. RAAF Base Williamtown communicates regularly with the local council and community about on base operations in a variety of formal and informal means. The Williamtown Advisory Group is an important mechanism for local interaction and discussion in relation to aircraft noise. The [RAAF Base Williamtown and Salt Ash Air Weapons Range](#) flying operations web site provides details.

27. RAAF Base Williamtown makes all attempts to advise local communities of non-routine flying operations via Media Releases, social media, [Williamtown Flying Operations](#) web site, a 1800 number, and emails to local registered community residents. Annex B provides the Air Force Fly Neighbourly Policy.

28. Advance publication of flying activities over the SAAWR are provided in the Port Stephens Examiner at least twice each year. Media Releases and advisories are issued in the weeks prior to SAAWR flying activities.

## Noise monitoring

29. Defence operates Noise and Flight Path Monitoring Systems (NFPMS) to provide the community information about aircraft noise associated with military operations. The NFPMS website can be accessed at this link [Noise and Flight Path Monitoring System](#). On this site, RAAF Base Williamtown has an interactive database, which can be used to develop reports of aircraft flight paths and volume of aircraft traffic. The site also provides details of the monitoring station locations around RAAF Base Williamtown. The stations are not located in training areas outside the immediate Williamtown area.

30. The NFPMS was developed by Defence to provide a public record of flying activity at RAAF Base Williamtown and SAAWR. The NFPMS allows individuals to gain an understanding of all flying activity in the vicinity of the Base. Defence uses the data to publish a monthly report of fast jet flying activity, and all aircraft flight activity.

31. An example of the interactive NFPMS quarterly report for RAAF Base Williamtown at Figure 2.

32.

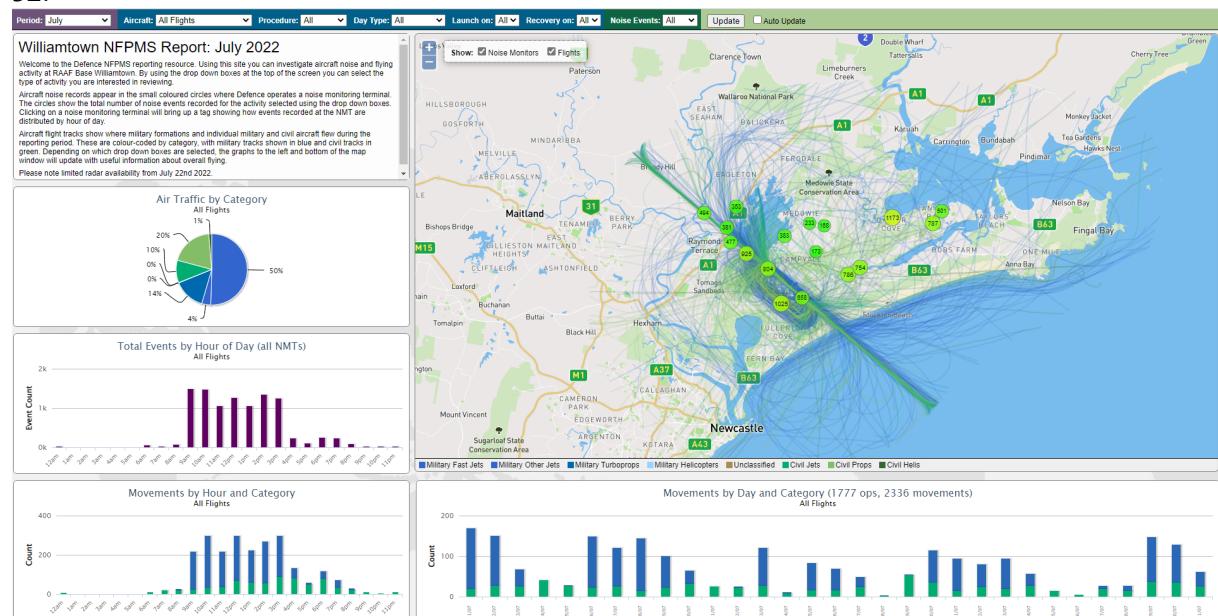


Figure 2: RAAF Base Williamtown NFPMS July 2022 Report

## Noise complaints

33. Complaints regarding Air Force aircraft noise should be made to the Noise telephone line on 1800 033 200 or submission of an [Aircraft noise complaint/enquiry form](#).

34. On receipt of a noise complaint, a Defence member will initiate an investigation to determine the occurrence and likely operating Squadron. Contact will be made to the complainant to provide information on the nature of the operations to the query. Complaints

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relating to civilian aircraft will be directed to Newcastle Airport.

35. All completed investigations are forwarded to Air Force Head Quarters Aircraft Noise/Environment, Canberra for further vetting. Noise complainants are able to contact the [Aircraft Noise Ombudsman](#) web site or:

Aircraft Noise Ombudsman  
GPO Box 1985  
Canberra City ACT 2601

[ano@ano.gov.au](mailto:ano@ano.gov.au)

**Review and update process**

36. This document will be reviewed annually as a minimum.

**Annexes:**

- A. [Williamtown Noise Abatement Procedures](#)
- B. [Air Force Fly Neighbourly Policy](#)

**Enclosure:**

- 1. [Compliance with Condition 3 for EPBC Approval 2010/5747 \(F35A\)](#)

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**WILLIAMTOWN NOISE ABATEMENT PROCEDURES**

1. The following procedures apply to all fast jet operations from RAAF Base Williamtown. The safe operation of the aircraft should not be compromised in attempts to adhere to noise abatement procedures. Poor weather, emergencies and specific Air Traffic Control restrictions are examples where aircrew may make deliberate decisions to operate their aircraft in contravention to the guidelines below. However, aircrew should make a clear distinction between variation from these guidelines due to valid external factors or for convenience.
2. The departure and arrival procedures apply in visual approach/departure conditions only. They do not apply to Standard Instrument Departures, SAAWR departures, Instrument Meteorological Conditions (IMC) or Special Visual Flight Rules (VFR) operations, or when given specific direction by ATC. Nor do they relax the requirements to avoid SAAWR if directed.
3. RAAF Base Williamtown flying operations generally require aircraft to track direct to their assigned training area or transit corridor once they are clear of the circuit area. Primarily dependent on weather conditions, aircraft will be given either a visual departure, or a Standard Instrument Departure (SID).
4. **Departures.** The following departure procedures should be followed:
  - a. **Runway 12.** Climb straight ahead to 3 nautical miles (nm) (5.56km) or 2,500 ft (762m) AMSL (whichever comes first) prior to turning for departure heading. The intent is to avoid Banksia Grove and then conduct the majority of the departure over water.
  - b. **Runway 30:**
    - (1) Gate 1-6, Hunter Corridor, and northerly departures in general. Climb straight ahead to 2nm (3.7km). The intent is to fly over Grahamstown Dam and turn to departure gate once above 3,500 ft (1066m) AMSL or upon reaching the northern shore of the dam. This should ensure aircraft turn to departure gates either north of Medowie or overfly Medowie not below 3,500 ft (1066m) AMSL. To achieve this either fly the above track visually from 2nm (3.7km) or at 2nm turn heading 360°, at 5nm (9.26km) or 3,500 ft(1066m)AMSL (whichever comes first) turn right to departure heading.
    - (2) Gate 7, Nowra 5, and southerly departures in general. Climb straight ahead to 2nm (3.7km). At 2nm, turn left to departure heading. Where possible, avoid delays to the left turn to minimise overflight of Raymond Terrace.
  - c. For either runway, be established on outbound track direct to gate (if applicable) by 10nm (18.2km).
  - d. Aircrew may request, or ATC may direct, cancellation of noise abatement departure procedures due traffic management or weather considerations. In these circumstances, standard visual departure procedures apply.

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5. **Recoveries.** Where practical avoid direct overflight of Medowie, Tanilba Bay, Lemon Tree Passage and Raymond Terrace. In general, where possible, aircraft should not fly below 2,500' (760m) AMSL until through the Initial Point (IP).

6. The intent on aircraft Recoveries is to allow visual recoveries via Initial and Pitch at altitudes down to 1,500ft (457m) AMSL where required due to weather. There is no intent to increase the number of instrument recoveries that are flown, as this is counterproductive to reducing noise levels.

7. **Circuit procedures.** Aircrew will avoid extending downwind Runway 12 over Raymond Terrace if practical.

8. **SAAWR.** The following concepts apply to operations at SAAWR:

- a. Where appropriate, the number of passes flown at SAAWR is to be minimised. This particularly applies to low angle profiles.
- b. Where practical, formations of four aircraft at SAAWR should occur on high angle bombing missions, and low angle profiles where practicable.
- c. Aircrew are to ensure only domestic recoveries are flown, with minimum power settings and nose up as sensible to minimise noise.

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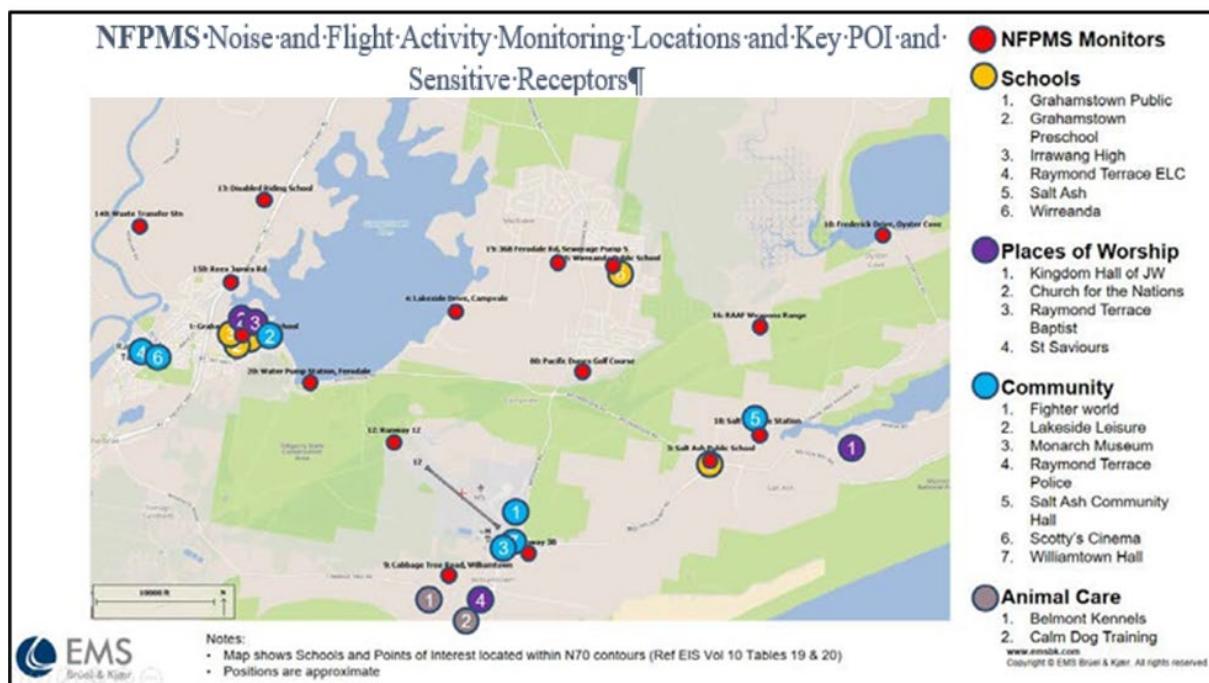
**AIR FORCE FLY NEIGHBOURLY POLICY**

1. Air Force is working with local communities near airbases, training areas and air weapons ranges to reduce noise impacts whilst balancing operational and training requirements.
2. Air Force commits to undertake flying operations in a manner which is considerate of our local communities, whilst maintaining safe operation of our aircraft and achieving the required levels of capability. Guided by these principles Air Force will:
  - a. comply with published airfield noise abatement procedures
  - b. use appropriate runway length for departures to maximise height over local communities
  - c. minimise the use of afterburner on fast jets during take-off and minimise noise during climb out
  - d. limit the speed of aircraft over populated areas
  - e. minimise flight over residential areas and other noise sensitive buildings such as hospitals, schools and farming communities
  - f. avoid low flying over known noise sensitive areas such as livestock yards
  - g. minimise flying late at night or early in the morning
  - h. include aircraft noise awareness in pilot training and familiarisation
  - i. notify local communities of major exercises or other non-routine training and flying activities such as flying displays.
3. To further minimise noise at some bases Air Force will:
  - a. limit continuous circuit training at night and on weekends and public holidays
  - b. use satellite airfields for repetitive aircraft circuits
  - c. vary flight paths to share noise
  - d. consider continuous descents to reduce noise
  - e. implement local engine run-ups procedures
  - f. minimise jet or turbo prop engine testing at night.
4. Refer to the [Defence Aircraft Noise](#) web site for all details.

## COMPLIANCE WITH CONDITION 3 FOR EPBC APPROVAL 2010/5747 (F35A)

## Background

1. F-35A Lightning II flying operations in Australia are subject to the conditions set out in EPBC approval 2010/5747.
2. Condition 3 of the approval requires Defence to prepare and implement aircraft noise management plans at RAAF Bases to minimise noise disturbance to sensitive receptors from the flying operations of the F-35A aircraft. Defence is also required to develop and implement corrective measures to the satisfaction of the Environment Minister if F-35A noise and flight activity levels exceed those predicted in the Environmental Impact Statement (EIS).
3. Figure 1 details sensitive receptors and other points of interest (POI) around RAAF Base Williamtown, including populated areas such as Raymond Terrace, Medowie and Salt Ash.



**Figure 1: RAAF Base Williamtown Noise and Flight Path Monitoring System (NFPMS)**  
– Noise and flight activity monitoring locations

## F-35A Introduction

4. The first F-35A aircraft arrived at RAAF Base Williamtown in December 2018, with regular flying operations commencing early 2019. Throughout 2019 and 2020, F-35A conducted a Verification and Validation (V&V) program to inform an Initial Operating Capability in late 2020. Final Operating Capability is scheduled for late 2023, after the full complement of 72 aircraft have arrived in Australia. Throughout the V&V program, F-35As will conduct limited detachments to RAAF Bases Amberley (2019), Tindal/Darwin (2020) and Townsville (2020). Regular F-35A flying operations will begin at the second Main

Operating Base (MOB) of RAAF Base Tindal during 2022.

### **Defence Policy and Existing Noise and Flight Activity Management**

5. Existing noise and flight activity management programmes include Air Force's Aircraft Noise Management Policy 2018-2023, Air Combat Group's Fly Neighbourly Policy, Base Noise Management Plans, the Hazard and Noise Database, and Air Traffic Control noise abatement procedures. F-35A operations will adhere to all Defence policy, management strategies and procedures. Air Force policy and procedures will adapt and evolve as experience operating F-35As increases.

### **Noise and Flight Activity Predictions**

6. The 2014 EIS contains predictions of F-35A noise associated with flight activity. The EIS includes an extensive range of noise predictions that can be broadly grouped as follows:

- a. **How loud is each F-35A flight?** This is a prediction of the maximum noise level from each F-35A flight at a given location ( $L_{Amax}$ ) with separate predictions for F-35As arriving and departing and using reduced thrust.
- b. **How often will the F-35A be heard?** This is a prediction of how often the F-35A will be louder than 70dB, 85dB and 100dB at a given location (N70, N85 and N100).
- c. **How much total noise will the F-35A produce?** This is a prediction of the Australian Noise Exposure Forecast (ANEF), and means when the F-35A is fully operational, how much noise will the aircraft produce over a year.

### **Noise and Flight Activity Monitoring**

7. Defence operates Noise and Flight Path Monitoring Systems (NFPMS) to monitor and report information about aircraft noise and operations associated with military operations at RAAF Bases Williamtown, Townsville and Amberley. NFPMS noise and flight activity monitoring locations at RAAF Base Williamtown are detailed in Figure 1. The NFPMS data is available in the public domain in a simple to understand format.

8. Defence will validate the EIS predicted noise and flight activity levels against actual F-35A data using the NFPMS over a five phase verification program. The five phase program is detailed in Table 1.

### **Compliance with Conditions of Approval**

9. How Defence will comply with Condition 3 of EPBC Approval 2010/5747 is detailed in Table 2.

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**Table 1: F-35A Noise and Flight Activity Verification Program**

	<b>Phase 1: Baseline</b>	<b>Phase 2: Initial</b>	<b>Phase 3: Detailed</b>	<b>Phase 4: Conclusions</b>	<b>Phase 5: Ongoing</b>
<b>Year</b>	2010 - 2018	2019	2020	2021	2022
<b>Main Operating Bases</b>	Williamtown	Williamtown	Williamtown	Williamtown	Williamtown and Tindal
<b>F-35 Operations</b>	-	Limited (2 – 8 aircraft)	Increasing (up to 33 aircraft)	Initial Operating Capability (IOC) (up to 48 aircraft)	Williamtown Ongoing (up to 49 aircraft) Tindal Limited (up to 15 aircraft)
<b>Objectives</b>	Noise baseline	Initial checks	Build Data Set	Comparison to prediction	Sustained monitoring
<b>Key Elements</b>	Long term noise data set	Initial data collection of noise and flight activity <ul style="list-style-type: none"> <li>• L<sub>Max</sub> initial checks</li> <li>• F-35A procedures checks</li> </ul>	Build decisive data set <ul style="list-style-type: none"> <li>• Verify L<sub>Max</sub></li> <li>• Check key assumptions used to generate long term noise predictions</li> <li>• N70,85,100</li> <li>• ANEF</li> </ul>	<ul style="list-style-type: none"> <li>• Monitoring checks at Forward Operating Bases</li> <li>• Compare results to predictions</li> <li>• Investigate materiality of any exceedance</li> <li>• Determine if corrective measures required</li> <li>• Implement &amp; verify corrective measures (if required)</li> </ul>	Report Consult Review Update
<b>Deliverable</b>		Letter of Commencement to the Department within 10 days of commencement of operations (planned to be mid- January 19).	Annual Compliance Report January 2020 - January 21 published on Defence Noise Website by April 2021.	Annual Compliance Report January 2021 - January 2022 published on Defence Noise Website, and Biennial Compliance Report January 2019 – January 2020 published July 2021.	Annual Compliance Report to be published March 2023.  Annual Review of BNMPs conducted

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					by March 2023. This includes RAAF Bases Williamtown, Tindal, Darwin and Townsville.
					Biennial Compliance Reports January 2021 – December 2022 due to the Department by July 2023. includes RAAF Bases Williamtown, Tindal, Darwin and Townsville.
					Biennial Compliance Reports January 2021 – December 2022 due to the Department by July 2023.

Annual Compliance Report January 2019 - January 20 published on Defence Noise Website by April 2020  
Annual review of BNMPs conducted by March 2020.

Annual review of BNMPs conducted by March 2021.

Base Noise Management Plans of RAAF Base Townsville due to the Department July 2020.

Annual review of BNMPs conducted by March 2022.

Biennial Compliance Report January 2019 – January 2020 due to the Department by July 2021.

Annual review of BNMPs conducted by March 2022.  
Base Noise Management Plans of RAAF Bases Tindal and Darwin due to the Department July 2021.

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**Table 2: Compliance with Condition 3 of EPBC Approval 2010/5747**

Condition	Condition Requirement	Response
3	Prepare and implement Aircraft Noise Management Plan(s), as described in the Aircraft Noise Management Strategy, at RAAF Base(s) to minimise noise disturbance at sensitive receptors from the flying operations of the F-35A Lightning II aircraft. The plan(s) must include, but not be limited to, the following measures:	<p>RAAF Bases, as defined by the approval definitions, are the main operating bases RAAF Bases Williamtown (including Salt Ash Air Weapons Range), Tindal, and the forward operating bases Townsville and Darwin.</p> <p>Air Force has prepared the RAAF Base Williamtown Aircraft Noise Management Plan (Document ID: G1082525/G14263835). It is an operational document which addresses noise arising from all Air Force aircraft permanently based at RAAF Base Williamtown and Salt Ash Air Weapons Range, including F-35A aircraft.</p> <p>The RAAF Base Williamtown Aircraft Noise Management Plan is prepared and implemented as described in, and works towards the objectives of, the Air Force Aircraft Noise Management (ANM) Policy.</p> <p>Air Force maintains an Australia-wide Hazard and Noise Database (HAND), which is centrally updated periodically and depicts all hazards and noise sensitive areas on a map. Pilots use HAND data in order to plan low level flying operations outside of Air Traffic Control (ATC) controlled airspace. When within ATC controlled airspace, pilots follow ATC procedures for arrivals, departures and training profiles (practice circuits and instrument approaches).</p> <p>This approval condition is supported by Air Force's Aircraft Noise Management Policy. See link <a href="http://www.defence.gov.au/AircraftNoise/_Master/Docs/Default/AirForceAircraftNoiseManagementStrategyBrochure2018.pdf">http://www.defence.gov.au/AircraftNoise/_Master/Docs/Default/AirForceAircraftNoiseManagementStrategyBrochure2018.pdf</a></p> <p>The RAAF Base Williamtown (WLM) Base Aircraft Noise Management Plan (BANMP) was approved by the Department of Environment and Energy now Department of Climate Change, Energy, the Environment and Water (DCCEEW) delegate on 3 December 2018. The development of the RAAF Base WLM BANMP is raised in compliance with the Air Force Aircraft Noise Management Strategy and ensures compliance with elements of the Conditions of Approval for the Flying Operations of the F-35A Lightning II. At the end of 2022, RAAF will have completed the five stage F-35A Noise and Flight Activity Verification Program carried out as part of the transition of F/A-18A/B Hornets to F-35A Lightning II aircraft at RAAF Base Williamtown. The RAAF Base WLM BANMP includes relevant elements of Condition 3 measures, and the annual and biennial reporting covers off on remaining elements of Condition 3 noted below.</p>

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3.a	Comparison of actual flight activity of F-35A aircraft with those predicted in the Environmental Impact Statement;	<p>Base Aircraft Noise Management Plans (BANMPs) for other RAAF Bases have been prepared as part of the Air Force Aircraft Noise Management Strategy and progressively uploaded to the Defence Noise website over 2021 and 2022. BANMPs were prepared for RAAF Bases prior to F-35A exercises and operations in each location. The documents were submitted to DCCEEW on completion and will be updated annually. The BANMPs can be located on the Defence Aircraft Noise website see link – <a href="#">Defence Aircraft Noise: Department of Defence</a>.</p> <p>BANMPs included measures to align with Condition 3 where applicable. Activities undertaken to inform the BANMPs, and with Condition 3 measures include:</p> <p>As documented in the approved RAAF Base WLM BANMP, the first biennial noise report F-35A Noise and Flight Path Activity December 2018 - December 2020 included comparison of flight activity with EIS predictions. See Pages 15 – 39, Sections 4 to 4.8.2. Flight activity for the period December 2018 – December 2020 is less than predicted in the EIS primarily due to the decreasing F/A-18A/B Classic Hornet aircraft numbers. At the end of 2022, 46 F-35A Lightning II aircraft are based at RAAF Base WLM.</p> <p>F/A-18A/B Hornet operations ceased in December 2021.</p>
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3.b	A review of existing noise management programmes	<p>Existing noise and flight activity management programmes include Air Force's Aircraft Noise Management Policy 2018-2023, Air Combat Group's Fly Neighbourly Policy, RAAF Base Williamtown Aircraft Noise Management Plan, the Hazard and Noise Database, and Air Traffic Control noise abatement procedures.</p> <p>A review of existing noise management programmes at RAAF Base WLM was conducted as part of the biennial reporting – <b>Review of F-35A Aircraft Noise Management and Reporting</b> Pages 9-12; Section 3.1 to 3.1.5 – see <a href="#">Defence Aircraft Noise : Department of Defence</a> – Noise Reporting</p> <p>In summary, the report assessed the suitability of noise management programmes for addressing community impacts due to noise associated with F-35A aircraft operations and considered appropriate for the following reasons:</p> <ul style="list-style-type: none"><li>• Defence's policies and systems are comprehensive and contain the necessary elements to effectively manage F-35A aircraft operational noise;</li><li>• Each element of Defence's policies and systems is appropriately documented, integrated and communicated at different organisational levels to support the management of F-35A aircraft noise levels;</li><li>• There are mechanisms that aim to limit the occurrence of noise events, minimise noise levels when they do occur where practical, and register and investigate complaints to identify further opportunities to reduce aircraft noise;</li><li>• The systems in place are dynamic (i.e. reviewed and updated regularly) and effective at resulting in changes to reduce community noise impacts;</li><li>• F-35A aircraft noise mitigation measures are consistent with those nominated by other international air forces that operate the aircraft;</li><li>• The noise management programmes are proportionate to the requirements to manage F-35A aircraft noise levels, and include review processes to enable management measures to be adjusted; and</li><li>• The number of complaints for RAAF Base Williamtown and SAAWR have been relatively consistent over the past eight (8) years, and less than half compared to 10 years ago, providing further support that existing noise management programmes, including the review and update processes are appropriate.</li></ul> <p>Further information can be sourced from the report Pages 9-25; Section 3.1-3.6.</p> <p>The next <b>Review of F-35A Aircraft Noise Management and Reporting</b> will comprise 2021 and 2022 flying years will be completed and uploaded to defence websites in July 2023.</p>
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3.c	<p>Monitoring, to validate predicted noise impacts to sensitive receptors at RAAF Base Williamtown (including Salt Ash Air Weapons Range), RAAF Base Tindal and RAAF Base Townsville. This must include, but not be limited to:</p> <ul style="list-style-type: none"><li>i. An investigation of alternative noise measurement and analysis methods;</li><li>ii. Utilisation of Noise and Flight Path Monitoring Systems (where installed), to provide ongoing noise information, and the development of a noise measuring system at RAAF Base Tindal;</li><li>iii. Comparison of actual measured F-35A aircraft noise levels with those predicted in the Environmental Impact Statement; and</li></ul>	<p>3c. The first biennial report, F-35A Noise and Flight Path Activity December 2018 - December 2020 included monitoring data to validate predicted noise at sensitive receptors. Please refer to link: <a href="#">Defence Aircraft Noise: Department of Defence</a> Noise Reporting.</p> <ul style="list-style-type: none"><li>i. The <b>Review of F-35A Aircraft Noise Management and Reporting</b> included an investigation of alternative noise measurement and analysis methods. For reference go to Pages 36 - 52, section 4.3 – 4.3.6. The review indicated current system was a sophisticated and modern system – designed as a fit for purpose model required for monitoring noise for military fast jets.</li><li>ii. RAAF Base WLM NFPMS produces monthly reports, and annual reports to provide ongoing noise information to local residents. Defence has reported NFPMS data to local communities since 2005. In 2013, Defence introduced an innovative webpage reporting system to replace paper-based reporting. Noise monitoring terminals have been installed at RAAF Bases Tindal and Darwin over the period Nov 2021 to January 2022 to monitor noise from aircraft operations. The NFPMS data is used to produce monthly, and annual noise reports for flying operations for RAAF Base TDL and WLM. Further information can be sourced through the interactive webpage reporting system – see link: <a href="#">Defence Aircraft Noise: Department of Defence</a></li></ul> <p>Comparisons were conducted and documented in the first biennial noise report F-35A Noise and Flight Path Activity December 2018 - December 2020. The details can be found at Pages 48-50, Section 5 to 5.1.4 and Appendix E. The findings of F-35A Noise and Flight Path Activity December 2018 - December 2020 indicate that flying operations and noise level changes associated with the F-35A aircraft are generally consistent with the EIS. Further comparisons of actual noise measurements versus the EIS will be conducted throughout 2021-22. The results will be addressed in the second biennial report to be presented to DCCEEW in July 2023. This will combine the data/results gathered as part of the F-35A Noise and Flight Activity Verification Program, an important part of the RAAF Base WLM BANMP 2018, and included in 2019, 2020, 2021 reviews.</p>
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	<p>3c.iv. The location of existing NFPMS noise and flight activity monitors have been selected by Defence in consultation with stakeholders, to record aircraft noise and flight activity at a significant number of sensitive receptors. In 2014, additional noise and flight activity monitors were added to the RAAF Base Williamtown NFPMS to ensure a better coverage across sensitive receptors. The noise and flight activity monitoring locations can be seen at Figure 1, and are listed below:</p> <ul style="list-style-type: none"><li>• Bellevue St, Riverview Ridge.</li><li>• Cabbage Tree Road, Williamtown.</li><li>• Pacific Highway, Raymond Terrace.</li><li>• Frederick Drive, Oyster Cove.</li><li>• Grahamstown Public School.</li><li>• Lakeside Drive, Campvale.</li><li>• Pacific Dunes Golf Course.</li><li>• Salt Ash Air Weapons Range.</li><li>• Salt Ash Public School.</li><li>• Waste Transfer Station.</li><li>• Wirreanda Public School.</li></ul> <p>A further six noise terminals were established in 2013 in consultation with the community.</p> <ul style="list-style-type: none"><li>• Tanilba Golf Course.</li><li>• Tanilba Primary School.</li><li>• Finnan Park.</li><li>• Ferodale Road, Medowie.</li><li>• Salt Ash Fire Station.</li></ul> <p><i>(Source EIS F-35A - Volume 2 - 9.9)</i></p> <p>Noise monitoring locations were reviewed in <b>Review of F-35A Aircraft Noise Management and Reporting</b> go to page 38, Section 4.3.4. There were no recommendations for changes to the siting of noise monitoring locations, beyond provision of mobile noise monitors in specific locations if required.</p> <p>An additional review will be conducted as part of the second biennial report to be completed in July 2023. This reports on 2021 and 2022 years of flying operations.</p>
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3.d	<p>If actual measured F-35A aircraft noise levels, and flight activity exceed those predicted in the Environmental Impact Statement then corrective action be developed and implemented at RAAF Base(s) and forward operating RAAF Base(s), until an appropriate assessment of noise levels and flight activity has been reached, as agreed with the Minister.</p>	<p>3d: Air Force has conducted considerably less flying activity since the introduction of the F-35A at RAAF Base WLM than identified in the EIS. This will be the case until squadrons reach full capacity by the end of 2023. The first F-35A aircraft arrived at RAAF Base Tindal on 3 December 2021. Aircraft will gradually be introduced through to the end of 2023.</p> <p>The findings of F-35A Noise and Flight Path Activity December 2018 - December 2020 indicate that flying operations and noise level changes associated with the F-35A aircraft are generally consistent with the EIS. However, as a result of the higher departure thrust settings required for safety reasons, the higher than predicted noise levels associated with these operations warrant the development of corrective measures in accordance with Condition 1 of the approval decision.</p> <p>Air Combat Group (ACG) trialled alternative departure procedures at RAAF Base WLM from mid-2019 to December 2020. The aim of the trials, conducted in accordance with the RAAF Base WLM Aircraft Noise Management Plan F-35A Noise and Flight Activity Verification Program, was to identify procedures to minimise noise for sensitive receivers that do not compromise the safe operation of the F-35A aircraft, or compromise the safety of the public and aircrew, while still achieving training and operational requirements. The noise test program was designed to be carried out from the first flying operations of the F-35A aircraft in Australia as from January 2019 through to December 2022.</p> <p>In 2022, ACG moved into Phase 5 of the verification program, which has involved ongoing noise monitoring and comparison at RAAF Base WLM and Salt Ash Air Weapons Range. Building on the information gained as a result of the extensive noise verification program at RAAF Base WLM during 2021-22, Defence will provide this data for input into the biennial reports, to be published in July 2023. Utilising this data, and in consideration of the ongoing maturation of the F-35A system, ACG will seek to finalise procedures designed to minimise aircraft noise as much as possible without comprising operations or safety. Where required and is considered to be worthwhile for noise minimisation, ACG will replicate this departure profile if it is assessed to be relevant at the other main operating base RAAF Base TDL; and other forward operating bases where applicable.</p>
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	<p>Flying activity and noise levels have been monitored throughout 2022 to assess the success of the revised departure profile in minimising noise within safety and operational constraints. The outcomes of this program will be assessed as part of the F-35A Noise and Flight Path Activity December 2021 - December 2022, and published in July 2023.</p> <p>Appropriate corrective measures will take into account environmental impact as well as operational, safety and training needs. Corrective actions will be applied until an agreement with the Environment Minister is reached.</p>
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3.e	<p>Reporting, to ensure clear and timely public access to noise levels and flight activity monitoring data. This must include but not be limited to:</p> <ul style="list-style-type: none"><li>i. conducting a biennial evaluation of the effectiveness of flight activity monitoring and programmes at RAAF Base(s) until agreed in writing by the Minister;</li><li>ii. annual publication on the Defence Aircraft Noise website of:<ul style="list-style-type: none"><li>i. noise levels and flight activity monitoring data of the F-35A aircraft; and</li><li>ii. a comparison of actual noise levels and flight activity of the F-35A with those predicted in the Environmental Impact Statement. This must include, but not be limited to: noise management measures; days and hours of operation; flight paths used to reduce noise; and frequency and type of activities that occur at Salt Ash Weapons Range.</li></ul></li><li>iii. annual review and update of the Aircraft Noise Management Plan for the first three years following the commencement of the action, and then biennially, unless agreed in writing by the Minister.</li></ul> <p>3e.i. The F-35A Noise and Flight Path Activity December 2018 - December 2020 was published in July 2021. The report includes sections evaluating the effectiveness of flight activity monitoring and programmes at RAAF Base WLM. See page 46, section 4.10). Please see link - <a href="#">Defence Aircraft Noise: Department of Defence</a>. F-35A Noise and Flight Path Activity December 2018 - December 2020 covers the requirements of this condition.</p> <p>ii. The NFPMS interactive noise level and flight activity monitoring website is available in addition to the annual compliance reports and the biennial reports. The website provides detailed information on noise management measures; days and hours of operation; flight paths; and the frequency of activities that occur at Salt Ash Weapons Range. The information can be sourced via an interactive portal. Defence publishes quarterly and annual NFPMS reports on the Defence Aircraft Noise website at <a href="http://www.defence.gov.au/aircraftnoise">http://www.defence.gov.au/aircraftnoise</a>.</p> <p>iii. The first RAAF Base Williamtown BANMP review was conducted and updated on 6 December 2019; reviewed and updated 2 December 2020; reviewed and updated 6 December 2021 and reviewed and update by Dec 2022. The RAAF Base Williamtown BANMP is available on the Defence website at <a href="#">Defence Aircraft Noise: Department of Defence</a>.</p> <p>3e.iii The information requested in Condition 3 a, b, c, d will be outlined in the BANMPs, and documented in the annual report published on Defence's Aircraft Noise website. Base NMPs will continue to be reviewed annually, in accordance with Air Force's Aircraft Noise Management Policy and the F-35A conditions of approval. Condition 9 will be adhered to in the review and update process.</p> <p>Approval condition also met through the application of Air Force's Aircraft Noise Management Policy. An abbreviated publicly released version can be seen at: <a href="http://www.defence.gov.au/AircraftNoise/_Master/Docs/Default/AirForceAircraftNoiseManagementStrategyBrochure2018.pdf">http://www.defence.gov.au/AircraftNoise/_Master/Docs/Default/AirForceAircraftNoiseManagementStrategyBrochure2018.pdf</a></p>
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3.f	<p>Consultation activities, to ensure adequate communication with stakeholders, including local residents and relevant authorities. Consultation activities must include, but not be limited to:</p> <ul style="list-style-type: none"><li>i. regular review of communication arrangements with affected stakeholders and communities;</li><li>ii. clear and timely notification of information regarding varied flight activity and future plans, which may impact stakeholders, including but not limited to:<ul style="list-style-type: none"><li>i. days and hours of operation;</li><li>ii. flight paths; and</li><li>iii. higher noise events.</li></ul></li><li>iii. continued participation at community forums and</li><li>iv. development of a concise location specific package of key information related to noise levels and flight activity monitoring data that addresses community concerns in an easily understandable manner for the lay person.</li></ul>	<p>3f. i. Defence has been conducting biannual Williamtown Advisory Group (WAG) meetings since 2012. The WAG provides a regular forum for local residents, local council representatives and state government officers to meet with senior Air Force officers to discuss areas of interest, including aircraft noise and local land planning activities.</p> <p>3. f .ii. Defence has prepared a Community Engagement and Information Provision Plan (CEIP) for RAAF Base Williamtown. The CEIP was promulgated on 9 December 2018 and reviewed by the WAG in October 2019, and October 2020. The CEIP was uploaded to the Defence website by 10 December 2018. The CEIP remains current and unchanged. Reviewed in 2021 and 2022. <a href="https://defence.gov.au/AirCraftNoise/Environment/F35EIS.aspx#:~:text=RAAF%20Base%20Williamtown%20Community%20Engagement%20and%20Information%20Plan%20Nov%202018.">RAAF Base Williamtown Community Engagement and Information Plan – Nov 2018</a> <a href="https://defence.gov.au/AirCraftNoise/Environment/F35EIS.aspx#:~:text=RAAF%20Base%20Williamtown%20Community%20Engagement%20and%20Information%20Plan%20Nov%202018.">https://defence.gov.au/AirCraftNoise/Environment/F35EIS.aspx#:~:text=RAAF%20Base%20Williamtown%20Community%20Engagement%20and%20Information%20Plan%20Nov%202018.</a></p> <p>As documented in the CEIP, Defence regularly engages with communities on communication arrangements, including clear and timely notification regarding varied flight activity such as an Air Force Flying Activity page <a href="#">Flying activity   Air Force</a> which is a link on the bottom of media alerts and media releases relating to all non-routine flying activity conducted near RAAF Base WLM and locations around Australia.</p> <p>The Plan outlines current procedures (including media releases, media alerts, public notices, social media updates, email notifications and various noise and flight activity websites) to inform residents of non-routine aircraft operations (including but not limited to 3.f.ii (i), (ii) and (iii)) in accordance with the principles defined the Air Force Aircraft Noise Management 2018-23 Policy.</p> <p>3. f. iii. The WAG is a community forum Defence is committed to participating in, on an ongoing basis.</p> <p>3f.iv. Concise location specific information related to noise levels and operational flight activity monitoring is already available on the Defence Noise Website for Williamtown and Salt Ash, Tindal, Darwin, Townsville, Amberley, Edinburgh and Pearce. Defence maintains location-specific information about F-35A Lightning II EIS predictions on the Defence website. Defence also provides access to aircraft noise levels and flight activity monitoring data on the Defence website. See <a href="#">Defence Aircraft Noise : Department of Defence</a>. Defence will continue to refine and develop information for specific locations relating to noise levels and flight activity monitoring data as knowledge surrounding F-35A operations grows. Information is reviewed annually. Other information available to the community such as the Annual Compliance Reports published on the Defence Noise Website and the quarterly and annual NFPMS reports.</p>
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3.g	<p>Complaint Handling and Resolution, to ensure enquiries and complaints about F-35A Lightning II aircraft flying operations are received, recorded, reported, responded to and resolved, as defined in the Aircraft Noise Management Strategy.</p> <p>The plan must be submitted to the Department for approval. The approval holder must not commence the action unless the Minister has approved this plan.</p>	<p>3g: Defence maintains a robust complaint handling system under Enclosure 1 of the RAAF Base Williamtown BANMP. Complaints are recorded as advised in the RAAF Base Williamtown BANMP and in accordance with the RAAF Aircraft Noise Management Strategy.</p> <p>The RAAF Base Williamtown Base Aircraft Noise Management Plan (BANMP) was approved by the Department of Environment and Energy (now DCCEEW) delegate on 3 December 2018 and has undergone subsequent documented reviews on an annual basis. The BANMP can be found at: <a href="#">Defence Aircraft Noise: Department of Defence</a></p> <p>This condition is also supported by actions taken to satisfy conditions 1, 2 and 4. In addition individuals can contact the:-</p> <p>Aircraft Noise Ombudsman GPO Box 1985 Canberra City ACT 2601 Email: <a href="mailto:ano@ano.gov.au">ano@ano.gov.au</a></p> <p>This is in compliance with the Air Force Aircraft Noise Management Policy Objectives 3.a and 3.b</p>
3.h (condition end note)	<p>The plan must be submitted to the Department for approval. The approval holder must not commence the action unless the Minister has approved this plan.</p>	<p>The RAAF Base Williamtown Aircraft Noise Management Plan was submitted to the Department of the Environment on 26 October 2018.</p> <p>The Plan was approved by a delegate of the Environment Minister on 6 December 2018.</p> <p>Air Force has developed Base Aircraft Noise Management Plans for operating and forward operating bases such as Tindal, Townsville, Darwin, Pearce and Edinburgh and have been uploaded on the Defence Aircraft Noise website. Plans are reviewed annually.</p>

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