

**PLANNING REPORT**

**SUBJECT:** P ENGLISH - MATERIAL CHANGE OF USE - AIR SERVICES (PRIVATE AIRSTRIP) - LOT 1 ON RP746336 - 343 FANTIN ROAD, KOAH - DA/17/0029

**MEETING:** Ordinary

**MEETING DATE:** 21 March 2018

**REPORT OFFICER'S TITLE:** Planning Officer

**DEPARTMENT:** Corporate and Community Services

**APPLICATION DETAILS**

| APPLICATION                 |  | PREMISES       |                       |
|-----------------------------|--|----------------|-----------------------|
| <b>APPLICANT</b>            | P English  | <b>ADDRESS</b> | 343 Fantin Road, Koah |
| <b>DATE LODGED</b>          | 23 June 2017   | <b>RPD</b>     | Lot 1 on RP746336     |
| <b>TYPE OF APPROVAL</b>     | Development Permit                                       |                |                       |
| <b>PROPOSED DEVELOPMENT</b> | Material Change of Use – Air Services (Private Airstrip) |                |                       |

|                            |  |              |                  |
|----------------------------|--|--------------|------------------|
| <b>FILE NO</b>             | DA/17/0029                                 | <b>AREA</b>  | 73.637 ha        |
| <b>LODGED BY</b>           | Liz Taylor Town Planner                    | <b>OWNER</b> | P, S & C English |
| <b>PLANNING SCHEME</b>     | Mareeba Shire Council Planning Scheme 2016 |              |                  |
| <b>ZONE</b>                | Rural Zone                                 |              |                  |
| <b>LEVEL OF ASSESSMENT</b> | Impact Assessment                          |              |                  |
| <b>SUBMISSIONS</b>         | 182  |              |                  |

**ATTACHMENTS:**

1. Proposal Plan/s
2. Noise Impact Assessment prepared by Dedicated Acoustics dated 3 November 2017
3. Submitter letters (distributed separately)

**EXECUTIVE SUMMARY**

*Council is in receipt of an impact assessable development application described in the above application details. The subject site contains an existing private grassed airstrip and aircraft hangar with existing use rights to conduct up to 52 flights per annum (approved by Council on 19 May 2010 – MCU/09/0050). The landowner/applicant now proposes to increase the total number of flights per annum to 365 flights, averaging one (1) flight per day, with the ability to conduct up to six (6) flights per day if desired.*

*During public notification of the application, 182 submissions were received by Council, of which 169 objected to the proposed development, while 13 were in support.*

*The application and supporting material has been assessed against the Mareeba Shire Council Planning Scheme 2016 and is not considered to conflict with any relevant aspect of the Planning Scheme. In terms of land use suitability, a private airstrip within the Rural zone is not considered to be an inconsistent use, however, this airstrip is situated in proximity to the Koah Township and is surrounded by a mix of residential and rural residential/lifestyle lots. As such, noise impacts as a result of the proposed increased use of the airstrip and the potential resultant loss of amenity are the primary planning consideration when assessing the application.*

*In order to comply with the relevant aspects of the Planning Scheme, it had to be demonstrated that the proposed intensification or increased use of the airstrip would not cause unacceptable noise impacts and loss of amenity for surrounding residences. 'Amenity' in itself is highly subjective and usually interpreted differently depending on an individual's viewpoints regarding environmental qualities. This is evidenced by a combination of support and opposition for the proposed development from a number of different landowners sited immediately adjacent the airstrip who would be expected to be impacted the greatest. For this reason, Council officers requested that the applicant commission a noise impact assessment (NIA) to assist in determining the level of noise impact associated with the development.*

*The NIA included calibrated noise readings at three different locations for all three (3) planes owned by the applicant, and all three test locations were in proximity to immediate adjoining dwellings. Based on the readings documented within the NIA, the planes created a noise disturbance (increase in noise) of between 20 – 50 decibels, depending on test location and background noise levels. Considering the airstrip can currently lawfully be used by two (2) of the three (3) planes involved in the assessment for up to 52 flights per year, the proposed increase in the frequency of flights becomes integral when determining if the developments level of noise nuisance/impact is unacceptable. Also measured was the noise levels of the three (3) planes when flying over the site (overflights) which has also been flagged by submitters as a noise nuisance.*

*The NIA concluded that some noise impacts will be felt by surrounding residences based on an average usage of one (1) flight per day and up to six (6) flights in any given day, however the level of impact is relatively minor and limited to a sparsely populated area. Noise impacts are also lessened due to the fact that flights only occur during the less sensitive daylight hours, are very short in duration (average of 34 seconds) and affected landowners are provided with substantial respite between each flight. Furthermore, overflight noise levels were generally less than that of commercial passenger jets which fly over the Koah area on a daily basis.*

*In order to help minimise noise and amenity impacts associated with the proposed development, it is recommended that conditions be attached to any approval limiting the frequency of flights to a maximum of seven (7) flights in any given calendar week. This will ensure the 365 flights applied for are spread over the course of a year, and if more than one (1) flight is carried out on any given day during that week (allowable maximum of 6 flights) there will be resultant day/s within that same week where flying would not be permitted as the seven (7) flight weekly limit will still apply.*

*Based on the above considerations and with the inclusion of conditions that will limit flight frequency, it is considered that the proposed intensification of the airstrip use could proceed without causing unacceptable noise impacts and loss of amenity for surrounding residential uses.*

*Draft conditions were provided to the applicant care of their consultant and have been agreed to.*

*It is recommended that the application be approved, subject to the conditions included below.*

**OFFICER'S RECOMMENDATION**

"1. That in relation to the following development application:

| APPLICATION                 |  | PREMISES       |                          |
|-----------------------------|--|----------------|--------------------------|
| <b>APPLICANT</b>            | P English  | <b>ADDRESS</b> | 343 Fantin Road,<br>Koah |
| <b>DATE LODGED</b>          | 23 June 2017   | <b>RPD</b>     | Lot 1 on RP746336        |
| <b>TYPE OF APPROVAL</b>     | Development Permit                                       |                |                          |
| <b>PROPOSED DEVELOPMENT</b> | Material Change of Use – Air Services (Private Airstrip) |                |                          |

and in accordance with the Sustainable Planning Act 2009, the applicant be notified that the application for a development permit for the development specified in (A) is:

Approved by Council in accordance with the approved plans/documents listed in (B), subject to assessment manager conditions in (C), assessment manager's advice in (D), relevant period in (E), further permits in (F), and further approvals from Council listed in (G);

And

The assessment manager does **not** consider that the assessment manager's decision conflicts with a relevant instrument.

(A) APPROVED DEVELOPMENT: Development Permit for Material Change of Use – Air Services (Private Airstrip)

(B) APPROVED PLANS:

| Plan/Document Number  | Plan/Document Title               | Prepared by | Dated     |
|-----------------------|-----------------------------------|-------------|-----------|
| 32301-01 Sheet 1 of 2 | Flight Plan For Take Off to South | Veris       | 1/06/2017 |
| 32301-01 Sheet 2 of 2 | Flight Plan For Take Off to North | Veris       | 1/06/2017 |

(C) ASSESSMENT MANAGER'S CONDITIONS (COUNCIL)

(a) Development assessable against the Planning Scheme

1. Development must be carried out substantially in accordance with the approved plans and the facts and circumstances of the use as submitted with the application, subject to any alterations:
  - found necessary by Council's delegated officer at the time of examination of the engineering plans or during construction of the development because of particular engineering requirements; and
  - to ensure compliance with the following conditions of approval.
2. Timing of Effect

The conditions of the development permit must be complied with to the satisfaction of Council's delegated officer prior to the commencement of the use except where specified otherwise in these conditions of approval.

### 3. General

3.1 The development approval would not have been issued if not for the conditions requiring the construction of infrastructure within the conditions of approval.

3.2 The applicant/landowner is responsible for the cost of necessary alterations to existing public utility mains, services or installations required by works in relation to the proposed development or any works required by condition(s) of this approval.

3.3 All works must be designed, constructed and carried out in accordance with FNQROC Development Manual requirements (as amended) and to the satisfaction of Council's delegated officer.

#### 3.4 Hours of Operation

The permitted hours for machinery to be used for maintaining the airstrip, for unscheduled aircraft maintenance, and for aircraft to take-off and land shall be between 7am and 6pm Monday to Sunday except for emergency use, which can be whenever necessary.

#### 3.5 Permitted Flights

Recreational aircraft flights shall be limited as follows unless approved otherwise by Council:

- seven (7) flights per calendar week (Monday to Sunday), totalling 365 flights per normal calendar year, inclusive of the 52 flights per calendar year permitted under development permit MCU/09/0050;
- A maximum of six (6) flights are permitted on any given day over the course of a calendar week, subject to the abovementioned limit of seven (7) flights per calendar week;
- A maximum of 12 flights for visitor pilots over the course of a calendar year, subject to the abovementioned limits of seven (7) flights per calendar week and up to six (6) flights in any given day over the course of a calendar week.

**Note: 1 "flight" includes 1 take-off movement and 1 landing movement, or vice-versa for "visitor flights" as visitor flights do not commence from the site.**

#### 3.6 Flight Logbook

The applicant/landowner must, for the life of the development, maintain a flight logbook, which contains records of all flight movements to and from the approved airstrip, including visitor flights. Flight records must include the aircraft used, and the date in which the flight/s was carried out.



At the request of Council officers, the logbook must be made available to Council for review.

### 3.7 Permitted Aircraft

Use of the airstrip is to be limited to Cessna 172, replica Spitfire MK5 and Glassair II aircraft, or other non-commercial aircraft with similar impact approved by Council's delegated officer. This excludes the use of the airstrip by emergency flights, which are permitted to use whatever aircraft necessary.

### 3.8 Flight Paths

When safe to do so, any aircraft taking off in a southerly direction (where not involving a circuit), must turn to the east immediately after take-off, preferably following the Fantin Road road reserve in a south-east direction in order to avoid flying over Lot 201 on NR3170.

Any circuit after take-off must be carried out to the east of the site.

***Note: A circuit as depicted on the submitted plans is not mandatory during take-off or landing.***

### 3.9 All scheduled maintenance of aircraft shall be undertaken off-site.

### 3.10 Water Supply for Fire Fighting Purposes

The development is to be provided with a source of water for fire-fighting purposes of not less than 5,000 litres. This may be satisfied by the provision of an accessible dam, swimming pool or tank. In the case of a tank supply, delivery of the water should be provided through a 50mm Camlock fitting. The outlet from the tank water supply or the dam/pool shall be located in an accessible position within 40 metres of the existing building.

### 3.11 Fuel Storage

Any fuel stored on site associated with the approved use must be kept in a sealed, bunded area with a storage capacity of at least 150% of the storage capacity of any fuel storage tanks/containers.

## 4. Infrastructure Services and Standards

### 4.1 Access

The sites existing access crossover must be upgraded/constructed (from the edge of the road pavement to the property boundary of the subject lot) in accordance with the FNQROC Development Manual, to the satisfaction of Council's delegated officer.

### 4.2 Stormwater Drainage/Water Quality

4.2.1 Any material likely to degrade water (e.g. oils, lubricants, solvents, coolants, degreasing agents etc.) must be stored within a bunded

area, or an appropriately designed chemical storage container, suitable for preventing the escape of material into surface or underground water resources.

4.2.2 An emergency spill containment kit must be kept on site at all times and used when a spill occurs to prevent the escape of any contaminants off-site.

4.2.3 Any aircraft wash down area/s is to be located so as to prevent the discharge of sediment, contaminants or wastewater to waterways, creeks or watercourses.

(D) ASSESSMENT MANAGER'S ADVICE

(a) Compliance with applicable codes/policies

The development must be carried out to ensure compliance with the provisions of Council's Local Laws, Planning Scheme Policies, Planning Scheme and Planning Scheme Codes to the extent they have not been varied by a condition of this approval.

(b) Compliance with Acts and Regulations

The erection and use of the building must comply with the Building Act and all other relevant Acts, Regulations and Laws, and these approval conditions.

(c) Environmental Protection and Biodiversity Conservation Act 1999

The applicant is advised that referral may be required under the *Environmental Protection and Biodiversity Conservation Act 1999* if the proposed activities are likely to have a significant impact on a matter of national environmental significance. Further information on these matters can be obtained from [www.environment.gov.au](http://www.environment.gov.au)

(d) Cultural Heritage

In carrying out the activity the applicant must take all reasonable and practicable measures to ensure that no harm is done to Aboriginal cultural heritage (the "cultural heritage duty of care"). The applicant will comply with the cultural heritage duty of care if the applicant acts in accordance with gazetted cultural heritage duty of care guidelines. An assessment of the proposed activity against the duty of care guidelines will determine whether or to what extent Aboriginal cultural heritage may be harmed by the activity. Further information on cultural heritage, together with a copy of the duty of care guidelines and cultural heritage search forms, may be obtained from [www.datsip.qld.gov.au](http://www.datsip.qld.gov.au)

(E) RELEVANT PERIOD

When approval lapses if development not started (s.341)

- Material Change of Use – four (4) years (starting the day the approval takes effect);

(F) OTHER NECESSARY DEVELOPMENT PERMITS AND/OR COMPLIANCE PERMITS

- Nil

(G) OTHER APPROVALS REQUIRED FROM COUNCIL

- Access approval arising from condition number 4.1 (Please contact Planning Section to obtain application form and applicable fee).

## THE SITE

The subject site is situated just to the south-east of the Koah Township at 343 Fantin Road, Koah and is described as Lot 1 on RP746336. The site is irregular in shape with a total area of 73.637 hectares and is zoned Rural under the Mareeba Shire Council Planning Scheme 2016. The site is accessed from Fantin Road which terminates at the site boundary and is constructed to a formed gravel standard for its entire length. The site also contains frontage to multiple sections of undeveloped road reserve in its north-east corner as well as approximately 470 metres of frontage to the Mareeba - Kuranda railway line at the northern end of the property.

The site is improved by an aircraft hangar/storage and maintenance shed situated approximately 500 metres into the site from Fantin Road as well as a grassed airstrip approximately 900 metres in length which runs in a north-west to south-east direction. The airstrip is operational and supports up to 52 flights per annum, approved under Development Permit MCU/09/0050. Two (2) dams are also present at opposite ends of the site. The majority of the site has been cleared of vegetation while the western edge remains vegetated with mature riparian vegetation pertaining to the Clohesy River which runs along the western edge of the site. Scattered mature vegetation is also present over the northern end of the site. The location of the existing airstrip is shown on the below maps in orange hatching.

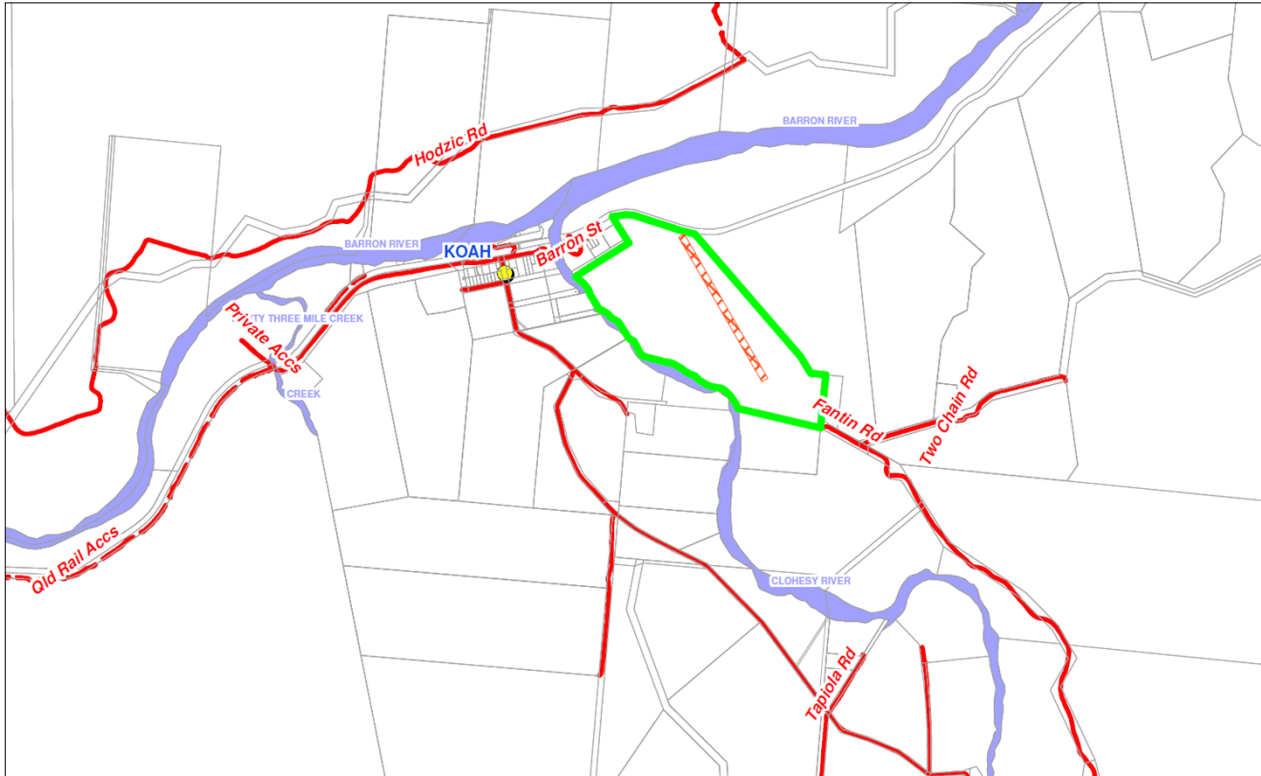
Lots to the north and north-west of the site make up the Koah Township and are zoned a mix of Low Density Residential and Rural Residential and contain a mix of dwelling house uses and rural lifestyle uses. Lots to the south, east and west of the site are predominantly Rural zoned properties and are used as a mix of both rural lifestyle lots and grazing properties.



### Map Disclaimer:

Based on or contains data provided by the State of Queensland (Department of Environment and Resource Management) (2009). In consideration of the State permitting use of this data you acknowledge and agree that the State gives no warranty in relation to the

data (including accuracy, reliability, completeness, currency or suitability) and accepts no liability (including without limitation, liability in negligence) for any loss, damage or costs (including consequential damage) relating to any use of the data. Data must not be used for direct marketing or be used in breach of the privacy laws.



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## **PREVIOUS APPLICATIONS & APPROVALS/BACKGROUND AND CONTEXT**

### MCU/09/0050

Council, at its Ordinary Meeting on 19 May 2010, approved an application made by Planning Far North on behalf of P English (the landowner) for a material change of use – aircraft facility (private airstrip) over land described as Lot 1 on RP746336, situated a 343 Fantin Road, Koah. Development approval MCU/09/0050 authorised the use of the private airstrip to conduct up to 52 flights per year using a Cessna 172 or similar aircraft with the same or lesser impact.

In July/August of 2012, Council received several complaints advising that the landowner had started operating a replica spitfire from the airstrip. In response to these complaints, the landowner submitted a formal request to Council for approval to operate the replica spitfire arguing that it had the same or lesser impact than the approved Cessna 172 aircraft. Council, at its Ordinary Meeting on 20 September 2012, resolved to approve the landowners request to operate the replica Spitfire aircraft from the airstrip.

P English, the landowner, now wishes to conduct up to 365 flights per year from the approved airstrip. This activity constitutes an intensification of the use, triggering the requirement for this fresh application for material change of use – air services (private airstrip).

### Noise Complaints

Between September 2012 after Council approved the use of the replica Spitfire aircraft from the approved airstrip and June 2017 when the current development application was lodged, Council

has no record of any complaints being received about the existing approved airstrip activity (taking off and landing of planes on site), or about any noise nuisance with regards to flying over the Koah/Speewah/Kuranda area.

## DESCRIPTION OF PROPOSED DEVELOPMENT

The development application seeks a Development Permit for Material Change of Use – Air Services (Private Airstrip) in accordance with the plans shown in **Attachment 1**.

Use of the sites existing airstrip for up to 52 flights per year is authorised under development permit MCU/09/0050 which was approved by Council on 19 May 2010.

The landowner/applicant proposes the following flight activity from the existing airstrip:

- A maximum of 365 flights per year, averaging one (1) flight per day; and
- The ability to conduct a maximum of 6 flights on any given day, with these flights to be included in the annual maximum 365 flight limit; and
- A maximum of 12 individual visitor flights per year (pilots other than the landowner/applicant) permitted to use the airstrip, whilst still adhering to the maximum daily flight limit of six (6) flights, and to be included in the annual maximum 365 flight limit.

Under any arrangement of flights, it is not proposed to exceed 365 flights per annum.

It should be noted that a 'flight' refers to one (1) take-off and one (1) landing or vice-versa for visitor flights (one landing and one take-off).

Aircraft primarily using the airstrip will be owned by the landowner/applicant and include a replica Spitfire MK5, a Cessna 172 Skyhawk and a Glassair II. Visitor planes using the airstrip will be of similar size and nature.

It is proposed that the hours of operation for both the machinery used to maintain the airstrip and for aircraft using the airstrip will be between 7 am and 6 pm, except for emergency use.

Aircraft using the airstrip have the option to take-off in both a northern and southerly direction, however the primary take-off direction will be to the south due to predominant wind direction in the area. The flight paths submitted with the application include circuits to the east of the site however these circuits are rarely required and are sometimes not desirable depending on wind direction, topography and speed.

## REGIONAL PLAN DESIGNATION

The subject site is included within the Regional Landscape and Rural Production Area land use category in the Far North Queensland Regional Plan 2009-2031. The Regional Plan Map 3- 'Areas of Ecological Significance' also identifies the site as containing:

- *State & Regional Conservation Corridors*
- *Wetland Area of General Ecological Significance*
- *Terrestrial Area of High Ecological Significance*

## PLANNING SCHEME DESIGNATIONS

|                      |  |
|----------------------|--|
| Strategic Framework: | <b>Land Use Categories</b><br>- <i>Rural Other</i><br><b>Natural Environment Elements</b><br>- <i>Biodiversity Areas</i>         |
| Zone:                | Rural Zone   |
| Overlays:            | - Environmental significance overlay<br>- Flood hazard overlay<br>- Hill and slope overlay<br>- Transport infrastructure overlay |

### Planning Scheme Definitions

The proposed use is defined as:-

| <b>Column 1<br/>Use</b> | <b>Column 2<br/>Definition</b>   | <b>Column 3<br/>Examples include</b>                          | <b>Column 4<br/>Does not include the following examples</b> |
|-------------------------|--|---|---|
| <i>Air Services</i>     | <p><i>Premises used for any of the following:</i></p> <ul style="list-style-type: none"> <li>• <i>The arrival and departure of aircraft</i></li> <li>• <i>The housing, servicing, refueling, maintenance and repair of aircraft</i></li> <li>• <i>The assembly and dispersal of passengers or goods on or from an aircraft</i></li> <li>• <i>Any ancillary activities directly serving the needs of passengers and visitors to the use</i></li> <li>• <i>Associated training and education facilities</i></li> <li>• <i>Aviation facilities</i></li> </ul> | <i>Airport, airstrip, helipad, public or private airfield</i> |   |

### RELEVANT PLANNING INSTRUMENTS

Assessment of the proposed development against the relevant planning instruments is summarised as follows:-

#### (a) Far North Queensland Regional Plan 2009-2031

Separate assessment against the Regional Plan is not required because the Mareeba Shire Council Planning Scheme 2016 appropriately advances the Far North Queensland Regional Plan 2009-2031, as it applies to the planning scheme area.

#### (b) State Planning Policy

Separate assessment against the State Planning Policy (SPP) is not required because the Mareeba Shire Council Planning Scheme 2016 appropriately integrates all relevant aspects of the SPP.

### **(c) Mareeba Shire Council Planning Scheme 2016**

#### **Strategic Framework**

##### *3.3 Settlement pattern and built environment*

###### *3.3.11 Element – Rural areas*

###### *3.3.11.1 Specific outcomes*

- (1) *Rural areas include rural activities and land uses of varying scale, consistent with surrounding land use, character and site conditions.*

#### Comment

The proposed airstrip land use is not an inconsistent use within the Rural zone, however the subject site is adjoined by land within the Low density residential zone and is surrounded by sensitive land uses.

As discussed in the body of this report, it is considered that provided reasonable conditions are attached to any approval limiting flight frequency, the proposed intensification of the airstrip use could proceed without causing unacceptable noise impacts and loss of amenity for surrounding residential uses.

The proposed development is not considered to conflict with Specific Outcome 1.

##### *3.4 Natural resources and environment*

###### *3.4.4 Element – Biodiversity areas*

###### *3.4.4.1 Specific outcomes*

- (1) *Development avoids adverse impacts on the ecological values of biodiversity areas and where avoidance is not possible the adverse impacts are minimised and, for an area of high ecological significance, no net loss in biodiversity values is achieved.*
- (2) *Development on lots containing biodiversity areas ensures their ongoing protection and retention through application of conservation covenants or dedication for public use.*
- (3) *Biodiversity areas that are considered to be of regional, state or higher levels of significance are awarded levels of protection commensurate with these values.*
- (4) *The ecological values of biodiversity areas which have been degraded are rehabilitated as part of the development, and commensurate with the scale of development.*

#### Comment

The proposed development is for the intensification of an existing lawfully established airstrip use within the Rural zone. No vegetation clearing, or habitat destruction will occur as a result of the development and the intensification of the use is unlikely to impact on



ground and surface water resources (Clohesy/Barron Rivers). Native wildlife living on or in proximity to the site are subject to aircraft noise at present and the intensification of the use (i.e. increase frequency of flights from 1 per week to 7 per week) is not likely to have a significant impact on this native wildlife. The proposed development is not considered to conflict with Specific Outcomes 1, 2, 3 and 4.

### 3.4.8 Element – Air and noise quality

#### 3.4.8.1 Specific Outcomes

- (1) *The health, well-being, amenity and safety of the community and the environment is protected from the impacts of air emissions, noise and odour through appropriate management and adequate separation distances.*
- (3) *Land uses which emit high level of noise, including for example motor sports, gun clubs and the like will be appropriately located and managed to mitigate acoustic impacts.*
- (4) *Sensitive land uses are appropriately separated from areas containing or designated for activities that generate noise and air emissions.*

#### Comment

Refer to Planning Discussion section of report. Council officers acknowledge that some noise nuisance/impact is likely to be felt by surrounding residences as a result of the increased use of the airstrip, however provided reasonable conditions are attached to any approval limiting flight frequency, the proposed intensification of the airstrip use could proceed without causing unacceptable noise impacts and loss of amenity for surrounding residential uses.

The proposed development is not considered to conflict with Specific Outcomes 1, 3 and 4.

### Relevant Development Codes

The following Development Codes are considered to be applicable to the assessment of the application:

- 6.2.9 Rural zone code
- 8.2.3 Bushfire hazard overlay code
- 8.2.4 Environmental significance overlay code
- 8.2.6 Flood hazard overlay code
- 8.2.8 Hill and slope overlay code
- 8.2.11 Transport infrastructure overlay code
- 9.3.6 Rural activities code
- 9.4.2 Landscaping code
- 9.4.3 Parking and access code
- 9.4.5 Works, services and infrastructure code

The application included a planning report and assessment against the planning scheme. An officer assessment has found that the application satisfies the relevant acceptable outcomes or performance outcomes where no acceptable outcome is provided) of the relevant codes set out below, provided reasonable and relevant conditions are attached to any approval.

| Relevant Codes | Comments |
|----------------|----------|
|----------------|----------|



|   |  |
|---|--|
| Rural zone Code                         | The application can be conditioned to comply with the relevant acceptable outcomes or performance outcomes (where no acceptable outcome is provided) contained within the code.<br>Further discussion is warranted with regards to the following:<br><ul style="list-style-type: none"> <li>▪ Performance Outcome PO6 (a) - noise</li> </ul> Refer to planning discussion section of report. |
| Bushfire hazard overlay code            | The application can be conditioned to comply with the relevant acceptable outcomes or performance outcomes (where no acceptable outcome is provided) contained within the code.  |
| Environmental significance overlay code | The application can be conditioned to comply with the relevant acceptable outcomes or performance outcomes (where no acceptable outcome is provided) contained within the code.  |
| Flood hazard overlay code               | The application can be conditioned to comply with the relevant acceptable outcomes or performance outcomes (where no acceptable outcome is provided) contained within the code.  |
| Hill and slope overlay code             | The application can be conditioned to comply with the relevant acceptable outcomes or performance outcomes (where no acceptable outcome is provided) contained within the code.  |
| Transport infrastructure overlay code   | The application can be conditioned to comply with the relevant acceptable outcomes or performance outcomes (where no acceptable outcome is provided) contained within the code.  |
| Rural activities code                   | The application can be conditioned to comply with the relevant acceptable outcomes or performance outcomes (where no acceptable outcome is provided) contained within the code.  |
| Landscaping code                        | Refer to development code assessment document. Given the nature of the use, landscaping is not considered reasonable or necessary.   |
| Parking and access code                 | Refer to development code assessment document. Given the nature of the use, formal car parking is not considered reasonable or necessary.  |
| Works, services and Infrastructure code | The application can be conditioned to comply with the relevant acceptable outcomes or performance outcomes (where no acceptable outcome is provided) contained within the code.  |

### (e) Planning Scheme Policies/Infrastructure Charges Plan

The following planning scheme policies are relevant to the application:

Planning Scheme Policy 4 - FNQROC Regional Development Manual

A condition will be attached to any approval requiring all development works be designed and constructed in accordance with FNQROC Development Manual standards.

### REFERRALS

#### Concurrence

This application did not trigger referral to a Concurrence Agency.

## Advice

This application did not trigger referral to an Advice Agency.

## Internal Consultation

Nil

## PUBLIC NOTIFICATION

The development application was originally placed on public notification from 8 November 2017 to 29 November 2017. During this initial public notification period, various community members expressed concern and confusion regarding the flight parameters applied for (number of flights per year/day, who would be permitted to use the airstrip etc.). As a result, further information and clarity was sought from the applicant regarding the requested flight parameters and Council officer advised the applicant to restart the public notification stage of the application process.

The development application was placed on public notification for the second time from 25 November 2017 to 15 December 2017. The applicant submitted the notice of compliance on 18 December 2017 advising that the public notification requirements were carried out in accordance with the requirements of the Act. Submissions from both public notification periods were accepted as property made submissions.

182 submissions were received during both public notification periods, of which 169 objected to the proposed development, while 13 were in support of the proposed development.

The applicants planning consultant has reviewed the submissions lodged and has provided the following commentary in relation to the submitters:

*“While it is acknowledged that anyone can make a submission, in this instance the only direct impact associated with this development will be felt by those properties immediately adjoining or in close proximity to the existing airstrip. On that basis the submissions have been grouped into place of origin of the submitter, with Mr English providing comments based on how he uses the airstrip and flight paths taken from the airstrip, as the plane noise is loudest at take-off not landing.*

*In summary, based on Mr English's observations, I advise as follows:*

- 83 submissions/objections (46.11%) are from Koah residents who are not located adjoining or in close proximity to the existing airstrip and would not be subjected to any significant noise disturbance due to the height of the aircraft (2500ft) passing overhead in relation to their house, in some instances and/or the fact that the aircraft rarely fly's over some areas of Koah, in other instances;*
- 42 submissions/objections (23.33%) are from Kuranda residents who would not be impacted by additional flights from the airstrip;*
- 23 submissions/objections (12.77%) are from Speewah residents who would not be impacted by additional flights from the airstrip;*
- 15 submissions/objections (8.33%) are from residents from other localities (Smithfield x 2, Trinity Park/Beach x 2, Mareeba x 1, Bungalow x 1, Cairns/Cairns North x 3, Paddys Green x 1, Myola x 3, Keperra x 1, Walkamin x 1) not remotely located*

*anywhere near the existing airstrip and therefore not impacted by additional flights from the airstrip.*

- *13 submission/in support (7.22%) are from 9 Koah residents (of whom 2 would be directly impacted and 7 would not be significantly impacted), 1 Kuranda resident, 1 Mareeba resident, 1 Stratford resident, and 1 Chapel Hill resident.*
- *4 submissions/objections (2.22%) are from 2 Koah residents (Nadine O'Brien x 3 and Sarah Isaacs x 1) who reside adjoining or in close proximity to the existing airstrip and would potentially be subjected to 23 seconds of aircraft noise once a day and for 12 additional days if a limited number of visitors used the airstrip, over any one (1) year period, if additional flights from of the airstrip were to be approved by MSC.”*

The assessing officer has reviewed the submissions lodged and the grounds for objection/support are summarised and commented on below:

### **Noise and subsequent amenity impacts**

A common concern amongst nearly all objecting submitters was the noise and amenity impact the additional flights would have on surrounding residents.

#### Comment

Refer to below Planning Discussion section of report for commentary on noise and amenity impact.

### **Domestic animals, wildlife and stock**

Submitters believe that the intensification of the use of the airstrip will negatively impact on native wildlife and domestic/stock animals.

#### Comment

The proposed increase in flight activity is not likely to impact on native wildlife or domestic/stock animals any more than some 'as of right' land uses would such as farm machinery noise, motorbikes and plane overflights associated with aerial spraying. As discussed in the report, wildlife moving throughout the area will have considerable respite from any take-off or landing noise with an average of only 1 flight per day proposed. Noise relating to overflights is negligible and generally below that of commercial aircraft that fly over the Koah area multiple times daily.

Contrary to what submitters have stated, Council has no record of any complaints lodged regarding the existing airstrip operations and its startling effect on domestic/stock animals.

### **Privacy**

There is concern with regards to the loss of or intrusion on privacy by aircraft flying low over properties. Aircraft taking off also pass low over neighbouring properties.

#### Comment

The primary take-off direction is to the south of the airstrip over a more sparsely populated area of Koah. During take-off and climb the pilots primary focus is on instruments and flying the aircraft, not observing neighbouring properties. The altitude at which the planes fly, combined with the speeds at which the planes are travelling make particular details on neighbouring properties, including people, almost undetectable. For this reason, the loss of privacy associated with the intensification of the use is likely to be negligible and has not been a substantial consideration during the assessment of this application.

Contrary to what submitters have stated, Council has no record of any complaints lodged regarding a loss of privacy from low flying aircraft over the Koah area and surrounds.

### **Extra pilots using the airstrip**

Submitters are concerned that up to 12 extra pilots might be using the aircraft facility. Furthermore, there are concerns about what aircraft they will be using or how loud these aircraft will be compared to those of the landowner/applicants which were included in the noise impact assessment.

#### Comment

Should Council approve the use of the airstrip for up to 12 visitor flights per year, these visitor flights will be inclusive in the 365 flights per year limit as well as the recommended 7 flights per week limit and the maximum six (6) flights per day limit. The visitor planes will also have to be of similar size and have the same or lesser impact than the applicant/developers three planes used to conduct the noise assessment.

If visitor flights are approved and carried out from the airstrip, it may result in more than one (1) aircraft flying over the Koah area at any one time, however it is acknowledged that any plane from any airstrip could fly over the Koah area at any time, and the overflight noise outputs from the smaller aircraft in question are generally lessor than that of commercial aircraft that fly over the Koah area multiple times daily.

The use of the airstrip by up to 12 visitor planes/pilots over the year will have a negligible impact on the amenity of surrounding residents.

### **Non-compliance with development approval MCU/09/0050**

There is community concern that the applicant/landowner is not adhering to the conditions previously imposed under development approval MCU/09/0050 which authorises the use of the airstrip for up to 52 flights per year. Submitters are concerned that if Council cannot enforce the conditions imposed on this approval Council may not be able to adequately enforce the conditions imposed on any future development approval.

#### Comment

Any alleged non-compliance with a previous development approval is not a relevant consideration during the assessment of this application.

Prior to the lodgement of this development application Council had no record of any complaints being received about the existing airstrip activity.

Notwithstanding this, any reported non-compliance with development approval conditions are investigated by Council officers in due course.

### **Safety**

Submitters are concerned about the increased risk of crash incidents as a result of the intensification of the use. Furthermore, the isolation of the Koah Township and the site itself would significantly increase emergency services response times if an incident was to ever occur.

#### Comment

Although it is acknowledged that an increase in flight activity from the airstrip would result in some increase in risk of crash incidents, it is also acknowledged that the applicant/landowner or any other party using the airstrip would take every precaution to ensure the risk of incident is minimised.

The increased risk of plane crash incidents as a result of the increased use of the airstrip and long response times from emergency services personnel is not sufficient grounds to recommend that the development application be refused.

### **Commercial activity**

Submitters are concerned the airstrip will be used for commercial purposes, or that the proposed intensification of the use is a precursor to future commercial development (joy flights, skydiving).

#### Comment

Should the landowner/applicant propose any commercial use of the airstrip, a fresh material change of use development application will be required to be submitted to Council for assessment as this activity did not form part of this development application.

### **Proposed reason/s for the increased flights**

Submitters have questioned the validity of the applicants stated reasoning for the request to increase flight numbers, which was to allow him to fly Cairns every day for work. Submitters also stated that the airstrip was originally approved because he intended on using the airstrip to muster livestock on his property and that, in fact, livestock has never been grazed on the airstrip property.

#### Comment

The particular reasons as to why the applicant/landowner wishes to intensify the use of the existing airstrip is irrelevant to the assessment of the application. This officer assessment is based on the flight parameters applied for and the potential impacts of that scale of development.

### **Overflight altitude**

Submitters are concerned that the applicant currently flies his three planes below the minimum required height of 500ft.

#### Comment

Any flying of aircraft below 500 feet is the responsibility of the Civil Aviation Safety Authority. Non-compliance with this requirement is not a relevant consideration during the assessment of this application.

Prior to the lodgement of this development application Council had no record of any complaints being received about low flying aircraft associated with the existing airstrip use.

### **Odour and emissions (excluding noise)**

Increasing the number of flights from the airstrip will increase levels of aircraft exhaust. Aircraft exhaust particles settle on house roofs which then flow into rainwater tanks causing a health issue.

#### Comment

It is unlikely that the exhaust from the aircraft would cause any contamination of local water supplies. Cars and trucks driving along the gravel roads in the area and other permitted rural uses involving machinery or aerial spraying would pose a greater contamination risk than aircraft exhaust.

### **Clohesy River water contamination**

Submitters are concerned about the developments impacts on the Clohesy River, in particular from water runoff from the site which may contain contaminants such as oils and fuels.

### Comment

A condition will be attached to any approval requiring any fuel and oil storage associated with the airstrip use to be contained in a bunded area to minimise risk of contamination. Given the proposed scale of the use and the anticipated number of planes to be stored on site, the risk of run-off and contamination to the Clohesy River is negligible.

### **Designated flight paths**

Submitters state that the landowner/applicant does not adhere to the designated flight paths submitted and approved under MCU/09/0050. Submitters have concerns that if this application is approved, the landowner/applicant will continue to disregard designated flight paths.

### Comment

Any non-compliance with conditions attached to development approval MCU/09/0050 do not form part of the assessment of this application. Council's control over the flight paths of aircraft using the airstrip is strictly limited to the flight paths used during the taking off and land of aircraft. Due to the predominant wind direction over the site, the predominant take off direction is to the south over the less densely populated areas of Koah. Despite the application including specific flight paths that include a circuit to the east of the site, Council officers consider it reasonable to allow aircraft using the site to avoid this circuit (if possible) as it will likely result in a net decrease in noise impact as the aircraft will not be flying twice in close succession over properties immediately adjoining the subject site (see Condition 3.8).

### **Future growth of Koah**

Koah has been identified as a future growth area in the Planning Scheme. The inconsistency and impacts of the airstrip use will only increase as the population of Koah increases.

### Comment

Any significant growth of the Koah area is dependent on a number of factors which include a major Planning Scheme amendment. Under the current Mareeba Shire Council Planning Scheme 2016, the only growth potential (that is consistent with the Planning Scheme) in the surrounds of the subject site is limited to 6 lots on the southern edge of the Koah Township which are zoned Rural Residential (2-hectare precinct). The noise impact of the proposed development at these locations is not considered significant in any way.

### **Property devaluation**

The proposed increased air traffic from the airstrip will cause property valuations to fall.

### Comment

The potential for a development to devalue land is not a valid town planning consideration. Notwithstanding this, as discussed in the Planning Discussion section of this report, the proposed intensification of the existing airstrip use is not likely to have an unacceptable impact on amenity surrounding the subject site.

### **Monitoring flight numbers**

Submitters have concerns that Council will be unable to monitor the additional flights for compliance if approved.

### Comment

A condition will be attached to any approval requiring the applicant/landowner to keep a logbook of all flight activity from the airstrip. It is understood any pilot using the airstrip is required by law to maintain a flight logbook.

### **Community benefit**

The proposed intensification of the airstrip use provides no community benefit, instead solely benefits the landowner/applicant.

#### Comment

The degree in which a development provides benefits to the wider community is generally only a consideration when that development significantly conflicts with the relevant planning instruments/provision, and is used as a means to justify approval, despite the conflicts. As discussed in the body of this report, the proposed development is not considered to conflict with any relevant aspect of the Mareeba Shire Council Planning Scheme 2016, in that Council officers consider that the scale of the proposed use, being an average of 1 flight per day, will not cause an unacceptable noise nuisance and loss of amenity to surrounding residents.

### **KUR-World**

The proposed intensification of the airstrip use is directly related to the KUR-World development.

#### Comment

The assessing officer is unaware of any link between the proposed intensification of the airstrip use and the KUR-World Coordinated Project.

### **Cairns & Mareeba Airports**

Submitters argue that the site is in proximity to both the Cairns and Mareeba Airports and that the landowner/applicant should move all flight activity to either of these locations as an alternative to protect the threatened amenity.

#### Comment

Use rights are already established over the subject site for a private airstrip. The application proposes the intensification of the use by increasing flight numbers from an average of one (1) flight per week to one (1) flight per day. Although there may be alternate locations to operate the proposed use (i.e. Mareeba/Cairns Airports), this is not sufficient grounds to recommend the application be refused, particularly considering the proposed development is not considered to conflict with the Planning Scheme. As discussed in the body of this report, Council officers consider that the scale of the proposed use, being an average of one (1) flight per day, will not cause an unacceptable noise nuisance and loss of amenity to surrounding residents.

### **Noise impact assessment**

There is a concern that the noise impact assessment that was conducted does not include adequate findings and does not consider all flight scenarios and should therefore be rejected by Council.

#### Comment

Council officers have reviewed the submitted Noise Impact Assessment and accept its findings in the context of providing a true representation of expected noise impacts associated with the proposed intensification of the airstrip use. If the application is approved by Council, submitters are able to engage their own suitably qualified professional to conduct a peer review of the noise impact assessment prior to the submitter appeal period ending.

**Increased vehicle traffic**

Submitters are concerned the development will increase vehicle traffic to and from the site.

Comment

The proposed intensification of the airstrip use is not likely to result in an increase in vehicle traffic to and from the subject site. The standard vehicle movements associated with a residential use on a rural property are 10 vehicle movements per day.

**Submitters**



| Record of Submissions received for DA/17/0029 |                         |                       |
|---|-------------------------|-----------------------|
| Name  | Address 1               | Address 2             |
| Natalie Waller                                | 31 Douglas Track        | Speewah QLD 4881      |
| Warren Pine                                   | 37 Douglas Track        | Speewah QLD 4881      |
| Samantha Smeaton                              | 245 Koah Road           | Koah Qld 4881         |
| Narelle Ross                                  | 9 Bolton Road           | Koah Qld 4881         |
| Anonymous (Katie)                             | Kennedy Highway         | Walkamin QLD 4872     |
| Jaide Stronggrove                             | 1058 Koah Road          | Koah Qld 4881         |
| Phil Simpson C/- Liz Taylor                   | Koah Road               | Koah Qld 4881         |
| Mike Prien C/- Liz Taylor                     | Two Chain Road          | Koah Qld 4881         |
| Richard Copland                               | 38 Copland Road         | Koah Qld 4881         |
| Anonymous (Rebecca)                           | 9 Brickworks Road       | Koah Qld 4881         |
| Priscilla Ralph                               | 8 Barron Street         | Koah Qld 4881         |
| Nadine O'Brien                                | 345 Fantin Road         | Koah Qld 4881         |
| Jo Martin                                     | 451 Oak Forest Road     | Kuranda QLD 4881      |
| Seanne Mcarthur                               | 392 Oak Forest Road     | Kuranda QLD 4881      |
| Marc Jaschok                                  | 1248 Koah Road          | Koah Qld 4881         |
| Yamuna Sztraka                                | 1063 Koah Road          | Koah Qld 4881         |
| Sarah Baxter                                  | 235 Palm Valley Road    | Koah Qld 4881         |
| William Johnston                              | 24 Clohesy Street       | Koah Qld 4881         |
| Ruth Young                                    | None provided           |                       |
| Syd Walker                                    | PO Box 774              | Kuranda QLD 4881      |
| Bruce Copland                                 | PO Box 171              | Smithfield Qld 4878   |
| Fay Copland                                   | 38 Copland Road         | Koah Qld 4881         |
| Steven Nowakowski                             | 29 Black Mountain Road  | Kuranda QLD 4881      |
| E.Heather Price                               | 7 Melaleuca Close       | Koah Qld 4881         |
| Hans Zehntner                                 | 81 Kuranda Heights Road | Kuranda QLD 4881      |
| Cathy Retter                                  | 19 Kullaroo Close       | Kuranda QLD 4881      |
| Linda Snart                                   | 7 Greenhills Road       | Kuranda QLD 4881      |
| Toni Rogers                                   | 11 Punch Close          | Kuranda QLD 4881      |
| Alison Kempe                                  | 3 Punch Close           | Kuranda QLD 4881      |
| Garth Owen                                    | 19 Kullaroo Close       | Kuranda QLD 4881      |
| Gabriela Schierenbeck                         | 102 Koah Rd/PO Box 741  | Koah Qld 4881         |
| Cheryl Tonkin                                 | 76 High Chapparal Road  | Kuranda QLD 4881      |
| Maria Feliz Newman                            | 4 Clohesy Street        | Koah Qld 4881         |
| Patricia Zehntner                             | 81 Kuranda Heights Road | Kuranda QLD 4881      |
| Andrew Hodgetts                               | 33 Brockman Way         | Smithfield Qld 4878   |
| Bill Sokolich                                 | 283 Speewah Road        | Speewah QLD 4881      |
| Maree Kerr                                    | 2 Meeroo Street         | Kuranda QLD 4881      |
| Sharon Shone                                  | 235 Koah Road           | Koah Qld 4881         |
| Emma Ewing                                    | Clohesy Street          | Koah Qld 4881         |
| Bonnie Riley                                  | 1087 Barron Street      | Koah Qld 4881         |
| Ashleigh Thorne                               | 14 Barron Street        | Koah Qld 4881         |
| Jamie Lee Thorne                              | 14 Barron Street        | Koah Qld 4881         |
| Vickie Harris                                 | 1078 Koah Road          | Koah Qld 4881         |
| Peggy S Martin                                | 1078 Koah Road          | Koah Qld 4881         |
| Christine Van Koeverden                       | 31 Natasha Close        | Koah Qld 4881         |
| P Wyatt                                       | 599 Koah Road           | Koah Qld 4881         |
| Matthew Webb                                  | 15 Northcote Street     | Trinity Park Qld 4878 |
| Michelle Webb                                 | 8 Mar Street            | Koah Qld 4881         |

|                                   |                          |                  |
|-----------------------------------|--------------------------|------------------|
| Tyronne Samson                    | 8 Mar Street             | Koah Qld 4881    |
| Jacqui Hammond                    | 6 Masons Road            | Kuranda QLD 4881 |
| Aaron Hobbler                     | 1099 Koah Road           | Koah Qld 4881    |
| Rosalyn A Wyatt                   | 599 Koah Road            | Koah Qld 4881    |
| Byron Campbell                    | 64 Barron Street         | Koah Qld 4881    |
| Tania Tutton                      | 12 Clohesy Street        | Koah Qld 4881    |
| Neal Martin                       | 1079 Koah Road           | Koah Qld 4881    |
| Ian Brouff                        | 12 Clohesy Street        | Koah Qld 4881    |
| John Lindsay                      | Lot 685 Koah Road        | Koah Qld 4881    |
| Gordon Bartlett                   | 685 Koah Road            | Koah Qld 4881    |
| Amadeus Lang                      | 24 Clohesy Street        | Koah Qld 4881    |
| Michael and Joanne Gunzburg       | 38 Tapiola Road          | Koah Qld 4881    |
| Beverley Anne Adamson             | 62 Barron Street         | Koah Qld 4881    |
| Hannah Wattel                     | PO Box 473               | Kuranda QLD 4881 |
| Shanna Janz                       | 149 McCorry Road         | Kuranda QLD 4881 |
| Chloe McKay                       | 149 McCorry Road         | Kuranda QLD 4881 |
| Kerry Geck                        | PO Box 401               | Kuranda QLD 4881 |
| Ian Hainsworth                    | 30 Enigma Close          | Speewah QLD 4881 |
| Kaya Wilson                       | 3338 Kennedy Highway     | Mareeba Qld 4880 |
| Paul M Maxwell                    | 200 Cedar Park Road      | Koah Qld 4881    |
| Chris Hannam                      | 53 William Smith Drive   | Speewah QLD 4881 |
| Miira Kostava                     | 922 Koah Road            | Koah Qld 4881    |
| Julie Brunt                       | 922 Koah Road            | Koah Qld 4881    |
| Nadine O'Brien x 2 Submission     | 345 Fantin Road          | Koah Qld 4881    |
| Jimi Hannam                       | 53 William Smith Drive   | Speewah QLD 4881 |
| Scott Morrison & Sajidah Abdullah | 961 Koah Road            | Koah Qld 4881    |
| Carole Myee Maxfield              | 442 Speewah Road         | Speewah QLD 4881 |
| Dorothy Clews                     | 374 Ganyan Drive         | Speewah QLD 4881 |
| John & Susan Fraser               | PO Box 274               | Kuranda QLD 4881 |
| Judith Bell                       | 8 Clohesy Street         | Koah Qld 4881    |
| Linda Guy                         | 516 Koah Road            | Koah Qld 4881    |
| Russell James                     | 516 Koah Road            | Koah Qld 4881    |
| Aeron Holzhauser                  | 450 Koah Road            | Koah Qld 4881    |
| Susan Tullipan                    | 11 Dominikovic Close     | Koah Qld 4881    |
| Sam Conomo                        | 9 Bolton Road            | Koah Qld 4881    |
| Narelle Ross x 2 Submission       | 9 Bolton Road            | Koah Qld 4881    |
| Tonia Rose                        | Lot 12 Dominikovic Close | Koah Qld 4881    |
| Matthew Cole                      | 6 Natasha Close          | Koah Qld 4881    |
| Muriel Richardson                 | 16 Barron Street         | Koah Qld 4881    |
| David Pickering                   | Lots 1 & 2 Barron Street | Koah Qld 4881    |
| Stuart Biggs                      | 382 Ganyan Drive         | Speewah QLD 4881 |
| Aneta Thomsen                     | 21 William Smith Drive   | Speewah QLD 4881 |
| Alison Ylstra                     | 90 Veivers Drive         | Speewah QLD 4881 |
| Arnold Erber                      | 117 William Smith Drive  | Speewah QLD 4881 |
| Steven and Amanda Grist           | 1 Copland Road           | Koah Qld 4881    |
| William Wilson                    | 457 Speewah Road         | Speewah QLD 4881 |
| Matthew Yates                     | 48 Sanctuary Close       | Speewah QLD 4881 |
| Guy Summer and Suzanne Cove       | 222 Stoney Creek Road    | Speewah QLD 4881 |
| Yvonne House                      | 9 Koah Road              | Koah Qld 4881    |
| Harry Dick                        | 65 Palm Valley Road      | Koah Qld 4881    |

|                                   |                              |                        |
|-----------------------------------|------------------------------|------------------------|
| Sam Musumeci                      | 367 Koah Road                | Koah Qld 4881          |
| Gillian Louise Whitehead          | 3 Natasha Close              | Koah Qld 4881          |
| Nicola Cunningham                 | 2413 Kennedy Hwy & 8 Marr St | Koah Qld 4881          |
| Andrew Jowett                     | 8 Tamarix Street             | Chapel Hill Qld 4069   |
| Richard Hunt                      | 13 Edgar Street              | Bungalow Qld 4870      |
| Mick & Diane Mosch                | PO Box 1490                  | Mareeba Qld 4880       |
| Chris Jaschok                     | 1248 Koah Road               | Koah Qld 4881          |
| Tracy Rusch                       | 408 Koah Road                | Koah Qld 4881          |
| Sarah Smits                       | 15 Law Street                | Cairns North Qld 4870  |
| B Dalla Costa                     | 170 McBean Road              | Paddys Green Qld 4880  |
| Mark Chirio                       | 441 Koah Road                | Koah Qld 4881          |
| Sophie McGrath                    | Koah Road                    | Koah Qld 4881          |
| Irma Mikacaicunas                 | 20 Weld Crescent             | Trinity Beach Qld 4878 |
| J Garbellini                      | 516 Koah Road                | Koah Qld 4881          |
| Chris Van Koeverden               | 102 Koah Road                | Koah Qld 4881          |
| Rohan Rusch                       | 408 Koah Road                | Koah Qld 4881          |
| Blake Hudson                      | 118 Greenforest Road         | Myola Qld 4881         |
| Pat Storey                        | Fallon Road                  | Kuranda QLD 4881       |
| Michelle Weeks                    | 110 Clohesy River Road       | Koah Qld 4881          |
| M Kenny                           | 14 Barron Street             | Koah Qld 4881          |
| Calvin Baker                      | 15 William Smith Drive       | Speewah QLD 4881       |
| Justine Schlicht                  | 22 Freedom Close             | Speewah QLD 4881       |
| Jemma Shelton                     | 102 Koah Road                | Koah Qld 4881          |
| Noah Sailer                       | 15 Law Street                | Cairns North Qld 4870  |
| Rohan Rusch                       | 408 Koah Road                | Koah Qld 4881          |
| H Voogt                           | 91 Scenic Drive              | Speewah QLD 4881       |
| Riette Voogt                      | Scenic Drive                 | Speewah QLD 4881       |
| John & Kathryn Edwards            | 28 Monaro Close              | Kuranda QLD 4881       |
| Mark Bishop                       | 2326 Kennedy Highway         | Koah Qld 4881          |
| Rob Stephenson                    | 24 William Smith Drive       | Speewah QLD 4881       |
| Nadine O'Brien x 3rd objection    | 345 Fantin Road              | Koah Qld 4881          |
| Sarah Isaacs                      | 345 Fantin Road              | Koah Qld 4881          |
| Nykea Ralston & Anthony Johnson   | 520 Koah Road                | Koah Qld 4881          |
| Kirsty Stephens                   | 8 Gregory Terrace            | Kuranda QLD 4881       |
| Rozana Wright                     | 426 Koah Road                | Koah Qld 4881          |
| Ken Wright                        | 426 Koah Road                | Koah Qld 4881          |
| Adrian Church                     | 7 Scrub Street               | Kuranda QLD 4881       |
| Keila Waksvik                     | 6 Meeroo Street              | Kuranda QLD 4881       |
| Steven Nowakowski x 2nd objection | PO Box 4761                  | Cairns Qld 4870        |
| Julie Cohen                       | 2 Punch Close                | Kuranda QLD 4881       |
| Robert Edwards                    | 28 Monaro Close              | Myola Qld 4881         |
| Rosemary Marks                    | 165 Boyles Road              | Kuranda QLD 4881       |
| Heinz Mullert                     | 11 Harriman Street           | Kuranda QLD 4881       |
| Bob Madden                        | 81 Veivers Drive             | Speewah QLD 4881       |
| Duncan Stebbing                   | None provided                | Keperra Qld 4054       |
| Jeffrey Hunt                      | 414 Koah Road                | Koah Qld 4881          |
| Michael Douglass                  | 9 Jarawee Road               | Kuranda QLD 4881       |
| Jon Trapnell                      | 58 Barron Falls Road         | Kuranda QLD 4881       |
| Ashley & Annmaree Sloan Coleman   | PO Box 829                   | Kuranda QLD 4881       |
| Geoffrey & Joy Stannett           | 1227 Koah Road               | Koah Qld 4881          |

|  |                              |                    |
|--|------------------------------|--------------------|
| John Todd                                      | PO Box 685                   | Kuranda QLD 4881   |
| Nico Wouterse                                  | 4 Fairyland Road             | Kuranda QLD 4881   |
| Iveta Svihla                                   | 143 Oak Forest Road          | Kuranda QLD 4881   |
| Suzanne Bartlett                               | 26 Mount Haren Road          | Kuranda QLD 4881   |
| Bruce Campbell                                 | 64 Barron Street             | Koah Qld 4881      |
| Belinda Fry                                    | 63 Masons Road               | Kuranda QLD 4881   |
| Matthew Fry                                    | PO Box 132                   | Kuranda QLD 4881   |
| Zalan Glen                                     | 13 Fairyland Road            | Kuranda QLD 4881   |
| Peter Cohen                                    | 40 Punch Close               | Kuranda QLD 4881   |
| Helen Downie                                   | 17 McKenzie Street           | Myola Qld 4881     |
| Suzy Grinter                                   | 70 Veivers Drive             | Speewah QLD 4881   |
| Brian Prove                                    | Lot 198 Popovic Road         | Koah Qld 4881      |
| Tanya Vickers                                  | RP 65 Greenforest Road       | Kuranda QLD 4881   |
| Ken Parsons                                    | 11 Shane Court               | Kuranda QLD 4881   |
| Charlene Cabral                                | 29 Palm Valley Road          | Koah Qld 4881      |
| Malcolm McKeen                                 | 25 Copland Road              | Koah Qld 4881      |
| Kerry Geck x 2                                 | 25 Copland Road              | Koah Qld 4881      |
| Phillip Arthur Simpson                         | 341 Fantin Road              | Koah Qld 4881      |
| Bill Sokolich x 2                              | 283 Speewah Road             | Speewah QLD 4881   |
| Kerry Geck submits petition various objections |                              |                    |
| Aileen Downs (submitted by Kerry Geck)         | 38 Rob Veivers Drive         | Kuranda QLD 4881   |
| M Wycherley (submitted by Kerry Geck)          | 415 Koah Road                | Koah Qld 4881      |
| R Wycherley (submitted by Kerry Geck)          | 415 Koah Road                | Koah Qld 4881      |
| Tonielle Christensen (submitted by Kerry Geck) | Kuranda                      |                    |
| Rose Hunter (submitted by Kerry Geck)          | 1093 Koah Road               | Koah Qld 4881      |
| Alexandra Worsfold                             | 1248 Koah Road               | Koah Qld 4881      |
| Marc Jaschok x 2                               | 1248 Koah Road               | Koah Qld 4881      |
| Garry Hooper                                   | Lot 2 McCorry Rd / PO Box 78 | Stratford Qld 4870 |
| Daniel Stronggrove                             | 1058 Koah Road               | Koah Qld 4881      |
| Gayle Hannah                                   | 42 Rob Veivers Drive         | Kuranda QLD 4881   |
| Julie Brunt x 2                                | 922 Koah Road                | Koah Qld 4881      |
| Piers Freeman                                  | 1063 Koah Road               | Koah Qld 4881      |
| Sarah Rizvi                                    | 1063 Koah Road               | Koah Qld 4881      |
| Brendan Kent                                   | 8 Jumrun Close               | Kuranda QLD 4881   |

## PLANNING DISCUSSION

### 6.2.9 Rural Zone Code

**(3) The purpose of the Rural zone code will be achieved through the following overall outcomes:**

- (a) Areas for use for primary production are conserved and fragmentation below economically viable lot sizes is avoidable;
- (b) The establishment of a wide range of rural pursuits is facilitated, including cropping, intensive horticulture, forestry, intensive animal industries, animal husbandry, and animal keeping and other compatible primary production uses;
- (c) The establishment of extractive industries, mining and associated activities and alternative forms of energy generation is appropriate where environmental impacts and land use conflicts are minimised;
- (d) Uses that require isolation from urban areas as a consequence of their impacts such as noise or odour may be appropriate where land use conflicts are **minimised**;
- (e) Development is reflective of and responsive to the environmental constraints of the land;
- (f) Residential and other development is appropriate only where directly associated with the rural nature of the zone;
- (g) Low-impact tourism and recreation activities do not compromise the long-term use of the land for rural purposes;

- (h) *The viability of both existing and future rural uses and activities is protected from the intrusion of incompatible uses;*
- (i) *Visual impacts of clearing, building, materials, access ways and other aspects of development are minimised or appropriately managed;*
- (j) *Adverse impacts of development both on-site and from adjoining areas are avoided and any impacts are minimised through location, design, operation and management; and*
- (k) *Natural features such as creeks, gullies, waterways, wetlands and bushland are retained, managed, enhanced and separated from adjacent development.*

Overall outcomes (d) and (j) are achieved through compliance with Performance Outcome PO6 below:

### **Amenity**

**PO6** *Development must not detract from the amenity of the local area, having regard to:*

- (a) *Noise;*
- (b) *Hours of operation;*
- (c) *Traffic;*
- (d) *Advertising devices;*
- (e) *Visual amenity;*
- (f) *Privacy;*
- (g) *Lighting;*
- (h) *Odour; and*
- (i) *Emissions*

Although the subject site is situated within the Rural zone, it is immediately adjoined by land within the Low Density Residential zone. The following provisions contained within the Low Density Residential zone are also considered relevant to the assessment of the application:

#### **6.2.6 Low density residential zone code**

**(3)** *The purpose of the code will be achieved through the following overall outcomes:*

- (g) *Development maintains a high level of residential amenity avoiding uses that introduce impacts associated with noise, hours of operation, traffic, advertising devices, visual amenity, privacy, lighting odour and emissions;*

Overall outcome (g) is achieved through compliance with Performance Outcome PO9 below:

### **Amenity**

**PO9** *Development must not detract from the amenity of the local area, having regard to:*

- (a) *Noise;*
- (b) *Hours of operation;*
- (c) *Traffic;*
- (d) *Advertising devices;*
- (e) *Visual amenity;*
- (f) *Privacy;*
- (g) *Lighting;*
- (h) *Odour; and*
- (i) *Emissions*



## **Comment**

The application proposes the intensification of the use of a private airstrip sited on a large rural allotment. Given the nature and scale of the proposed use, its intensification it is not likely to result in amenity impacts as a result of hours of operation, traffic, advertising devices, visual amenity, privacy, lighting, odour or emissions.

Considering the subject site is surrounded by a mix of rural lifestyle and residential lots, potential noise impacts resulting from the proposed increased use of the airstrip (increased flights) becomes the primary consideration when determining potential loss of amenity.

‘Amenity’ is typically used to describe desirable features of a place and as such is a highly subjective term which will be interpreted differently depending on an individual’s viewpoints regarding environmental qualities. This is evidenced by the combination of objection and support for the proposed development from different landowners sited immediately adjacent the site where the associated noise impacts will be the greatest.

The subject site is zoned Rural under the Mareeba Shire Council Planning Scheme 2016 and could support intensive cropping uses without council approval. Impacts generally associated with intensive cropping include noise (tractors, harvesters, motorbikes/quadbikes, aerial spraying depending on crop type), dust, and spray drift. The Koah locality contains a mix of land use zonings which include low density residential, rural residential and rural lots. Despite the mix of zonings, the area is considered to be rural in nature given its location, existing land uses and lack of urban services. As discussed above, rural areas are typically subject to noise generating activities such as machinery, tractors and motorbikes; therefore, the protection of amenity should not require the maintenance of a pristine acoustic environment.

As part of the application process, Council requested that the applicant/developer engage a suitably qualified acoustic consultant to investigate the level of noise nuisance/impact on surrounding sensitive land uses as a result of the proposed increased use of the airstrip. A Noise Impact Assessment (NIA) was prepared by Dedicated Acoustics and submitted to Council on 3 November 2017 (**Attachment 2**). The NIA was based on noise readings taken of all three (3) planes owned by the landowner at three (3) receptor points surrounding the site. All three (3) receptor points were in close proximity to adjoining dwellings, one (1) being adjacent the northern end of the airstrip (R4), and the other two (2) receptors being on the eastern side (R2) and western side (R3) of the southern end of the airstrip. The below table summarises the maximum noise levels reached at each receptor (refer to column heading L<sub>Amax</sub>).

**Table 4.1:** Calculated emission levels to receptors

| Receptor | Aircraft | External Level    |     | ANEF | Anticipated Annoyance |          |                 |
|----------|----------|-------------------|-----|------|-----------------------|----------|-----------------|
|          |          | L <sub>Amax</sub> | DNL |      | %Little Annoyed       | %Annoyed | %Highly Annoyed |
| R2       | Glassair | 86.4              | 42  | 11   | 22                    | 7        | 0               |
|          | Spitfire | 85.9              | 40  | 11   | 18                    | 5        | 0               |
|          | Cessna   | 74.3              | 32  | 0    | 1                     | 0        | 0               |
| R3       | Glassair | 73.7              | 32  | 0    | 0                     | 0        | 0               |
|          | Spitfire | 80.1              | 36  | 5    | 8                     | 1        | 0               |
|          | Cessna   | 65.9              | 26  | 0    | 0                     | 0        | 0               |
| R4       | Glassair | 69.6              | 29  | 0    | 0                     | 0        | 0               |
|          | Spitfire | 65.7              | 30  | 0    | 0                     | 0        | 0               |
|          | Cessna   | 63.7              | 24  | 0    | 0                     | 0        | 0               |

Based on the above noise measurements, the planes created a noise disturbance (increase in noise) of between 20 – 50 decibels during take-off depending on test location and background noise levels. The NIA also considered noise impacts associated with the three planes flying over the site (overflights). Overflight noise readings of the three planes were also compared to noise

produced by commercial jet overflights which occur over the Koah area on a daily basis. The intended planes generally produced lower overflight noise outputs than that of a commercial jet.

The Conclusion and Recommendations section of the NIA includes the following information in relation to noise nuisance/impact:

*“We note that the measured maximum levels from aircraft movements are less than 90 dB(A) which are considered “acceptable”, under AS 2021, for dwellings in the vicinity of aerodromes with civilian non-jet aircraft, provided the average number of flights are less than 15 flights per day.*

*Anticipated noise levels are considered to be “acceptable” under AS 2021 (i.e. there is usually no need for the building construction to provide protection specifically against aircraft noise). However, some annoyance is expected from use of the airstrip based on an average usage of one (1) flight per day (i.e. 1 take off movement, 1 overflight, and 1 arrival movement per day), which correlates with 365 flights per year. These levels of annoyance are relatively minor and limited to sparsely populated areas. Furthermore, the noise source is limited to day time hours, is short in duration and affected parties are provided with substantial respite from this intrusion. It is anticipated that the real impacts to affected residents will be limited to short duration speech interference.*

*Community reaction to aircraft noise is generally based on an energy average, whereby they respond to loudness and frequency of occurrence in a similar manner (i.e. a loud infrequent noise is comparable to moderate sound with a higher frequency of occurring), which forms the basis of the ANEF calculations. On this basis it is considered reasonable for the proponent to refrain from flying on some days and use these saved flights to facilitate multiple flights on a single day. We recommend a limit of 6 flights per day (i.e. 6 departure movements and 6 arrival movements) to avoid excessive concentration of use on a single day.*

*Use of the surrounding area by aircraft should be limited to those necessary for departure and landing. Flight tracks should seek to avoid direct overflight of dwellings where possible.”*

It is important to note that those dwellings in close proximity to either end of the airstrip will experience the greatest impact, however are generally only impacted by either the take-off or the landing of planes, as it is very rare that they occur at the same end of the airstrip for any given flight. It is also important to note that all noise readings were taken outdoors, and that noise impacts on residents would be significantly lessened when indoors.

In order to help minimise noise and amenity impacts associated with the proposed development, it is recommended that the following condition be attached to any approval limiting the frequency of flight activity:

#### *Permitted Flights*

*Recreational aircraft flights shall be limited as follows unless approved otherwise by Council:*

- *Seven (7) flights per calendar week (Monday to Sunday), totalling 365 flights per normal calendar year, inclusive of the 52 flights per calendar year permitted under development permit MCU/09/0050;*
- *A maximum of six (6) flights are permitted on any given day over the course of a calendar week, subject to the abovementioned limit of seven (7) flights per calendar week;*
- *A maximum of 12 flights for visitor pilots over the course of a calendar year, subject to the abovementioned limits of seven (7) flights per calendar week and up to six (6) flights in any given day over the course of any calendar week.*

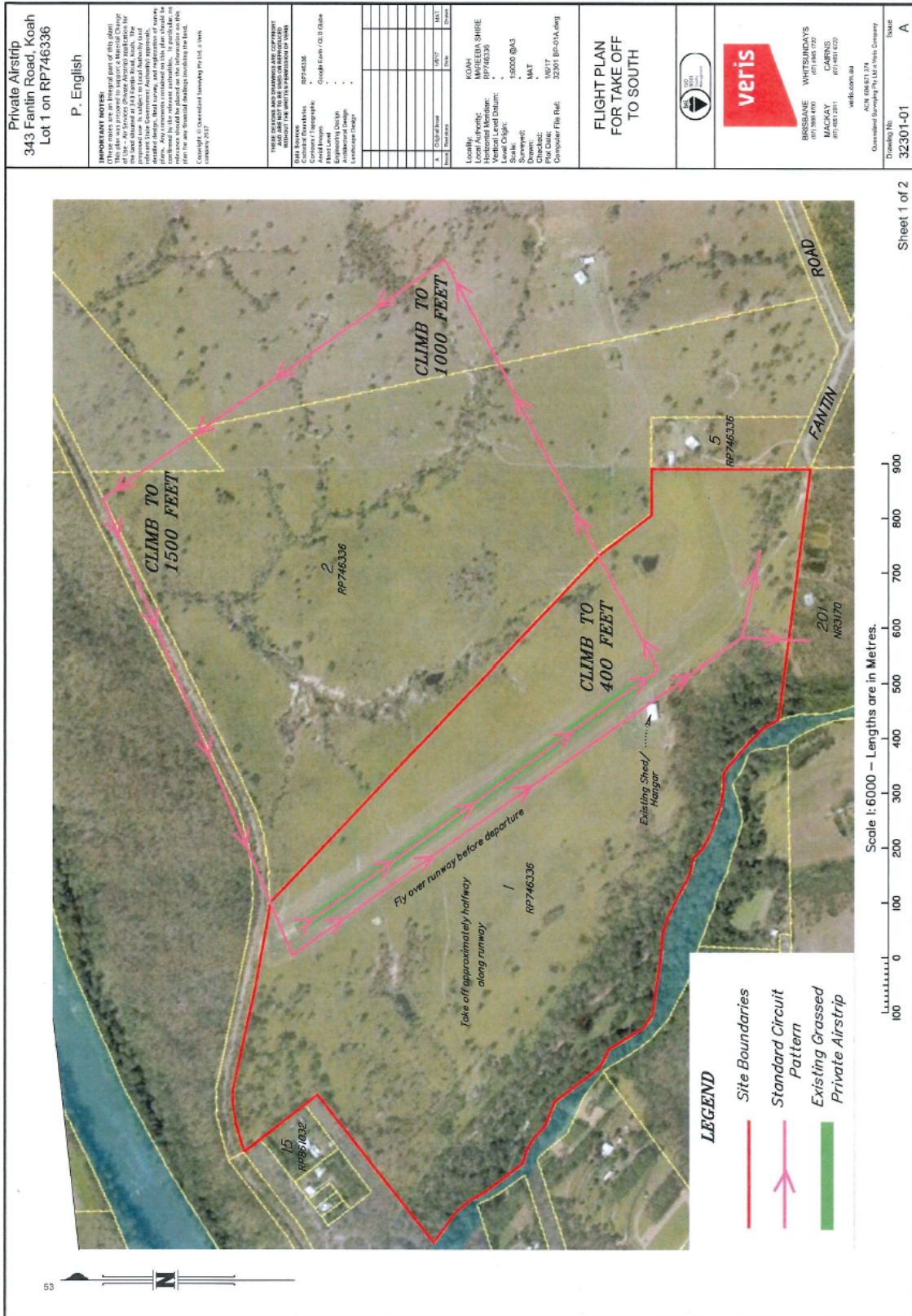
Such a condition will limit the frequency of flights to a maximum of seven (7) flights in any given calendar week which will ensure the 365 flights applied for are spread over the course of a year, and if more than one (1) flight is carried out on any given day during that week (allowable maximum of 6 flights) there will be resultant day/s within that same week where flying would not be permitted as the seven (7) flight weekly limit will still apply, thus providing further respite from any nuisance experienced by surrounding residents.

Based on the above considerations and with the inclusion of conditions that will limit flight frequency, it is considered that the proposed intensification of the airstrip use could proceed without causing unacceptable noise impacts and loss of amenity for surrounding residential uses. The proposed development is therefore not considered to be in conflict with Probable Solution PO6 of the Rural zone code or PO9 of the Low density residential zone code.

**Date Prepared:** 9 February 2018

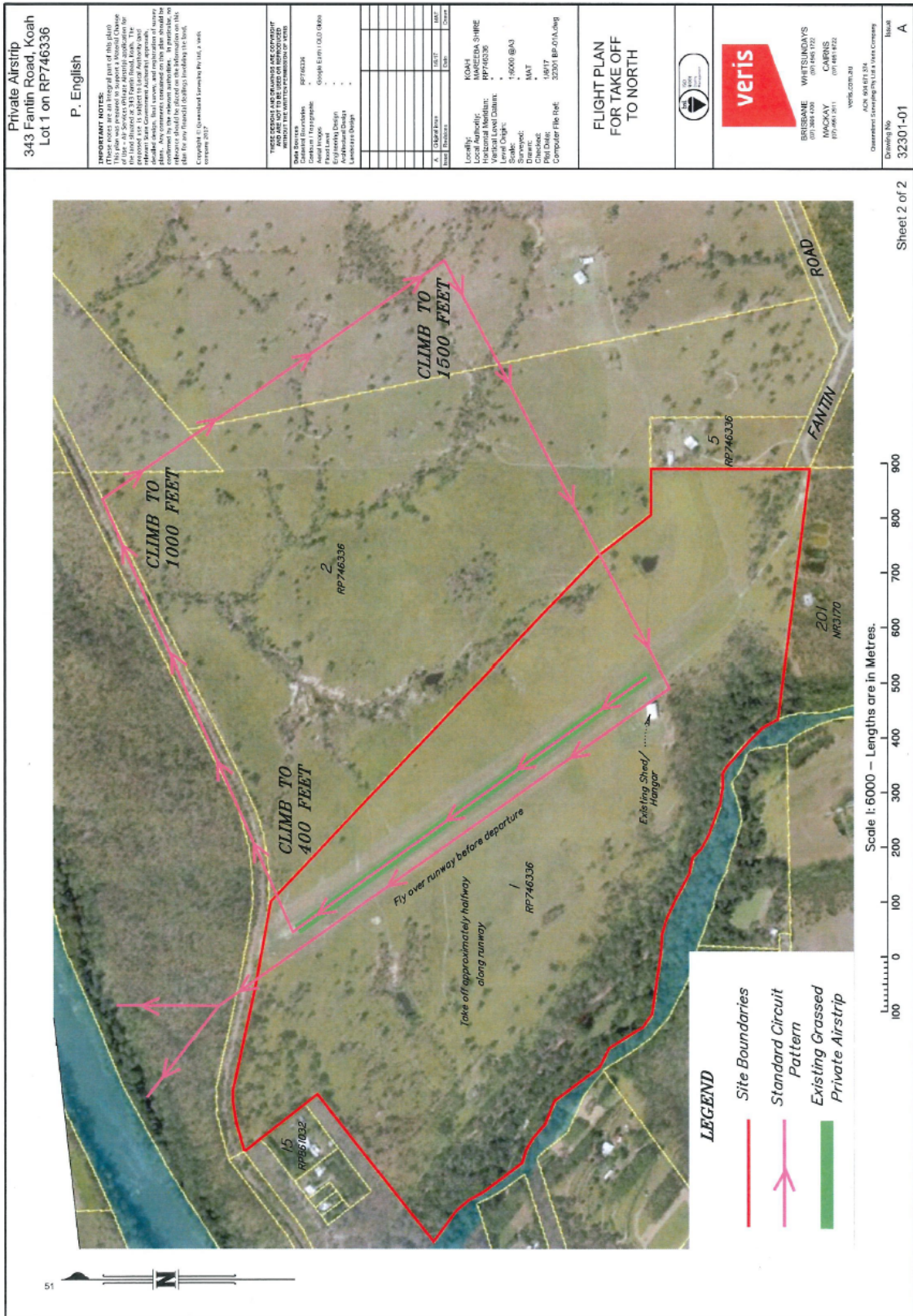


APPROVED PLANS (ECM Doc Set ID 3260510)



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Version: 1, Version Date: 23/06/2017





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## **NOISE IMPACT ASSESSMENT**

### **MATERIAL CHANGE OF USE – AIR SERVICES (PRIVATE AIRSTRIP)**

343 Fantin Road, Koah QLD 4881  
(Lot 1 on RP746336)







BRISBANE | SUNSHINE COAST | GOLD COAST | TOWNSVILLE | CAIRNS | BYRON BAY | TOOWOOMBA

## Document Control Page

**Document Title:** A168 – 343 Fantin Rd Koah – Noise Impact Assessment (Rev 3)  
**Date:** 3<sup>rd</sup> November 2017  
**Prepared by:** Craig O’Sullivan, BEng (Mech) MAAS  
**Reviewed by:** Craig O’Sullivan, BEng (Mech) MAAS

### Revision History

| Date       | Revision | Description     | Authorised                   |   |
|------------|----------|-----------------|------------------------------|---|
|            |          |                 | Name/Position                | Signature   |
| 30/09/2017 | 0        | Internal review | Craig O’Sullivan<br>Director |    |
| 30/10/2017 | 1        | Revised issue   | Craig O’Sullivan<br>Director |    |
| 31/10/2017 | 2        | Revised issue   | Craig O’Sullivan<br>Director |    |
| 3/11/2017  | 3        | Revised issue   | Craig O’Sullivan<br>Director |  |

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We encourage clients to check with us before using materials or equipment that are alternative to those specified in our Acoustical Report.

## Dedicated Acoustics: Noise Impact Assessment

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## EXECUTIVE SUMMARY

This report details a noise impact assessment undertaken for a Material Change of Use – Air Services (Private Airstrip) at 343 Fantin Road, Koah QLD 4881 (Lot 1 on RP746336).

The subject site is located at 343 Fantin Road, Koah; and is currently occupied by a large shed and an air-strip. The subject site and the majority of the surrounding land is zoned Rural, with a pocket of Rural Residential and Low Density Residential zoned land to the west and north west.

The airstrip has an existing approval for a total of 52 landings and take-offs per year with potential hours of operation limited to 7:00 am to 6:00 pm. The proponent wishes to increase the allowable usage to 365 landings and take-offs per year with hours of operation limited to 7:00 am to 6:00 pm.

The airstrip will be generally used by the following 3 planes which are owned by the proponent:

- Replica Supermarine Spitfire;
- Cessna 172 Skyhawk; and,
- Glassair Sportsman 2+2.

On occasion the airstrip may be utilised by aircraft other than those above, however they are expected to be of a similar size to these with similar levels of noise emission. Use of the site will be limited to take-off and departures only. Circuit training or prolonged usage of aircraft in the area is not proposed.

Context on the acceptability of the airstrip and surrounding land uses have been drawn from a review of:

- Mareeba Shire Planning Scheme 2016;
- Australian Standard AS 2021:2015 Acoustics – Aircraft Noise Intrusion – Building Siting and Construction; and,
- Annoyance from Transportation Noise: Relationships with Exposure Metrics DNL and DENL and Their Confidence Intervals.

Anticipated noise levels are considered to be 'acceptable' under AS 2021 (i.e. there is usually no need for the building construction to provide protection specifically against aircraft noise). However some annoyance is expected from use of the airstrip based on an average usage of 1 flight per day (i.e. 1 take off movement, 1 overflight, and 1 arrival movement per day), which correlates with 365 flights per



year. These levels of annoyance are relatively minor and limited to sparsely populated areas. Furthermore the noise source is limited to day time hours, short in duration and affected parties are provided with substantial respite from this intrusion. It is anticipated that the real impacts to affected residents will be limited to short duration speech interference.

Community reaction to aircraft noise is generally based on an energy average, whereby they respond to loudness and frequency of occurrence in a similar manner (i.e. a loud infrequent noise is comparable moderate sound with a higher frequency of occurring), which forms the basis of the ANEF calculations. On this basis it is considered reasonable for the proponent to refrain from flying on some days and use these saved flights to facilitate multiple flights on a single day. We recommend a limit of 6 flights per day (i.e. 6 departure movements and 6 arrival movements) to avoid excessive concentration of use on a single day.

Use of the surrounding area by aircraft should be limited to those necessary for departure and landing. Flight tracks should seek to avoid direct overflight of dwellings where possible.

## **1. INTRODUCTION**

This report details a noise impact assessment undertaken for a Material Change of Use – Air Services (Private Airstrip) at 343 Fantin Road, Koah QLD 4881 (Lot 1 on RP746336).

### **1.1 DESCRIPTION OF SITE AND SURROUNDS**

The subject site is located at 343 Fantin Road, Koah; and is currently occupied by a large shed and an air-strip. The subject site and the majority of the surrounding land is zoned Rural, with a pocket of Rural Residential and Low Density Residential zoned land to the west and north west.

An aerial photograph of the development site and surrounds is shown in **Figure 1.1**.





Figure 1.1 : Aerial photograph of the development site and surrounds (Google Earth)

## 1.2 PROPOSED OPERATON

We understand that approval has been given for a total of 52 landings and take-offs per year with potential hours of operation limited to 7:00 am to 6:00 pm. The proponent wishes to increase the allowable usage to 365 landings and take-offs per year with hours of operation limited to 7:00 am to 6:00 pm.

The airstrip will be generally used by the following 3 planes which are owned by the proponent:

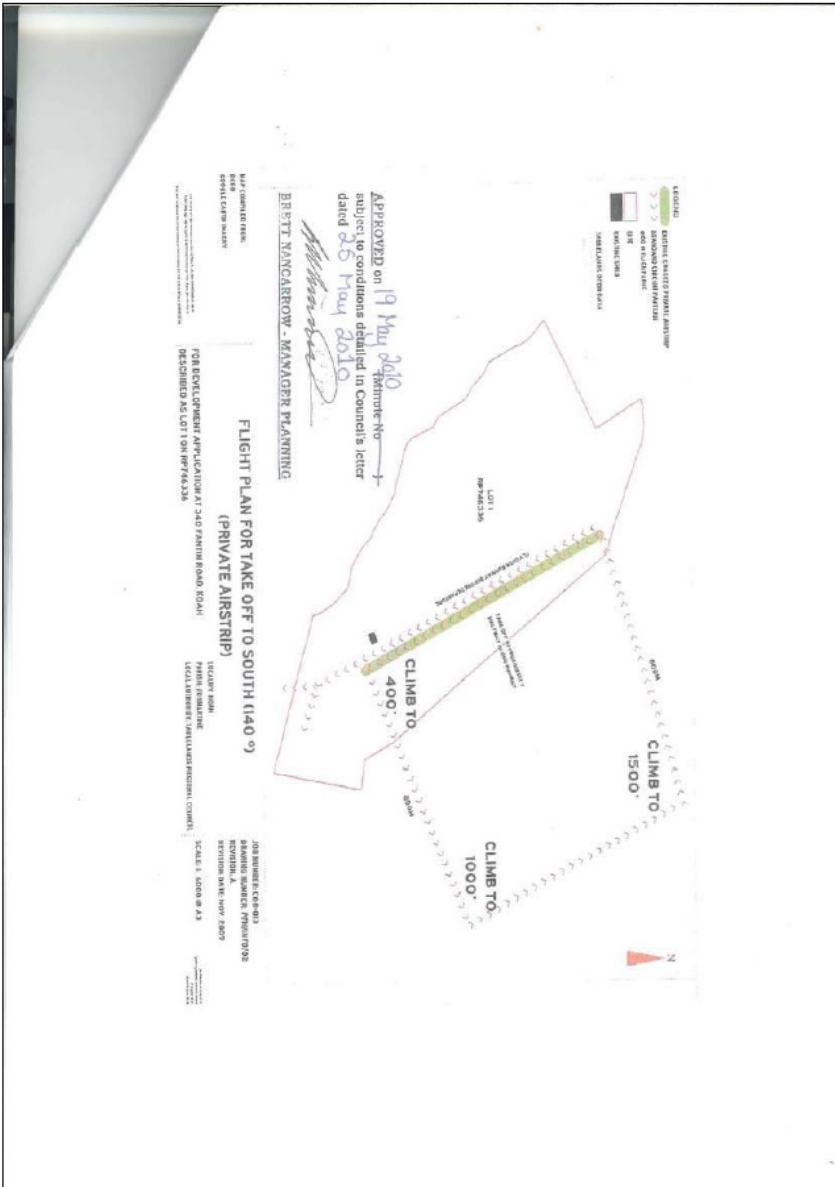
- Replica Supermarine Spitfire;
- Cessna 172 Skyhawk; and,
- Glassair Sportsman 2+2.

On occasion the airstrip may be utilised by aircraft other than those above, however they are expected to be of a similar size to these with similar levels of noise emission. These occasions may also involve multiple aircraft movements in a single day.

Use of the site will be limited to take-off and departures only. Circuit training or prolonged usage of aircraft in the area is not proposed.

The typical usage of the site is for departure to the south east and arrival from the north. The previously approved flight track for departure to the south is shown in **Figure 1.2**.

Figure 1.2: Previously approved departure track to the south



## 2. CRITERIA

### 2.1 MAREEBA SHIRE PLANNING SCHEME 2016 – RURAL ZONE CODE

The Mareeba Shire Planning Scheme 2016 – Rural Zone Code provides the following assessment criteria for amenity –

*PO6 – Performance Outcome*

*Development must not detract from the amenity of the local area, having regard to:*

*a) noise.*

*AO6 – Acceptable Outcome*

*No acceptable outcome is provided,*

Amenity typically describes desirable features of a place and as such is a highly subjective term which can be interpreted differently depending on one's viewpoint regarding environmental qualities. Under the Mareeba Shire Planning Scheme rural areas are intended to support rural activities and land uses of a varying scale, which typically involve noise generation over a range of levels (e.g. tractors and other machinery, processing equipment, and airstrips – which are considered to be a specific outcome for rural areas under the planning scheme). As such we do not consider that protection of amenity requires maintenance of a pristine acoustic environment, and that some impacts are tolerable within a rural environment.

The proposed development involves noise emission from aircraft, which is expected to occur for short durations on a daily basis during day time hours only. The anticipated impacts are expected to be limited to speech interference for very short periods and no sleep disturbance impacts are anticipated, along with some potential for annoyance depending on the recipients view towards neighbours and aviation activities.

Guidance on potential annoyance from the proposed use of airstrip has been drawn from Australian Standard AS2021:2015 – *Acoustics – Aircraft noise intrusion – Building siting and construction* as well as studies quantifying annoyance from transport noise in relation to the level of noise exposure; which are described in the following sections.

We note that aircraft noise is specifically excluded from the Environmental Protection Act 1994 and its subordinate legislation including the Environmental Protection (Noise) Policy 2008.



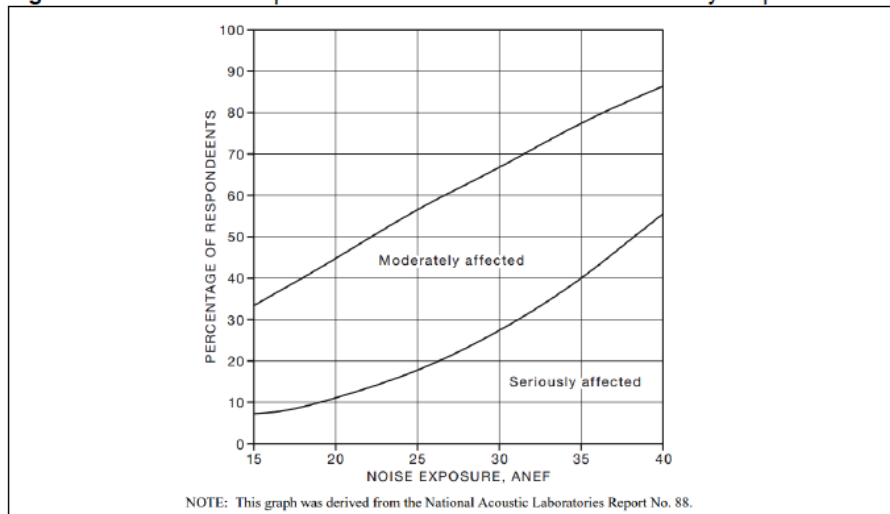
## 2.2 AS 2021:2015 – AIRCRAFT NOISE INTRUSION – BUILDING SITING AND CONSTRUCTION

Australian Standard AS 2021:2015 – *Aircraft Noise Intrusion – Building Siting and Construction* (AS 2021) is commonly used in land planning, and the siting and construction of buildings in the vicinity of airports. Its objective is to provide guidance to regional and local authorities, organisations, communities and others associated with urban and regional planning and building development on the siting and construction of new buildings against aircraft noise intrusion and on the acoustical adequacy of existing buildings in areas near aerodromes. The standard is not intended to be applied for the purposes of assessing the effects of noise from aircraft and is been incorporated within this assessment to provide context on the potential impacts of an increase to usage of the airstrip.

The standard is typically used in conjunction with an Australian Noise Exposure Forecast (ANEF) chart to determine:

- (a) Whether the extent of aircraft noise intrusion makes building sites 'acceptable', 'unacceptable' or 'conditionally acceptable' for the types of activity to be, or being undertaken;
- (b) For 'conditionally acceptable' sites, the extent of noise reduction required to provide acceptable noise levels indoors for the types of activity to be, or being, undertaken; and
- (c) The type of building construction necessary to provide a given noise reduction, provided that external windows and doors are closed.

The ANEF is a single number index for predicting the cumulative exposure to aircraft noise in communities near aerodromes during a specified time period (normally 1 year). The calculation of this index includes aircraft noise levels as well as the frequency and timing of operations. This index is useful for rating the compatibility of differing land uses in relation to aircraft noise. **Figure 2.1** shows the dose/response relationship between aircraft noise and community reaction which was derived from the National Acoustics Laboratories Report 88, which was used in the determination of the ANEF system.

**Figure 2.1: Relationship between aircraft noise and community response**

Under AS2021 dwellings are considered: 'acceptable' with less than 20 ANEF, 'conditionally acceptable' between 20 to 25 ANEF, and 'unacceptable' in areas greater than 25 ANEF. If a location is classified as 'acceptable', there is usually no need for the building construction to provide protection specifically against aircraft noise. However this does not mean that aircraft noise will not be unnoticeable.

Calculation of ANEF contours is based on forecast involves averaging yearly movements on an average day. This ANEF 'average day' is not a specific day, but is generally calculated as the number of annual movements divided by 365.

The ANEF is calculated from the following equation:

$$ANEF_{ij} = EPNdB_{ij} + 10\log_{10}(Nd + 4N_n) - 88$$

Where

$ANEF_{ij}$  = noise exposure due to aircraft type  $i$  on flight path  $j$

$EPNdB_{ij}$  = noise level of aircraft type  $i$  on flight path  $j$

$N_d, N_n$  = number of flights during the day and night respectively, of aircraft type  $i$  and flight path  $j$

The total ANEF is the logarithmic sum of all individual noise exposures produced by each aircraft type operating on each flight path for a design average day.

AS 2021 also provides guidance on the acceptability of sites for dwellings, based on aircraft noise levels, which is suitable where aircraft usage is limited to a small number of civil, non-jet aircraft movements; as shown in **Table 2.1**.

**Table 2.1:** Site acceptability for dwellings based on aircraft noise levels

| Average Number of Flights Per Day <sup>1</sup> | Aircraft Noise Level Expected at Site, dB(A) |                          |              |
|--|--|--------------------------|--------------|
|  | Acceptable                                   | Conditionally Acceptable | Unacceptable |
| > 30   | < 70   | 70-75                    | > 75         |
| 15-30  | < 80   | 80-85                    | > 85         |
| < 15   | < 90   | 90-95                    | > 95         |

1. Each night time flight is to count as 4 operations

### 2.3 ANNOYANCE FROM TRANSPORTATION NOISE: RELATIONSHIPS WITH EXPOSURE METRICS DNL AND DENL AND THEIR CONFIDENCE INTERVALS

Relationships between annoyance and aircraft noise exposure levels have been drawn from the peer reviewed paper *Annoyance from Transportation Noise: Relationships with Exposure Metrics DNL and DENL and Their Confidence Intervals* (Miedema & Oushoorn, 2001) and are summarised as:

- Percentage Little-Annoyed  

$$\%LA = -5.741 \times 10^{-4}(DNL-32)^3 + 2.863 \times 10^{-2}(DNL-32)^2 + 1.912(DNL-32)$$
- Percentage Annoyed  

$$\%A = 1.460 \times 10^{-5}(DNL-37)^3 + 1.511 \times 10^{-2}(DNL-37)^2 + 1.346(DNL-37)$$
- Percentage Highly-Annoyed  

$$\%HA = -1.395 \times 10^{-4}(DNL-42)^3 + 4.081 \times 10^{-2}(DNL-42)^2 + 0.342(DNL-42)$$

The Day-Night Level (DNL) is the average levels during day, evening and night time periods with a 10 dB penalty for noise occurring during the night.

### 3. BACKGROUND NOISE SURVEY

An on-site survey was conducted between 30<sup>th</sup> August and 1<sup>st</sup> September 2017. The measurement location (ML1) was located positioned towards the south of the property as shown in **Figure 3.1**. The measured levels are considered free field.

**Figure 3.1:** Aerial photograph showing measurement location ML1 (Google Earth)



All instrumentation used in this assessment holds a current calibration certificate from a certified NATA calibration laboratory. The following instruments were used to measure the ambient noise levels-

- Rion NL-21 sound level meter
- Castle GA607 calibrator

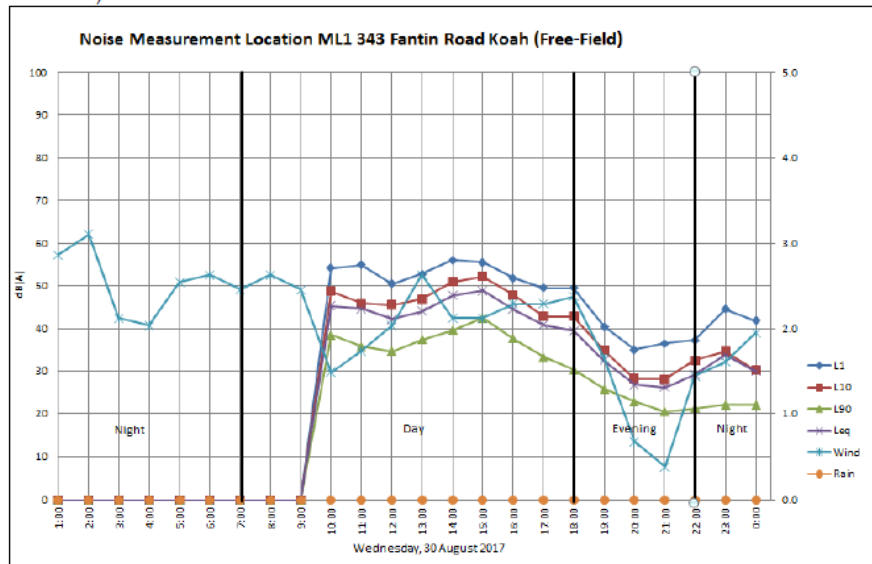
Ambient sound pressure levels were measured in accordance with Australian Standard AS1055.1:1997 – 'Acoustics-Description and measurement of environmental noise – Part 1: General procedures'. Ambient noise levels were recorded at continuous 15 minute intervals. Noise monitoring results are shown graphically in **Figure 2.2** and summarised in **Table 3.1**. Based on our observations the noise environment at the site is generally controlled by natural sounds (e.g. wind, bird and insect noise) as well as dog barks from the dwelling to the south of the site.

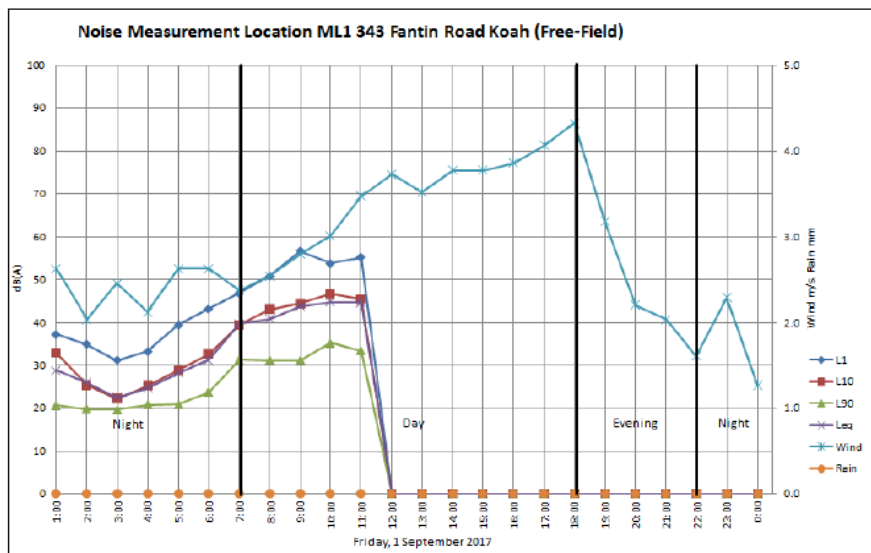
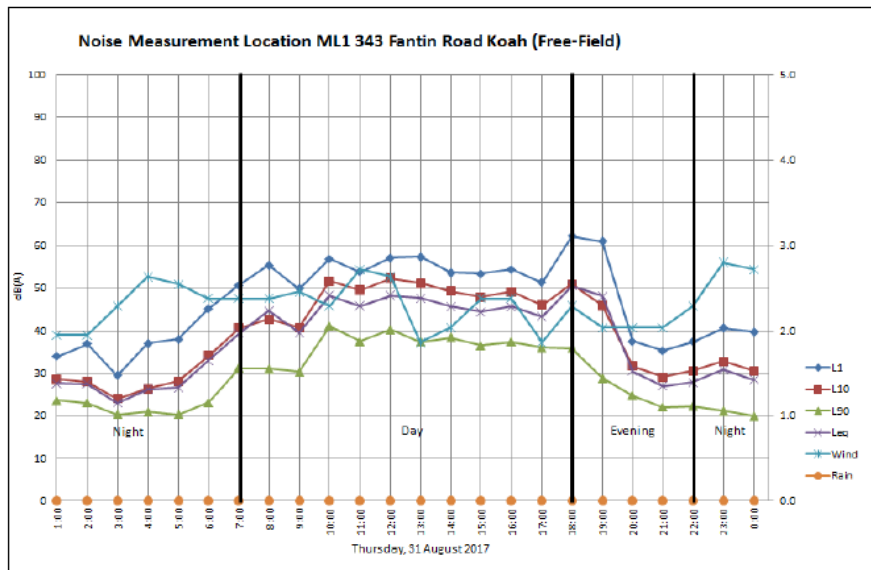


**Table 3.1:** Average ambient noise levels recorded at Location ML1, (levels in dB(A), free field)

| Time                             | Measured Noise Level dB(A) |                  |                  |                  |      |
|----------------------------------|----------------------------|------------------|------------------|------------------|------|
|                                  | L <sub>A01</sub>           | L <sub>A10</sub> | L <sub>A90</sub> | L <sub>Aeq</sub> | RBL  |
| Day 7:00am to 6:00pm             | 53.8                       | 47.2             | 36.0             | 44.7             | 30.3 |
| Evening 6:00pm to 10:00pm        | 40.0                       | 32.6             | 23.6             | 31.0             | 20.9 |
| Night 10:00pm to 7:00am          | 39.1                       | 30.3             | 22.5             | 29.3             | 20.1 |
| Day Max 1-hr 7:00am to 6:00pm    |                            |                  |                  | 49.6             |      |
| Night max 1-hr 10:00pm to 7:00am |                            |                  |                  | 39.5             |      |
| 24 hour                          | 46.0                       |                  |                  |                  | 36.6 |

**Figure 3.2:** Average ambient noise levels recorded at Location ML1, (levels in dB(A), free field)





Based on the background noise survey, the receiving environment can be considered to be very quiet and generally controlled by natural sounds.

#### 4. NOISE IMPACT ASSESSMENT

Noise measurements were taken for Glassair Sportsman 2+2, Replica Supermarine Spitfire, and a Cessna 172 Skyhawk undertaking departure, arrival, and overflight movements on Friday 20<sup>th</sup> October 2017. Departure movements were to the south, with aircraft crossing the airstrip from west to east before landing on the airstrip from the north. Weather during the measurements was occasionally cloudy, with wind varying between still conditions a gentle breeze. The noise background was generally controlled by wind in the trees and grass, along with occasional bird noise and dog barks; and generally varied between 35 and 45 dB(A).

The measurement locations are shown in **Figure 4.1**. Measurement results are shown in **Table 4.1**.

**Table 4.1: Measured noise levels**

| Location          | Aircraft  | Time       | Description | Measured Level, dB(A) |                    |                      |      |
|-------------------|-----------|------------|-------------|-----------------------|--------------------|----------------------|------|
|                   |           |            |             | L <sub>Amax</sub>     | L <sub>Aeq,T</sub> | Duration, T, seconds | SEL  |
| ML2 – SW Receptor | Glass Air | 13:57      | Take Off    | 86.4                  | 77.8               | 23                   | 91.4 |
|                   |           | 14:02      | Overflight  | 61.9                  | 54.9               | 55                   | 72.3 |
|                   | Spitfire  | 15:08      | Take Off    | 85.9                  | 75.9               | 24                   | 89.7 |
|                   |           | 15:15      | Overflight  | 56.7                  | 51.3               | 38                   | 67.1 |
|                   | Cessna    | 15:55      | Take Off    | 74.3                  | 66.4               | 35                   | 81.8 |
|                   |           | 15:59      | Overflight  | 50.0                  | 46.0               | 47                   | 62.7 |
| Commercial Jet    | 15:10     | Overflight | 60.2        | 55.2                  | 45                 | 71.7                 |      |
| ML3 – SE Receptor | Glass Air | 13:57      | Take Off    | 73.7                  | 65.2               | 37                   | 80.9 |
|                   |           | 14:02      | Overflight  | 60.4                  | 53.9               | 42                   | 70.1 |
|                   | Spitfire  | 15:08      | Take Off    | 80.1                  | 70.7               | 30                   | 85.4 |
|                   |           | 15:15      | Overflight  | 62.2                  | 53.0               | 43                   | 69.4 |
|                   | Cessna    | 15:55      | Take Off    | 65.9                  | 59.3               | 38                   | 75.1 |
|                   |           | 16:00      | Overflight  | 56.9                  | 47.4               | 19                   | 60.2 |
| Commercial Jet    | 15:10     | Overflight | 63.5        | 55.6                  | 31                 | 70.6                 |      |
| ML4 – NW Receptor | Glass Air | 13:57      | Take Off    | 69.6                  | 63.6               | 27                   | 78.0 |
|                   |           | 14:02      | Overflight  | 58.7                  | 58.7               | 35                   | 68.3 |
|                   |           | 14:05      | Landing     | 59.3                  | 53.3               | 21                   | 66.5 |

| Location | Aircraft       | Time  | Description | Measured Level, dB(A) |                    |                      |      |
|----------|----------------|-------|-------------|-----------------------|--------------------|----------------------|------|
|          |                |       |             | L <sub>Amax</sub>     | L <sub>Aeq,T</sub> | Duration, T, seconds | SEL  |
|          | Spitfire       | 15:08 | Take Off    | 65.7                  | 59.9               | 31                   | 74.8 |
|          |                | 15:15 | Overflight  | 67.2                  | 50.2               | 25                   | 74.2 |
|          |                | 15:17 | Landing     | 69.8                  | 60.2               | 28                   | 74.7 |
|          | Cessna         | 15:54 | Take Off    | 63.7                  | 58.9               | 24                   | 72.7 |
|          |                | 15:59 | Overflight  | 52.9                  | 48.3               | 39                   | 64.2 |
|          |                | 16:02 | Landing     | 50.2                  | 47.8               | 49                   | 64.7 |
|          | Commercial Jet | 15:10 | Overflight  | 64.1                  | 55.6               | 33                   | 70.7 |

The Sound Exposure Level (SEL) is the equivalent sound pressure level for the measurement condensed into a 1 second period.

Daily emission to nearby receptors has been calculated to nearby receptors and is shown in **Table 4.2**. The estimate is based on:

- An average single take off, over flight and landing per day; occurring in day time hours only.
- An approximation of  $EPNdB = L_{Amax} + 13$  dB as described in *Evaluation and Prediction of Airport Noise in Japan (Yoshioka, 2000)* to allow calculation of ANEF levels at measurement points.

Figure 4.1 : Measurement locations for aircraft noise survey



Table 4.1: Calculated emission levels to receptors

| Receptor | Aircraft | External Level    |     | ANEF | Anticipated Annoyance |           |                  |
|----------|----------|-------------------|-----|------|-----------------------|-----------|------------------|
|          |          | L <sub>Amax</sub> | DNL |      | % Little Annoyed      | % Annoyed | % Highly Annoyed |
| R2       | Glassair | 86.4              | 42  | 11   | 22                    | 7         | 0                |
|          | Spitfire | 85.9              | 40  | 11   | 18                    | 5         | 0                |
|          | Cessna   | 74.3              | 32  | 0    | 1                     | 0         | 0                |
| R3       | Glassair | 73.7              | 32  | 0    | 0                     | 0         | 0                |
|          | Spitfire | 80.1              | 36  | 5    | 8                     | 1         | 0                |
|          | Cessna   | 65.9              | 26  | 0    | 0                     | 0         | 0                |
| R4       | Glassair | 69.6              | 29  | 0    | 0                     | 0         | 0                |
|          | Spitfire | 65.7              | 30  | 0    | 0                     | 0         | 0                |
|          | Cessna   | 63.7              | 24  | 0    | 0                     | 0         | 0                |



We note that the measured maximum levels from aircraft movements are less than 90 dB(A) which are considered 'acceptable', under AS 2021, for dwellings in the vicinity of aerodromes with civilian non-jet aircraft, provided the average number of flights are less than 15 flights per day. The calculated ANEF levels also indicate that the nearby sensitive locations are considered 'acceptable' under AS 2021.

Some annoyance is expected from use of the airstrip based on an average usage of 1 flight per day (i.e. 1 take off movement, 1 overflight, and 1 arrival movement per day), as shown in **Table 4.1**; which correlates with 365 flights per year. However these levels of annoyance are relatively minor and limited to sparsely populated areas. Furthermore the noise source is limited to day time hours, short in duration and affected parties are provided with substantial respite from this intrusion. It is anticipated that the real impacts to affected residents will be limited to short duration speech interference.

Community reaction to aircraft noise is generally based on an energy average, whereby they respond to loudness and frequency of occurrence in a similar manner (i.e. a loud infrequent noise is comparable moderate sound with a higher frequency of occurring), which forms the basis of the ANEF calculations. On this basis it is considered reasonable for the proponent to refrain from flying on some days and use these saved flights to facilitate multiple flights on a single day. We recommend a limit of 6 flights per day (i.e. 6 departure movements and 6 arrival movements) to avoid excessive concentration of use on a single day.

Use of the surrounding area by aircraft should be limited to those necessary for departure and landing. Flight tracks should seek to avoid direct overflight of dwellings where possible.

## 5. CONCLUSION AND RECOMMENDATIONS

This report details a noise impact assessment undertaken for a Material Change of Use – Air Services (Private Airstrip) at 343 Fantin Road, Koah QLD 4881 (Lot 1 on RP746336).

The subject site is located at 343 Fantin Road, Koah; and is currently occupied by a large shed and an air-strip. The subject site and the majority of the surrounding land is zoned Rural, with a pocket of Rural Residential and Low Density Residential zoned land to the west and north west.

The airstrip has an existing approval for approval has been given for a total of 52 landings and take-offs per year with potential hours of operation limited to 7:00 am to 6:00 pm. The proponent wishes to increase the allowable usage to 365 landings and take-offs per year with hours of operation limited to 7:00 am to 6:00 pm.

The airstrip will be generally used by the following 3 planes which are owned by the proponent:

- Replica Supermarine Spitfire;
- Cessna 172 Skyhawk; and,
- Glassair Sportsman 2+2.

On occasion the airstrip may be utilised by aircraft other than those above, however they are expected to be of a similar size to these with similar levels of noise emission. Use of the site will be limited to take-off and departures only. Circuit training or prolonged usage of aircraft in the area is not proposed.

Anticipated noise levels are considered to be 'acceptable' under AS 2021 (i.e. there is usually no need for the building construction to provide protection specifically against aircraft noise). However some annoyance is expected from use of the airstrip based on an average usage of 1 flight per day (i.e. 1 take off movement, 1 overflight, and 1 arrival movement per day), which correlates with 365 flights per year. These levels of annoyance are relatively minor and limited to sparsely populated areas. Furthermore the noise source is limited to day time hours, short in duration and affected parties are provided with substantial respite from this intrusion. It is anticipated that the real impacts to affected residents will be limited to short duration speech interference.

Community reaction to aircraft noise is generally based on an energy average, whereby they respond to loudness and frequency of occurrence in a similar manner (i.e. a loud infrequent noise is comparable moderate sound with a higher frequency



of occurring), which forms the basis of the ANEF calculations. On this basis it is considered reasonable for the proponent to refrain from flying on some days and use these saved flights to facilitate multiple flights on a single day. We recommend a limit of 6 flights per day (i.e. 6 departure movements and 6 arrival movements) to avoid excessive concentration of use on a single day.

Use of the surrounding area by aircraft should be limited to those necessary for departure and landing. Flight tracks should seek to avoid direct overflight of dwellings where possible.

## APPENDIX A – GLOSSARY OF ACOUSTIC TERMS

The following is a brief description of the technical terms used to describe traffic noise to assist in understanding the technical issues presented in this document.

### **Event maximum sound pressure level ( $LA_{\%,adj,T}$ ), $L_{01}$**

The  $L_{01}$  level is calculated as the noise level equalled and exceeded for 1% of the measurement time, for example 9 seconds in any 15 minute interval.  $L_{01}$  is an appropriate level to characterise single events, such as from impulsive or distinctive pass-by noise. In this Report, the measured  $L_{01}$  levels for day/evening/night are not averaged but are arranged from low to high in the relevant day/evening/night interval and the value that is found at the 90th percentile ( $L_{10}$  of  $L_{01}$  sample) in the interval is recorded as its " $L_{01}$ " level. The level can be adjusted for tonality or impulsiveness.

### **Average maximum sound pressure level ( $LA_{\%,adj,T}$ ), $L_{10}$**

The " $L_{10}$ " level is an indicator of "steady-state" noise or intrusive noise conditions from traffic, music and other relatively non-impulsive noise sources. The  $L_{10}$  level is calculated as the noise level equalled and exceeded for 10% the measurement time, for example 90 seconds in any 15 minute interval. The measured  $L_{10}$  time-intervals for day/evening/night are arithmetically averaged to present the "average maximum" levels of the environment for day/evening/night. The level can be adjusted for tonality or impulsiveness.

### **Background sound pressure level ( $LA_{90,T}$ ), $L_{90}$**

Commonly called the " $L_{90}$ " or "background" level and is an indicator of the quietest times of day, evening or night. The  $L_{90}$  level is calculated as the noise level equalled and exceeded for 90% the measurement time. The measured  $L_{90}$  time-intervals are arithmetically averaged to present the "average background" levels of the environment for day/evening/night. The level is recorded in the absence of any noise under investigation. The level is not adjusted for tonality or impulsiveness.

### **Equivalent Continuous or time average sound pressure level ( $LA_{eq,T}$ ), $Leq$**

Commonly called the " $Leq$ " level it is the logarithmic average noise level from all sources far and near. The maximum 1-hour levels within the day/evening/night time intervals are referenced for building design. The level can be adjusted for tonality.

### **Façade-adjusted level**

A sound level that is measured at a distance of 1.0 metre from a wall or facade. The level is nominally 2.5 dB higher than the free-field level.

### **Free-field level**

A sound level that is measured at a distance of more than 3.5 metres from a wall or facade.