

15 May 2018

The General Manager  
Bega Valley Shire Council  
PO Box 492  
BEGA NSW 2550

**Attention: Anna Bowman**

Dear Anna,

**RE – DEVELOPMENT APPLICATION DA2017.445 FOR RECREATIONAL FLIGHT SCHOOL AT LOT 1 DP109606 AND LOT 1 DP245789, 1070 PRINCES HIGHWAY, FROGS HOLLOW**

NGH Environmental act on behalf of the proponent, Mr Norm Boyle of Sports Aviation Flight College Australia (SAFCA) in the matter of DA2017.445 for the proposed recreational flight school at 1070 Princes Highway, Frogs Hollow.

As you are aware, SAFCA consulted Council's Development Advisory Panel in the preparation of DA2017.445. A meeting held on 30 October 2014 was attended by Council officers across several relevant departments. Council's letter to SAFCA dated 13 November 2014 outlined the proposal as communicated to Council by the proponent and provided characterisation and planning pathway advice. The letter raised matters such as acoustic, traffic, biodiversity and wastewater that would need to be addressed in supporting material for the development application. Matters raised in Council's letter to SAFCA were incorporated in the initial DA submission.

Further consultation with Council's Planning Coordinator occurred in September and October 2017. The advice received was consistent with the earlier advice of the Development Advisory Panel. Relevant matters were also incorporated in the initial submission to Council.

Following the submission of the development application in October 2017, written requests for additional information in respect of DA2017.445 were received from Council on 12 January, 15 February 2018 and 15 March 2018. A summary of all submissions received by Council was received by NGH in two parts on 12 January 2018 and 28 February 2018.

As a result of Council's letter dated 15 March 2018, SAFCA obtained detailed legal advice from Bradley Allen Love Lawyers on the permissibility of the proposed development. The advice from BAL reinforced NGH and the proponent's shared view that the proposed development is permissible with development consent. The advice from BAL was provided to Council on 6 April 2018.

An extensive package of additional information was prepared by NGH and several specialist consultants in response to matters raised by Council and through Council from other agencies. This additional information package was submitted to Council on 11 May 2018.

We ask that Council finalise its assessment of DA2017.445 in consideration of all supporting material provided.

Yours sincerely,

**NGH Environmental**



**Lizzie Olesen-Jensen**  
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# ADDENDUM

## STATEMENT OF ENVIRONMENTAL EFFECTS

PROPOSED RECREATIONAL FLIGHT SCHOOL  
1070 PRINCES HIGHWAY, FROGS HOLLOW

MAY 2018



## Document Verification



Project Title: Proposed Recreational Flight School  
1070 Princes Highway, Frogs Hollow, NSW

Project Number: 17-434

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## ACRONYMS AND ABBREVIATIONS

ANEF	Australian Noise Exposure Forecast
APZ	Asset Protection Zone
AS	Australian Standards
ATSB	Australian Transport Safety Bureau
BCA	Building Code of Australia
BVDCP	Bega Valley Development Control Plan
BVLEP	Bega Valley Local Environment Plan
CAA	<i>Civil Aviation Act 1988</i>
CAO	Civil Aviation Orders
CAR	<i>Civil Aviation Regulations 1988</i>
CASA	Civil Aviation Safety Authority
CFI	Chief Flying Instructor
CTAF	Common Traffic Advisory Frequency
DTA	Designated Training Area
DECCW	Department of Environment, Climate Change & Water (former)
EEC	Endangered Ecological Community
EME	Electromagnetic Energy
EPA	Environmental Protection Authority
ERSA	En Route Supplement Australia
GIPA	<i>Government Information (Public Access) Act 2009</i>
ICAO	International Civil Aviation Organisation
ISEPP	State Environmental Planning Policy (Infrastructure) 2007
LALC	Local Aboriginal Land Council
LEP	Local Environmental Plan
MTOW	Maximum Take Off Weight
NBN	National Broadband Network
NCC	National Construction Code
NSWLEC	Land and Environment Court of NSW
OEH	Office of Environment and Heritage
RA-Aus	Recreation Aviation Australia
RFS	Rural Fire Service
RMS	Road & Maritime Services
SAFCA	Sports Aviation Flight College Australia
SEPP	State Environmental Planning Policies
TODR	Take Off Distance Required
VMP	Vegetation Management Plan



# 1 INTRODUCTION

## 1.1 ADDITIONAL INFORMATION REQUESTS FROM BEGA VALLEY SHIRE COUNCIL

This Addendum report has been prepared to address matters raised by Bega Valley Shire Council in its assessment of DA2017.445. The development application seeks approval for a proposed recreational flight school at 1070 Princes Highway, Frogs Hollow.

Over the course of several months, Council also referred the development application to relevant agencies for comment and technical guidance.

Table 1-1 below details the additional information requests that have been received by NGH from Council and through Council from other agencies.

To assist Council in its assessment of the development application going forward, additional information requests have been addressed together in this Addendum report and in the attached documentation.

Table 1-1 Additional information requests received from Bega Valley Shire Council

<i>Additional Information request</i>	
<i>Date</i>	<i>Information sought</i>
04/11/2017	Referral response from Office of Environment & Heritage (OEH) received by NGH on 12 December 2017. The response raised no objection to the proposed development and requested additional information in relation to biodiversity matters and Aboriginal cultural heritage.
13/11/2017	Referral response from Civil Aviation Safety Authority (CASA) received by NGH on 24 January 2018. The response raised no objection to the proposed development and recommended consideration of any relevant CASA Advisory Publications.
06/12/2017	Referral response from the Environment Protection Agency (EPA) NSW received by NGH on 28 February 2018. The response provided guidance on the appropriate methodology for assessment of aircraft noise impacts.
20/12/2017	Referral response from AirServices Australia received by NGH on 6 February 2018. The response raised no objection to the proposed development and advised that the <i>Airports (Environment Protection) Regulations 1997</i> provide noise guidelines for ground-based operation at airports such as Frogs Hollow.
12/01/2018	Letter from Anna Bowman at Bega Valley Shire Council requesting additional information in relation to operations, noise impact assessment, emissions, effluent disposal, Building Code of Australia (BCA) matters, environmental impact and Bega Valley Development Control Plan (BVDCP) 2013 matters. The letter was accompanied by a summary of the first 261 submissions received by Council.
19/01/2018	Referral response from NBN Co received by NGH on 24 January 2018. The response requested additional information in relation to any potential impacts on NBN infrastructure and aviation safety.

12/02/2018	Referral response from Recreational Aviation Australia (RA-Aus) received by NGH on 28 February 2018. The response confirms RA-Aus support for the proposed development and highlights the critical role that recreational flight training schools play as a stepping stone, or testing of the waters, for future commercial pilots.
15/02/2018	Email from Anna Bowman at Bega Valley Shire Council requesting additional information in relation to legal and merit-based matters.
15/02/2018	Referral response from Department of Infrastructure, Regional Development and Cities received by NGH on 28 February 2018. The response raised no objection to the proposed development and provided guidance on the appropriate methodology for assessment of aircraft noise impacts and the regulatory framework for managing noise impacts.
19/02/2018	Email from NSW Health received by NGH on 15 March 2018. The response raised no objection to the proposed development and provided general guidance on the protection of rainwater supplies.
20/02/2018	Referral response from Roads & Maritime Services (RMS) received by NGH on 20 February 2018. The response requested additional information in relation to intersection impacts from all users of the access road and the design of intersection upgrade.
28/02/2018	Email from Anna Bowman providing a summary of the remaining submissions received by Council.
02/03/2018	Email from RMS received by NGH on 15 March 2018. The email requested additional information in relation to the potential for driver distraction by aircraft.

## 1.2 RESPONSE TO BEGA VALLEY SHIRE COUNCIL REQUESTS

As indicated in the preceding section, this Addendum report has been prepared to address matters raised by Bega Valley Shire Council and other relevant agencies in the assessment of DA2017.445.

To assist Council in its assessment of the development application going forward, additional information requests have been addressed together in this Addendum report and in the attached documentation.


All specialist reports that provide evidence in support of the development application are included as attachments to this Addendum report. This Addendum report should be read in conjunction with the following plans and documents:

- Noise Impact Assessment report prepared by Renzo Tonin & Associates, dated May 2018,
- Socio-economic Impact Assessment report prepared by Judith Stubbs & Associates, dated May 2018,
- Aboriginal Cultural Heritage Due Diligence report prepared by NGH Environmental, dated April 2018,
- Biodiversity Assessment report prepared by NGH Environmental, dated October 2017,
- Biodiversity Assessment Addendum report prepared by NGH Environmental, dated March 2018,
- Traffic Impact Assessment report prepared by Tasman Engineering, dated October 2017
- Traffic Impact Assessment Addendum report prepared by Tasman Engineering, dated April 2018
- On-site Wastewater Management report prepared by Tasman Engineering, dated October 2017
- On-site Wastewater Management Addendum report prepared by Tasman Engineering, dated April 2018
- Fire Protection and Water Supply Plan prepared by Tasman Engineering, dated October 2017
- Fire Protection and Water Supply Addendum report prepared by Tasman Engineering, dated April 2018
- Bushfire Emergency Evacuation Plan prepared by GN Consulting, dated February 2018
- Visual assessment prepared by Sports Aviation Flight College Australia
- Sustainable Design Management Plan, prepared by NGH Environmental, dated May 2018
- Recreational Aviation Australia Operations Manual, dated August 2016
- Recreational Aviation Australia Syllabus of Flight Training dated October 2014
- Draft Operations Summary prepared by Sports Aviation Flight College Australia
- Recreational Days summary prepared by Sports Aviation Flight College Australia
- Map of Receptors within 2km prepared by NGH Environmental
- Written correspondence prepared by BAL Lawyers, dated April 2018

For ease of reading, individual matters contained in Council's requests dated 12 January 2018 and 15 February 2018 have been responded to in the table below. Where a matter requires a more detailed response, a direction to the relevant section of this Addendum report or accompanying specialist report is provided.

Table 1-2 Response to matters raised by Bega Valley Shire Council

Response to matters raised by Council	
Matter	Response
<b>Operations</b>	
<i>How many of the proposed 40 aircraft will be flying training circuits at any one time?</i>	<p>It is possible for no more than six (6) aircraft to be flying within the training circuit at any one time. However, it is noted that circuit training forms only a minor component of the training program offered. In this regard, all students must be proficient with the hierarchy of basic manoeuvres prior to proceeding to circuit training.</p> <p>The proposed development would make use of two existing grassed runways. Only one runway may be used at any one time as the use of a runway is determined by the prevailing wind direction. In addition, only one circuit may be used at any one time for safety reasons.</p> <p>Further, it would take the intended aircraft approximately six (6) minutes to complete one circuit and given the statutory requirements for aircraft separation the maximum of six (6) aircraft could safely fly within the circuit at any one time.</p> <p>See further detail in Section 3.2 of this Addendum report.</p>
<i>Where will the aircraft that are not flying training circuits be flying to and from?</i>	<p>An aircraft that is not flying training circuits would be flying to an individual pre-determined location within the Designated Training Area (DTA), before returning to Frogs Hollow. These flights are conducted between 4,000 ft and 10,000 ft above ground level.</p> <p>The Designated Training Area is a 25-nautical mile radius that extends from the Frogs Hollow airfield. The DTA is highlighted in the image below.</p>

	 <p>Figure 1-1 Map with Designated Training Area (Source: SAFA, 2018)</p> <p>The DTA has a total area of approximately 6,700sq. km. With all 40 aircraft in the air, the density of aircraft associated with the flight school is low given the expanse of the DTA. The density of aircraft in the DTA would equate to around one (1) aircraft per 160 sq. km.</p> <p>It is noted that approximately 20 percent of the Designated Training Area is located over the ocean.</p>
<p><i>At what altitude will they fly?</i></p>	<p>The aircraft will fly at varying altitudes. Once the departure manoeuvre has been completed, cruising will occur at a minimum altitude of 4,000ft (up to 10,000 ft).</p> <p>It is noted, at a height of 4,000ft, the aircraft are not readily visible or audible from the ground. Assuming clear skies, the perceived size of an aircraft directly overhead would be 2.5mm in comparison to a 30cm ruler directly in front of the viewer.</p> <p>See further detail in Section 9.10 of this Addendum report and the accompanying Visual Assessment and Noise Impact Assessment.</p>
<p><i>How often will these flights occur?</i></p>	<p>Flight training would occur for 15 days out of every month (note that the “month of training” does not align with the calendar months).</p> <p>The 15 days in which the standard flight training occurs may not be consecutive. For example, in the event of adverse weather, flights would be grounded by the Chief Flying Instructor (CFI) in accordance with the Operations Manual and aircraft specifications that responds to air</p>

	<p>safety. As a result, the standard training days would occur at the next suitable business day with satisfactory weather conditions.</p> <p>Standard flight training would occur on business days, being Monday to Friday. However, and only if required, limited remedial training would occur on a Saturday. Remedial training would only be undertaken if a student required extra support to meet the relevant competencies. Based on the flight instructor's experience, it is estimated that up to 15 percent of students may require remedial tutelage.</p> <p>All flights are restricted to Monday to Saturday and would not occur on a Sunday.</p> <p>A comprehensive section discussing flight scheduling is contained in Section 3.2 of this Addendum.</p> <p>The flight training component includes three sessions throughout the day i.e. morning, midday and afternoon sessions. These sessions would comprise forty students per session. Sessions would extend from approximately 7.10am to 10.30am, 10.50am to 2.10pm and 2.30pm to 5.50pm. During these sessions, up to forty (40) aircraft would depart from Frogs Hollow for a two-hour training flight before returning to Frogs Hollow.</p> <p>It is noted that some submissions suggest that flight training would need to extend outside of the proposed operational hours due to periods of inclement weather. This is not the case, given the proposed development would be bound by the approved operational times (consistent with RA-Aus operational restrictions, ie. no night flying). There is sufficient flexibility in the schedule to account for inclement weather days.</p>
<i>Will these aircraft be flying together as a squadron?</i>	<p>The aircraft would not be flying together as a squadron. A formation flying endorsement would be required to undertake formation flying. This endorsement would not be offered at the proposed recreational flight school.</p> <p>A minimum separation distance of 600 metres laterally is required to be maintained at all times for aircraft in flight.</p> <p>Where the term 'squadron' is used in the supporting material, this is an operational term only, that is used internally by Sports Aviation Flight College Australia (SAFCA), to organise and manage student groups.</p>
<i>What agreements are in place with other airports?</i>	<p>There are no agreements in place with other airports.</p> <p>Under the <i>Civil Aviation Regulations 1988</i>, agreements for the use of an operational aerodrome are not required.</p>

	<p>The use of other aerodromes is typically welcomed by airport operators as the fees they can levy on this activity generates income towards maintenance of the facilities. Regional and remote airports play an important role in supporting their communities and may be critical for inbound/outbound freight, firefighting activities, medical flights and the like; however, such airports typically lack adequate funding<sup>1</sup>.</p> <p>Annual 'landing right' arrangements may be negotiated with selected airfields in the area. This is common practice should pilots expect to be utilising an airfield frequently enough to justify the cost-saving of an annual landing right arrangement.</p> <p>However, in the instance of the subject development proposal, it would be premature to enter into any agreements given a determination of the application has not yet occurred.</p>
<p><i>What is the legal framework surrounding the use of other airports for circuit training?</i></p>	<p>The legal framework surrounding the use of other aerodromes is set out under the <i>Civil Aviation Regulations 1988</i>, generally Part 9 and Part 12, which contain few restrictions.</p> <p>The <i>Civil Aviation Regulations 1988</i> state that a pilot may use any open airfield for circuit training, provided they observe the relevant flight rules of the regulations.</p> <p>The relevant ERSA (En Route Supplement Australia) sheet for an aerodrome or the OzRunways database may state restrictions on the location of and/or hours of circuit training or movements in a transit area. These publications are routinely used by pilots and contain vital information relating to an aerodrome such as the prohibition of or restriction on certain activities, physical characteristics of the aerodrome, visual aids, hours of operation, owner/operator details, CTAF (Common Traffic Advisory Frequency) radiocommunication frequency and the like.</p>
<p><i>How many of the flight circuits will be used simultaneously?</i></p>	<p>As discussed previously in this Addendum, only one circuit would be used for safety reasons.</p>

<sup>1</sup> Australian Government Department of Infrastructure, Regional Development and Cities, 2018, 'Regional and remote aviation', <https://infrastructure.gov.au/aviation/regional/>



<i>How can 40 aircraft safely take off every 2.5 minutes between 7am and 8.40am while aircraft are simultaneously using the runway to fly circuits?</i>	<p>This would not be the case. Aircraft involved in standard flight training and aircraft involved with circuit training would not be using the runways simultaneously.</p> <p>Circuit training would only be conducted during set periods, when there are no standard training flights taking off or landing. Refer to the flight training schedule in the draft Operations Summary and Section 3.2 of this Addendum report.</p>
<i>How long does it take the aircraft to fly one circuit?</i>	<p>Based on the type of engine and aircraft intended to be used, the completion of one circuit would take approximately six minutes travel time.</p>
<i>Will pilot training include low level flying?</i>	<p>No, low-level flight training would not be offered to the students as it requires more advanced training, for more experienced pilots.</p>
<i>What additional endorsements will the pilots train for?</i>	<p>The total timeframe dedicated to flight training is 30 hours. Should a student complete the standard competencies in less than the 30-hour timeframe then the remaining hours may be used toward gaining the passenger and/or cross-country endorsements. E.g. Should a student complete the competencies over a period of 20 hours, the balance of 10 hours may be dedicated to gaining an additional endorsement.</p> <p>Additional flight training hours would not be offered to students to enable them to achieve these endorsements once their training totals a 30-hour timeframe.</p> <p>As discussed previously, more complex endorsements such as formation flying would not be offered at Frogs Hollow.</p>
<i>Where is it proposed to undertake training for emergency landings?</i>	<p>Emergency landings can be practised at any aerodrome, provided the relevant flight rules under the <i>Civil Aviation Regulations 1988</i> are observed.</p> <p>Emergency landings may be conducted at Frogs Hollow and any other aerodrome within the Designated Training Area.</p> <p>An emergency landing is simply a simulated “engine failure” where the aircraft power is switched to idle and a glide approach to the airfield is conducted, using the standard approach template.</p> <p>Pilots may often conduct a glide approach to their chosen destination, for saving fuel and minimising noise.</p>



<i>Please advise which aeroplane group applies.</i>	Group A (3-axis) and Group B (weight shift) in the RA-Aus syllabus.
<i>Please provide a copy of the RAA Syllabus of flight training.</i>	A copy of the RAA Syllabus of Flight Training for all registered flight schools is provided for Council's reference as an attachment to this Addendum report.
<i>How will electricity be supplied to the site?</i>	<p>Dwellings located on the broader property are served by existing electrical infrastructure. This land, being acquired by SAFCA, would facilitate connectivity to the proposed development.</p> <p>Presently, electrical infrastructure is located along the Princes Highway and has capacity to serve the proposed development. Initially, the proposed development would be powered by single-phase electrical supply that would be connected in accordance with the service providers guidelines.</p> <p>It is expected that photovoltaic solar panels would be installed as staging of the proposed development progresses.</p>
<i>Please provide details as to how the Frogs Hollow Fliers and the Bega District Model Club can operate compatibly with the proposed flight school</i>	<p>Further detail is included in Section 3.5 of this Addendum report.</p> <p>It should be noted that neither the Frogs Hollow Flyers, nor the Bega District Model Club have existing binding agreements to be located at the airfield. According to Council records, only three private hangars on the site have development consent.</p> <p>The development proposal, once operational, would not pose a conflict with the existing Frogs Hollow Flyers or other aircraft not associated with the proposed flight school.</p> <p>All aerodrome users are required to operate, at all times, in accordance with the procedures contained in the <i>Civil Aviation Regulation 1988</i>. The Regulation requires all users to observe standard priority and give - way procedures when moving about, approaching and departing from all aerodromes.</p> <p>Should existing users wish to continue using the airfield, it is expected that no conflicts would occur, given the overriding provisions of the <i>Civil Aviation Regulations 1988</i>.</p> <p>In addition, Council would require any future application for the subject site to be supported by details of how a proposal would operate compatibly with the flight school, should it be in operation. We expect that for the majority</p>

	<p>of activities, this would be no issue for the reasons outlined above.</p> <p>It is not desirable for the Model Club to be located within an operational aerodrome; the Model Club states that a specific exemption from CASA was sought for their organisation to utilise the Frogs Hollow aerodrome. A suitable site has been reserved for the Model Club within the wider property proposed to be acquired by SAFCA.</p>
<p><i>Please provide annual meteorological data for the subject site.</i></p>	<p>Annual meteorological data has been requested by Council in response to concerns about suitable weather conditions as raised in submissions.</p> <p>Annual meteorological data for the Bega Newtown Road weather station is included as an attachment to this Addendum report. The station is located approximately 7.5km north/north-east of the subject land.</p> <p>It is noted that some submissions suggest that flight training would need to extend outside of the proposed operational hours due to periods of inclement weather. This is not the case, given the proposed development would be bound by the approved operational times (consistent with RA-Aus operational restrictions, ie. no night flying). There is sufficient flexibility in the schedule to account for inclement weather days.</p>
<p><b>Noise Assessment</b></p>	
<p><i>The report uses the short-term method for determining background noise (1.5 hours of data). Given the proposed scale of this development, the long-term method should be used.</i></p>	<p>The noise monitoring conducted by Renzo Tonin &amp; Associates determined that the daytime background noise levels are low, between 29 and 36 dB(A) at the three monitoring locations.</p> <p>The methodology set out in the 'Noise Policy for Industry' (NPI) states that where background noise levels are measured to be less than 35dB(A) during the day period, the background noise level adopted for the assessment shall be 35 dB(A) – refer to Table 2.1 of the NPI.</p> <p>As such, 35 dB(A) has been adopted in the updated Noise Impact Assessment report, as this represents the most conservative background noise level that can be adopted for the assessment according to the NPI requirements.</p> <p>The potential advantage of conducting additional long-term background noise monitoring as requested by Council would be if higher background noise levels were recorded during additional monitoring. These higher baseline noise levels could then be adopted in lieu of adopting 35 dB(A).</p>

	<p>However, it was recommended by the acoustic specialist that 35 db(A) be adopted as the background noise level as this would produce conservative results when modelling the noise impacts of the proposed flight school.</p> <p>Consequently, the noise impacts of the proposal on the community have been over-estimated and it is likely that the community would be less affected than predicted in the Noise Impact Assessment report.</p>
<p><i>The report states the nearest affected receivers were identified through aerial maps and a site visit and were grouped into NCAs. The INP requires that the receiver be assessed at the most affected point.</i></p>	<p>As indicated in Section B1.1 of the NPI, it is required that noise monitoring be undertaken at the most, or potentially most-affected residence/s.</p> <p>In considering the most-affected residences for aircraft noise, the flight tracks can slightly vary due to weather conditions and slight differences in individual pilot handling. Therefore, monitoring locations were selected based on locations that were considered to be representative of the aircraft noise that would be experienced, given the clustering of the dwellings in the surrounds and the expected flight tracks.</p> <p>In considering the most affected residences for ground operations and plant noise, representative locations were selected that were near to the airfield, but that would not be masked/compromised by other noise sources such as highway traffic. This is consistent with the procedure contained in Section B1.1 of the NPI. Indeed, if monitoring has been undertaken on the eastern side of the Princes Highway at receptors located closer to the airfield than the monitoring locations selected, this would have likely measured higher background noise levels due to highway traffic. The result of this would have been an underestimation of the noise impact of the proposed development on other receptors.</p> <p>For clarity for the reader, an NCA as referred to by Council is a 'Noise Catchment Area' which is a tool used by acoustic experts to collectively consider noise impacts on a cluster of receptors that would experience similar impacts.</p>
<p><i>The report fails to identify houses located to the south and south-west in Newlyn's Place, Wanatta Lane, Moorlands Lane and approved subdivisions in the vicinity of the Princes Highway.</i></p>	<p>In response to Council's request, a copy of the development consents for all nearby subdivisions was obtained from Council. All existing and potential future houses in approved subdivisions have been accounted for in the updated Noise Impact Assessment.</p> <p>Please also refer to accompanying Sensitive Receivers Map prepared by NGH Environmental, dated April 2018.</p>

<p><i>Weather data for the noise measures taken during circuit flying has not been provided. Consideration of wind should form part of the assessment. Atmospheric absorption and temperature gradient can also affect how aircraft noise is received and should be documented.</i></p>	<p>Noise monitoring was conducted during suitable monitoring weather conditions as defined in Section A4 of the Noise Policy for Industry (NPI).</p> <p>Atmospheric absorption and temperature gradient are considered in the calculation of whether temperature inversions are a feature of the area.</p> <p>An evaluation of local weather data conducted by the expert acoustic consultant in accordance with the Noise Policy for Industry (NPI) methodology determined that wind is not a feature for the subject site. Refer to Section 4.2.1 of the accompanying Noise Impact Assessment report, dated May 2018.</p>
<p><i>Information regarding the noise impacts of circuit training at other airports has not been provided.</i></p>	<p>Council advised in its correspondence of 15 February 2018 that it was seeking advice to clarify if there was a responsibility to consider potential impacts of noise at other airports which may be used by the pilots from the proposed flight school. To date, further advice has not been provided by Council to the proponent on this matter.</p>
<p><i>Reports states that the Bantam is the loudest aircraft. Please substantiate this.</i></p>	<p>The report only states that the “Bantam” will be the aircraft used predominantly out of the three aircraft types mentioned. It is not stated in the report that this is the loudest aircraft.</p> <p>The Bantam, Brumby and Trike are the aircraft intended to be used and would have a similar noise level as each would be fitted with the same Rotax engine type.</p>
<p><i>Ground based operational noise has not been considered, particularly given occasional temperature inversions</i></p>	<p>Ground-based operational noise would be required to comply with the provisions of the <i>Airports (Environment Protection) Regulations 1997</i>. The Regulation is administered by AirServices Australia, who have raised no objection to the proposed development in a referral response to Council dated 20 December 2017.</p> <p>Temperature inversions are of relevance to evening and night time operations only. There would be no ground-based operational noise generated by the proposed development as all aircraft training and maintenance activities would be undertaken during day time hours.</p>
<p><i>It is noted that the RAA manual does not permit aircraft to be started or run in hangars and therefore ground testing would need to occur outdoors.</i></p>	<p>It is a CASA requirement that aircraft are not started or run in hangars, therefore this practice is observed at all Australian aerodromes. It is currently observed by existing users of Frogs Hollow.</p> <p>As indicated above, ground-based aircraft-related operations are governed by the <i>Airports (Environment Protection) Regulations 1997</i>. Such activities on the</p>

	<p>subject land would be required to comply with the relevant provisions of the Regulation.</p> <p>It is also noted that noise from all ground-based movement and taxiing of aircraft was inaudible at all receptor monitoring locations, according to the Noise Impact Assessment report.</p>
<i>Please detail thrust setting, payload and attitude of test aircraft in the noise assessment.</i>	<p>Test aircraft flights simulated the proposed training conditions. A pilot and one passenger were seated in the aircraft and the aircraft had a full fuel load. Standard aircraft handling was observed, with full power on take-off and ascent to a height of at least 1,000 ft, with cruising (half-power) for the remainder of the circuit.</p>
<i>Please include the continuous noise measurements at receivers into the report.</i>	<p>The most conservative background noise levels that can be used (35dB(A)), according to the NPI methodology, have been adopted instead of using the measured background noise levels.</p>
<i>The noise assessment should provide the maximum number of circuits proposed to be flown at each stage of the development in a 15-minute period and provide the LAeq 15 min and LAeq 11 hour noise levels at each receiver</i>	<p>In accordance with the findings of the Noise Impact Assessment report, it would be necessary to restrict the number of take-off movements from Frogs Hollow to less than 200 movements in each 24-hour period.</p> <p>A review of the proposed flight operations confirmed that the schedule is consistent with these limits. We expect that Council would apply an upper limit of take-off numbers as a condition of development consent to ensure noise limits are achieved.</p>
<i>Adopt new Noise Policy for Industry methodology</i>	<p>The Noise Impact Assessment was completed prior to the implementation of the Noise Policy for Industry in late October 2017. However, the updated Noise Impact Assessment prepared by Renzo Tonin &amp; Associates has adopted the NPI methodology where relevant to the proposal.</p> <p>Whilst the NPI is appropriate for assessing industrial noise such as ground-based operations and plant/equipment; it is not an appropriate methodology for evaluating aircraft noise impacts on the community. This is in accordance with guidance provided to Council by EPA NSW, AirServices Australia and the Department of Infrastructure, Regional Development and Cities.</p> <p>In response to matters raised by the above agencies and by Council, the updated Noise Impact Assessment follows the methodology recommended by the above agencies in the consideration of aircraft noise impacts. This is also consistent with the accepted methodology in relevant NSW Land &amp; Environmental Court matters.</p>

<b>Kitchen</b>	
<i>Provide details of water treatment systems for making potable water</i>	<p>In response to Council's request, further detail regarding potable water treatment has been prepared. Refer to Section 2 of the accompanying Fire Protection and Water Supply Plan Addendum prepared by Tasman Engineering Consultants.</p> <p>In accordance with the Fire Protection and Water Supply Plan Addendum, the proposed water treatment system would include multi-stage filtration and UV disinfection. The 'FiltaTank FT Rainwater Filtration System with UV Sterilisation' units manufactured by The Tank Doctor have been identified as a suitable proprietary system for the intended purpose. Detailed design plans and manufacturers specifications would be supplied with the construction certificate for the proposed development.</p> <p>In addition to the harvested and treated rainwater, drinking water would be supplied in all buildings by way of standard office-type water fountains, as discussed in the accompanying Fire Protection and Water Supply Plan Addendum. The use of such water fountains is common practice for many commercial buildings. Further, all plastic water bottles supplied for use with such water fountains are recycled and re-used by the supplier.</p> <p>Single-use plastic water bottles would not be used as incorrectly stated in submissions received by Council. The use of such water fountains is common practice for many commercial buildings. Further, all plastic water fountain bottles are recycled and re-used by the supplier.</p> <p>See further detail in the accompanying Fire Protection and Water Supply Plan Addendum.</p>
<b>Exhaust emissions</b>	
<i>Provide further information in relation to the accumulation of particulate matter from aircraft emissions.</i>	<p>Council sought advice from both NSW EPA and NSW Health on this matter. NSW EPA did not provide any response to this request or raise any concerns to Council. The response from NSW Health did not raise this as a significant concern for public health. Aviation-related development contributes a negligible amount to overall emissions. In 2011, 1.24 percent of Australia's total emissions were caused by domestic aviation activities. Notable contributors include coal mining, domestic solid fuel heaters, marine aerosols, coal-fired electricity plants, bushfires and industrial vehicles<sup>2</sup>.</p>

<sup>2</sup> EPA NSW, 2013, 'Managing particles and improving air quality in NSW'.

	<p>The emissions created by the flight school aircraft are similar to passenger vehicles, by way of the engine type and fuel type (ULP 95) intended to be used. The emissions generated would be equivalent to approximately 498 light passenger vehicles. The impact of this is minor. The emissions created by use of the Princes Highway has a significantly greater impact on localised air quality and is almost 10 times greater than what is anticipated by the activities of the proposed flight school.</p> <p>Of relevance, is the significant particulate impacts caused by solid fuel heaters in cool climates such as the Bega Valley. These heaters contribute to exceedances of the national air quality standards and account for up to 85 percent of particle pollution during winter<sup>3</sup>.</p> <p>In consideration of the above factors, the proposed aircraft activity poses no notable concern for particulate matter accumulation. The locality would be affected by more common sources of particulate emissions and sources that generate significantly greater levels of particulate pollution. This is discussed in further detail in Section 9.2 and 9.3 of this Addendum report.</p>
<p><i>Provide further information regarding likely public health impact of emissions potentially contaminating domestic roof water</i></p>	<p>NSW Health has not flagged this as a significant concern in its correspondence with Council, as all rainwater storage tanks that are relied upon for domestic water supply should be fitted with a first flush system.</p> <p>As indicated above, aviation is a minor contributor to emissions. The aircraft would not pose any notable risk to domestic water supplies. Domestic water supplies are at greater risk from other significant particulate matter generators such as solid fuel heaters (which cause exceedances of the national air quality standards and account for up to 85 percent of particle pollution during winter<sup>4</sup>).</p> <p>Water supply protection measures should be in place as standard practice where harvested rainwater is relied upon for drinking water. Such measures protect against common bacterial and chemical risks to drinking water and would also mitigate the potential risk from aircraft particulate matter.</p> <p>See further detail in Section 9.2 and 9.3 of this Addendum report.</p>

<sup>3</sup> EPA NSW, 2014, 'Wood smoke control measures: cost-benefit analysis'.

<sup>4</sup> EPA NSW, 2014, 'Wood smoke control measures: cost-benefit analysis'.



<b>On-site Sewerage Management</b>	
<i>Provide further detail showing how the fixed irrigation system will work with the aircraft and details of a back up area.</i>	<p>Council's suggestions have been considered and incorporated into the On-site Wastewater Management Addendum report.</p> <p>There are three different disposal areas/methods available within the subject land that can accommodate the wastewater disposal needs of the development.</p>
<i>Provide details illustrating how 50kL/day can be distributed across disposal area and the runway still be in use with 240 flight movements. Touch down areas may need to be sealed and therefore excluded from disposal area calculations.</i>	<p>As indicated above, the On-site Wastewater Management Addendum report details additional wastewater disposal areas on the site that would be suitable for use and eliminates any reliance on only the runway area for irrigation.</p> <p>Furthermore, the site geology is consistent with Category 3 loam or sandy loam soils in accordance with AS 1547; however, Category 4b soil irrigation rates have been adopted as a conservative estimate for the soil capabilities.</p> <p>It is also noted that the "touch-down" areas are not subjected to the greatest pressure or force, as the aircraft are still in flight and the full weight of the aircraft is not subjected onto the runway.</p> <p>The touch-down areas are also not at any one section of the runway, such as adjacent to the threshold. Touch-down points along the 1,000-metre-long runway will naturally vary due to slight differences in individual pilot handling, wind conditions and the like. This has the benefit of spreading the aircraft impacts across a greater section of the runway.</p>
<i>Instead, it is recommended that a discrete area near each accommodation building could be fenced and landscaped for wastewater disposal and the runway used for main building wastewater disposal.</i>	<p>Council's suggestions have been considered and incorporated into the On-site Wastewater Management Addendum report.</p>
<i>Provide water/nutrient balances for the main building and each accommodation unit</i>	<p>Please refer to accompanying On-site Wastewater Management Addendum report.</p>
<i>Provide further detail on how many grease traps are proposed in the kitchen or if a large unit will be installed in Stage 1</i>	<p>A grease trap is incorporated within the Ozzi Klean treatment unit. One treatment unit has the capability of processing 6,000L/day. According to the Wastewater Management System Addendum report, the main building will generate 11,200L/day wastewater at peak capacity. Two units would be in place when the main building is constructed in Stage 1.</p>



<b>Building Code of Australia</b>	
<i>Illustrate ambulant toilets to male and female bathrooms</i>	Ambulant toilets are illustrated on the floor plans in accordance with the relevant requirements of the National Construction Code. Refer to updated design plans prepared by Tasman Engineering Consultants.
<b>Environment</b>	
<i>Provide more detail on the proposed irrigation system to illustrate its impact on vegetation communities. It might be preferred to restrict the effluent from the western end of the east-west runway where the vegetation is in good to moderate condition.</i>	<p>The disposal of wastewater on-site is expected to have no adverse impacts on the vegetation communities present. All wastewater will be treated to an advanced secondary standard with disinfection, as described in the accompanying On-site Wastewater Management Plan and Addendum report.</p> <p>The phosphorus content of wastewater would typically be a matter to note for wastewater disposal to sensitive vegetation. The On-site Wastewater Management Plan and Addendum report illustrate that the size and nature of the site, combined with the intended disposal areas/procedures allow for sufficient phosphorus absorption capacity.</p> <p>The reports demonstrate that the wastewater management arrangements meet relevant standards and best practice guidelines including AS 1547 'On-site domestic wastewater management' and the Sydney Catchment Authority guideline 'Designing and installing on-site wastewater systems'.</p> <p>Further, the Lowlands Grassy Woodland EEC that is present on the subject site can tolerate soils with a reasonable level of fertility and nutrients. It is not considered to be a community that is sensitive to phosphorus.</p> <p>Lastly, the On-site Wastewater Management Addendum report demonstrates that several wastewater disposal methods and disposal areas are suitable for use within the bounds of the site. This will reduce reliance on any one area or method and spread wastewater loads across the site</p>

<i>What strategies are in place to monitor African Lovegrass?</i>	<p>The OEH referral response to Council recommends that a Vegetation Management Plan (VMP) be attached to the 88B instrument applying to the land and that it includes the protection of the Endangered Ecological Community (EEC) in perpetuity and strategies to control African Lovegrass and the Noisy Miner.</p> <p>This can be implemented by way of condition of consent that requires a VMP to be submitted to Council prior to construction/operation of the facility.</p>
<i>Request to modify the proposed boundary road to avoid Broad-Leaved Peppermint Trees identified in the biodiversity assessment report</i>	<p>Of the ten identified Broad-Leaved Peppermint Trees on the site, eight of these would be retained. The two that are necessary to remove would be offset at a ratio of 10:1 with plantings of the same species. This would be completed to Council's satisfaction prior to the commencement of operations of the facility and managed in perpetuity.</p>
<i>Undertake further survey at appropriate times to ensure threatened species are more suitably accounted for.</i>	<p>Additional site survey by two qualified ecologists (accredited under the new BAM methodology) was undertaken in response to OEH and Council's request.</p> <p>Refer to the accompanying Biodiversity Assessment Addendum report prepared by NGH Environmental.</p>
<i>Undertake assessment of significance on individual species as per OEH recommendation.</i>	<p>An assessment of significance was undertaken in response to OEH and Council's request.</p> <p>Refer to accompanying Biodiversity Assessment Addendum report prepared by NGH Environmental.</p>
<b>Development Engineering</b>	
<i>Clarify whether the estimated traffic volumes entering and exiting the site include service vehicles such as water, fuel, catering, spare parts, etc. as well as instructors, staff and students?</i>	<p>In consideration of Council's request, service vehicles have been incorporated into the traffic analysis in Appendix B of the Traffic Impact Assessment Addendum report prepared by Tasman Engineering Consultants. This includes typical service vehicles that are expected such as catering, water, fuel, maintenance and parts.</p> <p>All vehicle movements of staff were included in the initial assessment and in the Addendum report. The students are not included as they will not have use of a private vehicle during their stay. All students will be transported on buses for outings, which is accounted for in the traffic analysis in Appendix 2.</p>
<i>Access to the site is via Lot 1 DP245789. Need to provide landowners consent for this lot. Will this land be acquired as part of the land purchase?</i>	<p>Lot 1 DP245789 forms part of the land that is the subject of the development application. This land would be acquired as part of the overall land purchase should the proposed development be approved.</p>

	The consent of the current landowners has been obtained and is attached for Council's reference.
<i>Include go-kart club traffic with the traffic impact assessment.</i>	Information on the approved traffic volumes and conditions for the go-kart track was sought from Council through a GIPA application on 26 February 2018. Development consents and modified development consents that relate to the go-kart track were provided to NGH on 14 March. Further details regarding the traffic volumes/conditions considered by Council in its assessment of the development application and modified consent applications was sought from Council on 9 April. To date, these details have not been provided by Council. In lieu of the above information being received, consultation with the Secretary of the Sapphire Coast Kart Club was undertaken. Information sought included the confirmation of traffic volumes, traffic timing and vehicle types associated with the use of the go-kart track. The details provided by the Sapphire Coast Kart Club have been incorporated into the Traffic Impact Assessment Addendum report prepared by Tasman Engineering.
<i>Clarify whether the runway will be sealed or what rework of the runway will occur. Will the surface remain as grass if not?</i>	No, the runways would not be sealed. The grassed runways can support the proposed flight training school and meet RA-Aus standards. The runways will be able to withstand the testing regime outlined in Section 9 of CAAP 92-1.
<i>Has CAAP 92-1 been considered as per advice from CASA?</i>	Yes, the CAAP 92-1 has been considered. CAAPs are Civil Aviation Advisory Publications that are advisory only. Therefore, there is no legal requirement to observe the publication details.  The runways at Frogs Hollow would be maintained in accordance with Figure 2A contained within CAAP 92-1. It is also noted that the runways at Frogs Hollow significantly exceed the required runway length as contained within CAAP 92-1.  The runways at Frogs Hollow can withstand the testing procedures contained within Section 9 of CAAP 92-1. It is noted that the Maximum Take Off Weight (MTOW) of the aircraft intended to be used at Frogs Hollow would be no greater than 600kg. The Bantam that would be used for the majority of training flights and has a fully-loaded MTOW of 450kg.  Refer to further detail included in Section 7.2 of this Addendum report.

<b>BVC Development Control Plan (DCP)</b>	
<i>Provide a socio-economic impact assessment as per Section 5.4 of the DCP.</i>	<p>In response to Council's request, a Socio-Economic Impact Assessment is submitted for Council's consideration.</p> <p>Please refer to accompanying Socio-Economic Impact Assessment report prepared by Judith Stubbs &amp; Associates. This assessment has been undertaken based on the scope provided by Council and in accordance with the requirements of the Bega Valley Development Control Plan 2013.</p>
<i>Provide a Sustainable Design Management Plan as per Section 5.5 of the DCP.</i>	<p>In response to Council's request, a Sustainable Design Management Plan is submitted for Council's consideration.</p> <p>Please refer to accompanying Sustainable Design Management Plan prepared by NGH Environmental, dated May 2018.</p>
<b>Rural Fire Service Conditions of Consent</b>	
<i>BVC has received a deemed bushfire safety authority from NSW RFS. Condition 4 requires hydrant spacing, sizing and pressure to comply with AS 2419 Fire Hydrant Installation. It is recommended to provide a preliminary hydraulic assessment for the fire suppression system to ensure compliance with Condition 4.</i>	<p>Additional details on water supply have been included in the accompanying Fire Protection and Water Supply Plan Addendum report.</p> <p>The preliminary analysis indicates that there are no significant impediments to complying with the hydraulic requirements for the fire suppression system.</p>
<b>JRPP matters</b>	
<i>The Panel raised questions about permissibility of the proposal within the SP2 Infrastructure zone.</i>	This matter has been considered and a detailed response is included in Section 2 of the Addendum report and relevant attachments.
<i>Further detail is required regarding the history of the site, particularly in relation to whether the airport was established lawfully, ie. What approvals were in place to permit construction of the runway(s) in 1937? Has the use been continued since that date? What is the history of the second (east-west) runway? Was it established lawfully?</i>	A detailed response to this matter is included in Section 2 of the Addendum report and relevant attachments.
<i>Also regarding permissibility, we are seeking advice regarding whether all the elements of the proposed Educational Establishment can be considered ancillary to an airport under the provisions of the SEPP (Infrastructure),</i>	<p>A detailed response to this matter is included in Section 2 of the Addendum report and relevant attachments.</p> <p>We reiterate that the students are taught Aviation terminology, not English language. The students participate in an Aviation English course; which is consistent with International Civil Aviation Organisation</p>

particularly in relation to teaching/learning English.	(ICAO) standards. In addition to Aviation English, the student pilots are taught a <i>strictly aviation-related syllabus</i> .
<i>Although the SOEE states that the proposal does not trigger designated development, no detail has been provided with regard to the current intensity of use of the site. It is noted that the current use is of very low intensity and the proposal would result in a significant increase in the number of flight movements.</i>	<p>The proposed development is not Designated Development as detailed in Section 2.7 of this Addendum report.</p> <p>Council has incorrectly placed emphasis on the current intensity of use. The relevant clauses of the <i>Environmental Planning &amp; Assessment Regulation 2000</i> are clear in that the existing intensity of use is not a defining factor for Designated Development. The threshold in the Schedule only references an increase in intensity of use <i>where significant environmental harm is expected in relation to this</i>.</p>
<i>Council is seeking advice to clarify Council's responsibilities to consider the potential impacts from flight circuit training at other airports.</i>	To date, further advice has not been provided by Council to the proponent on this matter.
<i>Provide a locality plan that details all houses, or parcels of land with dwelling entitlements, within 2kms of the site.</i>	Please also refer to accompanying Sensitive Receivers Map prepared by NGH Environmental, dated April 2018.
<p><i>Additional details are to be provided detailing the surface construction of the runway and the impact that irrigation of treated effluent will have on it. More specifically, further expert engineering advice is required in relation to the following questions:</i></p> <ul style="list-style-type: none"> <li><i>What is the current construction type of the grass runways? Are they compacted gravel? What is the absorption capability of the runways?</i></li> <li><i>What are the safety implications to aircraft landing on or taking-off from the irrigated, wet runway surface?</i></li> <li><i>Is the standard of the construction of the grass runway (once subjected to ongoing irrigation) of a suitable standard to be capable of supporting the sustained load impacts of repeated aircraft take-offs and landings?</i></li> </ul>	<p>Details on the runway are provided in Section 7.2 of this Addendum report.</p> <p>There is no requirement for the runways to be constructed with gravel or to be concrete paved.</p> <p>The accompanying On-site Wastewater Management Plan and Addendum illustrate that there is adequate area on-site and several different satisfactory disposal options for wastewater. The assessment is also a conservative estimate of the site's capabilities as the site geology is consistent with Category 3 loam or sandy loam soils in accordance with AS 1547; but Category 4b soil irrigation rates were instead adopted.</p> <p>It is considered that the safety of landing aircraft would not be compromised as the On-site Wastewater Management Plan and Addendum report demonstrate that the runways can adequately cater for the wastewater disposal levels that are proposed. In addition, the reports demonstrate there are several different disposal options and areas that would be satisfactory according to the relevant standards and so reliance on the runways for irrigation would be reduced.</p> <p>In reviewing the runway testing procedures contained in Section 9 of CAAP 92-1, it is considered that the runways</p>

	<p>would comply with the test standards. The On-site Wastewater Management Plan demonstrates that the runway would not be overloaded by irrigation, according to the parameters set in AS 1547 'On-site domestic wastewater management' and the Sydney Catchment Authority guideline 'Designing and installing on-site wastewater systems'.</p> <p>Furthermore, the proposed aircraft require less than 250 metres take off distance (it is noted that the Trike requires the greatest take-off distance of 247 metres over a 50 ft obstacle, according to the manufacturers specifications). The primary runway is 1,000 metres in length and the secondary runway is 850 metres. The impact of the aircraft weight is naturally dispersed given they would not land at the same point, due to individual pilot handling and prevailing wind conditions. It is also planned that aircraft would take-off from different points along the runway as it would not be practical or necessary to taxi and take-off from the same point, given the considerable runway length available.</p>
<p><i>What is the required legal runway length for each of the three types of aircraft nominated to be used?</i></p> <p><i>Do both the North/South and East/West runways meet the minimum physical characteristics of landing areas per CASA's advisory publication CAAP 92-1(1)?</i></p>	<p>Of the intended aircraft to be used at Frogs Hollow, the Trike requires the greatest take-off distance (TODR of 247 metres over a 50ft obstacle, according to the manufacturers specifications).</p> <p>For these aircraft to operate from Frogs Hollow, RA-Aus would require that a runway of 321 metres be available (the TODR plus 30 percent, as stated in the RA-Aus operations manual). The secondary runway is greater than twice this distance and the primary runway is greater than three times this distance.</p> <p>CAAPs are Civil Aviation Advisory Publications that are advisory only. Therefore, there is no legal requirement to observe the publication details.</p> <p>The runways at Frogs Hollow would be maintained in accordance with Figure 2A contained within CAAP 92-1. The runways significantly exceed the required runway length as contained within CAAP 92-1.</p>
<p><i>What is the extent of Asset Protection Zones to be established?</i></p>	<p>The Deemed Bushfire Safety Authority provided by the NSW RFS dated 11 December 2017 states that a 30-metre-wide APZ be established around each proposed building.</p>
<p><i>The full extent of clearing proposed should be clearly shown on the plans.</i></p>	<p>There is no additional tree clearing required for establishing the requisite APZs, as any existing trees that would be located within 30 metres of a proposed building do not provide a contiguous canopy for a fire path. This is in accordance with Appendix 5 Standards for Asset</p>



	Protection Zones in 'Planning for Bushfire Protection 2006'.
<i>A vegetation management plan is required for the whole site.</i>	<p>The OEH referral response to Council recommends that a Vegetation Management Plan (VMP) be attached to the 88B instrument applying to the land that includes the protection of the Endangered Ecological Community (EEC) in perpetuity and strategies to control African Lovegrass and the Noisy Miner.</p> <p>This can be implemented by way of condition of consent that requires a vegetation management plan to be submitted to council prior to construction/operation of the facility.</p>
<i>It is unclear whether all the buildings already present at the site are intended to be relocated. Where it is intended to relocate the Frogs Hollow Flyers buildings including private hangars, these buildings should be detailed on the site plan.</i>	<p>As stated previously in this Addendum report, SAFCA's intention is to purchase the broader development site. The building improvements form part of the intended property sale to SAFCA.</p> <p>It should be noted that neither the Frogs Hollow Flyers, nor the Bega District Model Club have existing binding agreements to be located at the airfield. According to Council records, only three private hangars on the site have development consent.</p> <p>Preliminary consultation has occurred with existing users of the site to ascertain whether they wish to continue to use the airfield under a lease arrangement with SAFCA should the development be approved, and the property sale proceed. It is premature for further detailed consultation to occur and for existing users to confirm their intended future plans, given that the development application is still under consideration. Should the development be approved, SAFCA would engage with existing users and provide further details regarding any arrangements for building relocations with a construction certificate application.</p> <p>Should existing users wish to continue using the airfield, it is expected that private hangars could be relocated adjacent to the turning head near the eastern end of the secondary runway. It is anticipated that no conflicts would occur, given the overriding provisions of the <i>Civil Aviation Regulations 1988</i>.</p> <p>Should existing users not wish to continue using the airfield, the existing buildings would be removed from the site as part of the construction phase for Stage 1.</p> <p>In addition, Council would require any future application for the subject site to be supported by details of how a proposal would operate compatibly with the flight school,</p>

	<p>should it be in operation. We expect that for the majority of activities, this would be no issue for the reasons outlined previously in this Addendum report.</p>
<p><i>Provision of a long section (external from the site) is required demonstrating measures to mitigate the visual impact from the Princes Highway. The long section should include any relocated building/s.</i></p>	<p>It is considered that a long section is not required for the proposed development.</p> <p>The proposed buildings would be separated from the Princes Highway by at least 320 metres, with mature roadside vegetation also located within the highway corridor. Further, the Princes Highway runs generally parallel to eastern boundary of the subject site; accordingly, the visual corridor for highway drivers does not directly look towards the location of the proposed buildings.</p> <p>In terms of the visual impact of the proposed development, it is noted that the land is subject to the provisions of clause 4.3 of the Bega Valley Local Environmental Plan (BVLEP) 2013. According to the Height of Buildings Map, development on the subject land is restricted to a maximum height of 10 metres. All proposed buildings would have a height not exceeding 6 metres, as evidenced by the accompanying design plans, and would therefore comply with the provisions of clause 4.3 of the BVLEP 2013.</p> <p>Further, the proposed buildings would be low-profile, with low-intensity neutral colouring. The style, form and bulk are not dissimilar to what could be expected for large farm buildings in the locality. This is consistent with the surrounding visual environment.</p> <p>It is also noted that the land is zoned SP2, with a designated purpose of “air transport facility”. The proposed buildings would be less visually imposing than other types of buildings and structures a person would typically expect to see at an airport, such as control towers, terminal buildings, large aircraft hangars and the like.</p>
<p><i>Provision of long sections (internal from the runway) are required.</i></p>	<p>Refer to comments above.</p>
<p><i>A lighting plan is required.</i></p>	<p>A lighting plan is unable to be supplied until more detailed design is available. The lighting design, which must comply with the Australian Standard AS4282 ‘Control of the obtrusive effects of outdoor lighting’, is typically undertaken with the preparation of the construction certificate application.</p>



	<p>It is noted that illumination of the runway is not proposed as night time flying would not occur and is not permitted under RA-Aus rules.</p> <p>It is expected that low-level lighting would be provided only around the squadron compounds and the main building, for safety and security reasons. Illumination of the hangars and workshops would not be required as these would not be used at night.</p> <p>The closest dwelling not associated with the proposed development would be approximately 450 metres to the north-east from an area of illumination within the site (Receptor R8 on the accompanying map of receptors – note, R8 is not an existing dwelling, but is a proposed lot to be subdivided and has the potential for a dwelling to be erected).</p> <p>Given the separation distances, it is considered that illumination around the subject site for safety and security purposes would be unlikely to have an adverse impact on the local amenity or surrounding receptors not associated with the proposed development.</p> <p>A condition of consent could be applied that a lighting plan is to be supplied to Council's satisfaction prior to the release of the construction certificate. It is noted that the lighting design would comply with the Australian Standard AS4282 'Control of the obtrusive effects of outdoor lighting'.</p>
<p><i>Impacts from external night lighting should be considered upon flora and fauna.</i></p>	<p>No threatened flora species were found as part of the site survey conducted by qualified ecologists. No species were considered likely to occur, based on relevant database searches for the region. Broad-leaved Peppermint trees and the Lowlands Grassy Woodland EEC community were identified within the subject site.</p> <p>There is no scientific evidence available that suggests that external night lighting would pose a concern for native vegetation present on the site.</p> <p>No threatened fauna species were found as part of the site survey. Relevant database searches were conducted; however, most species were deemed unlikely to occur. There were three hollow-bearing trees that were identified on-site, with these having low nesting potential due to their isolation and the relatively small forested area on the site and the immediate surrounds. Given the absence of meaningful nesting habitat on the site, the low level of external night lighting would be unlikely to pose a concern for any threatened fauna in the area.</p>

	<p>Nocturnal birds may migrate or hunt for food at night and external night lighting has the potential to pose a navigation issue for these processes. However, this would only be a notable issue in respect of urban 'skyglow' and significant flood lighting and light spillage. This would not be the case for the proposed development. As outlined above, it is expected that low-level lighting would only be provided around the squadron compounds and the main building, for safety and security reasons. Illumination of the runways, hangars, workshops and other areas would not be required as these would not be used at night.</p> <p>Some recommended measures in relevant literature include ensuring safety/security lighting is at the minimum intensity necessary, the avoidance of external lighting at the blue and red ends of the spectrum, lighting should be directed downwards along paths or towards buildings and should not result in the illumination of trees.</p>
<p><i>Has further investigation into water provision been undertaken? Should bore water not be a feasible option, further estimates of the water deficit should be provided based on the rainfall "range", rather than the "average" or "decile five" rainfall statistics, to allow an understanding of best-case and worst-case scenarios, and likely additional truck movements for water cartage.</i></p>	<p>Additional detail on water supply is provided in the Fire Protection and Water Supply Addendum report as requested by Council to illustrate a wider range of scenarios. Water balance calculations have been provided for the worst-case year recorded at the Bega weather station and the Decile 5 and Decile 7 statistics.</p> <p>Water cartage movements are minor in the context of all vehicle movements associated with the proposed development. These have been incorporated into the traffic analysis in Appendix 2 of the Traffic Impact Assessment Addendum report.</p>
<p><i>An operations management plan is required for the overall development and should include any other uses to be retained including the Frogs Hollow Flyers and Bega District Model Club. Will the Frogs Hollow Flyers and Bega District Model Club continue to use the site? If so, detail regarding this use is also required within the operations management plan.</i></p>	<p>As required by Civil Aviation Orders (CAO) 95.10, 95.32 and 95.55, the proposed facility would be operated in accordance with the Recreational Aviation Australia Operations Manual. This is a requirement of CASA for all registered flight training schools. The RA-Aus Operations Manual incorporates the relevant requirements of the <i>Civil Aviation Act 1988 (CAA)</i>, <i>Civil Aviation Regulations 1988</i>, <i>Civil Aviation Safety Regulations 1998</i>, CAOs and relevant associated legislation such as the <i>Transport Safety Investigation Act 2003 (TSI Act)</i>.</p> <p>The operation of the proposed facility would also be conducted in accordance with a site-specific Operations Manual. An extract of the relevant details is included in the attached draft Operations Summary.</p> <p>The development proposal, once operational, would not pose a conflict with the existing Frogs Hollow Flyers or</p>

	<p>other aircraft not associated with the proposed flight school.</p> <p>All aerodrome users are required to operate, at all times, in accordance with the procedures contained in the <i>Civil Aviation Regulation 1988</i>. The Regulation requires all users to observe standard priority and give - way procedures when moving about, approaching and departing from all aerodromes.</p> <p>It is not desirable for the Model Club to be located within an operational aerodrome; the Model Club states that a specific exemption from CASA was sought for their organisation to utilise the Frogs Hollow aerodrome. A suitable site has been reserved for the Model Club within the wider property proposed to be acquired by SAFCA.</p> <p>Further details are provided in Section 3.5 of this Addendum report.</p>
<i>Any obstructions to navigation, such as large powerlines, should be documented on a locality plan.</i>	<p>The airport is already operational, and the proposed development would not introduce any obstructions to navigation, so a locality plan is not necessary.</p> <p>Any “obstructions” to navigation are listed in the OzRunways database entry that is relevant to Frogs Hollow airfield and these details are required to be observed by any pilot using the airfield.</p>
<i>How much fuel is currently stored on the site and how is it stored?</i>	<p>A GIPA application was submitted to Bega Valley Shire Council to determine what existing development consents were in place. The results indicate that three private hangars have development consent, but the documentation does not indicate any approval for the storage of fuel on the site.</p> <p>It is understood through the landowner that approximately 1,000L of fuel, including Aviation Gasoline (avgas), is currently stored at the Frogs Hollow airfield. This is currently stored in unprotected, un-bunded steel drums.</p> <p>There is no proposal to store any avgas in connection with the proposed flight school.</p>
<i>Please provide letters of agreement from the other airports and airstrips detailing that those facilities can cater for proposed flight circuit training.</i>	<p>Letters of agreement are not required. The use of other airports is governed by the Civil Aviation Regulations 1988.</p> <p>Any pilot may use any open airfield for circuit training, provided they observe all relevant aviation regulations. OzRunways and ERSAs provide aerodrome-specific guidance that assists pilots and contains vital information relating to an aerodrome including the physical</p>

	characteristics, visual aids, hours of operation, owner/operator details, CTAF frequency and the like.
<i>The noise report should consider the cumulative impact of noise from the Go-Kart track and Frogs Hollow Flyers.</i>	<p>According to the Frogs Hollow Flyers, their use of Frogs Hollow typically occurs on a Sunday. Any movements from Monday to Saturday would be infrequent and generally a singular movement, not associated with a meeting/get together of the Flyers. These numbers are low and would have no notable cumulative impact with the proposed flight school. It is also noted that the proposed flight school would not conduct any training flights on a Sunday.</p> <p>The information advises that the noise levels for the hire kart track (Stage 2 of the development consent, but not yet in operation) would be considerably lower than the go-kart track. The information states that the go-kart track shall not have an impact greater than 5 dB(A) above background noise levels at receiver locations.</p> <p>Given the compliance with the identified noise criteria for the flight activity and mechanical plant outlined in the accompanying Noise Impact Assessment and the stringent noise levels permitted for the go-kart track, a cumulative increase at the receiver would not be expected.</p>

## 1.3 CONTEXT

The proposed development is aligned with strategic directions for both tourism and international education set at State and Federal levels.

The 'National Strategy for International Education 2025' identified "there are new and emerging forms of education where there are significant opportunities for both students and providers. These include blended delivery models, online professional development and offshore and **edu-tourism opportunities**<sup>5</sup>" [emphasis added].

China has long been identified as both a significant tourism source market and international education source market for Australia. According to AusTrade, Australia's medium and long-term growth outlook is intrinsically linked to its strong ties to the Asian region, China in particular<sup>6</sup>.

In the individual sectors of tourism and international education, Australia is performing 20 percent above the global average<sup>7</sup>. Combining these competitive advantages is a rapidly-growing industry for education-related travel services. Behind iron ore and coal exports, education-related travel services are the third-largest goods and services export, generating over \$22 billion in revenue in 2016<sup>8</sup>.

The 'China Tourism Strategy' published by Destination NSW sets out strategic directions to capitalise on identified opportunities in the Chinese market and protect NSW position as the leading destination for Chinese tourists visiting Australia. According to the Strategy, **new markets will be actively built, new products will be supported**, and industry partnerships developed to "ensure that NSW secures substantial market share and harnesses the potential of the China market".

China is Australia's largest, fastest growing and highest spending inbound visitor market. Almost 1.4 million Chinese visitors arrived in Australia in 2017 and the collective spend was \$10.4 billion. Of these, 48 percent were return visitors to Australia<sup>9</sup>. The number of Chinese visitors is expected to triple to almost 4 million by 2027<sup>10</sup>.

Traditionally, China has had a restricted airspace policy that has been controlled by the military and the State-owned airlines. There was a significant overhaul in 2015 with the Chinese government deregulating the airspace and giving rise to the establishment and growth of general aviation, which includes the subset of recreational aviation.

Australia has long been among the leading nations in aviation safety and is also a world leader in the provision of aviation training. This is evidenced by the numerous general aviation flight training schools

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<sup>5</sup> Australian Government Department of Education and Training, 2016, 'National Strategy for International Education', p.v

<sup>6</sup> Australian Government Australian Trade and Investment Commission, 2018, 'Why Australia: Benchmark Report 2018', p.7

<sup>7</sup> Australian Government Australian Trade and Investment Commission, 2018, 'Why Australia: Benchmark Report 2018', p.8

<sup>8</sup> Australian Government Australian Trade and Investment Commission, 2018, 'Why Australia: Benchmark Report 2018', p.40

<sup>9</sup> Tourism Australia, 'Market Profile: 2017', accessed at <http://www.tourism.australia.com/en/markets-and-research/market-regions/>

<sup>10</sup> Minister for Trade, Tourism and Investment, 'More Chinese tourists to Australia', 18 April 2018, accessed at [http://trademinister.gov.au/releases/Pages/2018/sc\\_mr\\_180418.aspx](http://trademinister.gov.au/releases/Pages/2018/sc_mr_180418.aspx)

that have active contracts with Asian and Middle-Eastern based airlines to train commercial airline pilots<sup>11</sup>.

Building on Australia's international reputation as an aviation leader, the proposed flight school at Frogs Hollow seeks to cater for this emerging niche market for recreational aviation in China. Sports Aviation Flight College Australia is an Australian-owned and operated 'start-up' in the aviation and tourism spaces.

The proposed development would offer a packaged recreational flight training experience to Chinese nationals. The training would be conducted from the Frogs Hollow site over a period of three months. The package includes accommodation at the Frogs Hollow site, return flights to China and group transportation between Canberra Airport and Frogs Hollow. Participants are also taken on a guided tours and social outings in the Bega Valley and wider South Coast and Monaro region, showcasing Australian landmarks and local/regional places of interest.

The proposed service aligns with the principles of experiential tourism, where tourists are not merely "seeing the sights"; instead, they are learning new skills, gaining knowledge and directly engaging with their interests.

The Frogs Hollow airfield was selected by the proponents as they are a local family residing in the area, familiar with the local environment and aerospace. It is important to the proponents that the proposed investment and ongoing local expenditure will benefit their community.

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<sup>11</sup> Australian International Aviation College (AIAC) at Port Macquarie Airport is owned by Hainan Airlines of China and intends to expand to Kempsey Airport. Australian Airline Pilot Academy (AAPA) at Wagga Wagga Airport has partnership arrangements with the General Civil Aviation Authority of the UAE and the Civil Aviation Administration of Vietnam (owner of Vietnam Airlines).

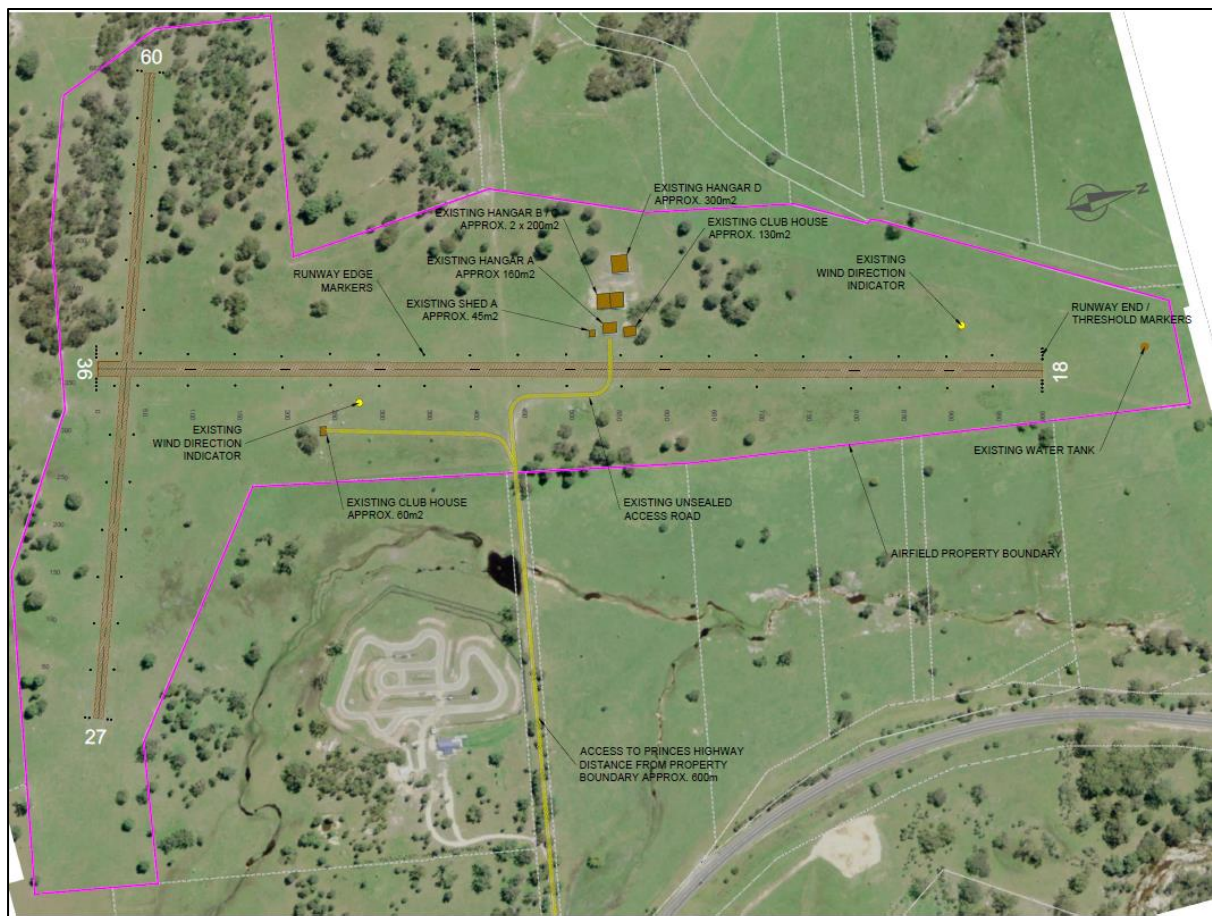


## 2 PERMISSIBILITY MATTERS

### 2.1 ESTABLISHMENT AND COMMENCEMENT

The existing facilities at Frogs Hollow include a primary runway (north-south) of 1,000 metres and a secondary runway (east-west) of 850 metres, supported by two wind direction indicators (wind socks) and runway edge markers.

It is understood that there are approximately 12 aircraft that consider Frogs Hollow their base. There are five aircraft hangars, one shed and two club houses presently on the land, as indicated in the figure below. Of these buildings, only the three western-most hangars have development consent (refer DA 2006.0443, DA 2007.0634, DA 2010.0228). Aviation gasoline (avgas) is presently stored on the land in unprotected steel drums.



All development is characterised and defined according to standardised land use terms in the Standard Instrument – Principal Local Environmental Plan. For aviation-related facilities, there are four broad sub-categories: an airstrip, an airport, a helipad and a heliport. The existing facilities at Frogs Hollow aerodrome are viewed as an “airport”, a type of “air transport facility” (the group term), which are defined as follows:

**airport** means a place that is used for the landing, taking off, parking, maintenance or repair of aeroplanes, and includes associated buildings, installations, facilities and movement areas and any heliport that is part of the airport.

**Note.**

Airports are a type of **air transport facility**—see the definition of that term in this Dictionary.

**air transport facility** means an airport or a heliport that is not part of an airport, and includes associated communication and air traffic control facilities or structures.

The existing facilities at Frogs Hollow are not considered as an “airstrip”, as defined below in the Principal Local Environmental Plan, given there are two operational runways. Consequently, the existing development does not fit with the definition of an airstrip.

**airstrip** means a single runway for the landing, taking off or parking of aeroplanes for private aviation only, but does not include an airport, heliport or helipad.

Similarly, the existing facilities are not considered to be or to include a “helipad” or “heliport” as they do not accommodate helicopters.

This characterisation is also consistent with Council’s own assessment, having designated the subject land as an “air transport facility” (meaning an airport, a heliport, or both), and not an “air strip”, in the making of its conversion Local Environmental Plan, the Bega Valley Local Environmental Plan 2013. Refer to further discussion below.

## 2.2 EXISTING AIR TRANSPORT FACILITY

According to the *Environmental Planning & Assessment Act 1979* the existing “air transport facility” at Frogs Hollow is a “lawful use” as defined, given the facility was established prior to the gazettal of planning legislation that would either prohibit the use or require the need for development consent.

The first legislative framework for planning in NSW was introduced in 1945 in the form of amendments to the *Local Government Act 1919* (NSW Parliamentary Library Research Service e-brief 10/2010, June 2010). This means that prior to 1945, the air transport facility did not require development consent and was established lawfully.

Lawful use is also described in the ‘Environmental Law Handbook’, as shown below in Figure 2-1.

A use would be unlawful if, at the time it commenced, the use was permissible with consent but consent was not obtained (*Hastings Municipal Council v Mineral Deposits Ltd* (1981) 43 LGRA 198; *Steedman v Baulkham Hills Shire Council (No 2)* (1993) 80 LGRA 323).

Some uses will be lawful because they commenced before there was any relevant planning regime in place.

Figure 2-1 Lawful use defined (The Environmental Law Handbook 5<sup>th</sup> Edition 2011:165)

Section 4.68(1) of the *Environmental Planning & Assessment Act 1979* states that consent is not required for the continuance of use for a lawful purpose. For a lawfully established use, the introduction of a requirement to obtain consent for that use does not apply retrospectively. Therefore, development consent has not been required to be obtained, nor is it required to be obtained, for the continued operation of the air transport facility at Frogs Hollow.



Existence of the air transport facility at Frogs Hollow prior to 1945 is established in the table below. These historical records show that the facility was established prior to 1937 and it is the oldest aerodrome in the Bega Valley.

Copies of archived newspaper articles and other historical documents relating to the operation of the air transport facility are provided as an attachment to this report.

Table 2-1 Frogs Hollow air transport facility newspaper articles

<i>Date</i>	<i>Content</i>	<i>Publication</i>
23 April 1937	Council Engineer to carry out necessary repairs on the road to the aerodrome at Frogs Hollow.	Southern Record and Advertiser
11 May 1937	The Mayor (Alderman DC Rosenthal) declared the aerodrome open the day before the article was published. It states that Adastra Airways had been operating a passenger transport service to Sydney for three years prior to the article.	Sydney Morning Herald
14 May 1937	A big crowd attended the opening of Adastra's new aerodrome on Sunday.	Southern Record and Advertiser

Section 4.68 of the *Environmental Planning & Assessment Act 1979* states that, a use is presumed to be abandoned if it ceases to be actually so used for a continuous period of 12 months. It is known that the airport was used for scheduled passenger transport between Bega and Sydney until approximately 1956, when Merimbula airport was opened.

In the case of the air transport facility at Frogs Hollow, the abandonment of this use would mean that the landing, taking off, parking, maintenance or repair of aeroplanes had not occurred at least once every 12 months since 1956. Given that Frogs Hollow is an airfield open to the public, it is considered reasonable to assume that at least one aircraft had taken off, landed or parked there at least once per year since this time.

According to planning law, the onus of proof falls on the party alleging abandonment. Further, the continuance of use may be substantiated even in a minor way and needn't be the same intensity or exact manner of use at which the use had been lawfully commenced (*King v Lewis* (1995) 88 LGERA 183; *Meriton Apartments Pty Ltd v Fairfield Council* (2004) NSWLEC 423). The air transport facility remains a lawfully commenced use to this date and does not require any further consent to be utilised in this regard.

Regardless of continuance or abandonment, the proposed development is a permissible use with consent under the provisions of the BVLEP 2013, as outlined in the following sections.

## 2.3 LAND USE ZONING

The Bega Valley Local Environmental Plan 2013 applies to the subject land. The land is zoned SP2 Infrastructure (Air Transport Facility) under the provisions of the BVLEP 2013. The BVLEP 2013 was prepared as a "conversion" LEP, for the Bega Valley Local Environmental Plan 2002 to the Standard Instrument – Principal Local Environmental Plan.

For completeness, it is also noted that the LEP as it applies to the subject land was exhibited in the same form as it was adopted. That is, it was exhibited as the BVLEP 2010 with the zoning of SP2 Infrastructure and the designated purpose of "Air Transport Facility".

The zoning of the land under the BVLEP 2002 was 1(a) Rural. The equivalent conversion zone under the Standard Instrument for the 1(a) Rural zone is the RU1 Primary Production zone. This is also evidenced by

Council's application of the RU1 Primary Production zone to the surrounding locality under the BVLEP 2013. The Council effectively rezoned the land to SP2 Infrastructure, by not applying the equivalent conversion zone, and notably, when undertaking a "conversion" LEP.

Under the provisions of the RU1 Primary Production zone, an "air transport facility" is prohibited in the zone. Should Council have applied the equivalent conversion zone to the subject land for the 1(a) Rural zone, the existing air transport facility at Frogs Hollow would currently be operating under an "existing use" right.

This would have been the appropriate course of action, should Council have felt at the time that the air transport facility at Frogs Hollow was inconsistent with the present needs of the community and the environment and with the desirable pattern of land use in the locality. It therefore follows that Council did not deem that the air transport facility at Frogs Hollow fit these criteria.

Further, Council would have known that because the land was privately-owned and therefore development unlikely to be proposed by any public authority, the provisions of clause 22 of the State Environmental Planning Policy (Infrastructure) 2007 (referred to as ISEPP) would not have applied for development on this land.

Instead, Council imposed the SP2 Infrastructure zone on the subject land and specifically the identified purpose of Air Transport Facility, as designated on the Land Zoning Map. In the application of any Special Purpose zone under the Standard Instrument, the Council was required to give consideration to LEP Practice Note PN 08-002 (dated 7 March 2008) 'Zoning for infrastructure in LEPs' and Practice Note PN 11-002' (dated 10 March 2011) 'Preparing LEPs using the Standard Instrument: standard zones'.

Practice Note PN 11-002 stipulates the purposes for each of the zones which Council's must give consideration to in their application. It notes that the SP2 zone is for "infrastructure land that is highly unlikely to be used for a different purpose in the future". Practice Note PN 08-002 makes mention that some types of private infrastructure are provided under the provisions of ISEPP, but that most private infrastructure will be predominantly regulated by the local LEP. Further, the Practice Note recommends that in zoning private infrastructure land, Council follows the Planning Principles methodology listed therein, rather than simply adopting a Special Purpose zone.

In considering the due process followed by Council in developing the draft BVLEP over several years and the evaluation it undertook as set out by the LEP Practice Notes published by the Department of Planning, it can be reasoned that Council identified the subject land for future airport and related development. The new zone that was applied, as opposed to a conversion zone, and the purpose that was designated for the land in the BVLEP 2013 demonstrate that Council endorses airport and related development for the subject land.

## 2.4 DEVELOPMENT PROPOSAL

As outlined above, the Bega Valley Local Environmental Plan 2013 applies to the subject land. The land is zoned SP2 Infrastructure under the provisions of the BVLEP 2013. On land within the SP2 Infrastructure zone, development may be carried out with development consent for the following purpose according to the land use table in the LEP:

Roads; The purpose shown on the [Land Zoning Map](#), *including any development that is ordinarily incidental or ancillary to development for that purpose* [emphasis added]

The designated purpose on the Land Zoning Map applying to the subject land is "Air Transport Facility". As described earlier in this section, an air transport facility is defined as follows:

**air transport facility** means an airport or a heliport that is not part of an airport, and includes associated communication and air traffic control facilities or structures.

Further, the BVLEP 2013 provides a definition of airport as follows:

**airport** means a place that is used for the landing, taking off, parking, maintenance or repair of aeroplanes, and **includes associated buildings, installations, facilities and movement areas** and any heliport that is part of the airport. [emphasis added]

**Note.**

Airports are a type of **air transport facility**—see the definition of that term in this Dictionary.

The word "associated" in the definition of "airport" is important and its meaning straightforward. Various dictionary definitions of "associated" reflect a common meaning along the lines of: "correlated with, allied with, related to" and "connected with something else" (these examples from the Oxford English dictionary). The key consequence of the use of the word "associated" is that use of the word "associated" does not import notions of subservience or dominance which are irrelevant to that concept – it is, rather, a concept centred on a form of connection or relationship of any type.

When its components are read together, and having regard to the meaning of the word "associated" in the definition of "airport", the effect of the drafting in the LEP is that development may be carried out with development consent under the LEP if the proposed development satisfies any of the following four criteria:

1. it is for the purpose of a place that is used for the landing, taking off, parking, maintenance or repair of aeroplanes (**"criteria 1 – a place used for the taking off and landing etc of aeroplanes"**); *or*
2. it is for the purpose of buildings, installations, facilities and movement areas that are correlated with, allied with, related to or connected with [by virtue of the word "associated" in the definition of "airport"] a place that is used for the landing, taking off, parking, maintenance or repair of aeroplanes (**"criteria 2 – buildings/facilities, including for flight training, related to a place used for the taking off and landing etc of aeroplanes"**); *or*
3. it is ordinarily incidental or ancillary to development for the purpose of a place that is used for the landing, taking off, parking, maintenance or repair of aeroplanes (**"criteria 3 – ordinarily incidental or ancillary to a place used for the taking off and landing etc of aeroplanes"**); *or*
4. it is ordinarily incidental or ancillary to development for the purpose of buildings, installations, facilities and movement areas that are correlated with, allied with, related to or connected with a place that is used for the landing, taking off, parking, maintenance or repair of aeroplanes (**"criteria 4 – ordinarily incidental or ancillary to buildings/facilities etc, including for flight training, that are related to a place used for the taking off and landing etc of aeroplanes"**).

When considered in a common sense and practical way, the proposed recreational flight training school would plainly be *related to or otherwise allied, connected or associated with a place used for the taking off and landing etc of aeroplanes*. For example, as part of their training, the student pilots would be required to (amongst other things):

- learn about and master the layout and operation of the place used for the landing, taking off, parking, maintenance and repair of aeroplanes;
- learn about the aspects and physical configuration of the aircraft located at the place used for the landing, taking off, parking, maintenance and repair of aeroplanes;
- conduct mandatory pre-flight safety briefings in the presence of the aircraft as part of their flight training;

- conduct mandatory pre-flight physical safety inspections on the physical aircraft as part of their flight training;
- take off, land, taxi and park at the place used for the landing, taking off, parking, maintenance and repair of aeroplanes; and
- learn about, and conduct, the service and repair of aircraft located at the place used for the landing, taking off, parking, maintenance and repair of aeroplanes.

All these activities are plainly and in a practical way related to, or associated with, a place used for the landing, taking off, parking, maintenance or repair of aeroplanes. These activities cannot be conducted anywhere else. For example, it is not possible to conduct a mandatory pre-flight inspection of an aircraft that is about to be flown at any location other than at an airport.

Conversely, an airport is not necessary or appropriate for the conduct of other forms of training – for example, a scuba diving training facility could not be said to be related in any way to an airport, as noted above. There is a clear association between a flight school and a place for the landing, taking off, parking, maintenance or repair of aeroplanes (as per the definition of "airport" in the LEP).

Accordingly, development for the purposes of a flight training school is development for the purpose of buildings, installations, facilities and movement areas that are related to, or otherwise associated with, a place used for the landing, taking off, parking, maintenance or repair of aeroplanes. It is noted that this would satisfy criteria 2 ("related to a place used for the taking off and landing etc of aeroplanes") and arguably criteria 1 also ("a place used for the taking off and landing etc of aeroplanes", especially if one considers that an airport can be a training airport). It is noted that there is no requirement in the definition that an airport only, or predominantly, provides for regular passenger transport.

The proposed use does not change the character which is, per *Chamwell Pty Ltd v Strathfield Council* [2007] 151 LGERA 400, "imparted to the land at which the use is pursued". Specifically, the land will still be used by planes taking off and landing etc and, moreover, will continue to be available for use by existing users of the airport and other members of the public for the purposes of taking off and landing their aircraft etc, in the way they have been prior to, and will continue to do following, the establishment of any flight school.

Even if the proposed flight school could be said to change the character imparted on the land, the character that would be imparted would still be consistent with the purpose of the use of the land as an airport.

This approach to characterisation is consistent with the approach in *Chamwell*. At paragraph [46], the Court said:

*The retail customers who [use the driveways/ramps/parking facilities etc] would not consider they had driven on a road.... The customers of the supermarket who [use the forecourt/ramps/parking etc] would not describe the route they had passed as a road. Similarly, customers using the ... forecourt ... would not consider that they were sitting on a road.*

It is reasonable to assert that a trainee pilot would consider that they were learning to fly "at the airport". A reasonable statement would be "I'm learning to fly at Frogs Hollow airport", as opposed to "I'm on the road [while seated in the forecourt]" in the *Chamwell* case, as identified by the Court. This analysis is consistent with the requirement in *Chamwell* that "the characterisation of the purpose of development must also be done in a common sense and practical way" (at [45]) and further reinforces the satisfaction of criteria 2 and arguably criteria 1 as noted above.

In matters raised by Council, emphasis has been placed on the difference in scale of the proposed development compared to the activities undertaken at the existing airfield. However, a comparison of the scale of the existing use against what is proposed does not assist in determining the characterisation of the

development. If a hangar housing one aircraft is characterised as falling within the defined permitted uses, then a hangar that houses 10 aircraft is also permissible. The same applies to characterisation of all other features of the flight school, which in our view all satisfy at least criteria 2 and arguably also criteria 1 as outlined above.

## 2.5 ANCILLARY USES

In the SP2 Infrastructure zone under the BVLEP 2013, the purpose for which development may be carried out includes both the purpose shown on the Land Zoning Map as well as development that is *ordinarily incidental or ancillary* to development for that purpose.

A use is *ancillary* to another use if it is inspired by the same purpose as the other use, or if it subserves the other use or if the use could not function without the primary use (*Foodbarn Pty Ltd v Solicitor-General* (1975) 32 LGRA 157). Of importance here is a decision of the NSW Court of Appeal in *Macquarie International Health Clinic Pty Ltd v University of Sydney* (1998) 98 LGERA 218. In that case Stein JA held (with Mason P and Meagher JA concurring) [at 223]:

*... an ancillary use does not necessarily need to be a subordinate or subservient one. It may be more than a minor use. It seems to be that an ancillary or incidental use is not capable of being reduced to a mathematical formula. It may also be noted that among the relevant dictionary meanings of ancillary are "auxiliary" and "accessory".*

As a use will be ancillary if it is inspired by the same purpose as another use or requires another use to function, or is auxiliary or an accessory to another use, then the flight school's activities and uses can be considered:

- a. ancillary to development for the purpose of a place that is used for the landing, taking off, parking, maintenance or repair of aeroplanes ("criteria 3" referenced above); or
- b. ancillary to development for the purpose of buildings, installations, facilities [including for flight training] and movement areas that are correlated with, allied with, related to or connected with a place that is used for the landing, taking off, parking, maintenance or repair of aeroplanes ("criteria 4" referenced above)

Only pilots would be trained at the proposed facility. Only material strictly related to aviation will be taught. Such activities cannot happen anywhere other than at an airport, including for the reasons outlined earlier. All of the proposed activities are therefore properly characterised either as being for the purposes of an "airport" as defined, or being ancillary to the airport purpose (as outlined above).

Furthermore, in the context of the development proposed, only those who are involved in the pilot training will make use of the proposed accommodation facilities, and only for the duration of their involvement in the training. No other person will be able to make use of the accommodation facilities. As such, it is not considered to be a general accommodation facility. This fact, and the fact that housing trainee pilots learning to fly at remotely located airports is inspired by the same purpose as training them, further reinforces that the accommodation is ancillary to the flight training school, consistent with criteria 4 as outlined above (ie "ordinarily incidental or ancillary to buildings/facilities [including training facilities] that are related to a place used for the taking off and landing etc of aeroplanes").

Of relevance here is the recent decision of the Land and Environment Court of NSW in *Nessdee Pty Limited v Orange City Council* [2017] NSWLEC 158 (Nessdee). In that case, Preston CJ considered a development application for a heliport at Fredricks Valley. Significantly, in addition to helicopter flights the development

for which consent had been sought included classroom-based pilot training and accommodation for trainee pilots. Preston CJ accepted that these components could be understood as being ancillary components of the heliport and that a condition of consent could be imposed which limited the use of the pilot accommodation and classrooms to pilots undergoing training. The same reasoning applies to this development application.

The classroom-based pilot training and pilot accommodation approved in *Nessdee* was of a smaller scale than that proposed in the subject application. However, it would be incorrect to use this as a basis to distinguish the case from the development proposed; for the reasons outlined above, a comparison of the scale does not assist in determining the permissibility of the development.

## 2.6 PROVISIONS OF ISEPP

Clause 23 of the State Environmental Planning Policy (Infrastructure) 2007 (ISEPP) provides that development for a range of additional purposes may be carried out on land within the boundaries of an existing "air transport facility", if the development is ancillary to the air transport facility. Those additional purposes include, relevantly: (d) *"premises for retail, business, recreational, residential or industrial uses"*; and (e) *"tourist and visitor accommodation"*.

It is noted that the operation of clause 23 of ISEPP, having regard to our discussions above about use of the word "associated" in the definition of "airport" (which of course is part of the definition of "air transport facility" used in clause 23 of ISEPP) means that "premises for retail, business, recreational, residential or industrial uses" (subclause (d)) and "tourist and visitor accommodation" (subclause (e)) are permissible if ancillary to:

- a. a place that is used for the landing, taking off, parking, maintenance or repair of aeroplanes; or
- b. buildings, installations, facilities and movement areas that are correlated with, allied with, related to or connected with [by virtue of the word "associated" in the definition of "airport" in clause 21 of the ISEPP] any place that is used for the landing, taking off, parking, maintenance or repair of aeroplanes.

As noted above, the visitor accommodation facilities in the proposed development are strictly and exclusively limited to those participating in the flight training activities and only for the duration of such participation, and so are clearly "visitor accommodation" (within the meaning of subclause (e) of clause 23 of the ISEPP) that is ancillary to:

- a. a place that is used for the landing, taking off, parking, maintenance or repair of aeroplanes; or
- b. buildings, installations, facilities (eg for pilot training) and movement areas that are allied with, related to or connected with [by virtue of the word "associated" in the definition of "airport"] any place that is used for the landing, taking off, parking, maintenance or repair of aeroplanes.

This establishes permissibility under ISEPP, which permits ancillary use of this nature.

Similarly, the activities of the proposed flight school can be considered to be captured by the wording in subclause (d) of clause 23 of the ISEPP (namely, "premises for retail, business, recreational, residential or industrial uses"). Again, given that these activities are exclusively for the purposes of the operation of pilot training and the airport (and are not for general or unrelated retail purposes - such as a pet store or a car yard or fishing school for example – that have no connection to an "airport" as defined), then such premises and uses are ancillary to:



- a. a place that is used for the landing, taking off, parking, maintenance or repair of aeroplanes; or
- b. buildings, installations, facilities (eg for pilot training) and movement areas that are allied with, related to or connected with [by virtue of the word "associated" in the definition of "airport"] any place that is used for the landing, taking off, parking, maintenance or repair of aeroplanes.

Again, this establishes permissibility under ISEPP, which permits ancillary use of this nature.

## 2.7 DESIGNATED DEVELOPMENT

The proposed development was assessed against the provisions of Schedule 3 of the *Environmental Planning and Assessment Regulation 2000* in the preliminary planning phase, to determine whether the proposal was to be deemed Designated Development. This assessment was also conducted with the assistance of Council's Planning Coordinator at the time.

The proposed development is not deemed to be Designated Development given the characteristics do not exceed the thresholds or other determining factors stated under Schedule 3 Part 2 Airport Facilities, as discussed in the table on the following page.

Table 2-2 Designated Development assessment

<b>Schedule 3 Designated Development under Environmental Planning &amp; Assessment Regulation</b>	
<b>Part 1 What is designated development</b>	
<b>2 Airport Facilities</b>	
<i>Aircraft facilities (including terminals, buildings for the parking, servicing or maintenance of aircraft, installations or movement areas) for the landing, taking-off or parking of aeroplanes, seaplanes or helicopters:</i>	
<i>(a) in the case of seaplane or aeroplane facilities:</i>	
<i>(i) that cause a significant environmental impact or significantly increase the environmental impacts as a result of the number of flight movements (including taking-off or landing) or the maximum take-off weight of aircraft capable of using the facilities, and</i>	<p>There are two components to this subclause and these are addressed below:</p> <p>There are no identified environmental impacts of the proposed development that would be considered <i>significant</i>. The application is supported by a number of specialist reports that indicate the development would not have an adverse environmental impact.</p> <p>It is considered that there would be no significant increase in environmental impacts as a result of the number of flight movements or the maximum take-off weight (MTOW) of aircraft capable of using the facilities. It is accepted that the number of flight movements will increase as a result of the proposal; however, there is no significant increase in environmental impacts to be expected as a result of this. The proposed development has no implications for the maximum take-off weight of aircraft capable of using the facility. The proposed development would not increase the capability of the runway compared with the existing condition and the proposed aircraft to be used by the flight school has a MTOW of typically 450kg (Bantam)</p>



	<p>but not more than 600kg (Brumby). Aircraft with a MTOW of 2,000kg have historically been using the airfield on a regular basis.</p> <p>Further, the proposed development does not trigger the requirements for scheduled premises under the <i>Protection of the Environment Operations Act 1997</i>, which is a typical indicator of significant environmental impact in this regard.</p>
<p><i>(ii) that are located so that the whole or part of a residential zone, a school or hospital is within the 20 ANEF contour map approved by the Civil Aviation Authority of Australia, or within 5 kilometres of the facilities if no ANEF contour map has been approved, or</i></p>	<p>Subclause (i) above is not applicable and therefore subclause (ii) is not relevant by virtue of the word “and” between the subclauses.</p>
<p>(b) in the case of helicopter facilities (other than facilities used exclusively for emergency aeromedical evacuation, retrieval or rescue):</p>	
<p><i>(i) that have an intended use of more than 7 helicopter flight movements per week (including taking-off or landing), and</i></p>	<p>Not applicable, given the proposed development would not involve the use of helicopters.</p>
<p><i>(ii) that are located within 1 kilometre of a dwelling not associated with the facilities, or</i></p>	
<p>(c) in any case, that are located:</p>	
<p><i>(i) so as to disturb more than 20 hectares of native vegetation by clearing, or</i></p>	<p>Not applicable given the proposed development will not clear more than 20 hectares of native vegetation.</p>
<p><i>(ii) within 40 metres of an environmentally sensitive area, or</i></p>	<p>Not applicable. Part 4 of Schedule 3 provides a definition of “environmentally sensitive area”. The subject land does not include any land that is referred to in parts (a) to (e) of the definition and is not within 40 metres of such an area either.</p>
<p><i>(iii) within 40 metres of a natural waterbody (of other than seaplane or helicopter facilities)</i></p>	<p>Not applicable. Part 4 of Schedule 3 provides a definition of “waterbody” which includes a “natural waterbody” under subclause (a) and an “artificial waterbody” under subclause (b). The definition of “natural waterbody” is taken to be that referred to in subclause (a). Subclause (a) includes (i) a lake or lagoon, (ii) a river or stream, or (iii) tidal waters.</p> <p>Subclause (a)(i) and (iii) are not applicable as there are no identified lakes, lagoons or tidal waters within 40 metres of the boundary of the subject land.</p> <p>Subclause (a)(ii) is not applicable as there are no rivers and no perennial or intermittent streams within 40 metres of the boundary of the subject</p>

	land. There are ephemeral streams in close proximity to the subject land, but an ephemeral stream does not fall within the defined stream types in the clause and is therefore not relevant.
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## 3 OPERATION & MANAGEMENT

### 3.1 OVERVIEW

As required by Civil Aviation Orders (CAO) 95.10, 95.32 and 95.55, the proposed facility would be operated in accordance with the Recreational Aviation Australia Operations Manual. Refer to further details in Section 3.3 of this report regarding the regulatory framework. To give a brief overview, Recreational Aviation Australia (RA-Aus) is the administrator and regulator of recreational aviation in Australia. It is designated this role by the Civil Aviation Safety Authority (CASA).

This is a requirement of CASA for all registered flight training schools. The RA-Aus Operations Manual incorporates the relevant requirements of the *Civil Aviation Act 1988* (CAA), *Civil Aviation Regulations 1988*, *Civil Aviation Safety Regulations 1998*, CAOs and relevant associated legislation such as the *Transport Safety Investigation Act 2003*.

The operation of the proposed facility would also be conducted in accordance with a site-specific Operations Manual. An extract of the relevant details is included in the draft Operations Summary that is attached to this Addendum report.

### 3.2 FLIGHT TRAINING ARRANGEMENT

In accordance with the draft SAFCA Operations Summary, it is proposed that a maximum of 12 new student pilots would be inducted into each squadron of the recreational flight school around the 15<sup>th</sup> day of every month from the 15 December to 15 September. As indicated in Section 1.2, a *'squadron' is an aviation term and is used internally by SAFCA to organise and manage the student pilots into groups or units. It does not reflect any flying formation, or the like.*

It is proposed that the facility would commence with two squadrons – meaning a maximum of 24 student pilots would be inducted each month; given the proposed three-month stay, this would equate to no more than 72 students accommodated at any one time. The facility would gradually add a further squadron at each six-month interval, up to a maximum of 10 squadrons.

Each monthly intake is collectively referred to as one 'student group'; these students progress through the course at the same rate. The program extends for just shy of three months, with a student group departing around the 12<sup>th</sup> day of the month. The dates align so that none of the student pilot groups are within the theory and training 'phase' between early/mid-December and early/mid-February and therefore ***no flight training occurs between 10 December and 5 February***. It is noted therefore that no flight training would occur on the Christmas Day, Boxing Day, New Year's Day or Australia Day public holidays. Refer to the draft Operations Summary attached.

The structure of the program includes approximately 7.5 weeks of intensive Aviation English tutelage and approximately 4.5 weeks of theory and training.

As outlined above, the flight school would commence with two squadrons (24 students arriving each month and 72 students in total) and increase to a maximum capacity of 10 squadrons (120 students arriving each month and 360 students in total). Each monthly intake of students is collectively referred to as one *student group*; these students progress through the course at the same rate, arriving and departing the facility at the same time. The course is arranged such that only one student group (at full capacity this would be up to 120 student pilots) would be within the flight theory and training phase at any one time. The remaining 240 student pilots would be in the earlier phases of the program, which includes intensive Aviation English.

It is noted that the students are not taught the English language, they participate in a mandatory Aviation English course to International Civil Aviation Organisation (ICAO) standards. All radio communications for aviation in any country are conducted in English, in accordance with ICAO agreements.

Thus, it is common that many pilots cannot speak fluent English but are fluent in Aviation English. This does not increase the safety risks of the proposal, as has been raised in community submissions received by Council, as all necessary aircraft radio communications are very standardised in their structure and wording. Pilots refrain from using words outside of these standardised communications. Therefore, a pilot who is unable to speak fluent English, but understands Aviation English is at no greater risk than a pilot who speaks fluent English.

The theory and training phase extends for the last 4-5 weeks of the full program. It is noted that the student pilots are taught ***strictly aviation-related syllabus only***. Each day, the student group within this phase is arranged into three classes of up to forty student pilots to participate in three separate lessons on:

- flight theory,
- aircraft maintenance and aircraft construction theory, and
- flight training.

Regarding the flight training component, there are three sessions throughout the day (morning, midday and afternoon sessions) comprising forty student pilots each session. These sessions extend from approximately 7.10am to 10.30am, 10.50am to 2.10pm and 2.30pm to 5.50pm. At full capacity, during these sessions up to 40 aircraft would take off and later return to land at Frogs Hollow.

Consistent with RA-Aus restrictions, it is proposed that there would be no flying during night-time hours.

The schedule is highly regimented for flight training. Four aircraft would take off in each ten-minute block during the first half of the session and will land in each ten-minute block during the second half of the session. There would be on average 50 minutes between the end of the first half (departures) and the commencement of the second half (arrivals) depending on the time taken for all aircraft to depart. There would also be a further 20 minutes between each of the morning, midday and afternoon sessions.

Each training flight extends for two hours within a 1,963 square nautical mile area surrounding Frogs Hollow airfield. This is referred to as the Designated Training Area (DTA) and extends in a 25-nautical mile (nm) radius of the airfield.

When departing the Frogs Hollow airfield, the aircraft follow a designated departure manoeuvre. This is called a circuit and is a “template” that pilots follow in the approach of and departure from an airfield where there is no control tower. The circuit is controlled by CASA regulations and these are also consistent with international practice.

The circuit can also be used for training, to repeat and practice approach, touchdown and departure procedures. The circuit pattern is as indicated in Figure 3-1 below. Circuit training may also occur during the arrival and departure break outlined above and between the session breaks. For safety reasons, it would not occur during the departure or arrival period. Further, conflicting circuits would not be used for safety reasons and could not be used given that prevailing winds dictate which circuit would need to be used at any one time.

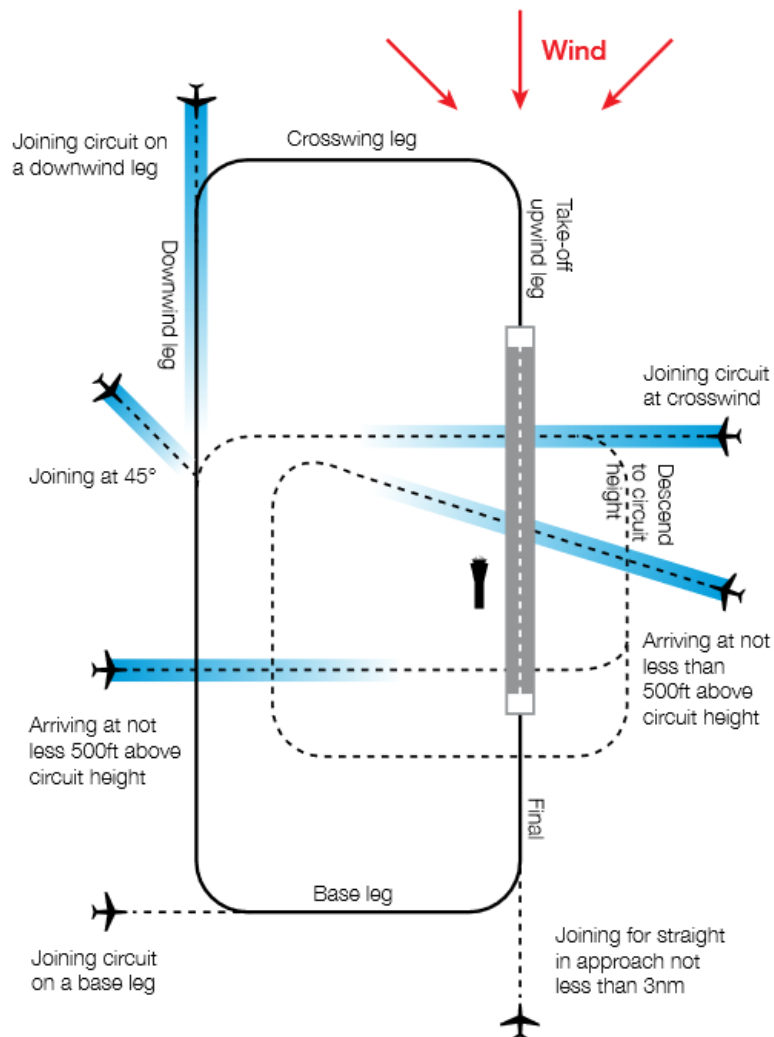


Figure 3-1 Standard circuit pattern (Source: AirServices Australia)

For the departure, the student pilots would reach a height of 500 ft prior to the turn crosswind and then typically extend the crosswind leg to exit the circuit once they had reached an altitude of 1,000 ft. From there, they would ascend to their flying altitude of between 4,000 ft and 10,000 ft.

The Bantam will be used for most of the training flights conducted and this aircraft ascends at a rate of approximately 600 ft per minute. The Trike aircraft would ascend at the slowest rate, being approximately 500ft per minute.

### 3.3 ADMINISTRATION FRAMEWORK

The Civil Aviation Safety Authority (CASA) is an independent statutory authority that conducts the safety regulation of civil air operations in Australia. Civil air operations include both scheduled air transport and general aviation. Sport aviation is a term used to describe a subset of general aviation and is also governed by the rules and regulations of CASA.

CASA sets out the regulations under which sport aviation must be conducted but has delegated the administration of sport aviation to several organisations, each of which have responsibility for a different subset of sport aviation – such as hang gliding, model aircraft, ballooning, parachuting and the like.

Sport aviation participants must be members of the relevant organisation to participate in a sport aviation activity. For the type of aircraft use proposed at Frogs Hollow airfield, the relevant governance organisation is Recreational Aviation Australia (RA-Aus).

RA-Aus administers ultralight, recreational, weight shift microlight and LSA aircraft. RA-Aus train and certify pilots, flying instructors and maintainers, register their aircraft fleet and oversee a large number of flight training schools across Australia. All student pilots at the proposed flight school are required to obtain RA-Aus membership.

### **3.4 RECREATIONAL AVIATION AUSTRALIA (RA-AUS) SYLLABUS**

The proposed flight training school would be registered with Recreation Aviation Australia (RA-Aus). Other registered flight training schools are located at major airports, without issue, such as at Bankstown, Moorabbin, Archerfield, Wagga Wagga, Parafield, and Townsville. There are over 160 registered flight training schools across the country with three registered schools already located in the area at Aadminaby and Moruya.

As indicated above, Recreational Aviation Australia (RA-Aus) administers ultralight, recreational, weight shift microlight and LSA aircraft, train and certify pilots, flying instructors and maintainers, register their aircraft fleet and oversee flight training schools. Recreation Aviation Australia has been designated this role by the Civil Aviation Safety Authority (CASA), the peak statutory body for the conduct of safety regulation of civil air operations in Australia. CASA still sets out the regulations under which sport aviation must be conducted.

As with any registered flight training school, the facility at Frogs Hollow would be required to implement and follow the RA-Aus Syllabus of Flight Training. The syllabus is included as an attachment to this report. Student pilots are assessed against the competencies framework in the syllabus. It is noted that the students only receive tutelage in matters of aviation. The students will be supervised by a qualified and experienced flight instructor during their flight training, in accordance with RA-Aus rules.

As indicated previously, it is proposed to use a Brumby, Bantam and Trike aircraft in the offering of recreational flight training at Frogs Hollow. The Bantam would be used for the majority of training flights, with advanced students potentially having the opportunity to undertake training in the Trike and further in the Brumby. These aircraft fall within Group A (3-Axis) and Group B (Weight Shift) categories within the RA-Aus syllabus.

There are several sections in the syllabus that are not relevant to the proposed operations at Frogs Hollow, as an example, Unit 1.06 Formation Endorsement and Unit 1.09 Low Level Endorsement. This type of training is for more advanced recreational pilots and would not be achievable within the 3-month period the students are at Frogs Hollow.

A number of submissions received by Council raise concerns about certain types of flying manoeuvres. The concerns would not be realised as advanced flight training, such as formation flying, low level flying or aerobatics, is not offered at Frogs Hollow.



### 3.5 OWNERSHIP AND LEASE ARRANGEMENTS

#### The proponent, Sports Aviation Flight College Australia

It is proposed that **Sports Aviation Flight College Australia Ltd** would acquire **Lot 1 DP109606** and **Lot 1 DP245789**, as well as other surrounding properties that the development application does not apply to but that would act as a buffer to surrounding receptors. Refer to the figure on the following page.

Sports Aviation Flight College Australia Ltd (SAFCA) is an Australian, un-listed public company with all shares held by Australian shareholders. SAFCA has no Chinese investors or shareholders and claims of Chinese ownership in written submissions received by Council are false. In fact, ownership has no relevance to the assessment of the application under the provisions of the *Environmental Planning & Assessment Act 1979*.

Developing cross cultural communications is vital when doing business on a global scale. Cultural differences, both verbal and nonverbal, should be observed to avoid unintentionally causing offense. In this regard, SAFCA liaises with advisors that have commercial experience in China. This strategy is recommended by the Australian Trade and Investment Commission (AusTrade) when trading globally.

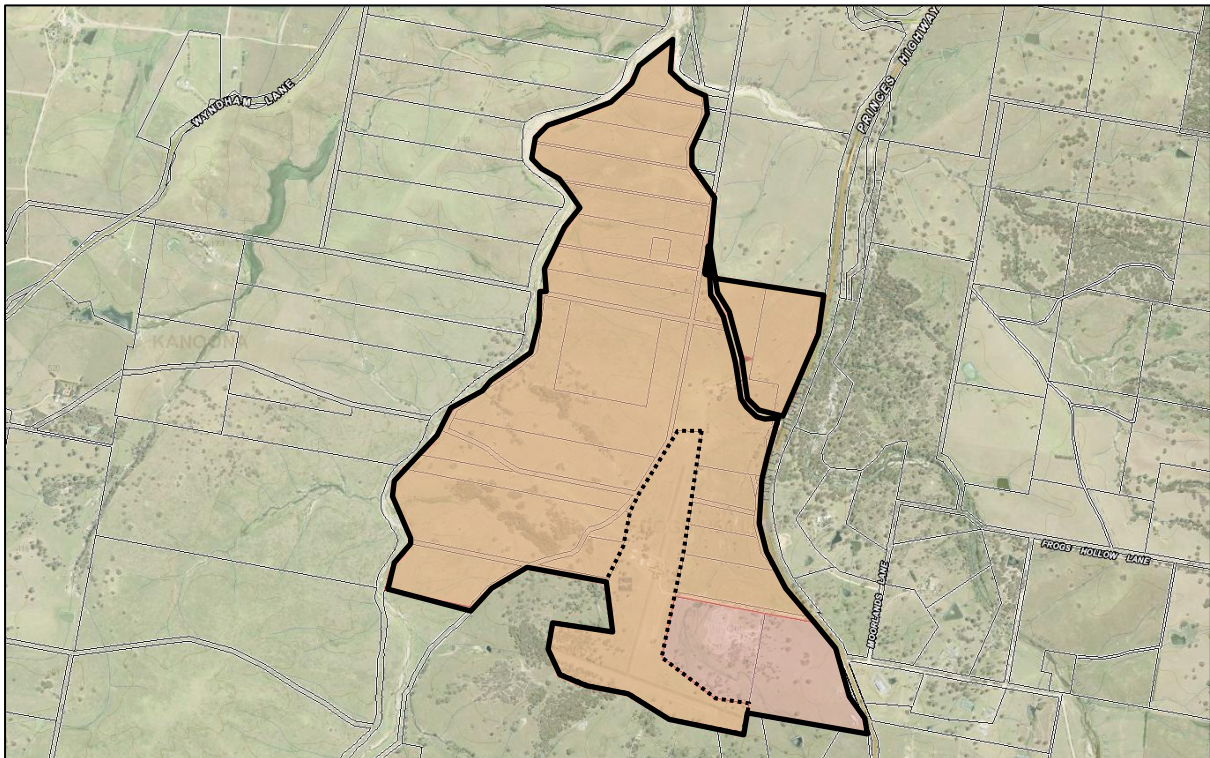


Figure 3-2 Area of the wider property intended to be purchased (Source: NSW SIXmaps)

#### Use of the Frogs Hollow airfield by aircraft not associated with the flight school

Should development consent be forthcoming, and the flight school be in operation, the Frogs Hollow airfield would remain open and accessible to other aircraft not associated with the flight school.

There would be no safety issues or conflicts with other aircraft using Frogs Hollow if the flight school was in operation. All aerodrome users are required to operate, at all times, in accordance with the procedures contained in the *Civil Aviation Regulation 1988*. The Regulation requires all users to observe standard priority and give - way procedures when moving about, approaching and departing from all aerodromes.



### **Other organisations currently located at Frogs Hollow**

Neither the Frogs Hollow Flyers, nor the Bega District Model Club have existing binding agreements to be located at the airfield. A search of Council records indicates there are no development consents for the Model Club and some of the hangars used by the Frogs Hollow Flyers. It is understood that these buildings have been in existence since around the 1980s.

As indicated on the previous page, the subject land is intended to be acquired by Sports Aviation Flight College Australia. The existing buildings located on the property are within the ownership of Mr & Mrs Johnson and would form part of the sale of land and improvements to SAFCA. SAFCA would permit the Frogs Hollow Flyers to use the airfield should they wish to do so, but a new location for private hangars (most likely to be near the access road turning head adjacent the eastern end of the secondary runway) would need to be agreed.

Preliminary consultation has occurred with existing users of the site to ascertain whether they wish to continue to use the airfield under a lease arrangement with SAFCA should the development be approved, and the property sale proceed. It is premature for further detailed consultation to occur and for existing users to confirm their intended future plans, given that the development application is still under consideration. Should the development be approved, SAFCA would engage with existing users and provide further details regarding any arrangements for building relocations with a construction certificate application. As indicated above, a suitable area can be made available for private hangars.

Should existing users wish to continue using the airfield, it is expected that no conflicts would occur, given the overriding provisions of the *Civil Aviation Regulations 1988*. Should existing users not wish to continue using the airfield, the existing buildings would be removed from the site as part of the construction phase for Stage 1.

In addition, it is understood that Council would require any future application for the subject site to be supported by details of how a proposal would operate compatibly with the flight school, should it be in operation. We expect that for the majority of activities, this would be no issue for the reasons outlined previously in this Addendum report.

It is not desirable for the Model Club to be located within an operational aerodrome; the Model Club states that a specific exemption from CASA was sought for their organisation to utilise the Frogs Hollow aerodrome. A suitable site has been reserved for the Model Club within the wider property proposed to be acquired by SAFCA.

## 4 NOISE IMPACT ASSESSMENT

### 4.1 ASSESSMENT METHODOLOGY

In consideration of guidance provided by AirServices Australia, the Department of Infrastructure and Regional Development & Cities and EPA NSW and requests received from Council, an updated Noise Impact Assessment was prepared by Renzo Tonin & Associates. The approach taken is also reflective of the methodology that has been accepted in Land & Environmental Court matters for aviation-related developments.

In the 1980's a major socio-acoustic investigation was undertaken by the National Acoustics Laboratories (NAL) to assess the impact of aircraft noise on communities. This led to the development of the Australian Noise Exposure Forecast (ANEF), a dose-response curve that is used as a land use planning tool to determine acceptable levels of aircraft noise exposure for different types of land uses.

The ANEF is used in tandem with the Australian Standard AS 2021:2015 'Acoustics – Aircraft noise intrusion – Building siting and construction'. According to the Australian Standard, residential uses are acceptable within the ANEF 20 contour and conditionally acceptable within the ANEF 25 contour. Residential uses would be exposed to an unacceptable level of aircraft noise if located within a contour greater than ANEF 25.

An Air-Services Australia-endorsed Australian Noise Exposure Forecast (ANEF) chart is not in place for the Frogs Hollow aerodrome, as these are only required for Commonwealth-owned airports or airports that support Regular Passenger Transport (RPT) flights. However, consistency with the Australian Standard can still be determined in the absence of an endorsed ANEF chart, as the ANEF value is generally taken to be equivalent to the LAeq value minus 35<sup>12</sup> (ie. ANEF 20 is generally taken to be equivalent to LAeq 55dB(A)).

For situations where aircraft noise would be introduced, a more conservative level of ANEF 13 is recommended by acoustic experts.

In addition, supplementary noise metrics are used in tandem with the ANEF 13 noise parameter to provide a dual assessment of average noise levels and upper limit noise events. In this regard, L<sub>max</sub> is typically used in the assessment of aircraft noise. Table E1 of AS 2021 recommends an upper limit of L<sub>max</sub> 70dB(A) for small aerodromes with more than 30 flights per day.

The accompanying Noise Impact Assessment assesses aircraft noise against both the ANEF 13 criteria (which is generally taken to be LAeq24hr 48dB(A)) and the L<sub>ASmax</sub> 70dB(A) criteria.

In accordance with guidance provided to Council by NSW EPA, mechanical plant and equipment has been assessed against the 'Noise Policy for Industry'. The relevant criteria under the NPI is referred to as the project noise trigger level, being the more stringent of either the project intrusive noise level or the project amenity noise level.

It is also noted that an analysis for noise enhancement wind conditions was conducted by the acoustic expert in accordance with the NPI methodology to determine if wind is considered to be a feature of the study area. The analysis using the EPA's Noise Enhancement Wind Analysis program determined that wind

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<sup>12</sup> Australian Government Department of Infrastructure, Regional Development and Cities, 2014, 'Appendix A – The Australian Noise Exposure Forecast (ANEF) System', [https://infrastructure.gov.au/aviation/environmental/transparent\\_noise/expanding/app\\_a.aspx](https://infrastructure.gov.au/aviation/environmental/transparent_noise/expanding/app_a.aspx)

is not a feature of the area and it was therefore not taken into consideration in the assessment, as prescribed by the NPI.

## 4.2 ASSESSMENT METHODOLOGY

As indicated in the accompanying Noise Impact Assessment report and this Addendum report, noise from flight training activities would be generated during standard training flights and circuit training.

Test aircraft flights simulated the proposed training conditions. A pilot and one passenger were seated in the aircraft and the aircraft had a full fuel load. Standard aircraft handling was observed, with full power on take-off and ascent to a height of at least 1,000 ft, with cruising (half-power) for the remainder of the circuit. The test aircraft was fitted with a Rotax Type 912/80hp (UL/A/F) engine, which is intended to be fitted to all aircraft that would be used with the flight school.

When departing or approaching the airfield, standard training flights within the wider training area use the designated "circuit profile" as a template. Standard training flights enter and leave the profile at a minimum height of 1,000 ft. Outside of the departure and approach manoeuvres, the standard training flights are conducted between 4,000 ft and 10,000 ft above ground level. Given that standard training flights also follow the circuit profile at approach and departure, the most-affected receiver locations would be those located directly under the circuit path. Therefore, the surrounding receivers are considered to be most-affected by noise from aircraft that are within the circuit profile.

Attended noise measurements were undertaken on Monday 18th September 2017, to quantify the aircraft noise at each measurement location (M1, M2 and M3), in accordance with the NPI. Three (3) test flights were completed for each designated flight circuit and the noise generated by the aircraft flybys during each flight circuit were measured at all monitoring locations (M1, M2 and M3). A further monitoring location M4 was used to record noise levels within the bounds of the aerodrome and was positioned at the northern end of the primary runway.

## 4.3 NOISE ASSESSMENT FINDINGS

The consideration of noise levels from mechanical plant and equipment has been undertaken to determine maximum combined source sound power level, given the distance from the plant/equipment to surrounding receptors. The assessment determined that the maximum combined source sound power level should not exceed 97dB(A) to comply with the project trigger noise levels. It is expected that this could be complied with based on the type of mechanical plant and equipment expected. Detailed specifications, supported by an acoustic certification, would be supplied to Council as part of a future construction certificate application.

In terms of the aircraft noise impacts, Table 8 of the Noise Impact Assessment provides evidence that the LASmax and LAeq,24hr noise criteria would be complied with for the identified existing and future residence locations. The criteria would also be met at location M4 within the aerodrome site if the aircraft were flying approximately 500 ft above. Two hundred (200) flights (accounting for both a departure and return to Frogs Hollow) per day has been selected as a nominal upper limit for the assessment against the criteria. A review of the proposed flight operations concludes that this would be complied with.

The findings are summarised as follows:

- As an upper limit assessment of individual flight movements, the measured LASmax noise levels for all the test flights was found to be less than the 70 dB(A) criteria
- The ANEF 13 criteria (LAeq24hr 48dB(A)) would be complied with provided that the number of flights (accounting for both a departure and return movement to Frogs Hollow) in any 24-hour period was limited to not more than 200.
- The criteria would be complied with provided that all aircraft maintain a height of 500 ft if flying over a dwelling.

#### **4.4 OTHER RELEVANT LEGISLATION**

It is noted that all aircraft operating in Australia are required to meet specified noise standards imposed through the *Air Navigation (Aircraft Noise) Regulations 1984*, which align with global standards imposed by the International Civil Aviation Organisation (ICAO). The regulations are administered by the Department of Infrastructure, Regional Development and Cities.

According to guidance provided to Council by AirServices Australia, ground-based operational noise would be required to comply with the provisions of the *Airports (Environment Protection) Regulations 1997*. The Regulation is administered by AirServices Australia, who have raised no objection to the proposed development in a referral response to Council dated 20 December 2017.

## 5 SOCIO-ECONOMIC IMPACT ASSESSMENT

In response to Council's request dated 12 January 2018, a Socio-Economic Impact Assessment is submitted for Council's consideration. Please refer to the Socio-Economic Impact Assessment report prepared by Judith Stubbs & Associates included as an attachment to this Addendum report.

This assessment has been undertaken based on the scope provided by Council and in accordance with the requirements of the Bega Valley Development Control Plan 2013.

### 5.1 POSITIVE SOCIO-ECONOMIC IMPACTS

The Socio-Economic Impact Assessment identified that the proposed development would provide full time employment for an estimated 200 people, with approximately 170 of these positions able to be filled by local people. These include both skilled and non-skilled positions and so would provide for employment opportunities across a wider cross section of the community.

The proposed development was estimated to provide for 106 indirect jobs and the expenditure by households employed by the flight school calculated to provide for another 10 jobs in the locality. Accordingly, the proposed flight school would be a major employer in the region.

The tourism sector in the region was estimated to provide for approximately 950 jobs, so a direct increase of 200 jobs in this sector is significant. The proposal was viewed as being able to contribute to the recovery of the local tourism sector, as employment in this sector fell from 2006-2016. The annual value of the local tourism industry was estimated to be \$29.9 million, with the proposed development calculated to provide a net increase to this, by almost 25 percent. (\$7 million).

The Socio-Economic Impact Assessment found that the proposal would align with adopted State and local strategic directions relating to employment (in particular, skilled employment), access the international market and diversify the local tourism service base. The development would positively contribute to regional development through the creation of a new service export for the region. Further, the proposal would showcase

The proposed development was expected to generate over \$50 million turnover annually, with the local community to significantly benefit from this. Importantly, the revenue would be drawn from overseas, rather than absorbed or drawn from other local businesses.

Additional usage of other regional airfields including Mallacoota, Cooma Snowy Mountains, and Bombala would generate additional income through the levying of fees, and so reduce the cost to the community of maintenance of those airfields.

The Socio-Economic Impact Assessment recommended the implementation of a local purchasing policy, which would see ongoing expenditure benefits for the community through the purchase of food supplies, fuel, parts, waste management and the like. Further, other local tourism operators would benefit as it is intended that the students would be taken on guided tours of regional landmarks and regular social outings to local cafes/restaurants, entertainment venues and the like.

## 5.2 ADVERSE SOCIO-ECONOMIC IMPACTS

The Socio-Economic Impact Assessment identified that there would likely be amenity impacts associated with the proposed development as a result of the increase in the density of flight movements compared with the existing usage of the airfield.

These amenity impacts would be likely to consist of noise impacts, visual impacts and perhaps loss of privacy if overflying by aircraft results in people changing their behaviour. However, it was acknowledged that the level of amenity with respect to noise, visual impacts and loss of privacy will be in accordance with normative standards.

The assessment considered that amenity impacts at other airfields in the region that would be used by the proposed flight school would be similar to impacts in the immediate locality. It was identified that most of the other airfields in the region were somewhat isolated from residential uses.

The Socio-Economic Impact Assessment found there to be no evidence of impact on agriculture from operation of the proposed flight school in the immediate locality.

According to statistics, the operation of the flying school could be expected to increase the number of crashes in the Shire by 3 percent, and the number of crash-related fatalities by around 3 percent. The number of fires is expected to increase by 0.2 percent, however fire risk would be further partially offset by the proposed shut down over December and January.

The assessment identified that there was potential for displacement of the Frogs Hollow Flyers and the Bega District Model Club; however, there may be opportunities for suitable sites to be agreed. Further, there would be time for the users to relocate, as the staging means that relocation would not be required until later stages in the development.

## 5.3 NET SOCIO-ECONOMIC IMPACT

According to the Socio-Economic Impact Assessment report, most of the probable costs and benefits of the proposal are quantifiable, using widely accepted methodologies including NSW Government Guide to Cost-Benefit Analysis and Principles and Guidelines for Economic Appraisal of Transport Investment and Initiatives.

The major benefit associated with the proposal is the value of local employment and expenditure. It would be a new export service industry, diversifying the local tourism base. It has the potential to be a major employer in the Shire, would increase tourism sector jobs by approximately 20 percent and provide for skilled and non-skilled job opportunities. Importantly, the revenue would be generated from overseas rather than drawn or absorbed from other local businesses.

The major quantifiable costs relate to the amenity impacts of the proposal and the social costs of crashes. The report recommended mitigation measures that could be considered for reducing amenity impacts on the immediate surrounds.

The possible impact on other tourist industries was unquantifiable. However, for an overall adverse economic impact, the proposed flying school would need to reduce employment in other tourist industries by 23 percent, that is, it would need to result in a reduction of visitors to the region by 23 percent. This was considered to be unlikely.

The cost benefit analysis demonstrated that the benefits of the proposal in terms of employment would be more than sufficient to offset amenity impacts on residents and the cost of crashes.

## 6 ENVIRONMENT

### 6.1 BIODIVERSITY IMPACTS

#### **Further consideration of impacts to Lowlands Grassy Woodland**

Further to the advice provided by OEH to Bega Valley Shire Council dated 4 November 2017 (Ref DOC17/552916-12), NGH carried out additional field survey and assessment to more fully address the potential biodiversity impacts of the proposal. Approximately 10-person hours of site survey have been conducted across two separate visits in September and December 2017. These site surveys were undertaken by two senior ecologists (both accredited under the new BAM environmental assessment system) and a technician.

Vegetation originally surveyed on-site in September was classified into woodland, derived grassland and exotic-dominated derived grassland components, as indicated in Figure 4-1 of the Biodiversity Impact Assessment report (NGH Environmental, 2017). The treed component was considered by NGH to also be consistent with the 'Lowlands Grassy Woodland in the South East Bioregion', an Endangered Ecological Community (EEC) under the TSC Act.

OEH has provided advice that the derived grassland component on-site should also be considered to form part of the Lowlands Grassy Woodland EEC, which the Biodiversity Assessment Addendum report adopted in an updated 7 Part Assessment of Significance (NGH Environmental, 2018). The updated assessment found:

- Local occurrence of the EEC is not likely to be significantly affected: Of the 300-400 hectares of LGWL verified as occurring adjacent to the site, a maximum of 5.67 hectares would be impacted; about 1-2 percent of the local extent,
- Composition is not likely to be significantly affected: the areas are highly degraded, with most areas being already weed infested and cleared of overstory vegetation,
- Fragmentation of the community would not be significantly affected,
- The habitat onsite is not considered significant or containing unique values such that its removal would result a decline in the long-term survival of this EEC,
- Existing threats to the community ('*Invasion of native vegetation by exotic perennial grasses*' and '*Aggressive exclusion of birds from woodland and forest habitat by abundant Noisy Miners*') are present already onsite but may be exacerbated by the proposal,

Although the loss of 5.67 hectares of degraded LGWL is not considered a significant loss under the 7 Part Assessment, it is recommended to conserve and manage the remaining LGWL on the property consistent with OEH advice:

- Protection of all native vegetation not impacted by infrastructure in perpetuity through a section 88B instrument under the Conveyancing Act 1919, with an associated vegetation management plan to address African Lovegrass and Noisy Miner, which are key threatening processes of relevance to the EEC.

The OEH database profile for the Lowlands Grassy Woodland EEC details several threats that are impacting on this community such as; passive land management, invasion by non-native plant species, dieback associated with Noisy Miner colonies, grazing by livestock and feral animals, harvesting of firewood, lack of knowledge amongst landowners about the LGW EEC, overgrazing and trampling by pest animals. Each of these threats could be better managed or eliminated under the proposed development regime and



controlled by conditions of consent and the implementation of a VMP. Actions included in the VMP would align with the Recovery Strategy in place for this vegetation community.

Whilst the existing passive land management techniques would avoid the initial vegetation clearing that would be associated with the proposed development, there are no actions being implemented that address the multitude of other identified threats included the OEH database profile.

#### **Further consideration of impacts to threatened birds**

On advice from OEH, the updated assessment more thoroughly considers the potential impact of the proposal on raptors known to frequent the area including Grey falcon, White bellied sea eagle, Spotted harrier, Little eagle and Square-tailed kite. The updated assessment concluded that impacts were unlikely to be significant on these species but recommends a risk mitigation strategy as a precautionary measure as follows:

- During infrastructure design, features such as lattice structures and other perch or shelter opportunities for raptors should be avoided or minimised.
- Vegetation management of grassland onsite should reduce habitat provision for raptors and raptor prey.
- Monitoring of habitat and refuge availability for raptors should be undertaken regularly.
- Monitoring raptor collisions. Any raptor carcasses should be identified to species level. Any threatened species collisions should be reported to OEH and should trigger consideration of further actions to minimise collisions onsite.

The measures recommended in the Addendum (NGH Environmental, 2018) are considered in addition to the recommendations contained in the Biodiversity Impact Assessment Report (NGH Environmental, 2017). The recommendation made in the earlier report are supported by OEH and are anticipated to be applied by Council as consent conditions of any forthcoming development consent.

#### **Management of African Lovegrass**

Council has queried what strategies will be put in place to manage African Lovegrass on the subject land. On advice from OEH, a Vegetation Management Plan (VMP) would be prepared for the proposed development which would include such matters as the control and suppression of African Lovegrass.

The Plan would be attached to the 88B instrument applying to the land and the requirements would be implemented in perpetuity.

#### **Management of Broad-leaved Peppermint Trees**

Council has also queried the potential retention of the identified Broad-leaved peppermint trees on the subject land. The engineer advises that amendments can be made to the perimeter boundary road to retain Broad-leaved peppermint trees; however, two of the trees are unable to be retained. Of the 10 peppermint trees recorded on-site, 8 of these would be retained.

Compensatory plantings at a ratio of 10:1 could be provided and maintained in perpetuity, with details provided to Council's satisfaction prior to the release of the construction certificate.

#### **Consideration of lighting impacts to native flora and fauna**

No threatened flora species were found as part of the site survey conducted by qualified ecologists. No species were considered likely to occur, based on relevant database searches for the region. Broad-leaved Peppermint trees and the Lowlands Grassy Woodland EEC community were identified within the subject site. There is no scientific evidence available that suggests that external night lighting would pose a concern for native vegetation present on the site.

No threatened fauna species were found as part of the site survey. Relevant database searches were conducted; however, most species were deemed unlikely to occur. There were three hollow-bearing trees that were identified on-site, with these having low nesting potential due to their isolation and the relatively small forested area on the site and the immediate surrounds. Given the absence of meaningful nesting habitat on the site, the low level of external night lighting would be unlikely to pose a concern for any threatened fauna in the area.

Nocturnal birds may migrate or hunt for food at night and external night lighting has the potential to pose a navigation issue for these processes. However, this would only be a notable issue in respect of urban 'skyglow' and significant flood lighting and light spillage. This would not be the case for the proposed development. As outlined above, it is expected that low-level lighting would only be provided around the squadron compounds and the main building, for safety and security reasons. Illumination of the runways, hangars, workshops and other areas would not be required as these would not be used at night.

Some recommended measures in relevant literature include ensuring safety/security lighting is at the minimum intensity necessary, the avoidance of external lighting at the blue and red ends of the spectrum, lighting should be directed downwards along paths or towards buildings and should not result in the illumination of trees

#### **Consideration of wastewater impacts to Lowlands Grassy Woodland**

Council has raised a question of whether wastewater disposal would have an impact on the vegetation community present. It is considered that there would be no adverse impacts on the vegetation community.

All wastewater will be treated to an advanced secondary standard with disinfection, as described in the accompanying On-site Wastewater Management Plan and Addendum report. The reports demonstrate that the wastewater management arrangements meet relevant standards and best practice guidelines including AS 1547 'On-site domestic wastewater management' and the Sydney Catchment Authority guideline 'Designing and installing on-site wastewater systems'.

The phosphorus content of wastewater would typically be a matter to note for wastewater disposal to sensitive vegetation. The On-site Wastewater Management Plan and Addendum report illustrate that the size and nature of the site, combined with the intended disposal areas/procedures allow for sufficient phosphorus absorption capacity.

Further, the Lowlands Grassy Woodland EEC that is present on the subject site can tolerate soils with a reasonable level of fertility and nutrients. It is not considered to be a community that is sensitive to phosphorus.

Lastly, the On-site Wastewater Management Addendum report demonstrates that several wastewater disposal methods and disposal areas are suitable for use within the bounds of the site. This will reduce reliance on any one area or method and spread wastewater.

## 7 SITE FACILITIES

### 7.1 SUSTAINABLE DESIGN

Submissions made to the notification of the development application suggest that the proposed development includes the unsustainable use of resources.

A Sustainable Design Management Plan has been developed in accordance with the requirements of the Bega Valley Development Control Plan (BVDCP) 2013 and highlights the sustainable design features of the proposed development.

### 7.2 RUNWAY

#### Runway physical characteristics

The existing facilities at Frogs Hollow include a primary runway (north-south) of 1,000 metres and a secondary runway (east-west) of 850 metres, supported by two wind direction indicators (wind socks) and runway edge markers.

The requisite standards for an airfield to be used as a flight training school base are included in Section 3.01 of the Recreational Aviation Australia Operations Manual and states the following;

*The CFI (Chief Flying Instructor) must ensure that the aerodrome complies with the following minimum criteria:*

- a. The take-off and landing distance available in the prevailing conditions, is equivalent to the Flight Manual or the manufacturers calculated or stated distance requirement, plus 30%;*
- b. The surrounding topography must be such that a standard circuit for the aeroplane type can be flown;*
- c. There must be sufficient clear ground in the vicinity of the aerodrome that a successful forced landing, in the case of an engine failure, may be expected;*
- d. If the aerodrome is classified as uncertified the physical dimensions of the aerodrome should comply with "LANDING AREA - AEROPLANES" CASA CAAP 92 – 1 (1);*
- e. The aerodrome is serviceable;*
- f. There is a method of determining the wind direction and velocity at the aerodrome; and*
- g. If required, the owner or operators written consent has been given for the use of the aerodrome.*

Frogs Hollow complies with these requirements.

Of the intended aircraft to be used at Frogs Hollow, the Trike requires the greatest take-off distance (TODR of 247 metres over a 50ft obstacle, according to the manufacturers specifications). For the intended aircraft types to operate from Frogs Hollow, RA-Aus would require that a runway of 321 metres be available (being 247 metres plus 30 percent as outlined in subclause 3.01 (a) above from the Operations Manual). As indicated above, the secondary runway is greater than twice this distance and the primary runway is greater than three times this distance.

CAAPs are Civil Aviation Advisory Publications; they are advisory only and there is no legal requirement to observe the publication details. CAAP 92-1 has been considered in the design of the development.

RA-Aus only requires that the runways comply with the *physical dimensions* specified in CAAP 92-1 but makes no requirement in respect of other sections of the CAAP. In this regard, it is noted that the runways at Frogs Hollow would be maintained in accordance with the relevant physical dimensions illustrated in Figure 2A of CAAP 92-1.

It is noted that the runways at Frogs Hollow significantly exceed the required runway length as contained within CAAP 92-1. Further, the runways at Frogs Hollow can withstand the testing procedures contained within Section 9 of CAAP 92-1. The MTOW of the Bantam aircraft intended to be used at Frogs Hollow would be 450kg. The Brumby would be used infrequently and has a MTOW of 600kg.

### **Runway performance**

It is noted that there is no requirement for the runways to be constructed with gravel or to be bitumen/concrete paved. The runways must comply with the RA-Aus Operations Manual specifications in order to be used for a registered flight school. As indicated in the preceding section, the primary and secondary runways at Frogs Hollow meet these requirements.

Council has raised a matter of wastewater disposal impacting on the performance of the runway. In this regard, it is considered that the runways would comply with the test standards contained in Section 9 of the CASA Publication CAAP 92-1. In addition, it is considered that the safety of landing aircraft would not be compromised by irrigation of the runways as the On-site Wastewater Management Plan and Addendum report provide evidence that the runway can adequately cater for the wastewater disposal levels that are proposed.

The reports demonstrate that the runways would not be overloaded by irrigation according to the parameters set in AS 1547 'On-site domestic wastewater management' and the Sydney Catchment Authority guideline 'Designing and installing on-site wastewater systems'. In addition, the assessment determined there are several different disposal options and areas that would be satisfactory according to the above standards and so reliance on the runway for irrigation would be reduced.

The assessment is also a conservative estimate of the site's capabilities as the site geology is consistent with Category 3 loam or sandy loam soils in accordance with AS 1547; but Category 4b soil irrigation rates were instead adopted.

Furthermore, the aircraft require less than 250 metres take off distance (it is noted that the Trike requires the greatest take-off distance of 247 metres over a 50ft obstacle, according to the manufacturers specifications). The primary runway is 1,000 metres in length and the secondary runway is 850 metres. The impact of the aircraft weight is naturally dispersed given they would not land at the same point, due to individual pilot handling and prevailing wind conditions. It is also planned that aircraft would take-off from different points along the runway as it would not be practical or necessary to taxi and take-off from the threshold or other established point, given the considerable runway length available.

## 8 REFERRAL RESPONSE RECEIVED BY BEGA VALLEY COUNCIL

Over the course of several months, Council referred the development application DA2017.445 to relevant agencies for comment and technical guidance. A schedule of the additional information requests received by NGH from Council and through Council from other agencies is included in Table 1-1 of this Addendum report.

A response to the matters raised by the respective agencies is included in this section for Council's consideration.

### 8.1 OFFICE OF ENVIRONMENT & HERITAGE (OEH) REFERRAL RESPONSE

The referral response from OEH raises no objection to the proposed development.

The referral response confirms that OEH supports the recommendations made in Section 6 of the Biodiversity Impact Assessment report dated October 2017.

The response to Council recommends that a Vegetation Management Plan (VMP) be attached to the 88B instrument applying to the land, that includes the protection of the EEC in perpetuity and strategies to control African Lovegrass and the Noisy Miner. The proponent has no concerns with the imposition of a condition of consent requiring a VMP to be prepared and submitted to Council prior to release of an operational/occupation certificate for Stage 1 of proposed development.

A Biodiversity Assessment Addendum report was prepared by NGH Environmental, in consideration of matters raised in OEH's referral response. The Addendum report is attached to this report and addresses the potential risk of collision with threatened bird species. This is also considered in Section 6.1 and 9.4 of this Addendum report.

The response from OEH also recommended that the proponent satisfy itself of Aboriginal cultural heritage requirements under the *National Parks & Wildlife Act 1974*. A Due Diligence assessment has been prepared by NGH Environmental, with direct involvement from the Bega Local Aboriginal Land Council (LALC), in accordance with the DECCW 'Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales'. The assessment report is included as an attachment to this report.

The assessment found no Aboriginal objects during a site survey conducted with the assistance of members of the Bega LALC. However, it was considered that predictive landscape features were found within the subject land that indicated potential for objects to be present. The report recommendations include further investigation to be conducted prior to the conduct of any construction works on-site.

It would not be necessary to conduct any further investigation at this stage as further stages of investigation are reliant on development consent having been obtained. Further, if the development does not proceed to construction stage, there is no potential for the impact to Aboriginal objects if present.

## 8.2 CIVIL AVIATION SAFETY AUTHORITY (CASA) REFERRAL RESPONSE

The referral response from CASA raises no objection to the proposed development.

The submission recommends the consideration of CAAP 92-1. CAAPs are Civil Aviation Advisory Publications that are advisory only. There is no legal requirement to observe the publication details.

CAAP 92-1 has been considered in the design of the development. The runways at Frogs Hollow would be maintained in accordance with Figure 2A contained within CAAP 92-1. It is noted that the runways at Frogs Hollow significantly exceed the required runway length as contained within CAAP 92-1.

The runways at Frogs Hollow can withstand the testing procedures contained within Section 9 of CAAP 92-1. It is noted that the Bantam would be used for the majority of training flights and has a MTOW of 450kg. The Brumby has a MTOW of 600kg but would be used infrequently.

Further detail regarding the runway specifications is included in Section 7.2 of this Addendum report.

## 8.3 ENVIRONMENT PROTECTION AUTHORITY (EPA) REFERRAL RESPONSE

The referral response from EPA raises no objection to the proposed development.

Council sought advice from the EPA in relation to public health concerns arising from increased aircraft emissions in the locality. EPA did not raise this as a matter of concern in its response to Council.

Given that air quality matters fall within the jurisdiction of EPA and that a major component of EPA's activities is in supporting local councils in managing air quality, it is assumed that the level of emissions from aircraft movements associated with the proposed flight school is not a notable concern for EPA. Further detail in relation to emissions is included in Section 9.2 and 9.3 of this Addendum report.

The referral response from EPA confirms that the proposed development does not trigger any thresholds for scheduled activities as contained within the *Protection of the Environment Operations Act 1997*.

The submission advises that the Noise Policy for Industry (NPI) is not an appropriate methodology for the consideration of potential noise impacts including aircraft taxiing around the airfield prior to take-off and post landing, aircraft take-off and landing and aircraft in flight. The submission advises that potential noise impacts from aircraft on the ground (not engaged in the above activities) can be controlled by Council through the provisions of the *Protection of the Environment Operations Act 1997*.

The submission advises that AirServices Australia is the relevant regulatory authority for potential noise impacts from aircraft taxiing around the airfield prior to take-off and post landing, aircraft take-off and landing and aircraft in flight.

The referral response from EPA also references the use of Australian Standard AS 2021 'Acoustics – Aircraft noise intrusion – Building siting and construction' for guidance on appropriate noise levels for aircraft noise at airports without an endorsed ANEF (Australian Noise Exposure Forecast) chart.

The guidance provided by EPA has been utilised in the preparation of an updated Noise Impact Assessment report by Renzo Tonin & Associates.

## **8.4 DEPARTMENT OF INFRASTRUCTURE, REGIONAL DEVELOPMENT & CITIES REFERRAL RESPONSE**

The referral response from the Department of Infrastructure raises no objection to the proposed development.

The submission refers to the National Airports Safeguarding Framework (NASF) that was agreed to by Federal and State governments in 2012 as a land use planning and management tool to provide for aviation development, whilst also protecting the safety and amenity of surrounding receivers. It is noted in the submission that the Australian Noise Exposure Forecast (ANEF) used in tandem with Australian Standard AS 2021 'Acoustics – Aircraft noise intrusion – Building siting and construction' is a useful planning tool, but it should be observed that the ANEF only considers average noise levels.

The referral response also confirmed that all aircraft operating in Australia are required to meet the noise standards imposed by the *Air Navigation (Aircraft Noise) Regulations 1984*. The Regulations align with global standards imposed by the International Civil Aviation Organisation (ICAO).

The guidance provided by the Department of Infrastructure has been utilised in the preparation of an updated Noise Impact Assessment report by Renzo Tonin & Associates.

## **8.5 NSW HEALTH REFERRAL RESPONSE**

The response from NSW Health raises no objection to the proposed development.

It is understood that Council sought advice from NSW Health about the potential for emissions from additional aircraft in the vicinity of Frogs Hollow contaminating harvested rainwater supplies for domestic use. NSW Health has not flagged this as a significant concern in its correspondence with Council and provided general comment on the protection of rainwater supplies of drinking water from potential contamination by particulate matter.

In any situation where rainwater is relied upon as a drinking water supply, NSW Health recommends homeowners employ risk management strategies to protect harvested rainwater from bacterial and chemical contamination. NSW Health recommends the use of a 'first flush device', which prevents the first portion of roof-harvested rainwater from entering a water tank to reduce the amount of dust, bird droppings and leaves etc., that accumulate on roofs, from being washed into the tank.

The potential for particulate matter impacts as a result of the proposed development are considered further in Section 9.2 and 9.3 of this Addendum report.

## **8.6 ROADS & MARITIME SERVICES (RMS) REFERRAL RESPONSE**

The referral response from the Roads & Maritime Services (RMS) raised concerns about the potential impacts of traffic associated with the proposed development at the intersection of the access road and the Princes Highway. RMS requested further information to enable full consideration of the potential impacts.

### **Traffic analysis**

RMS raised concerns with the suitability of a basic right turn (BAR) and basic left turn (BAL) treatment to cater for existing activity and Stage 1 traffic from the proposed development and the timing and suitability of an upgrade to a rural channelised T junction (CHR) and rural auxiliary left turn (AUL) treatment.



In response, Tasman Engineering conducted a further analysis and gathered additional information from the go-kart club committee operating from the adjacent site and sharing use of the access road. This additional information is provided in the accompanying Traffic Impact Assessment Addendum report prepared by Tasman Engineering Consultants.

Information on the approved traffic volumes and conditions for the go-kart track was sought from Council through a GIPA application on 26 February 2018. Development consents and modified development consents that relate to the go-kart track were provided to NGH on 14 March 2018. Further details regarding the traffic volumes/conditions considered by Council in its assessment of the development application and modified consent applications was sought from Council on 9 April 2018. To date, these details have not been provided by Council.

In lieu of the above information being received, consultation with the Secretary of the Sapphire Coast Kart Club was undertaken. Information sought included the confirmation of traffic volumes, traffic timing and vehicle types associated with the use of the go-kart track.

According to the SCKC Secretary, Stage 2 of the approved consent - the go-kart hire proposal - has not been achieved to date. It is unlikely to eventuate due to the facility and equipment upgrades that would be required, which the committee are not in a financial position to undertake. The SCKC is a volunteer-run organisation and such upgrades would likely need to be undertaken using in-kind donations from their members. Further, there has not been sufficient demand or interest to justify moving forward with this proposal.

The accompanying Traffic Impact Assessment Addendum report demonstrates the likely anticipated traffic that would utilise the access road to the Princes Highway, should the proposed flight school be approved. The staffing numbers and expected shifts for each stage of the proposal have been developed by Sports Aviation Flight College Australia based on the flight instructor's experience of the numbers necessary to support the number of students in each stage. The numbers are consistent with the staff: student ratios at other similarly-structured flight schools, such as Port Macquarie and as proposed at Kempsey. The number of students will increase at a relatively consistent level with each additional stage.

It is noted that the traffic associated with Stage 1 of the proposed development may only warrant a BAL/BAR intersection treatment (existing). However, in the interests of assuring the safe operation of the access road and Princes Highway, it is proposed that an intersection upgrade to a CHR/AUL treatment would be provided prior to the commencement of operations of the proposed flight school.

#### **Intersection concept design plans**

RMS raised concerns about aspects of the concept design for the intersection upgrade such as culvert headwalls, tree removal, shoulder width, pavement edges and turning lane storage.

In response to these concerns, further detailed design has been undertaken to address these aspects. The updated concept design plans are included as an appendix to the Traffic Impact Assessment report.

#### **Safe Intersection Sight Distance (SISD)**

RMS raised concerns regarding the requirement for Safe Intersection Sight Distance (SISD) of 285 metres in both directions.

Further analysis was undertaken and the required SISD would be achieved in both directions, as detailed in the accompanying Traffic Impact Assessment Addendum report.

### **Potential for driver distraction**

RMS raised concerns for potential driver distraction by aircraft using the secondary runway (Runway 09/27) crossing the highway.

It is also noted that many major and regional airports are located adjacent to or in the vicinity of highways, where the potential for driver distraction might also exist. Such airports are used by larger aircraft that that proposed at Frogs Hollow and the highways experience greater traffic volumes than the 4,600 daily movements on the Princes Highway near Frogs Hollow.

The secondary runway is only proposed to be used when dictated by the prevailing wind conditions. A minimum height of 500 ft is reached in the departure manoeuvre prior to the commencement of the turn “crosswind” and is reached in the approach manoeuvre at the end of the turn to “base” leg.

As a mitigation measure, it is considered that standard warning signage for “potential low-flying aircraft” could be erected at an agreed location on the Princes Highway approaching the location of the subject site. This is common practice for highways that are located near operational airports. Details of this signage would be provided to RMS satisfaction as part of the final intersection design.

## **8.7 NBN CO REFERRAL RESPONSE**

NBN Co has raised safety and operational concerns with respect to the satellite earth station located at Wanatta Lane, Wolumla. The concerns raised appear to be unsubstantiated and, in some cases, contradict information provided by NBN to Council in support of its development application for the earth station at Wolumla. The following response is provided to the matters raised in NBN Co’s submission dated 19 January 2018.

A satellite earth station is a communications facility designed for direct communication with satellites in space. The earth station at Wolumla forms part of a network with nine other stations including Broken Hill Bourke, Roma, Geraldton, Kalgoorlie, Carnarvon, Waroona, Ceduna and Geeveston. Each earth station includes two x 13.5 metres dishes with Kalgoorlie and Wolumla using two extra dishes each for back-up, telemetry and tracking.

The stations communicate with two ‘Sky Muster’ satellites located 36,000km away, which follow the Earth’s orbit, as opposed to remaining stationary. The satellites provide satellite network coverage across mainland Australia and other off-shore locations using 101 different “spot beams” back to Earth, as figuratively indicated in NBN’s diagram on the following page. These provide internet connectivity for a comparatively small number of users, in rural and remote locations.

The spot beams are used to carry information from the end user’s equipment to the satellites in space and back to the earth stations. The satellites use the frequency bands known as K-band (Kurz) and Ka-band (Kurz-above) with uplink signals (from Earth to the satellite) being transmitted at 27GHz to 31GHz, and the downlink signals (from the satellite to the Earth) at frequencies between 17.7GHz to 22GHz.

### **Location of the NBN SES and potential for land use conflict**

As noted in NBN Co’s submission and in the material supplied with their development application for the NBN SES (DA 2012.360), a wide range of factors were considered in the site evaluation and selection for each of the 10 earth stations. The NBN material emphasises that these site evaluations were detailed,

given the significance of the infrastructure. ***In the site evaluation and selection process, consideration was explicitly given to flight paths and maintaining radio-frequency clearance<sup>13</sup>, as stated by NBN.***

As noted above, earth stations have been established at Wolumla, Roma, Kalgoorlie, Bourke, Geraldton, Geelong, Carnarvon, Ceduna, Broken Hill and Waroona. Of these earth stations, Carnarvon, Ceduna, Geraldton and Bourke are located **within 3.5km of an operational airport**. The earth station at Bourke is located on land adjoining the airport. A further three earth stations, at Roma, Kalgoorlie and Broken Hill, are located within 10km of an operational airport. There are no airports in Waroona or Geelong.

Given the detailed site evaluation and selection process undertaken by NBN Co, it is difficult to accept a concern for land use conflict between aviation activity and the earth stations, as five of the ten stations are sited in close proximity an operational airport (Wolumla, Carnarvon, Ceduna, Geraldton and Bourke).



Figure 8-1 Diagrammatic Sky Muster spot beam coverage (Source: NBN Co)

### **Radio interference with the SES**

As NBN would be aware, radio interference from aircraft in the area on the earth station, and vice versa, is simply not possible. To state that there is any potential for conflict is unfounded.

Electromagnetic waves in this frequency range (3 Hz to 3,000 GHz, the radio spectrum) are extremely widely used in modern technology, particularly in telecommunication. To prevent interference between multiple different uses, the transmission of radio waves is highly regulated and controlled by Commonwealth laws and coordinated by the International Telecommunications Union.

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<sup>13</sup> Bega Valley Shire Council, Planning Assessment Report for Proposed Satellite Earth Station for the National Broadband Network, 2013, p.22

The Australian Radiofrequency Spectrum Plan is a legislative instrument, as designated by the provisions of the *Radiocommunications Act 1992*. The Spectrum Plan divides the Australian radiofrequency spectrum into hundreds of frequency bands and specifies the general purpose and use for each band. The Spectrum Plan is diagrammatically indicated in the figure on the following below.

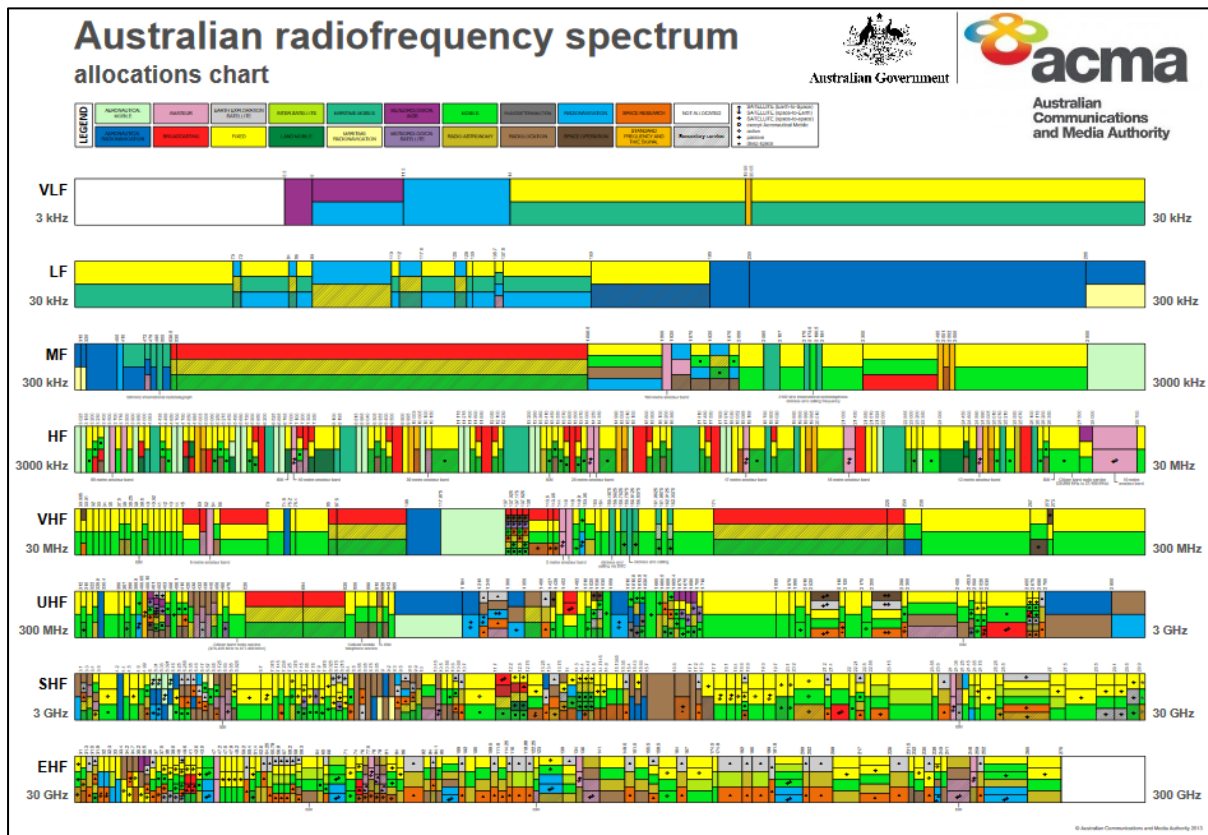


Figure 8-2 Australian radiofrequency spectrum allocations chart (Source: Australian Communications & Media Authority)

NBN has 14 separate apparatus licences in respect of the earth station at Wolumla, each with an allocated radiofrequency for transmissions. As per the attachment, the RF signals between the ground station at Wolumla and the Sky Muster satellites are **confined by these licences to 18.5 GHz and 29.505 GHz**.

All RF signals for aeronautical radionavigation are confined by legislation below 15.7 GHz. Indeed, the RF used by the proposed aircraft for communications transmission will be within the 'aircraft band' (or airband, as it is referred to) which is the **VHF band allocation for aeronautical communications. The airband is 118 MHz to 137 MHz**. The designation of the airband is regulated by the Spectrum Plan legislative instrument as outlined above, whilst the frequency assignments within the airband are regulated by AirServices Australia.

Further, if NBN does not consider existing aircraft in the area to pose a risk of RF interference, it is difficult to understand how additional aircraft associated with Frogs Hollow would be seen to pose a threat.

It is evident that there is no potential risk of interference between the earth station and aircraft associated with the proposed facility. This is controlled by way of Commonwealth legislation and managed by the Australian Communications and Media Authority, under the auspice of the Department of Communications and the Arts.

### **Physical interference with the RF signal beam**

It is considered that there is no critical risk to NBN infrastructure if an object is to pass between the RF signal beam as NBN has not taken steps to establish a restricted area, danger area, prohibited area, controlled airspace, control zone or control area in the vicinity of the Wolumla earth station. There is also no restricted area, danger area, prohibited area, controlled airspace, control zone or control area that has been established in respect of their nine other earth stations at Roma, Kalgoorlie, Bourke, Geraldton, Geeveston, Carnarvon, Ceduna, Broken Hill and Waroona. As noted earlier, eight of the earth stations are located within 10km of an operational airstrip or airport, with five of these within 3.5km.

Given NBN Co's mandate and the critical role of the earth stations in providing connectivity for rural and remote locations, it is expected that NBN would have implemented airspace restrictions, as is available to them, if it considered that there was the potential for such a risk to any station.

It is also noted that due to the proximity of the earth station, the only possible flight path over the earth station would be if a straight-in approach was conducted to Runway 36 or a straight-out departure was conducted from Runway 18, as illustrated in the figure on the following page. However, such an approach or departure would not be conducted by pilots associated within the proposed flight school. Given that Frogs Hollow does not have a traffic control tower, it will be necessary for all student pilots to observe specific approach and departures tracks that follow the circuit profile.

### **Aviation safety impacts from RF signals and electromagnetic energy (EME)**

As detailed above, there is no potential risk of interference between the earth station and aircraft associated with the proposed facility and therefore no safety impacts that would arise from this.

The submission raises concern about exposure of pilots to electromagnetic energy; however, information supplied by NBN Co to Council in support of the development application for the earth station (DA2012.360) is contradictory to this concern. As required by the 'Telecommunications Facilities Guideline Including Broadband' (NSW Planning, 2010), an electromagnetic energy (EME) emissions assessment report must be supplied in the form specified by the Australian Radiation Protection Nuclear Safety Agency. The EME report must demonstrate that the proposed telecommunication infrastructure complies with safety limits imposed by the Australia Communications and Media Authority (ACMA) and the Radiocommunications (Electromagnetic Radiation — Human Exposure) Standard 2014.

An EME report prepared by EMC Technologies, dated February 2013 was provided by NBN Co in support of the development application. Section 4 of the EME Summary Report states the following:

*"The amount of electromagnetic energy radiating from the NBNCo earth station antennas only exceeds the general public limits for human exposure when directly in front of the antenna. The antennas are pointed towards the sky, making it highly unlikely for anyone to be present in the antenna beam. Even if an airplane were to fly directly through the antenna beam, it would not be possible to expose the persons inside the airplane for a long enough time to exceed the average exposure limit."*

Based on the EME report provided by NBN Co, it is concluded that the risk of EME exposure to the student pilots and instructors is low as they would need to pass directly through the signal beam to be exposed, and if exposed, this would not exceed the average exposure limit specified by the Electromagnetic Radiation Standard.



As discussed above, the student pilots would be required to observe specific approach and departure procedures that follow the circuit profile. Therefore, student pilots associated with the proposed flight school would not be flying directly over the earth station and through the signal beam.

It is also noted that in Council referred the development application for the earth station to AirServices Australia and the Civil Aviation Safety Authority. AirServices Australia and CASA raised no public health and safety concerns for aviation activity in the area.

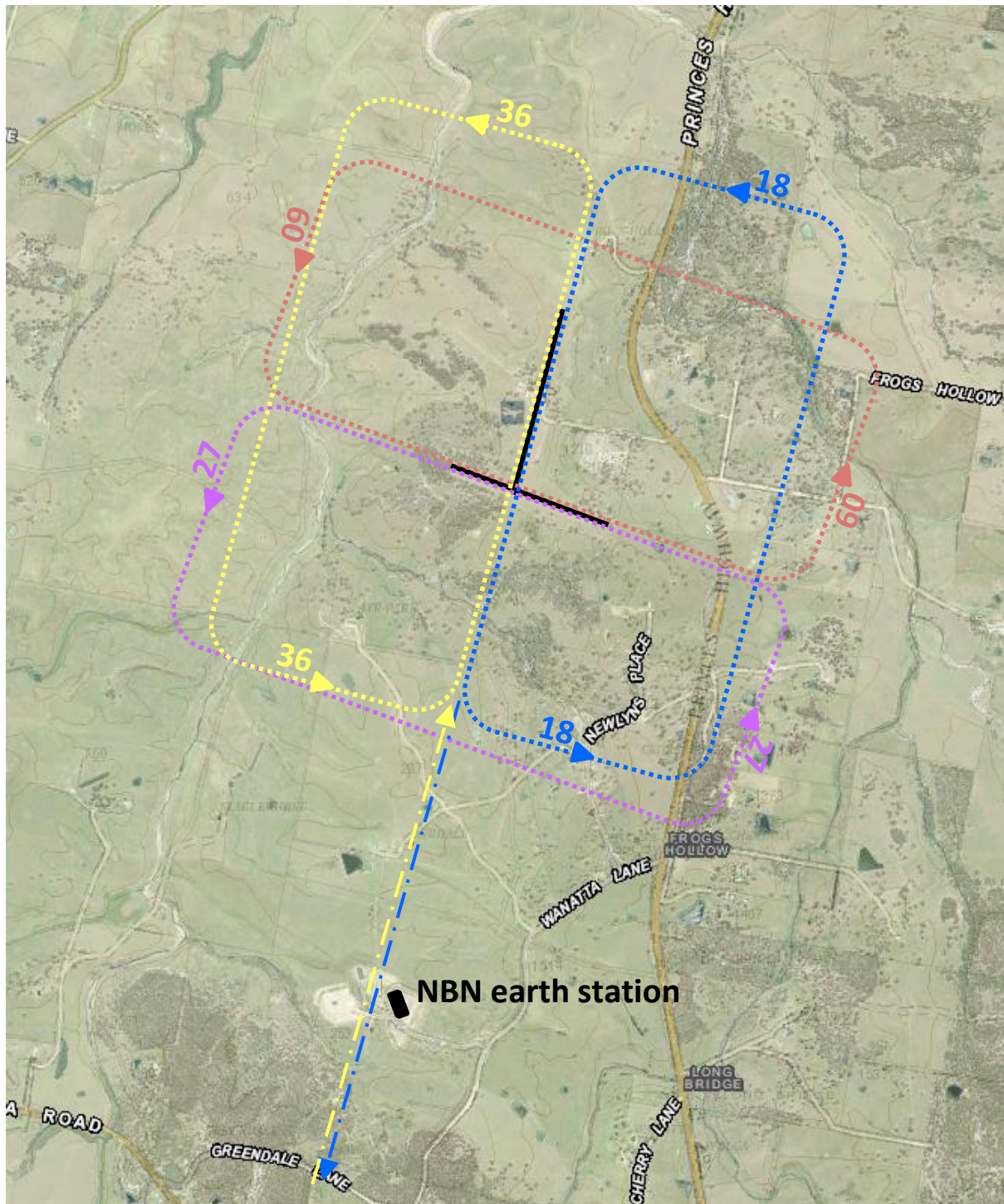


Figure 8-3 Circuit profile in respect of Wolumla earth station

## 9 SUBMISSIONS RECEIVED BY BEGA VALLEY COUNCIL

On 11 January 2018 Bega Valley Shire Council advised that approximately 400 submissions had been received during the notification period for the subject development application DA2017.445. A summary of written submissions 1-261 was provided to NGH by Council on 12 January 2018. A summary of written submissions 262-462 was provided to NGH by Council on 28 February 2018.

A GIPA application was submitted to Bega Valley Shire Council on 8 March 2018 seeking a copy of all 462 submissions (it was expected that personal details would be redacted from the submissions by Council). To date, a copy of the submissions has not been received by NGH from Council.

In responding to the issues raised in the written submissions received by Council, the written summary provided to NGH by Council has been relied upon.

The review of Council's submissions summary identified 17 central matters raised by the community. These matters are outlined below, with a detailed response for Council's consideration included in the following sections of this Addendum report.

The central matters raised by the community in written submission include:

1. Noise impact from aircraft use and facility operations
2. Emissions and particulate matter from aircraft use
3. Impact to organic produce and certification opportunities
4. Impact to bird populations from bird strike
5. Type of land use proposed
6. Intensity of land use proposed
7. Restricted potential for future residential development in the Frogs Hollow area
8. A lack of public benefits
9. Clarity on aircraft movements
10. Visual privacy impacts from overhead aircraft
11. Water quality
12. Safety impacts
13. Risk of bushfire
14. National security issues
15. Unsustainable use of electricity and water
16. Usefulness of an Australian pilot certificate in china
17. Reduction in land and property values



## 9.1 NOISE IMPACT FROM AIRCRAFT USE AND FACILITY OPERATIONS

### **Noise Impact Assessment report**

Further details are provided in Section 4 of this Addendum report.

In consideration of guidance provided by AirServices Australia, the Department of Infrastructure and Regional Development & Cities and EPA NSW and requests received from Council, an updated Noise Impact Assessment was prepared by Renzo Tonin & Associates. The approach taken is also reflective of the methodology that has been accepted in Land & Environmental Court matters for aviation-related developments.

The Noise Impact Assessment uses the Australian Noise Exposure Forecast (ANEF) in tandem with the Australian Standard AS 2021:2015 'Acoustics – Aircraft noise intrusion – Building siting and construction'. These are used as a land use planning tool to determine acceptable levels of aircraft noise exposure for different types of land uses and can be used to demonstrate the acceptability of the proposed development in consideration of surrounding rural residential development.

According to the Australian Standard, residential uses are acceptable within the ANEF 20 contour, but would be exposed to an unacceptable level of aircraft noise if located within a contour greater than ANEF 25.

An endorsed Australian Noise Exposure Forecast (ANEF) chart is not in place for the Frogs Hollow aerodrome, however, consistency with the Australian Standard can still be determined, as the ANEF value is generally taken to be equivalent to the LAeq value minus 35<sup>14</sup> (ie. ANEF 20 is generally taken to be equivalent to LAeq 55dB(A)).

For situations where aircraft noise would be introduced, a more conservative level of ANEF 13 is recommended by acoustic experts.

In addition, supplementary noise metrics are used in tandem with the ANEF 13 noise parameter to provide a dual assessment of average noise levels and upper limit noise events. In this regard, L<sub>max</sub> is typically used in the assessment of aircraft noise. Table E1 of AS 2021 recommends an upper limit of L<sub>max</sub> 70dB(A) for small aerodromes with more than 30 flights per day.

The accompanying Noise Impact Assessment assesses aircraft noise against both the ANEF 13 criteria (which is generally taken to be LAeq24hr 48dB(A)) and the L<sub>A</sub>S<sub>max</sub> 70dB(A) criteria.

In accordance with guidance provided to Council by NSW EPA, mechanical plant and equipment has been assessed against the 'Noise Policy for Industry'. The relevant criteria under the NPI is referred to as the project noise trigger level, being the more stringent of either the project intrusive noise level or the project amenity noise level.

The consideration of noise levels from mechanical plant and equipment has been undertaken to determine maximum combined source sound power level, given the distance from the plant/equipment to surrounding receptors. The assessment determined that the maximum combined source sound power level should not exceed 97dB(A) to comply with the project trigger noise levels. It is expected that this could be complied with based on the type of mechanical plant and equipment expected. Detailed

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<sup>14</sup> Australian Government Department of Infrastructure, Regional Development and Cities, 2014, 'Appendix A – The Australian Noise Exposure Forecast (ANEF) System', [https://infrastructure.gov.au/aviation/environmental/transparent\\_noise/expanding/app\\_a.aspx](https://infrastructure.gov.au/aviation/environmental/transparent_noise/expanding/app_a.aspx)

specifications, supported by an acoustic certification, would be supplied to Council as part of a future construction certificate application.

In terms of the aircraft noise impacts, Table 8 of the Noise Impact Assessment provides evidence that the LASmax and LAeq,24hr noise criteria would be complied with for the identified existing and future residence locations. The criteria would also be met at location M4 within the aerodrome site, if the aircraft were flying approximately 500 ft above. Two hundred (200) flights (accounting for both a departure and return to Frogs Hollow) per day has been selected as a nominal upper limit for the assessment against the criteria. A review of the proposed flight operations concludes that this would be complied with.

The findings are summarised as follows:

- As an upper limit assessment of individual flight movements, the measured LASmax noise levels for all the test flights was found to be less than the 70 dB(A) criteria
- The ANEF 13 criteria (LAeq24hr 48dB(A)) would be complied with provided that the number of flights (accounting for both a departure and return movement to Frogs Hollow) in any 24-hour period was limited to not more than 200.
- The criteria would be complied with provided that all aircraft maintain a height of 500 ft if flying over a dwelling.

Additional noise abatement measures may be negotiated and incorporated into the approved Operations Manual for the proposed development.

#### **Covenants relating to noise impacts**

Of relevance to the Frogs Hollow aerodrome, is that Council has applied a condition of consent to the nearby subdivision in Newlyn Lane (refer DA2006.0031). Condition 14 requires that a covenant be applied to all lots created in that subdivision, advising the purchaser that an operational airfield, go-kart track and driver education facility exist on adjoining land and to ensure that dwellings are constructed, located and oriented in consideration of these uses.

#### **Third-party noise report**

Council advised that a third-party noise report on the proposal was provided during the notification period. A GIPA Application was submitted to Council in February 2018 to access this report and allow the acoustic expert to respond to the matters raised.

It was advised that the third party and Council's Governance section have elected not to release the report to the proponent. Therefore, we are unable to respond to matters raised in the report, as was requested in discussions with Council.

## **9.2 EMISSIONS AND PARTICULATE MATTER FROM AIRCRAFT USE**

#### **Expert agency advice**

Council has referred this concern to both the NSW EPA and the NSW Health – Water Unit for advice. Neither agency has raised an objection to the proposed recreational flight school on these grounds.

The EPA written response does not provide any comment or raise any concerns on this matter. Given that air quality matters fall within the jurisdiction of EPA, it is assumed that the level of aircraft movements proposed with the flight school are not a notable concern for EPA.

NSW Health provided general comment on the protection of rainwater supplies of drinking water from potential contamination by particulate matter.

In any situation where rainwater is relied upon as a drinking water supply, NSW Health recommends homeowners employ several risk management strategies to protect harvested rainwater from bacterial and chemical contamination. NSW Health recommends the use of a 'first flush device', which prevents the first portion of roof-harvested rainwater from entering a water tank to reduce the amount of dust, bird droppings and leaves etc., that accumulate on roofs, from being washed into the tank.

### **Emissions**

Aviation emissions account for a very low proportion of emissions. In 2011, 3.1 percent of Australia's total emissions were caused by aviation activity. Of this 3.1 percent, only 40 percent were attributable to domestic aviation activities, with the remainder caused by international operations<sup>15</sup>.

According to the EPA, aviation is a very minor contributor to particulate emissions. Major contributors are coal mining, domestic solid fuel heaters, marine aerosols, coal-fired electricity plants, bushfires and industrial vehicles<sup>16</sup>. In cool climates such as Bega, domestic solid fuel heaters can contribute to exceedances of the national air quality standards and account for up to 85 percent of particle pollution during winter<sup>17</sup>.

### **Expected training aircraft emissions**

All aircraft to be used as part of the proposed flight school would be fitted with a 4-stroke Rotax 912 UL/A/F engine which has an output of 80hp. According to the manufacturer datasheets, the peak torque for this engine is approximately 4900 RPM, where fuel consumption level is approximately 13.5 litres per hour<sup>18</sup>.

As discussed previously in this Addendum report, there would be approximately 120 training flights (240 take-off/landing movements) daily from Monday to Friday associated with the proposed flight school. It is estimated that up to 15 percent of students may require remedial training support to meet the relevant competencies and this remedial training would be conducted on a Saturday. As noted previously in this Addendum report, there would be no flight training conducted on a Sunday.

For comparison, it is noted that a light passenger vehicle (a Toyota Camry SX has been used as an example) has a 180 horsepower, six-cylinder engine. According to the manufacturers testing, average fuel consumption is 6.5 litres per hour assuming highway driving conditions<sup>19</sup>.

Based on the above details, the fuel consumption and emissions generated by the proposed aircraft would equate to roughly 2.07 light passenger vehicles in standard cruise conditions (peak torque). Consequently, the number of weekday aircraft movements (240) would be generally equivalent to the fuel consumption and emissions caused by 498 light passenger vehicle movements.

The impact of this is considered to be minor. In comparison, the Princes Highway adjacent to the subject land caters for an average of 4,200 vehicle movements per day. The aircraft fuel consumption and emissions associated with the proposed flight school equates to approximately 11 percent of the emissions generated by traffic currently using the Princes Highway.

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<sup>15</sup> Department of Infrastructure, Regional Development and Cities, 2017, 'Aircraft emissions', <https://infrastructure.gov.au/aviation/environmental/emissions/>

<sup>16</sup> EPA NSW, 2013, 'Managing particles and improving air quality in NSW'.

<sup>17</sup> EPA NSW, 2014, 'Wood smoke control measures: cost-benefit analysis'.

<sup>18</sup> See engine specifications at <https://www.flyrotax.com/produkte/detail/rotax-912-ul-a-f.html>

<sup>19</sup> <https://www.toyota.com.au/camry/specifications/sx-sedan>

### **Harvested rainwater supplies**

As indicated above, Council sought advice from NSW Health regarding this matter. NSW Health's response provided general comment on the protection of rainwater supplies of drinking water from potential contamination by particulate matter.

In any situation where rainwater is relied upon as a drinking water supply, NSW Health recommends homeowners employ risk management strategies to protect harvested rainwater from bacterial and chemical contamination. NSW Health recommends the use of a 'first flush device', which prevents the first portion of roof-harvested rainwater from entering a water tank to reduce the amount of dust, bird droppings and leaves etc., that accumulate on roofs, from being washed into the tank.

As indicated above, aviation is a minor contributor to emissions (accounting for 1.24 percent of overall emissions). Accordingly, the aircraft would not pose a notable risk to domestic water supplies. Domestic water supplies are at greater risk from other significant particulate matter generators such as solid fuel heaters (which cause exceedances of the national air quality standards and account for up to 85 percent of particle pollution during winter<sup>20</sup>).

Water supply protection measures should be in place as standard practice where harvested rainwater is relied upon for drinking water. Such measures protect against common bacterial and chemical risks to drinking water and would also mitigate any potential risk from aircraft particulate matter.

## **9.3 IMPACT TO ORGANIC PRODUCE AND CERTIFICATION OPPORTUNITIES**

This matter is raised in submissions received by Council but has not been supported by evidence.

### **Intensive agricultural activity**

A site inspection and a review of aerial imagery in the area did not identify any intensive plant agriculture operations in the surrounding area. Several properties in the locality appeared to be used for livestock grazing and production (beef cattle). Most of the properties within 2km of the airfield (and not associated with the airfield) are large rural residential lots mainly ranging from 5 to 15 hectares in size. There is no visual evidence from public roads and from aerial imagery that any commercial cultivation of produce has been established.

### **Harvested rainwater supplies**

As discussed in the preceding section, aviation-related development contributes a negligible amount to overall emissions. In 2011, 1.24 percent of Australia's total emissions were caused by domestic aviation activities<sup>21</sup>. Further, the emissions created by the flight school aircraft are similar to passenger vehicles, by way of the engine type and fuel type intended to be used. As indicated in the previous section, the emissions pollution caused by the Princes Highway is almost 10 times greater than what is anticipated could be generated by the proposed flight school.

The potential risk to produce is not in the emissions, as such, but rather the particulate matter component of the emissions. However, aviation is a very minor contributor to overall particulate emissions, according

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<sup>20</sup> EPA NSW, 2014, 'Wood smoke control measures: cost-benefit analysis'.

<sup>21</sup> Department of Infrastructure, Regional Development and Cities, 2017, 'Aircraft emissions', <https://infrastructure.gov.au/aviation/environmental/emissions/>

to the EPA NSW. Notable contributors include coal mining, domestic solid fuel heaters, marine aerosols, coal-fired electricity plants, bushfires and industrial vehicles<sup>22</sup>.

Of relevance is the significant particulate impacts caused by solid fuel heaters in cool climates such as the Bega Valley. These heaters contribute to exceedances of the national air quality standards and account for up to 85 percent of particle pollution during winter<sup>23</sup>. Particulate matter generated by aircraft is a low risk to produce grown in the locality. This produce is at risk from more common sources of particulate emissions and sources that generate significantly greater levels of particulate pollution.

### **Organic certification**

The 'National Standard for Organic and Bio-Dynamic Produce' is the relevant standard to which organic certification must comply, as overseen by the Department of Agriculture and Water Resources.

Organic produce is primary production products that are produced and managed in a way that is strictly consistent with a set of principles outlined in the National Standard. Organic produce is not products that are not contaminated in any way shape or form; the National Standard acknowledges potential contaminants that have occurred due to historical processes or ambient environmental factors. Organic certification requires that producers strictly comply with the requirements to avoid the application of artificial fertilisers or chemicals, conserve resources and meet livestock welfare needs. The proposed flight school would not pose any obstructions or risks in this regard.

As indicated above, the aircraft intended to be used at the proposed flight school include 4-stroke Rotax engines that would operate on standard unleaded fuel (ULP 95 as a minimum). It is proposed to store only unleaded fuel in connection with the proposed flight training school and this would be protected by bunding, spill kits, firefighting equipment and only biodegradable firefighting foam. Aviation gasoline (avgas) would not be used. It is noted that avgas is currently stored at Frogs Hollow in unprotected steel barrels.

The aircraft proposed to be used in the flight school do not have the capability to dump fuel. This is a system feature of larger aircraft, predominantly commercial airliners, freight liners and military aircraft. As such, there is no ability for a fuel spill from such an aircraft to occur outside of the subject land.

## **9.4 IMPACT TO BIRD POPULATIONS FROM BIRD STRIKE**

It is considered that the potential impact to bird populations in the locality as a result of the proposed development is minor. According to advice from the Office of Environment & Heritage and the Biodiversity Assessment Addendum report, raptors are the most likely type of birds to occur in the area surrounding the airfield. Raptors are less prone to flocking behaviour than other types. Airport Practice Note 6 'Managing Bird Strike Risk' (Australian Airports Association, 2015) identifies that of the 711 raptor strikes reported to ATSB in the 10 years to 2014, only 6 percent involved multiple bird strike and 8 percent resulted in damage to aircraft.

The occurrence of bird strike is reasonably low in comparison to the millions of flight hours that occur annually in Australia. A study was conducted by the Australian Transport Safety Bureau (ATSB) that found almost 1,400 bird strike incidents were reported in the 10 years to 2001. For general aviation (which is 'other' aviation not involving scheduled passenger transport), the rate of bird strike from 2006-2015 was

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<sup>22</sup> EPA NSW, 2013, 'Managing particles and improving air quality in NSW'.

<sup>23</sup> EPA NSW, 2014, 'Wood smoke control measures: cost-benefit analysis'.

less than 0.53 incidents per 10,000 movements. ***Based on these rates, less than 1 bird strike incident per year would be likely to occur in association with the proposed flight school.***

The Biodiversity Impact Assessment report (NGH Environmental, 2017) and Addendum (NGH Environmental, 2018) have considered the potential for bird strike and impacts to bird populations in the area.

Only one threatened species was identified as potentially frequenting the Frogs Hollow airfield (the Grey falcon) based on records for the area but was not observed during either of the site surveys that were conducted. The habitat values and disturbance regimes occurring at the site indicate the site would not be a high risk for ongoing bird strike.

As an added precaution, a collision risk mitigation strategy has been recommended in the Biodiversity Assessment Addendum report for implementation. This strategy would be consistent with the Airport Practice Note 6 'Managing Bird Strike Risk' (Australian Airports Association, 2015) and include a range of construction and operation phase measures to protect local bird populations, particularly threatened species, and protect the students, pilot and training aircraft.

## 9.5 TYPE OF LAND USE PROPOSED

Please refer to the detailed response provided in Section 2 of this Addendum report.

### **Characterisation of the proposed development**

As discussed in Section 2 of this Addendum report, the subject land is zoned SP2 Infrastructure and specifically nominated as an 'air transport facility' under the Bega Valley Local Environmental Plan 2013. An 'air transport facility' is defined under the BVLEP 2013 as being "*an airport, or a heliport that is not part of an airport, and includes associated communication and air traffic control facilities or structures*".

As detailed in Section 2.4 of this Addendum report, the proposed development is consistent with the definition of an 'airport' as included below.

*airport* means a place that is used for the landing, taking off, parking, maintenance or repair of aeroplanes, and ***includes associated buildings, installations, facilities and movement areas*** and any heliport that is part of the airport. [emphasis added]

**Note.** Airports are a type of *air transport facility*—see the definition of that term in this Dictionary.

The word "associated" in the definition of airport is important and its meaning straightforward. Various dictionary definitions of "associated" reflect a common meaning along the lines of: "correlated with, allied with, related to" and "connected with something else" (these examples from the Oxford English dictionary). It is noted that a key consequence of the use of the word "associated" is that use of the word "associated" does not import notions of subservience or dominance which are irrelevant to that concept – it is, rather, a concept centred on a form of connection or relationship of any type.

When its components are read together, and having regard to the meaning of the word "associated" in the definition of "airport", the effect of the drafting in the LEP is that development may be carried out with development consent under the LEP if the proposed development satisfies any of the following four criteria:

1. it is for the purpose of a place that is used for the landing, taking off, parking, maintenance or repair of aeroplanes (**"criteria 1 – a place used for the taking off and landing etc of aeroplanes"**); or
2. it is for the purpose of buildings, installations, facilities and movement areas that are correlated with, allied with, related to or connected with [by virtue of the word "associated" in the definition



of "airport"] a place that is used for the landing, taking off, parking, maintenance or repair of aeroplanes ("**criteria 2 – buildings/facilities, including for flight training, related to a place used for the taking off and landing etc of aeroplanes**") ; or

3. it is ordinarily incidental or ancillary to development for the purpose of a place that is used for the landing, taking off, parking, maintenance or repair of aeroplanes ("**criteria 3 – ordinarily incidental or ancillary to a place used for the taking off and landing etc of aeroplanes**") ; or
4. it is ordinarily incidental or ancillary to development for the purpose of buildings, installations, facilities and movement areas that are correlated with, allied with, related to or connected with a place that is used for the landing, taking off, parking, maintenance or repair of aeroplanes ("**criteria 4 – ordinarily incidental or ancillary to buildings/facilities etc, including for flight training, that are related to a place used for the taking off and landing etc of aeroplanes**").

When considered in a common sense and practical way, the proposed recreational flight training school would plainly be *related to or otherwise allied, connected or associated with a place used for the taking off and landing etc of aeroplanes*. For example, as part of their training, the student pilots would be required to (amongst other things):

- learn about and master the layout and operation of the place used for the landing, taking off, parking, maintenance and repair of aeroplanes;
- learn about the aspects and physical configuration of the aircraft located at the place used for the landing, taking off, parking, maintenance and repair of aeroplanes;
- conduct mandatory pre-flight safety briefings in the presence of the aircraft as part of their flight training;
- conduct mandatory pre-flight physical safety inspections on the physical aircraft as part of their flight training;
- take off, land, taxi and park at the place used for the landing, taking off, parking, maintenance and repair of aeroplanes; and
- learn about, and conduct, the service and repair of aircraft located at the place used for the landing, taking off, parking, maintenance and repair of aeroplanes.

All these activities are plainly and in a practical way related to, or associated with, a place used for the landing, taking off, parking, maintenance or repair of aeroplanes. These activities cannot be conducted anywhere else. For example, it is not possible to conduct a mandatory pre-flight inspection of an aircraft that is about to be flown at any location other than at an airport.

Accordingly, development for the purposes of a flight training school is development for the purpose of buildings, installations, facilities and movement areas that are related to, or otherwise associated with, a place used for the landing, taking off, parking, maintenance or repair of aeroplanes. It is noted that this satisfies **criteria 2 ("related to a place used for the taking off and landing etc of aeroplanes")** and arguably **criteria 1 also ("a place used for the taking off and landing etc of aeroplanes"**, especially if one considers that an airport can be a training airport). There is no requirement in the definition that an airport only, or predominantly, provides for regular passenger transport.

The proposed use does not change the character which is, per *Chamwell Pty Ltd v Strathfield Council* [2007] 151 LGERA 400, "imparted to the land at which the use is pursued". Specifically, the land will still be used by planes taking off and landing etc and, moreover, will continue to be available for use by existing users of the airport and other members of the public for the purposes of taking off and landing their aircraft etc, in the way they have been prior to, and will be continue to do following, the establishment of any flight school.



Even if the proposed flight school could be said to change the character imparted on the land, the character that would be imparted would still be consistent with the purpose of the use of the land as an airport, as defined. This approach to characterisation is consistent with the approach in Chamwell. At paragraph [46], the Court said:

*“The retail customers who [use the driveways/ramps/parking facilities etc] would not consider they had driven on a road.... The customers of the supermarket who [use the forecourt/ramps/parking etc] would not describe the route they had passed as a road. Similarly, customers using the ... forecourt ... would not consider that they were sitting on a road. “*

It is reasonable to assert that a trainee pilot would consider they were learning to fly "at the airport". A reasonable statement would be "I'm learning to fly at Frogs Hollow airport", as opposed to "I'm on the road [while seated in the forecourt]" in the Chamwell case, as identified by the Court. This analysis is consistent with the requirement in Chamwell that "the characterisation of the purpose of development must also be done in a common sense and practical way" (at [45]) and further reinforces the satisfaction of criteria 2 and arguably criteria 1 as noted above.

In matters raised by Council, emphasis had been placed on the difference in scale of the proposed development compared to the activities undertaken at the existing airfield. However, a comparison of the scale of the existing use against what is proposed does not assist in determining the characterisation of the development. If a hangar housing one aircraft is characterised as falling within the defined permitted uses, then a hangar that houses 10 aircraft is also permissible. The same applies to characterisation of all other features of the flight school, which in our view all satisfy at least criteria 2 and arguably also criteria 1 as outlined above.

#### **Ancillary development**

In the SP2 Infrastructure zone under the BVLEP 2013, the purpose for which development may be carried out includes both the purpose shown on the Land Zoning Map and also development that is *ordinarily incidental or ancillary* to development for that purpose.

A use is *ancillary* to another use if it is inspired by the same purpose as the other use, or if it subserves the other use or if the use could not function without the primary use (*Foodbarn Pty Ltd v Solicitor-General* (1975) 32 LGRA 157). Of importance here is a decision of the NSW Court of Appeal in *Macquarie International Health Clinic Pty Ltd v University of Sydney* (1998) 98 LGERA 218. In that case Stein JA held (with Mason P and Meagher JA concurring) [at 223]:

*“... an ancillary use does not necessarily need to be a subordinate or subservient one. It may be more than a minor use. It seems to be that an ancillary or incidental use is not capable of being reduced to a mathematical formula. It may also be noted that among the relevant dictionary meanings of ancillary are “auxiliary” and “accessory”.*

As a use will be ancillary if it is inspired by the same purpose as another use or requires another use to function, or is auxiliary or an accessory to another use, then the flight school's activities and uses can be considered:

- a. ancillary to development for the purpose of a place that is used for the landing, taking off, parking, maintenance or repair of aeroplanes ("criteria 3" referenced above); or
- b. ancillary to development for the purpose of buildings, installations, facilities [including for flight training] and movement areas that are correlated with, allied with, related to or connected with a place that is used for the landing, taking off, parking, maintenance or repair of aeroplanes ("criteria 4" referenced above)

Only pilots would be trained at the proposed facility. Only material strictly related to aviation will be taught. Such activities cannot happen anywhere other than at an airport, including for the reasons outlined earlier. All the proposed activities are therefore properly characterised either as being for the purposes of an "airport" as defined, or being ancillary to the airport purpose (as outlined above).

Furthermore, in the context of the development proposed, only those who are involved in the pilot training will make use of the proposed accommodation facilities, and only for the duration of their involvement in the training. No other person will be able to make use of the accommodation facilities. This all means they are not general accommodation facilities. This fact, and the fact that housing trainee pilots learning to fly at remotely located airports is inspired by the same purpose as training them, further reinforces that the accommodation is ancillary to the flight training school, consistent with criteria 4 as outlined above (ie "ordinarily incidental or ancillary to buildings/facilities [including training facilities] that are related to a place used for the taking off and landing etc of aeroplanes").

Of relevance here is the recent decision of the Land and Environment Court of NSW in *Nessdee Pty Limited v Orange City Council* [2017] NSWLEC 158 (Nessdee). In that case, Preston CJ considered a development application for a heliport at Fredricks Valley. Significantly, in addition to helicopter flights the development for which consent had been sought included classroom-based pilot training and accommodation for trainee pilots. Preston CJ accepted that these components could be understood as being ancillary components of the heliport and that a condition of consent could be imposed which limited the use of the pilot accommodation and classrooms to pilots undergoing training. The same reasoning applies to this development application.

The classroom-based pilot training and pilot accommodation approved in Nessdee was of a smaller scale than that proposed in the subject application. However, Council would be wrong to use this as a basis to distinguish the case from the development proposed; for the reasons outlined above, a comparison of the scale does not assist in determining the permissibility of the development.

#### **Educational Establishment as defined under the BVLEP 2013**

It is noted that submissions received by Council suggest that the proposed development is an educational establishment and is therefore prohibited with the SP2 Infrastructure zone.

Whilst it is evident that there is a fundamental 'training' element to the proposal, the definition of an 'education establishment' under the BVLEP 2013 does not recognise the proposed development as such. This is because the definition recognises only two categories of schools, to the exclusion of all other education- or training-related facilities.

According to the Bega Valley LEP 2013, an

*"educational establishment means a building or place used for education (including teaching), being:*

*(a) a school, or*

*(b) a tertiary institution, including a university or a TAFE establishment, that provides formal education and is constituted by or under an Act".*

A school is further defined in the LEP as *"a government school or non-government school within the meaning of the Education Act 1990"*. The proposed development does not constitute a school within the meaning of the Education Act 1990. Further, the proposal does not constitute a tertiary institution that provides formal education and is constituted by or under an Act. It can therefore be concluded that the proposed development is inconsistent with the definition of an 'educational establishment'.

## 9.6 INTENSITY OF LAND USE PROPOSED

As mentioned in the previous section, the subject land is zoned SP2 Infrastructure and specifically identifies the land as being reserved as an 'air transport facility'. As indicated in the previous section, an 'air transport facility' is defined under the Bega Valley Local Environmental Plan 2013 as being *"an airport, or a heliport that is not part of an airport, and includes associated communication and air traffic control facilities or structures"*.

From the land use zone and the stated purpose as shown on the Land Zoning Map, it is reasonable to infer that the subject land could be used as any type of 'air transport facility' – including an airport, a heliport or both, and that communication and air traffic control facilities and any other ancillary facilities may be constructed on the land, subject to development consent.

The proposed development is permissible with consent for the reasons detailed in Section 2 of this Addendum report.

Many of the submissions raise concern regarding the proposed intensity of the development. The permissibility of any development is controlled by the Bega Valley Local Environmental Plan 2013, but the BVLEP does not recognise scale or intensity in matters of characterisation and permissibility. If a flight school with one teacher and one training aircraft is permissible, then a school with 100 teachers and 100 aircraft is also permissible.

## 9.7 RESTRICTED POTENTIAL FOR FUTURE RESIDENTIAL DEVELOPMENT IN THE FROGS HOLLOW AREA

Potential future residential development in the Frogs Hollow area has been strategically restricted by existing statutory instruments and policies in place at the Federal, State and local levels.

These restrictions would continue to be relevant to the protection of the Frogs Hollow aerodrome (as an operational aerodrome), even in the absence of the proposed recreational flight training school.

### **Australian Standard AS 2021 Acoustics - Aircraft noise intrusion - Building siting and construction**

The potential for future residential development is restricted around all aerodromes. This is by virtue of the Australian Standard AS 2021 'Acoustics - Aircraft noise intrusion - Building siting and construction' which is the industry standard for the assessment of development surrounding aerodromes.

### **National Airports Safeguarding Framework**

Decision makers are required to implement the 'National Airports Safeguarding Framework' (2012), a national land use planning regime that protects airports and communities from off-airport development.

### **South Coast and Tablelands Regional Plan 2036**

Isolated rural residential sprawl in the Bega Valley is noted in the South Coast and Tablelands Regional Plan 2036 as an undesirable form of development that has occurred and that must be curbed. The concentration of future residential and rural residential development around existing urban centres as well as better strategic management of rural residential development are identified priorities under Direction 25, 26 and 28 of the South Coast and Tablelands Regional Plan 2036.

### **Bega Valley Local Environmental Plan 2013**

The BVLEP The BVLEP 2013 imposes a deadline of the 2 August 2018 for subdivision from existing holdings as referred to in clause 4.2A(4). No further subdivision from existing holdings can be permitted under the BVLEP after this date.

## **9.8 LACK OF PUBLIC BENEFITS**

### **Federal and State strategic directions**

The proposed development is consistent with Federal and State strategic actions for tourism, education and training and diplomacy.

The development will benefit national security as it forms part of identified public diplomacy initiatives linked to the education and training of international students in the Department of Foreign Affairs & Trade's 'Australia Global Alumni Engagement Strategy 2016-2020' and the Department of Education & Training's 'National Strategy for International Education 2025'.

The Alumni Engagement Strategy is "a whole of government public diplomacy initiative that has been developed in collaboration with Australia's tertiary education sector". The aim of the Strategy is to connect with international students and mobilise Australian-educated students to promote Australia and advance our national interests. The objectives of the strategy are to strengthen these links with Australia's international alumni in order to:

- improve our diplomatic access and influence,
- to grow trade, investment and business links, and
- to showcase Australia as an innovative, open society.

The 'National Strategy for International Education 2025' identified "there are new and emerging forms of education where there are significant opportunities for both students and providers. These include blended delivery models, online professional development and offshore and **edu-tourism opportunities**<sup>24</sup>"[emphasis added]. The strategy acknowledges international education as a key competitive advantage:

*"Recognised as one of the five super growth sectors contributing to Australia's transition from a resources-based to a modern services economy, international education offers an unprecedented opportunity for Australia to capitalise on increasing global demand for education services. The intent of the strategy is to ensure Australia remains a leader in the provision of education services to overseas students. Australia already has a well-deserved reputation for the quality of our education and research, however, to fully realise our potential we must be both strategic and ambitious".*

The China Tourism Strategy published by Destination NSW sets out strategic directions to capitalise on opportunities identified in the Chinese market and protect the position of NSW as the leading destination for Chinese tourists visiting Australia. According to the Strategy, new markets will be actively built, new products will be supported, and industry partnerships developed to "ensure that NSW secures substantial market share and harnesses the potential of the China market".

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<sup>24</sup> Australian Government Department of Education and Training, 2016, 'National Strategy for International Education', p.v

AusTrade has identified that Australia's medium and long-term growth outlook is intrinsically linked to its strong ties to the Asian region, China in particular<sup>25</sup>. China is Australia's largest, fastest growing and highest spending inbound visitor market. Almost 1.4 million Chinese visitors arrived in Australia in 2017 and the collective spend was \$10.4 billion. Of these visitors, 48 percent were return visitors to Australia<sup>26</sup>. The number of Chinese visitors is expected to triple to almost 4 million visitors by 2027<sup>27</sup>.

In the individual sectors of tourism and international education, Australia is performing 20 percent above the global average<sup>28</sup>. Combining these competitive advantages is a rapidly-growing industry for education-related travel services. Behind iron ore and coal exports, education-related travel services are the third-largest goods and services export, generating over \$22 billion in revenue in 2016<sup>29</sup>.

Traditionally, China has had a restricted airspace policy that has been controlled by the military and the State-owned airlines. There has been a significant overhaul in 2015 with the Chinese government deregulating the airspace and giving rise to the establishment and growth of general aviation, which includes the subset of recreational aviation.

Australia has long been among the leading nations in aviation safety and is also a world leader in the provision of aviation training. Building on Australia's international reputation as an aviation leader, the proposed flight school at Frogs Hollow seeks to cater for this emerging niche market for recreational aviation in China. Sports Aviation Flight College Australia is an Australian-owned and operated 'start-up' in the aviation and tourism spaces.

The proposed development is centred on a packaged service and experience provided to Chinese nationals by Sports Aviation Flight College Australia Ltd. The participants would purchase a package that is centred on a recreational flight training experience in Australia over a period of three months. The participants would be accommodated at the Frogs Hollow site, transported to and from Canberra Airport and taken on several guided tours and social outings in the Bega Valley and wider South Coast and Monaro region.

The Frogs Hollow airfield was selected by the proponents as they are a local family residing in the area, familiar with the local environment and aerospace. It is important to the proponents that the proposed investment and ongoing local expenditure will benefit their community.

The establishment of the proposed flight school would involve a \$10 million initial investment, where local consultants, contractors and suppliers would benefit. Local consultants, contractors and suppliers will also benefit through ongoing goods and services needed to support the operation of the flight school.

The proposed flight school would also directly result in the creation of approximately 200 new positions to support its operations at full capacity and would be a major employer in the Bega Valley. The national

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<sup>25</sup> Australian Government Australian Trade and Investment Commission, 2018, 'Why Australia: Benchmark Report 2018', p.7

<sup>26</sup> Tourism Australia, 'Market Profile: 2017', accessed at <http://www.tourism.australia.com/en/markets-and-research/market-regions/>

<sup>27</sup> Minister for Trade, Tourism and Investment, 'More Chinese tourists to Australia', 18 April 2018, accessed at [http://trademinister.gov.au/releases/Pages/2018/sc\\_mr\\_180418.aspx](http://trademinister.gov.au/releases/Pages/2018/sc_mr_180418.aspx)

<sup>28</sup> Australian Government Australian Trade and Investment Commission, 2018, 'Why Australia: Benchmark Report 2018', p.8

<sup>29</sup> Australian Government Australian Trade and Investment Commission, 2018, 'Why Australia: Benchmark Report 2018', p.40

unemployment rate for the December quarter was 4.1 percent; however, the rate of unemployment in the Bega Valley LGA was higher at 6.84 percent<sup>30</sup>.

Approximately 35-40 percent of the staff would be qualified and experienced flight instructors. There are a number of suitably qualified and experienced instructors already residing in the locality; however, some of these may be sourced further afield as it is a specialised field. The remaining 65-70 percent of staff including squadron leaders, squadron assistants and chefs. It is desired that most of these positions will be able to be filled by local residents.

### **Independent Socio-Economic Impact Assessment**

Section 5 of this Addendum outlines the socio-economic impact of the proposed development. The Addendum is supported by a Socio-Economic Impact Assessment report prepared by an independent consultant, Judith Stubbs & Associates. Judith Stubbs & Associates have considerable expertise in this field.

A Socio-Economic Impact Assessment was prepared on request of Bega Valley Council in accordance with Section 5.4 of the Bega Valley Development Control Plan 2013. The scope of the assessment report was determined by Bega Valley Shire Council, as specified in the Bega Valley DCP.

According to the Socio-Economic Impact Assessment report, the costs and benefits were quantified using widely accepted methodologies including NSW Government Guide to Cost-Benefit Analysis and Principles and Guidelines for Economic Appraisal of Transport Investment and Initiatives.

The major quantifiable costs relate to the amenity impacts of the proposal and the social costs of crashes. The report recommended mitigation measures that could be considered for reducing amenity impacts on the immediate surrounds. The possible impact on other tourist industries was unquantifiable. However, for an overall adverse economic impact, the proposed flying school would need to reduce employment in other tourist industries by 23%, that is, it would need to result in a reduction of visitors to the region by 23%. This was considered to be unlikely.

The major benefit associated with the proposal is the value of local employment and expenditure. It would be a new export service industry, diversifying the local tourism base. It has the potential to be a major employer in the Shire, would increase tourism sector jobs by approximately 20 percent and provide for skilled and non-skilled job opportunities. Importantly, the revenue would be generated from overseas rather than drawn or absorbed from other local businesses.

The cost benefit analysis demonstrated that the benefits of the proposal in terms of employment would be more than sufficient to offset amenity impacts on residents and the cost of crashes.

## **9.9 CLARITY ON AIRCRAFT MOVEMENTS**

It is understood from the summary of submissions provided by Bega Valley Council that there is misunderstanding as to the nature, number and frequency of aircraft movements associated with the proposed development.

Further details have been included in Section 3.2 of this Addendum report for clarity.

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<sup>30</sup> id.community, 2018, Bega Valley Shire economic profile, accessed at <https://economy.id.com.au/bega-valley>

## 9.10 VISUAL PRIVACY IMPACTS FROM OVERHEAD AIRCRAFT

It is noted that the proposed flight training would predominantly use the primary 18/36 runway, with the secondary runway only used when dictated by the prevailing wind conditions. In consideration of the circuit path and height profile, the aircraft would be at a height of at least 500 ft before passing directly over any existing dwelling and for most surrounding receivers, it would be a height of 1,000 ft.

Further, the students are engaged in the approach and departure manoeuvres which given their early stage of experience, would demand a significant level of concentration and attention. There would be limited opportunity or ability for overlooking for rural residential properties.

It is noted that outside of the departure and approach manoeuvres, standard flight training would be conducted at a height of 4,000 ft.

## 9.11 WATER QUALITY

As indicated above, the aircraft intended to be used at the proposed flight school include 4-stroke Rotax engines that would operate on standard unleaded fuel (ULP 95 as a minimum). It is proposed to store only unleaded fuel in connection with the proposed flight training school and this would be protected by bunding, spill kits, firefighting equipment and only biodegradable firefighting foam.

Aviation gasoline (avgas) would not be used, although it is noted that avgas is currently stored at Frogs Hollow in unprotected steel barrels.

It is also noted that the aircraft proposed to be used in the flight school do not have the capability to dump fuel. This is a system feature of larger aircraft, predominantly commercial airliners, freight liners, military aircraft. As such, there is no ability for a fuel spill from such an aircraft to occur outside of the subject land.

It is proposed to dispose of wastewater on the site as there is no reticulated system to discharge to. This is common to all developments within the locality. There are no water quality impacts expected as a result of the wastewater disposal arrangements. Firstly, there are no waterways or watercourses within the subject site and buffers are maintained to surrounding ephemeral and intermittent watercourses.

The accompanying Onsite Wastewater Management Addendum report demonstrates that the subject site would not be overloaded by irrigation according to the parameters set in AS 1547 'On-site domestic wastewater management' and the Sydney Catchment Authority guideline 'Designing and installing on-site wastewater systems'. In addition, the assessment determined there are several different disposal options and areas that would be satisfactory according to the above standards and so reliance on the runway for irrigation would be reduced.

The assessment is also a conservative estimate of the site's capabilities as the site geology is consistent with Category 3 loam or sandy loam soils in accordance with AS 1547; but Category 4b soil irrigation rates were instead adopted.

## 9.12 SAFETY IMPACTS

The Civil Aviation Safety Authority (CASA) is an independent statutory authority that conducts the safety regulation of civil air operations in Australia. Civil air operations include both scheduled air transport and general aviation). Sport aviation is a term used to describe a subset of general aviation (general aviation refers to civil aviation other than scheduled air transport) and is ultimately also governed by the rules and regulations of CASA.



CASA sets out the regulations under which sport aviation must be conducted but has delegated the administration of sport aviation to several organisations, each of which have responsibility for a different subset of sport aviation – such as hang gliding, model aircraft, ballooning, parachuting and the like.

Sport aviation participants must be members of the relevant organisation to participate in a sport aviation activity. For the type of aircraft use proposed at Frogs Hollow airfield, the relevant organisation is Recreation Aviation Australia (RA-Aus). Recreation Aviation Australia (RA-Aus) administers ultralight, recreational, weight shift microlight and LSA aircraft. RA-Aus train and certify pilots, flying instructors and maintainers, register their aircraft fleet and oversee a large number of flight training schools across Australia. All the student pilots at the proposed flight school are required to obtain RA-Aus membership.

As a registered flight training school, the facility at Frogs Hollow would be required to implement and follow the RA-Aus syllabus. The full syllabus is included as an attachment to this report. The students will be supervised by a qualified and experienced flight instructor during their flight training, in accordance with RA-Aus rules.

Reports published by the Australian Transport Safety Bureau identify recreational aviation as having a higher accident rate than other types of flying; however, the rate is still very low. The accident rate for recreational aircraft is 273.5 per million flying hours and for recreational weight-shift aircraft is 101.1 per million flying hours. The fatal accident rate for recreational aircraft is 27.7 per million flying hours and for recreational weight-shift aircraft is 23.0 per million flying hours. The ATSB report does not distinguish between the different types of flight training (such as general aviation, recreational aviation and the like), but the accident rate is lower again for flight training compared with recreational aviation. For aircraft flight training, the accident rate is 39.3 per million hours and 1.5 fatal accidents per million hours<sup>31</sup>.

In 2015, there were a total of 120 incidents (including 34 serious incidents) and 52 accidents (including 4 serious and 8 fatal) for recreational aircraft. The ten-year average was 91 incidents per year and 41 accidents. In terms of injuries and fatalities, there were 4 people seriously injured and 8 people died in 2015 as a result of recreational aircraft accidents. The ten-year average was 4 seriously injured and 6 deaths<sup>32</sup>.

### **9.13 RISK OF BUSHFIRE**

This matter is raised in submissions received by Council however has not been supported by evidence.

The risk of bushfire is considered to be diminished as a result of the proposed development. The land would become more developed and the vegetative cover would become more actively managed and controlled. The proposed development would have a beneficial impact on the management of the land against the risk of bushfire.

All proposed buildings would be covered by firefighting infrastructure and equipment to the standards prescribed by the National Construction Code (NCC).

The design of the proposed development complies with the relevant requirements of the NSW RFS document 'Planning for Bushfire Protection' which applies to all types of development on bushfire prone land. Further, integrated approval has been provided by the NSW RFS to Bega Valley Council and the conditions attached to this integrated approval can be complied with in the design and operation of the proposed development.

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<sup>31</sup> Australian Transport Safety Bureau, 2017, *ATSB Transport Safety Report: Aviation Research Statistics*, p.58

<sup>32</sup> Australian Transport Safety Bureau, 2017, *ATSB Transport Safety Report: Aviation Research Statistics*, p.50

Many of the submissions state that the proposed development will cause aircraft crashes, which increases the risk of bushfires. As outlined in the preceding section, the risk of an aircraft crash is extremely low. A car crash is significantly more likely to occur. The possibility of aircraft crashes in association with the proposed flight school is so low that it would not be reasonable to consider that the facility would have any unreasonable impact on the resources of local fire brigades or rural fire service squadrons.

## **9.14 NATIONAL SECURITY ISSUES**

Submissions received by Council raise national security matters in relation to the proposed development. It is suggested in the submissions that the Chinese students would have the potential to “spy” on important national infrastructure from the aircraft during training. Such statements in the submissions are not supported by evidence.

As discussed in Section 9.8 of this Addendum report, the proposed development will benefit national security as it forms part of identified public diplomacy initiatives linked to the education and training of international students. These initiatives are set out in the Department of Foreign Affairs & Trade’s Australia Global Alumni Engagement Strategy 2016-2020 and the Department of Education & Training’s National Strategy for International Education 2025.

## **9.15 UNSUSTAINABLE USE OF ELECTRICITY AND WATER**

This matter is raised in submissions received by Council however has not been supported by evidence. The supporting material indicates the proposed development would be quite self-sufficient.

A Sustainable Design Management Plan has been developed in accordance with the requirements of the Bega Valley Development Control Plan (BVDCP) 2013 and highlights the sustainable design features of the proposed development.

A Section J energy efficiency assessment would also be required for the proposed development at Construction Certificate stage. The proposed buildings will have to comply with energy usage standards as relevant under the National Construction Code and details provided to Council prior to the release of any construction certificates.

## **9.16 USEFULNESS OF AN AUSTRALIAN PILOT CERTIFICATE IN CHINA**

This matter is raised in submissions received by Council but is not relevant to the assessment of the development application. The proposed development would meet an identified market for recreational flight training and it is for the individual consumer to determine if the service fits with their needs.

Should the development be approved SAA would then make application to Recreational Aviation Australia (RAA) to become a registered RAA flight training school. The application process includes a rigorous audit to ensure that all the required facilities, systems and qualified staff are in place to offer the course.

The students of the proposed facility would be eligible to receive a Recreational Pilot Certificate if they satisfactorily complete the education and training provided by Sports Aviation Australia. The flight training hours count towards further endorsements in China and other countries, such as a Private Pilot Licence or Commercial Pilots Licence should the student wish to take their training further.

The proposed development is consistent with Federal and State strategic actions for tourism, education and training and diplomacy. The China Tourism Strategy published by Destination NSW sets out strategic

directions to “harness the potential of the China market” including building new goods and services markets, supporting the development of new products and developing industry partnerships.

AusTrade has identified that Australia’s medium and long-term growth outlook is intrinsically linked to its strong ties to the Asian region, China in particular<sup>33</sup>. China is Australia’s largest, fastest growing and highest spending inbound visitor market. Almost 1.4 million Chinese visitors arrived in Australia in 2017 and 48 percent were return visitors to Australia<sup>34</sup>. The number of Chinese visitors is expected to triple to almost 4 million visitors by 2027<sup>35</sup>.

In the individual sectors of tourism and international education, Australia is performing 20 percent above the global average<sup>36</sup>. Combining these competitive advantages, education-related travel services is the third-largest goods and services export, generating over \$22 billion in revenue in 2016<sup>37</sup>.

Australia has long been among the leading nations in aviation safety and is also a world leader in the provision of aviation training. Building on Australia’s international reputation as an aviation leader, the proposed flight school at Frogs Hollow seeks to cater for this emerging niche market for recreational aviation in China.

It is also noted that a Recreational Pilot Certificate is the first tier of pilot certification in Australia. It is an introduction to the aviation flight training framework and the student may choose to progress their flight training towards a Private Pilot Licence (PPL) or Commercial Pilot Licence (CPL). More advanced training for these certifications is provided by numerous other Australian flight training schools. The proponent has received interest from other schools to partner and provide avenues for the Frogs Hollow students to advance their training. This furthers Australia’s reputation as a leader in aviation training and generates additional export services income in Australia.

## **9.17 REDUCTION IN LAND AND PROPERTY VALUES**

This claim is of no relevance to development assessment process. Land and property values are not a planning matter that is recognised in the relevant legislation, the *Environmental Planning & Assessment Act 1979* specifically. This matter is therefore unable to be taken into consideration in the assessment and determination of a development application.

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<sup>33</sup> Australian Government Australian Trade and Investment Commission, 2018, ‘Why Australia: Benchmark Report 2018’, p.7

<sup>34</sup> Tourism Australia, ‘Market Profile: 2017’, accessed at <http://www.tourism.australia.com/en/markets-and-research/market-regions/>

<sup>35</sup> Minister for Trade, Tourism and Investment, ‘More Chinese tourists to Australia’, 18 April 2018, accessed at [http://trademinister.gov.au/releases/Pages/2018/sc\\_mr\\_180418.aspx](http://trademinister.gov.au/releases/Pages/2018/sc_mr_180418.aspx)

<sup>36</sup> Australian Government Australian Trade and Investment Commission, 2018, ‘Why Australia: Benchmark Report 2018’, p.8

<sup>37</sup> Australian Government Australian Trade and Investment Commission, 2018, ‘Why Australia: Benchmark Report 2018’, p.40