

AMENDED

22 January 2014
To the Ordinary Council Meeting

Director's Report
Development and Building Department

2.3 DA/853/2013 - Proposed Skydiving at 1897 South Tacoma Road Tuggerah (Pioneer Dairy)

TRIM REFERENCE: DA/853/2013 - D05171144

MANAGER: Lin Armstrong, Director Development and Building

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SUMMARY

An application has been received for a skydiving operation to use a portion of the site at Pioneer Dairy for a landing area, reception area and parachute packing. The application has been assessed having regard to the matters for consideration detailed in section 79C of the Environmental Planning and Assessment Act and other statutory requirements.

Applicant	Australia Skydive Pty Ltd
Owner	Crown Land NSW
Application No	853/2013
Description of Land	Tuggerah Pioneer Dairy - Lot 31 DP 1096069 No. 1897 South Tacoma Road Tuggerah
Proposed Development	Skydiving Operation - Part of existing Hannan Shed to be used for reception area & parachute packing and use of part of the site for parachute landing area
Site Area	155ha
Zoning	7(g) Wetlands Management, 4(a) General Industrial, 1(c) Non Urban Constrained Lands and 5(b) Railways – Wyong Local Environmental Plan 1991
Existing Use	Existing Pioneer Dairy
Employment Generation	25-50
Estimated Value	\$30,000

RECOMMENDATION

- 1 ***That Council grant consent for a period of 6 months subject to the conditions detailed in the schedule attached to the report; and***
- 2 ***That Council advise those who made written submissions of its decision.***

PRECIS

- *Recreation areas* are permissible with the consent of Council within the 1(c) Non-Urban Constrained Lands zone under Wyong Local Environmental Plan 1991 (WLEP 1991).
- *Recreation areas* are permissible with consent of Council within the E3 Environmental Management Zone under Wyong Local Environmental Plan 2013 (WLEP 2013).

2.3 DA/853/2013 - Proposed Skydiving at 1897 South Tacoma Road Tuggerah (Pioneer Dairy) (contd)

- The use of the subject land commenced without consent of Council. Legal proceedings have commenced in relation to this matter.
- 141 Submissions both for (47) and (92) against were received in relation to the proposed development including a petition with 89 signatures.
- The site was listed as a heritage item of “Regional Significance” in the WLEP 1991. Under WLEP 2013 Schedule 5 “Tuggerah Pioneer Dairy” is listed as a heritage item of “Local Significance”.

The site is identified as being bushfire prone, flood prone, located within the coastal protection zone and within 100m of a sensitive coastal location. The site also has acid sulphate soils however, it is noted that no physical works are proposed on the site under the current application.

INTRODUCTION

The Site

The subject site is commonly known as No. 1897 South Tacoma Road Tuggerah and is legally described as Lot 31 DP 1096069. The subject site is part of the Tuggerah Pioneer Dairy which comprises the following lots: -

- Lot 1 DP 585323
- Lot 7316 DP 1155188
- Lot 7317 DP1155188
- Lot 31 DP 1096069
- Lot 1 DP 206598

An aerial photograph of the site is provided in Attachment 1.

The subject site is located on the eastern side of the Pacific Highway and Northern Railway line, the northern side of Lake Road and the southern side of South Tacoma Road and Wyong River. The site has frontages of 2.38km to South Tacoma Road and 566m to Lake Road. The subject site has an overall site area of 155ha. Vehicular access to the site is from South Tacoma Road.

The built form features of the site include:

- a dwelling-house,
- a café,
- a storage shed
- open aired shed with a kitchen and loft
- Heritage listed buildings/structures including a sleep out building, managers house, old milking bails, barn building, silos and feed stalls
- Hardstand car parking area

The site also contains recently constructed wetlands.

The northern portion of the site is traversed by a high voltage electricity transmission line and adjoins the Northern Railway line and Pacific Highway to the west.

The site is now a Crown Reserve that has been dedicated for Public Recreation and Conservation. The Plan of Management developed and approved at the end of 2007 outlines the management guidelines for the site.

The surrounding properties are characterised by existing residential, industrial and rural development.

The subject site is bushfire prone, flood prone, located within the coastal protection zone and within 100m of a sensitive coastal location. The site also has acid sulphate soils, however, no physical works are proposed under the current application.

The Proposed Development

The development application seeks approval for use of a portion of the site as a parachute drop zone (landing area) for a skydive business, an existing shed as a reception area and parachute packing area as well as car parking for participants, employees and volunteers.

The skydiving activity commenced operation in early November 2013 without prior consent of Council.

Court proceedings were commenced in November 2013 and have been held over until 7 February 2014.

The operational details of the skydive business provided by the applicant are as follows: -

- Bookings can be made either by phone, website or in person.
- Clients will arrive at the site and will be directed to the existing shed where part of it is utilised to undertake tuition, induction, jumping procedures, safety, fitment of attire, debriefing and editing of photography and video. Transportation to the site will be from private car travel or from the businesses courtesy bus.
- The applicant proposes to utilise a 6m x 15m area of the existing shed for the reception area for the parachutists and parking of the parachutes.
- The participants will be driven to Warnervale airport, where they will board a plane and fly back to the site to land within the drop zone.
- The aircraft would then depart Warnervale airport and climb to a height of approximately 10,000-14,000 feet where the parachutists disembark the aircraft in the vicinity of the Pioneer Dairy.
- It is anticipated that a maximum of 12 vehicles per hour will be visiting the site.
- The activity will employ approximately 25-50 people (pilots, ground crew, instructors, packers and manifest) with 10,000 to 15,000 participants annually and up to 2.5 spectators per participant.
- Part of the site, approximately 100m², opposite the existing shed is to be utilised as the drop zone for the parachutists. During emergency situations, the rest of the site can be utilised.
- The subject site is relatively cleared of vegetation and provides good viewing areas for the public of the parachutists from several areas on the subject site.

2.3 DA/853/2013 - Proposed Skydiving at 1897 South Tacoma Road Tuggerah (Pioneer Dairy) (contd)

- After the parachutists have landed, the chutes are recovered and participants walk to the shed to debrief and to change their attire. The mini bus returns from Warnervale airport and the procedure is repeated through the course of the day.
- The maximum number of parachutists at one time will be 8 tandem jumpers ie participant and instructor.
- The applicant proposes to operate from 7am-6pm seven days, with the skydiving to be undertaken between 8am to 5pm, subject to weather constraints. The participants will arrive at the site from 7.30am, be driven to Warnervale airport with the first take off to be at 8am. Parachutists have the potential to jump every 30 minutes (19 jumps per day), however it is more likely they will jump every hour from 8am (10 jumps).
- The aircraft identified to be used is a Cessna 208 Caravan.
- Details of the development and storage shed are provided in Attachment 2.

The use of Warnervale airport for taking off and landing does not form part of the development application as the administration and day to day running of the Warnervale airport is controlled by Central Coast Aero Club.

The details of the flight path used by the aircraft to reach the required altitude are shown graphically in Attachment 3. There are two flight paths provided depending on prevailing wind conditions. The altitude required to be reached by the aircraft before parachutist jump is between 12,000 and 14,000ft.

Summary

The key issue associated with the development is noise from the aircraft used to transport parachutists to the drop zone. A number of other issues have been raised in submissions received as part of the public notification of the development application. These issues include traffic, parachutist safety and permissibility.

These issues are discussed throughout this report.

VARIATIONS TO POLICIES

There are no variations to Council policies

HISTORY

The site was originally cleared for cattle grazing and operated as the largest commercial dairy in the Wyong Shire until its closure in 1986. The site currently contains a sleep out building, manager's house and garage, oil milking bails, barn building, silos, feed stores and storage hayshed.

Pioneer Dairy was listed as an item of regional heritage significance under WLEP 1991, however, this has been reduced to an item of local heritage significance and the new WLEP 2013.

2.3 DA/853/2013 - Proposed Skydiving at 1897 South Tacoma Road Tuggerah (Pioneer Dairy) (contd)

The relevant approvals and applications on the subject land are as follows:

- RZ/6/2013 – Regional Sporting and recreation complex – under assessment.
- LA/2/2010- Construction of Wetland – Approved 25 February 2010.
- DA/884/2007 - Waterless Composting Toilet and amenities building – Approved 8 August 2007.
- DA/668/2008 – Proposed community nursery – Approved 23 September 2008.

DA/1680/2006 – Channel Rehabilitation and culvert wingwall construction – Approved 23 January 2007

SUBMISSIONS

Any submissions from the public.

The application was notified in accordance with DCP 2005 Chapter 70 - Notification of Development Proposals with 141 submissions being received. Of these submissions 47 were received in support and 92 were received objecting to the proposal including three petitions, one with 89 signatures.

The general reasons for support of the proposal are included below: -

- Good use of pioneer dairy;
- Fun to watch;
- Not noisy;
- Economic benefits;
- Increased tourism;
- Environmentally friendly;
- Generating jobs;
- Source of income for Pioneer Dairy; and
- Unobtrusive activity.

The general issues raised in relation to the proposal are included below:-

- Permissibility of the use in the 1(c) Non Urban Constrained Lands zone.

The use of the site for parachute landing and ancillary skydive functions is consistent with the definition of a *Recreation area* under WLEP 1991. A *recreation area* is further defined as:

Recreation area means:

- a children's playground,*
- an area used for sporting activities and sporting facilities,*
- an area used by the Council to provide recreation for the physical, cultural or intellectual welfare of the community, or*
- an area used by a body of persons associated for the purposes of the physical, cultural or intellectual welfare of the community to provide recreation for those*

persons, but does not include a building or place elsewhere specifically defined in this clause.

It is considered that the skydiving activity is a permissible use within the 1(c) Non Urban Constrained Lands zone.

It should be noted that the application was lodged under WLEP 1991. WLEP 2013 was gazetted on 23 December 2013 and now is the relevant planning instrument for Wyong Shire, however, the new WLEP 2013 has a saving provision clause to enable development applications lodged under WLEP 1991 to be determined under that plan and not the new WLEP 2013.

- Noise from aircraft

Concern has been raised in a number of submissions to the development application as well as in complaints lodged by residents about the noise from the aircraft used to transport the parachutists.

It appears that the primary noise impact is from the aircraft as it climbs to altitude. The investigation of aircraft noise is primarily a function of Air Services Australia and the authority is responsible for investigating any complaints relating to noise from aircraft in flight. However in this case, the noise from the aircraft has a direct link to the proposed land use and therefore requires consideration.

At the request of Council staff, a noise assessment, Report No.13390, prepared by Wilkinson Murray and dated December 2013 was provided by the applicant. A peer review of this assessment was provided by the acoustic consultant Renzo Tonin engaged by Council staff. Both noise assessments are provided as Attachments 3 and 4.

The issue of noise will be further addressed later in the report.

Other issues raised include:

- *The skydive business is operating illegally.*

The skydiving operation has commenced operation prior to the determination of the development application. A development application was received by Council in October 2013.

The skydive operation is currently the subject of court proceedings which have been held over until 7 February 2014.

- *Increased traffic on South Tacoma Road specifically Wyong River bridge and increased traffic noise.*

The applicant has identified that the skydive operation will increase traffic along South Tacoma Road by 12 vehicular movements per hour. At an average of 1 additional vehicular movement per every 5 minutes, the anticipated increase in traffic and traffic noise is considered insignificant.

- *Concern operator will not comply with operating hours.*

2.3 DA/853/2013 - Proposed Skydiving at 1897 South Tacoma Road Tuggerah (Pioneer Dairy) (contd)

Should Council grant development consent for the use, conditions of consent will be imposed to limit the hours of operation of the business. Council staff will have the power to enforce the conditions imposed on a consent.

- *Devaluation of property.*

There are a number of factors that contribute to the value of property prices, all of which cannot be examined in isolation. In addition, the impact of a development on the value of surrounding property prices is not a consideration under s79C of the Environmental Planning and Assessment Act, 1979, and for this reason does not form part of this assessment.

- *Drop zone located in proximity to high voltage transmission line, railway line and Pacific Highway which may have safety issues.*

The drop zone proposed for parachutists is a cleared portion of the site with dimensions of 20 metres by 50 metres. The setbacks to the drop zone from nearby infrastructure are:

Electricity transmission line – Approximately 200m

Northern Railway line – Approximately 300m

Pacific highway – Approximately 330m

Whether or not the above setbacks provide a reasonable buffer for safe landing is unknown and best determined by the regulators of the parachuting industry and air safety industry. The activity of skydiving poses a number of risks for participants none of which are regulated by local government. The Australian Parachute Federation is the organisation which controls skydiving and parachuting at most civilian operations in Australia. With the approval of the Civil Aviation Safety Authority (CASA) it sets the standards of operation, conducts competitions, issues licences and instructor ratings, conducts exams and distributes various publications to keep its members informed of current events and safety standards.

If approved, a condition of consent will be imposed to ensure that a risk assessment audit of the site is undertaken by the Applicant in association with the Australian Parachute Federation, CASA, Ausgrid and Transgrid within one month of the consent date. A report on the risk assessment and mitigation strategy is to be forwarded to Council for review.

- *Impact upon wildlife on site.*

The landing area, carpark and reception area located approximately 150m from the recently constructed wetlands. It is unlikely the operation of the skydive activity would cause any impact on any fauna or bird life within the wetland area.

- *Distracting traffic on Pacific Highway nearly causing accidents*

It is unlikely that the parachutists would be within the field of vision of a person driving a vehicle along the Pacific Highway and therefore the concern is not considered valid.

2.3 DA/853/2013 - Proposed Skydiving at 1897 South Tacoma Road Tuggerah (Pioneer Dairy) (contd)

- *Excessive hours of operation on weekends starting at 7am.*

The application proposes the first take off would be at 8am and the final take off at 5pm. Council has received a number of complaints about the existing skydive operation commencing at 7am and flights as late as 7pm. Should the application be approved, the following hours of operation for the skydive component are considered to be reasonable:

8am to 4pm – Monday to Saturday
9am to 4pm - Sunday

- *Does the proposal comply with the provisions of the Warnervale Airport (Restrictions) Act 1996*

The Warnervale Airport (Restrictions) Act 1996 enables a maximum of 88 takeoffs and landings every day from Warnervale airport between 6.30am and 10pm. The proposed skydiving operations would undertake 19 takeoffs and landings between 8am to 5pm, every day. The airport manager is responsible for ensuring that the number of takeoffs and lands does not exceed the provisions of this Act.

- *Proposed hours of operation in breach of time restrictions for weekends and public holidays as published by DECC.*

The NSW Environment Protection Authority (formerly DECC), provides advice on noise related issues and the regulation of offensive noise however does not include aircraft noise nor the times that aircraft can be operated. The Warnervale Airport restrictions act enables take off and landings between 6.30 and 10pm.

Airservices Australia is the regulatory authority for investigating aircraft noise complaints.

- *Applicant relying on heritage incentive provisions of LEP.*

It is considered that the proposed skydiving activity is a permissible use within the 1(c) Non Urban Constrained zone and does not need to rely on the heritage incentive provisions of the WLEP 1991 for permissibility.

- *Are suitable sewerage facilities connected.*

Concern was raised that there are not adequate amenities provided at the site. The subject site is connected to sewer and there are suitable toilet facilities on site.

- *The proposal is an entertainment facility*

The use of the site is considered to be a *recreation area*. The proposal is not considered to be an *entertainment area* as the primary use is not one of observing other people or things undertaking activities, whereas a *recreation area* involves active participation.

Any submission from public authorities.

There were no submissions from public authorities.

ECOLOGICALLY SUSTAINABLE PRINCIPLES

The proposal has been assessed having regard to ecologically sustainable development principles and is considered to be consistent with the principles.

The proposed development is considered to incorporate satisfactory stormwater, drainage and erosion control and the retention of vegetation where possible and is unlikely to have any significant adverse impacts on the environment and will not decrease environmental quality for future generations. The proposal does not result in the disturbance of any endangered flora or fauna habitats will not affect fluvial environments.

ASSESSMENT

Having regard to the matters for consideration detailed in Section 79C of the Environmental Planning and Assessment Act 1979 and other statutory requirements, Council's policies and Section 149 Certificate details, the assessment has identified the following key issues, which are elaborated upon for Council's information.

THE PROVISIONS OF RELEVANT INSTRUMENTS/PLANS/ POLICIES

a) Wyong Local Environmental Plan 1991

Permissibility

The subject site is zoned part 7(g) Wetlands Management, part 4(a) General Industrial, part 1(c) Non Urban Constrained Lands and part 5(b) Railways under the Wyong Local Environmental Plan 1991. The zoning map is provided in Attachment 4.

The part of the subject site to be utilised for the development is zoned 1(c) Non-Urban Constrained Lands under the provisions of the WLEP 1991. The proposed development is defined as a *recreation area (sporting activities and sporting facilities)* under the WLEP as follows:

Recreation area means:

- (a) *a children's playground,*
- (b) *an area used for sporting activities and sporting facilities,*
- (c) *an area used by the Council to provide recreation for the physical, cultural or intellectual welfare of the community, or*
- (d) *an area used by a body of persons associated for the purposes of the physical, cultural or intellectual welfare of the community to provide recreation for those persons, but (in the Table to clause 10) does not include a building or place elsewhere specifically defined in this clause.*

The development satisfies the definition of *recreation area*, as the development comprises a skydiving operation where parachutists will arrive at the site, undertake induction, be driven to Warnervale airport and will land on part of the site. As the proposal fits within the definition of *recreation area* it is not necessary to rely on the conservation incentive provisions of Clause 36 of the LEP.

Objectives

The objectives of the 1(c) Non-Urban Constrained Lands zone are as follows:

- (a) *to limit the development of land that may be affected by flooding, coastal erosion, slope, and other physical constraints (including lack of adequate water supply and sewerage), and*
- (b) *to prohibit development that is likely to prejudice the present and future environmental quality of the land, and*
- (c) *to ensure that development is carried out in a manner that minimises risks from natural hazards and does not detract from the scenic quality.*

The proposed skydiving operation is considered to comply with the objectives of the 1(c) Non-Urban Constrained Lands zone.

Development of heritage items

There are a number of heritage items identified on the site that signify the historic dairy use and include the sleep out, managers house, silos, old milking bails, barn and feed stalls. As the development does not involve the use of these items, it is considered that their heritage value will not be compromised.

Notwithstanding the above, Council is required to consider the provisions of the WLEP 2013 in the assessment of this application. An assessment of the proposal under WLEP 2013 is provided below.

Permissibility

Wyong Local Environment Plan 2013

The subject land is zoned part E2 Environmental Conservation and part E3 Environmental Management Zone under the provisions of WLEP 2013.

That part of the subject site to be utilised for the development is zoned E3 Environmental Management Zone under the provisions of the LEP 2013. The proposed development is defined as a *recreation area* under the WLEP 2013 as follows:

- Recreation area*** means a place used for outdoor recreation that is normally open to the public,
and includes:
- (a) *a children's playground, or*
 - (b) *an area used for community sporting activities, or*
 - (c) *a public park, reserve or garden or the like,*
and any ancillary buildings, but does not include a recreation facility (indoor), recreation facility (major) or recreation facility (outdoor).

The development satisfies the definition of recreation area, as the development will be open to the public and comprises a skydiving operation (or sporting activity) where parachutists will arrive at the site, undertake induction, be driven to Warnervale airport and will land on part of the site.

Objectives

The objectives of the E3 Environmental Management Zone are: -

- *To protect, manage and restore areas with special ecological, scientific, cultural or aesthetic values.*
- *To provide for a limited range of development that does not have an adverse effect on those values.*

The proposal complies with the objectives of the E3 Environmental Management.

b) Relevant SEPPs

SEPP 71 – Coastal Protection

State Environmental Planning Policy (SEPP) No.71 – Coastal Protection applies to the development as the subject site is located within the coastal protection zone and within 100m of a coastal lake or sensitive coastal location. Clause 8 'Matters for Consideration' is to be taken into consideration by the consent authority when it determines a development application to carry out development on land to which SEPP 71 applies. The use of the site for the proposed development will not compromise the protection of the coastal zone.

c) Relevant DCPs

Wyong Development Control Plan 2013

The following is an assessment of the proposal's compliance with the numerical standards in the Development Control Plan.

Chapter 61 – Parking and Access

The carparking requirements for a recreation area are not nominated in DCP 61. The applicant has identified that a total of 59 vehicles could be accommodated in the designated parking area of the site. Considering the applicant proposes a maximum of 16 parachute jumps per hour, the provision of 59 car parking spaces is considered more than adequate.

Chapter 70 – Notification of Development Proposals

Notification was carried out in accordance Chapter 70. The submissions received have been addressed previously in the report.

d) Relevant regulations

There are no matters prescribed by the Regulations that apply to this development.

THE LIKELY IMPACTS OF THE DEVELOPMENT

Noise

Council has received a numbers of submissions in regards to both the potential and actual noise generated from the Skydive operations. As a result of these submissions, Council staff requested the applicant provide an acoustical noise assessment for the proposal.

The applicant provided a noise assessment report in support of the proposed skydive operation. The report concluded that the noise measurements from the Skydive operations met appropriate noise standards. Further the report indicates that where possible noise exceedences occur, flight paths can be adjusted to achieve compliance.

Council staff engaged an independent acoustic consultant to peer review the applicant's noise assessment report. The peer review provided the following recommendations:

- 1 *"The applicant shall prepare a detailed Fly Neighbourly Advice (FNA) management plan describing the type of aircraft to be used, the runways to be used, the flight schedules, the flight path, throttle and altitude settings and the influence of weather conditions on flight operations to ensure external noise levels associated with flight operations do not exceed the limit prescribed in these conditions. The FNA shall be submitted to the Office of Airspace Regulation and Council for approval.*
- 2 *The applicant shall use and operate the premises in accordance with the approved FNA.*
- 3 *The maximum external noise level associated with flight operations shall not exceed 60.
LA_{max}(slow) when measured at any residential premises in accordance with Australian Standard AS 2021-2000 Aircraft noise intrusion – Building siting and construction.*
- 4 *A suitably qualified acoustic engineer* shall be appointed within the first three months of the date on which the FNA is approved to undertake the following tasks:*
 - a. *Measure and report the maximum external noise level associated with flight operations and demonstrate compliance with the noise limit prescribed in these conditions.*
 - b. *Conduct noise measurements of all flights on the day of testing at the locations specified in these conditions without the knowledge of the applicant, manager or operator of the premises on a Saturday or Sunday from 9:00am to 5:00pm.*

Noise measurements shall only be taken when weather conditions permit valid noise measurements to be taken in accordance with guidelines published by the NSW Environment Protection Authority.

- d. *Observe and record wherever possible the flight path of each aircraft and assess compliance with that approved in the FNA.*

- e. *Provide a full detailed report documenting the results and submit to Council within 21 days of the testing.*

**A suitably qualified acoustic engineer shall have qualifications not less than that required for membership of the AAAC – Association of Australian Acoustical Consultants.*

5. *The following locations shall be tested with a minimum of two valid noise measurements at each location:*
 - a. *No 3 The Knoll, Jiliby*
 - b. *No. 10 Weaver Crescent, Watanobbi*
 - c. *No 13-15 Hope St, Wyong*
 - d. *No 20 Kensington Place, Mardi*
 - e. *Riverview drive, Wyong*
 - f. *Pinto Way, Wadalba*
6. *If noise levels exceed the limit prescribed in these conditions, the applicant shall determine the cause of the exceedance and modify the FNA. The revised FNA shall be submitted to the Office of Airspace Regulation and Council for approval and further noise measurements shall be undertaken as prescribed in these conditions until it can be demonstrated that the noise limit specified in these conditions can be complied with.*
7. *The applicant shall supply to Council and advertise on their website a telephone number for lodgement of complaints.*
 - a. *The telephone number shall be answered promptly by a responsible person (and not a recorded message) continuously in the approved hours of operation.*
 - b. *Each reasonably valid complaint shall be recorded and investigated by the applicant and the likely cause of the complaint and any action taken shall be documented.*
 - c. *Telephone complaint rolls and investigation reports shall be maintained by the applicant for a period of 5 years and supplied to Council upon request”*

The actual impact of the noise has not yet fully been determined due to the limited testing undertaken. It is therefore considered appropriate that should Council determine to grant consent for the operation of the skydive business, that a time limited consent of 6 months be initially granted. This will enable enough time for the recommended conditions of consent outlined in the peer review report to be actioned by the applicant and for Council staff to fully gauge the noise impacts. It will also allow the applicant to work collaboratively with the community to resolve any potential noise impacts and strengthen any future prospects of an extended consent.

The applicant can apply in the future to extend the consent via an application to modify the consent under s96 of the *Environmental Planning and Assessment Act, 1979*. Any extension to a consent would however be subject to the applicant demonstrating compliance with the conditions of consent.

Economic benefits

The applicant has stated that the proposed skydiving operations will employ approximately 25-50 people as well as having a multiplier effect for Wyong Local Government Area with potentially 10,000 to 15,000 participants annually to undertake skydiving and visit this area. It is considered that the skydive business could be a potential tourism for Wyong Shire.

All other relevant issues regarding the likely impacts of the development have been discussed throughout this report. In general, it is considered that the property is suitable for a sky dive use subject to an initial limited consent period and the imposition of conditions of consent.

THE SUITABILITY OF THE SITE FOR THE DEVELOPMENT (s79C(1)(c)):

A review of Council's land information mapping identifies the following constraints:

Bushfire prone

There is no construction work proposed for the operation of the skydive activity. The area designated to be used for the operation of the skydive activity is primarily cleared grassland area with the use of an existing shed for the reception, amenities and parachute packing. It is therefore considered that bushfire would not pose a risk to the operation of the skydive activity.

Flood prone

There are no construction works proposed therefore the impacts of flood are negligible.

Coastal protection zone and within 100m of a sensitive coastal location

There are no construction works proposed therefore no impact on the Coastal protection zone.

Acid sulphate soils

There are no construction works proposed therefore no impact on acid sulphate soils.

There are no other constraints that would render the site unsuitable for the proposed development.

ANY SUBMISSION MADE IN ACCORDANCE WITH THIS ACT OR REGULATIONS

The submissions have been addressed previously in the report.

THE PUBLIC INTEREST

There are a number of aspects to the proposal that affect the public interest that could provide both positive and negative impacts. The positive impact of the proposal is in terms of tourism potential, employment and promotion of Wyong Shire. However, the noise associated with the proposal has the potential to affect residents from a wide number of surrounding suburbs and also needs to be considered. On balance, it is considered that the wider public interest would be served by approving the proposal for a limited period subject to appropriate conditions of consent. This will allow the activity to be monitored for a 6 month period and the actual impact of the operations to be more appropriately gauged.

OTHER MATTERS FOR CONSIDERATION

Warnervale Airport (Restrictions) Act 1996

Under Clause 6 of the Warnervale Airport (Restrictions) Act 1996, the total number of take offs and landings of aircraft at Warnervale airport between 6.30am and 10pm is eighty-eight (88).

The proposed skydiving operations would propose 19 takeoffs and landings between 8am to 5pm, every day.

The airport manager/Council is responsible for ensuring that the number of takeoffs and lands does not exceed the provisions of this Act.

Plan of Management

Tuggerah Lakes Reserve (Pioneer Dairy)

The Pioneer Dairy site is currently Crown Land designated as a reserve. A Plan of Management has been prepared for the site which outlines the appropriate uses for the site and the proposed future use of the reserve.

The plan allows for licences to be granted for long term, intermittent and short term use of the reserve. The Trust must take into consideration that the use complies with the requirements of the Crown Lands Act, and the following matters:

Requirements for licences & leases	Proposal
Whether the use/activity is in the public interest.	The proposed development will provide a tourism attraction for visitors to and residents of Wyong Shire. If the aircraft associated with the skydive activity is operated without generating offensive noise to surrounding suburbs, the development is considered to be in the public interest.
Whether the use/activity would cause any significant detrimental impact to the land or local community.	The proposal should not cause impact on the land as the activity is contained and uses techniques to minimise water consumption. The structures associated with the development are also able to be removed when required.
What the appropriate limit on maximum numbers in attendance is to be.	The number of volunteers attending the site on any given day will be small.

The plan of management also includes an Action Plan which outlines the means of achieving the objectives and how performance in their achievement can be measured. The recommendations are a result of the previous discussion of constraints and opportunities detailed in the management framework of the plan. The application has been assessed against the action plan and has been found to be consistent with the requirements.

Section 94 Contributions

There are no Section 94 contributions applicable to the development.

CONCLUSION

The proposal has been assessed using the heads of consideration in Section 79C(1) of the Environmental Planning and Assessment Act 1979. It is generally considered the proposed development is suitable for approval for a period of 6 months subject to conditions.

A number of issues have been identified, however, the primary concern relates to the potential impact of noise generated by the aircraft from take-off to reaching the required altitude. Notwithstanding the limited consent period and specific conditions relating to aircraft noise are considered a reasonable approach to manage and gauge the potential noise issues.

Accordingly, Development Application No 853/2013 is recommended for approval subject to the conditions listed in this report.

ATTACHMENTS

- | | | |
|---|-------------------------------------|-----------|
| 1 | Aerial Photo | D05184911 |
| 2 | Site Plan and Development Area | D05184960 |
| 3 | Proposed Flight Paths | D05184961 |
| 4 | Zoning Maps | D05184963 |
| 5 | Applicant's Noise Report | D05350921 |
| 6 | Peer Review Noise Assessment Report | D05350636 |
| 7 | Draft Conditions of Consent | D05173176 |

ACOUSTICS AND AIR

SKYDIVE AUSTRALIA
CENTRAL COAST AIRCRAFT
NOISE ASSESSMENT

REPORT NO. 13390
VERSION A

DECEMBER 2013

PREPARED FOR

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SKYDIVE AUSTRALIA
CENTRAL COAST AIRCRAFT
NOISE ASSESSMENT

REPORT NO. 13390 VERSION A

DOCUMENT CONTROL

Version	Status	Date	Prepared By	Reviewed By
A	Final	24 th December 2013	Luke Warren	Brian Clarke

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ACOUSTICS AND AIR

SKYDIVE AUSTRALIA
CENTRAL COAST AIRCRAFT
NOISE ASSESSMENT

REPORT NO. 13390 VERSION A

TABLE OF CONTENTS

	Page
GLOSSARY OF ACOUSTIC TERMS	
1 INTRODUCTION	1
2 SITE DESCRIPTION	2
2.1 Measurement Locations	2
3 ASSESSMENT NOISE CRITERIA	7
4 MEASURED NOISE LEVELS	8
4.1 Methodology	8
4.1.1 Attended Noise Measurements	8
4.1.2 Attended Noise Measurements	8
4.2 Results of Noise Measurements	8
5 DISCUSSION OF RESULTS	10
6 CONCLUSION	11

SKYDIVE AUSTRALIA
CENTRAL COAST AIRCRAFT
NOISE ASSESSMENT

REPORT NO. 13390 VERSION A

GLOSSARY OF ACOUSTIC TERMS

Most environments are affected by environmental noise which continuously varies, largely as a result of road traffic. To describe the overall noise environment, a number of noise descriptors have been developed and these involve statistical and other analysis of the varying noise over sampling periods, typically taken as 15 minutes. These descriptors, which are demonstrated in the graph below, are here defined.

Maximum Noise Level (L_{Amax}) – The maximum noise level over a sample period is the maximum level, measured on fast response, during the sample period.

L_{A1} – The L_{A1} level is the noise level which is exceeded for 1% of the sample period. During the sample period, the noise level is below the L_{A1} level for 99% of the time.

L_{A10} – The L_{A10} level is the noise level which is exceeded for 10% of the sample period. During the sample period, the noise level is below the L_{A10} level for 90% of the time. The L_{A10} is a common noise descriptor for environmental noise and road traffic noise.

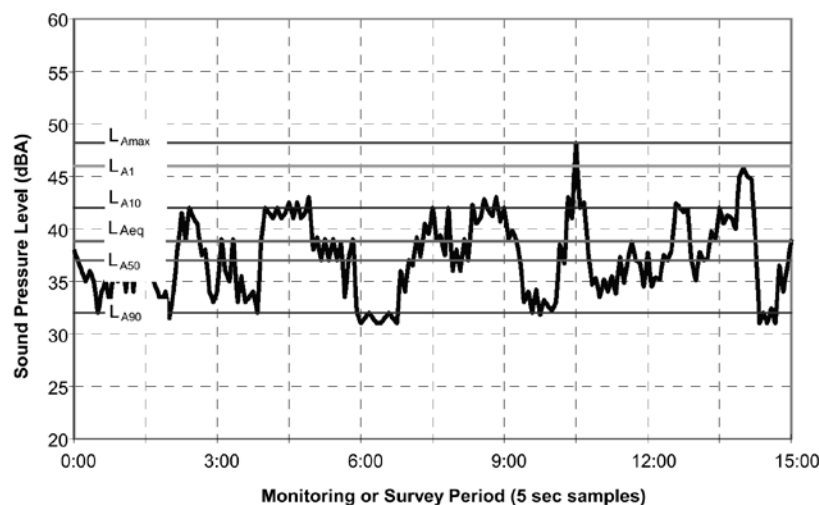
L_{A90} – The L_{A90} level is the noise level which is exceeded for 90% of the sample period. During the sample period, the noise level is below the L_{A90} level for 10% of the time. This measure is commonly referred to as the background noise level.

L_{Aeq} – The equivalent continuous sound level (L_{Aeq}) is the energy average of the varying noise over the sample period and is equivalent to the level of a constant noise which contains the same energy as the varying noise environment. This measure is also a common measure of environmental noise and road traffic noise.

ABL – The Assessment Background Level is the single figure background level representing each assessment period (daytime, evening and night time) for each day. It is determined by calculating the 10th percentile (lowest 10th percent) background level (L_{A90}) for each period.

RBL – The Rating Background Level for each period is the median value of the ABL values for the period over all of the days measured. There is therefore an RBL value for each period – daytime, evening and night time.

Typical Graph of Sound Pressure Level vs Time



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SKYDIVE AUSTRALIA
CENTRAL COAST AIRCRAFT
NOISE ASSESSMENT

PAGE 1

REPORT NO. 13390 VERSION A

1 INTRODUCTION

Wilkinson Murray has conducted measurements of aircraft noise related to the sky diving operations of Skydive Australia, around the Warnervale Aerodrome and Tuggerah drop zone on Tuesday 17th December 2013. This testing has been conducted as a requirement of Wyong Council following complaints about aircraft flyover noise

Both attended and unattended measurements were undertaken between 8:30am and 2pm, at a number of locations surrounding the airport and drop zone, to determine the noise levels associated with these operations in residential areas.

Skydive Australia began operating a Cessna 208 Caravan aircraft out of Warnervale Aerodrome on Saturday 7th December 2013. During the survey period, Skydive Australia operated five flights. This is consistent with the average number of daily flights since they began operating the Cessna 208 aircraft.

2 SITE DESCRIPTION

Skydive Australia operates out of Warnervale Aerodrome, with a drop zone at Pioneer Dairy 1897 South Tacoma Rd, Tuggerah. Shown below in Figure 2.1;

Figure 2.1: Location of Drop Zone.



2.1 Measurement Locations

Noise measurements of aircraft flyovers were conducted at a number of representative receivers in the area surrounding the Warnervale Aerodrome and Pioneer Dairy drop zone to determine the potential noise impact of Skydive Australia aircraft movements on residential properties.

Attended measurements were taken within the following areas;

- Jilliby Residential Area
- Watanobbi Residential Area
- Pioneer Dairy (Dropzone)
- Chittaway Bay Residential Area

Unattended noise loggers were installed within the following residential areas;

- Mardi

SKYDIVE AUSTRALIA
CENTRAL COAST AIRCRAFT
NOISE ASSESSMENT

PAGE 3

REPORT NO. 13390 VERSION A

- Tuggerah

The selected locations were determined based on review of locations of noise complaints about aircraft flyovers.

The measurement locations listed above are shown on the maps below.

Figure 2.2 Jiliby (Attended Monitoring) – 3 The Knoll, Jiliby.



Figure 2.3 Watanobbi (Attended Monitoring) – 10 Weaver Crescent, Watanobbi.



Figure 2.3 Pioneer Dairy Drop Zone (Attended Monitoring) - 1897 South Tacoma Rd, Tuggerah.



Figure 2.4 Chittaway Bay (Attended Monitoring) - 3 Thomas Walker Drive, Chittaway Bay.



Figure 2.5 Mardi (Unattended Monitoring) – Opposite 11 Joseph Esplanade, Mardi.



SKYDIVE AUSTRALIA
CENTRAL COAST AIRCRAFT
NOISE ASSESSMENT

PAGE 6

REPORT NO. 13390 VERSION A

Figure 2.6 Tuggerah (Unattended Monitoring) - South Tacoma Rd, Tuggerah.



3 ASSESSMENT NOISE CRITERIA

It is understood that council has required assessment of aircraft flyover noise with respect to the recommended noise levels contained in *AS 2107-2000 - Acoustics - Recommended design sound levels and reverberation times for building interiors AS2107:2000*.

However AS2017 is applicable for steady state or quasi-steady state sound. Further the standard specifically states that

The standard is not intended for either the assessment or prescription of acceptable level from transient or variable noise sources such as -

- i. Aircraft noise (see AS2021 [NZS 6805])*

Therefore assessment with respect to AS2021:2000 Acoustics—Aircraft noise intrusion—Building siting and construction. This standard specifies maximum internal noise levels for residential receivers located within the Australian Noise Exposure Forecast (ANEF) 20 contour. Outside this contour no noise criteria is applied.

A review of the ANEF noise contours for Warnervale indicated that none of the subject residential areas are within the ANEF 20 contours. Therefore a strict interpretation of the standard means that no criteria are applicable. However for the purposes of this assessment we have adopted the recommended levels of the standard which are summarised as follows in Table 3-1.

Table 3-1 AS 2021:2000 Allowable Noise Levels $L_{A_{Max}(slow)}$ – (dBA)

Building Type and Activity	Indoor Design Sound Level (dBA)*
Sleeping areas	50
Other habitable spaces (e.g. Living rooms)	55
Bathrooms, toilets, laundries, kitchens	60

*The Standards states that windows and doors are assumed shut.

Allowing for a 10 and 20 dBA noise reduction across an open and closed window respectively the following external noise objectives have been derived. It is also noted that there are no aircraft movements in the night period associated with Skydive Australia operations therefore all rooms in dwelling have been classified under the Habitable category.

Table 3-2 External Noise Objectives based on AS2021:2000 - $L_{A_{Max}(slow)}$ – (dBA)

Building Type and Activity	External Design Sound Level (dBA)*	
	Windows Open	Windows Closed
Habitable spaces	65	75
Bathrooms, toilets, laundries, kitchens	70	80

4 MEASURED NOISE LEVELS

4.1 Methodology

Noise measurements of maximum aircraft level (slow weighting) were conducted using both attended and unattended methods as follows.

4.1.1 Attended Noise Measurements

Attended monitoring was conducted using a Bruel and Kjaer Type 2260 Sound Level Meter. This sound level meter conforms to Australian Standard 1259 *Acoustics – Sound Level Meters* as a Type 1 Precision Sound Level Meter which has accuracy suitable for field and laboratory use. The A-Weighting filter of the meter was selected and the time weighting was set to "Slow". The calibration of the meter was checked before and after the measurements and no significant drift was noted.

L_{Amax} slow weighted noise levels were measured when the Skydive Australia aircraft flyovers occurred.

4.1.2 Unattended Noise Measurements

The noise monitoring equipment used for the unattended measurements consisted of an ARL Ngarra noise logger that continuously monitors at 100ms intervals and is also capable of recording high resolution audio files. This data from the two noise loggers was analysed back in the office to determine the L_{ASmax} levels from the Skydive Australia aircraft flyover of the unattended sites.

The logger has been calibrated at a NATA approved laboratory and has a current certificate. Further to this, the equipment calibration was checked before and after the survey and no significant drift occurred.

4.2 Results of Noise Measurements

The following Tables 4.1 and 4.2 detail the results of noise measurements of the five Skydive Australia flights that occurred on the day of measurements.

Table 4.1 Attended Noise Monitoring Results

Location	Time	Flight	Runway	L_{ASmax}
Jilliby	8:46:22am	1	02	63dBA
Watanobbi	9:51:55am	2	20	52dBA
Pioneer Dairy (Drop zone) Initial Approach from West	11:10:03am	3	20	49dBA
Pioneer Dairy (Drop zone) at drop height between 12000-14000ft	11:14:00am	3	20	43dBA
Chittaway Bay	12:20:00am	4	20	43dBA
Pioneer Dairy (Drop zone) At drop height between 12000-14000ft	1:05:25pm	5	20	42dBA

SKYDIVE AUSTRALIA
CENTRAL COAST AIRCRAFT
NOISE ASSESSMENT

PAGE 9

REPORT NO. 13390 VERSION A

Table 4.2 Unattended Noise Monitoring Results

Time	Flight	Runway	Mardi L _{ASmax}	South Tacoma Rd
				L _{ASmax}
8:46:22am	1	02	46 dBA	47 dBA
9:51:55am	2	20	47dBA	48 dBA
11:10:03am	3	20	Inaudible*	48 dBA
12:20:00am	4	20	Inaudible *	43 dBA
1:05:25pm	5	20	Inaudible *	Inaudible*

*Inaudible above the ambient noise level, which was affected by cicadas.

5 DISCUSSION OF RESULTS

A review of the results of noise measurements indicates that the noise levels associated with Skydive Australia aircraft movements are mostly below 50 dBA. Maximum noise levels were measured at Jilliby where a noise level of 63 dBA was measured. All measurements comply with the "windows open" noise objective for habitable rooms of 65 dBA.

It is worth noting that the 5 flights a day are typical of normal Skydive Australia operations when weather conditions permit. It is understood when weather is inclement operations can be suspended for several days. Further flights over Jilliby will not occur when runway 20 is in use.

During the survey period various general aviation aircraft were observed flying within the vicinity of the drop zone at a low much lower altitude than the Skydive Australia aircraft. These aircraft produced maximum noise levels of up to L_{A5max} 79dBA, and were observed to be regularly flying in and around the survey area.

Therefore, assuming that complaints are generated to aircraft noise levels, it is likely that the complaints are generated by other General Aviation associated with Warnervale Airport.

6 CONCLUSION

Wilkinson Murray has conducted measurements of aircraft noise related to the sky diving operations of Skydive Australia, around the Warnervale Aerodrome and Tuggerah drop zone on Tuesday 17th December 2013. This testing has been conducted as a requirement of Wyong Council following complaints about aircraft flyover noise.

Aircraft noise objectives have been established for daytime operations of aircraft flyovers at residences based on AS2021:2000. A review of the results of Skydive Australia noise measurements indicates that compliance with established noise criteria has been demonstrated.

Therefore, based on these findings, the operations Skydive Australia, from a noise perspective, meet appropriate noise standards. It is worth noting that other aircraft that generate higher noise levels at residences may be the source of resident's noise complaints.



6 January 2014

TG586-01F03 Review of Wilkinson Murray Noise Assessment (r0)

Wyong Shire Council
 Mr Brian Glendenning
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From: Renzo Tonin [rtonin@renzotonin.com.au]

Wyong Shire Council v Skydive Australia | L&EC Proceedings No 40934/13 - Review of Wilkinson Murray Noise Assessment Report, December 2013

1 Introduction

This technical memo is a review of Report No 13390 Version A dated December 2013 "Skydive Australia Central Coast - Aircraft Noise Assessment" prepared by Wilkinson Murray Pty Ltd ("**Wilkinson Murray Report**") on behalf of Australia Skydive Group ("**Skydive**").

Warnervale Aerodrome has a single 970m long runway, designated Runway 02/20. Skydive Australia commenced operating a public sky diving operation at the Pioneer Dairy site situated at 1897 South Tacoma Road, Tuggerah in the State of NSW (the "**dropzone**") in November 2013 using a Cessna 206, a single engine six seater fixed wing aircraft.¹ The hours of operation are 9:00am to 5:00pm seven days a week.²

There are numerous and large suburban residential areas in the vicinity of both Warnervale Aerodrome and the dropzone including Mardi, Wyong, Watanobbi, Wadalba and Jilliby from which complaints of excessive aircraft noise associated with Skydive have originated.

On the 7th December 2013, Skydive ceased use of the Cessna 206 and began operating a Cessna 208 Caravan, a single turboprop engine aircraft typically seating nine passengers. The Cessna 208 is reported to be a quieter aircraft (according to aircraft noise certification documents, a standard Cessna 208 is approximately 4dB(A) quieter on take-off compared with a standard Cessna 206).^{3 4}

¹ The Telegraph Central Coast, 29 November 2013

² www.skydivesydneycity.com.au

³ European Aviation Safety Agency report TCDSN IMA.053 Cessna Model 206



Sydney Melbourne Brisbane Kuwait



The Wilkinson Murray Report addresses noise impact from operations of the Cessna 208 Caravan aircraft.

2 Noise Measurement Locations

In the introduction section of the Wilkinson Murray Report and in the discussion of results, the report states that 5 flights a day are typical of Skydive operations. This may have been the observation on the day of noise measurements, being Tuesday 17th December 2013, but would not be true of weekends when flights have been observed to occur at approximately one-half hourly intervals equating to 16 or 17 per day for the advertised operating hours. This may also be representative of other peak time periods such as during school holidays.

As described in section 2 of the Wilkinson Murray Report, there were six locations selected for noise monitoring which, with the exception of Wadalba, generally encompass the residential area potentially affected by noise from Skydive operations.

The site selected at Mardi is unsuitable because of its close proximity to bushland where the sound of cicadas affected the noise measurements. This is evident in Table 4.2 in which many of the noise measurements were rendered invalid.

3 Applicable Noise Criteria

Noise criteria are presented in section 3 of the Wilkinson Murray Report. This section refers to Australian Standard *AS 2021-2000 Aircraft noise intrusion – Building siting and construction* which is used by State and Local Governments when developing land use planning advice in areas potentially affected by aircraft noise. The Wyong Local Environmental Plan 1991 refers to that standard for any new residential development.

The Wilkinson Murray Report states that this standard would not be applicable to assessing noise in the existing residential areas and therefore "*no criteria are applicable*". Whilst it is true that the standard is only intended to address requirements for building construction, there are acceptability criteria in the standard which are useful in assessing noise from Skydive operations, in particular the following table:

⁴ European Aviation Safety Agency report TCDSN EASA.IM.A.226 Cessna Model 208

Table 1 Indoor Design Sound Levels* for Determination of Aircraft Noise Reduction (Table 3.3 AS 2021)

Building type and activity	Indoor design sound level, dB(A)
<i>Houses, home units, flats, caravan parks</i>	
Sleeping areas, dedicated lounges	50
Other habitable spaces	55
Bathrooms, toilets, laundries	60

* These indoor design sound levels are not intended to be used for measurement of adequacy of construction. For measurement of the adequacy of construction against aircraft noise intrusion see Appendix C.

In this table the dB(A) levels shown are defined as:

The arithmetic average of the maximum sound levels occurring during a series of flyovers by a specific aircraft type and load conditions measured in A-weighted decibels (dB(A)) using the S time-weighting of a sound level meter.

The following pertinent notes appear below the table:

Note 1: The indoor design sound levels in Column 2 are hypothesized values based on Australian experience. A design sound level is the maximum level (dB(A)) from an aircraft flyover which, when heard inside a building by the average listener, will be judged as not intrusive or annoying by that listener while carrying out the specified activity. Owing to the variability of subjective responses to aircraft noise, these figures will not provide sufficiently low interior noise levels for occupants who have a particular sensitivity to aircraft noise.

Note 3: The indoor design sound levels are intended for the sole purpose of designing adequate construction against aircraft noise intrusion and are not intended to be used for assessing the effects of noise. Land use planning authorities may have their own internal noise level requirements which may be used in place of the levels above.

With respect to Note 3, whilst it is the intent of the standard to limit its scope to planning matters, there is no reason why the noise levels in the second column of Table 1 could not be used to assess the acceptability of noise from specific aircraft operations such as from Skydive.

The Wilkinson Murray Report at page 7 also adopts the recommended levels in the standard however, as there is an error in Table 3-1 of that report, the recommended objectives in Table 3-2 are also in error.

Firstly, in respect of Table 3-1, the first row in the table should be "*Sleeping areas, dedicated lounges*" and not "*Sleeping areas*". The description "*dedicated lounges*" is interpreted to refer to a room for relaxation which is not used for any other purpose. It could be a reading room, study, an enclosed lounge room, wintergarden, sun room or the like. A mixed dining/living room/kitchen commonly found in modern dwellings would not fit that description but would instead fall under the category "*other habitable spaces*".

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6 JANUARY 2014

The second row in Table 3-2 should be "*Other habitable spaces*" and not "*Other habitable spaces (e.g. Living rooms)*". The third row should be "*Bathrooms, toilets, laundries*" and not "*Bathrooms, toilets, laundries, kitchens*".

The consequence of these errors is that the external noise objectives in Table 3-2 are too high. For example, there is no category for "*dedicated lounges*" for which the applicable sound level objective would be 50dB(A). The applicable sound level objective for kitchens should be 55dB(A) not 60dB(A).

It is not practical to measure noise levels indoors. However, if the noise reduction from outside to inside a dwelling is assumed to be a constant, this may be used to convert the inside noise levels to an equivalent outside noise level. With windows open, a reduction from outside to inside of 10dB(A) is adopted in the Wilkinson Murray Report, this being a commonly used value.

Therefore, the outside noise levels which correspond to the indoor design sound levels in the table above are:

Table 2 External Noise Objectives Based on AS 2021:2000

Building type and activity	External Sound Level L _{Amax} (slow)
<i>Houses, home units, flats, caravan parks</i>	
Dedicated lounges	60
Other habitable spaces	65
Bathrooms, toilets, laundries	70

In this table, the category for sleeping areas is not shown as Skydive operations only occur in the daytime.

In respect of the "*windows closed*" criterion adopted in Table 3-2 of the Wilkinson Murray Report, this is inappropriate because it would require houses to be fitted with fresh air ventilation plant which may be found in some apartment buildings but uncommon in houses.

Table 2 above should therefore supersede Table 3-2 of the Wilkinson Murray Report.

4 Measured Noise Levels

The measured noise levels of five flights are shown in Tables 4.1 and 4.2 of the Wilkinson Murray Report. As previously stated, the results for Mardi are unacceptable because of the poor choice of monitoring location.

With the exception of the first flight using runway 02 (takeoff to the north), noise levels comply with the most stringent standard of 60 L_{Amax}(slow) in Table 2 above.

There is no description in the report of the flight path taken by aircraft or any other special precautions which may have been taken to fly quietly. Clearly, the flight path and climb details are relevant factors in controlling noise from aircraft. The report should have provided appropriate details to ensure that

Skydive operations can be conducted in a manner which will not cause noise levels to exceed the values reported.

5 Recommendations

The Civil Aviation Safety Authority ("CASA") provides advice on noise mitigation on its website "*Fly Neighbourly Advice - Information and Guidelines*". It states as follows:

A Fly Neighbourly Advice (FNA) is a voluntary code of practice established between aircraft operators and communities or authorities that have an interest in reducing the disturbance caused by aircraft within a particular area. FNAs were introduced in Australia in 1994 as a tool to reduce the effects of aviation on environmentally sensitive areas within uncontrolled airspace. The development of an FNA is facilitated by the OAR [Office of Airspace Regulation].

An FNA might include recommended limitations on operating heights, the frequency of operations and areas of operation. The nature, scope and terms of the advice are matters for the stakeholders to determine. Arrangements for the monitoring, and adherence with, an FNA are also matters that may be addressed.

Accordingly, if Skydive operations are to be approved, it is recommend that the applicant prepare an FNA code of practice in accordance with CASA guidelines.

The following draft conditions are therefore recommended:

1. The applicant shall prepare a detailed Fly Neighbourly Advice (FNA) management plan describing the type of aircraft to be used, the runways to be used, the flight schedules, the flight path, throttle and altitude settings and the influence of weather conditions on flight operations to ensure external noise levels associated with flight operations do not exceed the limit prescribed in these conditions. The FNA shall be submitted to the Office of Airspace Regulation and Council for approval.
2. The applicant shall use and operate the premises in accordance with the approved FNA.
3. The maximum external noise level associated with flight operations shall not exceed 60 L_{Amax}(slow) when measured at any residential premises in accordance with Australian Standard AS 2021-2000 *Aircraft noise intrusion – Building siting and construction*.
4. A suitably qualified acoustic engineer* shall be appointed within the first three months of the date on which the FNA is approved to undertake the following tasks:
 - a. Measure and report the maximum external noise level associated with flight operations and demonstrate compliance with the noise limit prescribed in these conditions.
 - b. Conduct noise measurements of all flights on the day of testing at the locations specified in these conditions without the knowledge of the applicant, manager or operator of the premises on a Saturday or Sunday from 9:00am to 5:00pm.

- c. Noise measurements shall only be taken when weather conditions permit valid noise measurements to be taken in accordance with guidelines published by the NSW Environment Protection Authority.
- d. Observe and record wherever possible the flight path of each aircraft and assess compliance with that approved in the FNA.
- e. Provide a full detailed report documenting the results and submit to Council within 21 days of the testing.

*A suitably qualified acoustic engineer shall have qualifications not less than that required for membership of the AAAC – Association of Australian Acoustical Consultants.

5. The following locations shall be tested with a minimum of two valid noise measurements at each location:
 - a. No 3 The Knoll, Jiliby
 - b. No 10 Weaver Crescent, Watanobbi
 - c. No 13-15 Hope St, Wyong
 - d. No 20 Kensington Place, Mardi
 - e. Riverview drive, Wyong
 - f. Pinto Way, Wadalba
6. If noise levels exceed the limit prescribed in these conditions, the applicant shall determine the cause of the exceedence and modify the FNA. The revised FNA shall be submitted to the Office of Airspace Regulation and Council for approval and further noise measurements shall be undertaken as prescribed in these conditions until it can be demonstrated that the noise limit specified in these conditions can be complied with.
7. The applicant shall supply to Council and advertise on their website a telephone number for lodgement of complaints.
 - a. The telephone number shall be answered promptly by a responsible person (and not a recorded message) continuously in the approved hours of operation.
 - b. Each reasonably valid complaint shall be recorded and investigated by the applicant and the likely cause of the complaint and any action taken shall be documented.
 - c. Telephone complaint rolls and investigation reports shall be maintained by the applicant for a period of 5 years and supplied to Council upon request.

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6 JANUARY 2014

Document Control

Date	Revision History	Non-Issued Revision	Issued Revision	Prepared	Instructed	Authorised
6th Jan 2013	Issued to client		0	RT	RT	RT

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