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***Submission to the WSI Airspace and flight path
design - Draft EIS***

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Table of contents

Introduction

Section 1 Aircraft Noise

Section 2 Non-noise Health Impacts

Section 3 Threat to Aboriginal Cultural Heritage and Land-Sky Connection

Section 4 Impacts on Natural Environment

Section 5 Airspace Design Principles

Section 6 Economic Impact

Section 7 Specific Flightpaths

Introduction

Every Member of Parliament believes their area is special. When I consider the impact of the proposed flightpaths for Western Sydney International Airport (WSI) on the Blue Mountains and Hawkesbury regions that make up Macquarie, I am absolutely correct in arguing that this place is special:

- The Greater Blue Mountains World Heritage Area (GBMWA) is recognised internationally as a unique natural place, with outstanding universal values, including its eucalypt species and its diversity of habitats, plants and animals.
- As the only city in the world situated within a World Heritage Area - the next closest being the small town of Banff in Canada - the City of Blue Mountains holds special significance not only within Australia, but around the world.
- Unlike other cities, the ambient sound levels are so low that the dominant noise is frogs or cicadas.

This combination of features means that the areas of both people and nature within the GBMWA deserve particularly careful consideration when making decisions about flightpaths that will operate 24 hours a day, seven days a week.

I remain deeply concerned that the current plan does not provide that particularly careful consideration nor the protections that this area should receive.

This submission seeks to cover a broad range of concerns raised with me in response to the Draft EIS. There are many important issues and details that are not contained in this submission, and I urge careful consideration of every single submission made in response to the Draft EIS.

The community holds deep fears about the impact of the airport based on the information available in the Draft EIS. It provides extensive data that demonstrates the profound impacts of the flightpaths on this region, and while some people have found the volume of information overwhelming, for others there is a desire for more clarity and additional work to be done on noise and land-based impacts, including additional work to properly assess the impacts on Aboriginal Cultural Heritage and environment.

There is a strong feeling within sections of the community I represent that there is a lack of fairness in the proposed flight paths.

Some of this goes to the issue that WSI is being built as a 24/7 airport, with operations all day and night, without respite. I recognise that it has long been stated that the viability of WSI depends on it operating without a curfew, and the hours of operation were set when the airport was approved in 2016.

However, that does not preclude the ability to better share the evening, overnight and early morning noise so that it has less of an impact on any one area. The overwhelming view in the community is that if there has to be night-time flights operating, for the benefit of the Sydney, NSW and Australian economy, then those flights should be better shared across the Sydney basin.

If it's good enough for the west of Sydney to have night-time flights and the disturbances that causes, it is only fair that the rest of Sydney shares the load. The wider it's shared, the less a single group of people will suffer.

This principle of fairness appears to have been behind the changes made from the indicative flightpaths in the 2015 EIS. The community criticism at that time was that the indicative flightpaths unfairly impacted the lower Blue Mountains. I welcome that the community feedback on those flightpaths was heeded and urge there to be a similar listening and responding to the current concerns from people across Macquarie.

This submission will note in particular the concerns for the Mid-Mountains residents of Linden and surrounds including Woodford and Faulconbridge, who face both departing and arriving aircraft with no respite, and the residents of the Warrimoo/Mount Riverview/Yellow Rock/Winmalee and surrounding suburbs. Residents of Mount Wilson and Mount Irvine and neighbouring areas like Mount Tomah have also highlighted specific concerns to me. I stress that I have received feedback from every suburb in the Blue Mountains and many in the Hawkesbury, raising issues with the height, frequency, hours and noise of proposed flightpaths.

The principle of fairness applies to the design of the flightpaths with respect to the airline operators. Where there is a view that the flightpath design prioritises the convenience and profits of the airlines over the amenity of the people who live beneath them, there is little support. The dual arrival flightpath over Linden on Runway 05 night arrivals and departures will be referred to later in this submission: the lower of the two flightpaths appears to have one purpose only, and that is to marginally shorten the landing time to suit the plane, at the expense of residents underneath.

Where airlines are being granted 24/7 access, to benefit their business models, it should be done in a way that transparently minimises impacts for residents.

Equally, if, in order to achieve fairness, additional amendments are required to KSA flightpaths, Macquarie residents indicate they expect that to happen.

For instance, the impact of overhead flights both day and night-time on the residents of Linden is disproportionate and many suggestions have been made that it could be minimised if flights continued further west before turning north. As certain changes are already being made to KSA flight paths, referred to as *facilitated changes*, it is not clear to my community why additional facilitated changes cannot be made to KSA flight paths to accommodate WSI flights heading further west before turning north.

Airspace Design Principles

Constituents have considered the Airspace Design Principles outlined in the Draft EIS (Volume 1 Pg 22), which has been shared online and in printed brochures for many years.

In assessing the proposed flight paths against the 12 criteria there have been questions raised with me about six of the criteria.

People have expressed the view that the following criteria have not been adequately applied:

- Overflights of residential areas and noise sensitive facilities will be avoided to the maximum extent possible;
- Where flight paths are unable to avoid residential areas – where possible, these areas should not be overflown by both arriving and departing aircraft
- Procedures will be developed to minimise the impact of night-time aircraft operations on the community while not constraining airport operations.
- Noise mitigation measures will be developed
- Airspace design will consider the impacts of air operations on natural and visually sensitive areas

People have also provided feedback to me that they believe a sixth criteria – that changes to the current noise sharing arrangements at Sydney (Kingsford Smith) Airport will be avoided – has unfair consequences for much of western Sydney and the Blue Mountains.

The critical and concerned feedback I have received on the Draft EIS and the proposed flightpaths is not unexpected. As the Draft EIS says in Volume 3 Technical paper, pg 16:

Experience has shown that many factors can influence an individual's response to aircraft noise, including:

- *the specific characteristics of the noise (e.g., the frequency, intensity and duration of noise events) and the time-of day noise events occur*
- *background noise levels, and whether background noise is natural, industrial, desirable (e.g., bird song) or undesirable (e.g., road traffic)*
- *their personal circumstances and expectations about the number, frequency, loudness and timing of noise events*
- *their individual sensitivities and lifestyle (e.g., whether they spend a lot of time outdoors, work from home or sleep with a window open)*
- *their reaction to a new noise source (in the case of a new airport or new runway) or to changed airport operational procedures*
- *their understanding of whether the noise is avoidable and their notions of fairness*

- *their attitudes towards the source of the noise (e.g., general views about aviation activities and airports).*

Some residents in Macquarie will be influenced by every single one of these factors; that response is valid and should be respected.

Methods of engagement

My constituent engagement on this issue began in 2015 prior to my entering Parliament. In the last 7 months, since the release of the flightpaths in June 2023 and the subsequent release of the Draft EIS, the engagement has ranged from hundreds of emails and phone calls through to an online survey (463 responses) as well as in-person conversations while out in the community and at the WSI community consultative sessions, and of course, social media comments.

I have also met with a number of individuals, community groups and organisations with specific expertise in relevant fields, and been informed by their knowledge, and drawn on their submissions in this document.

While some residents have been long-term campaigners against the Badgerys Creek Airport, dating to the 1990s, many of the respondents are residents who have not previously engaged on this issue. I have actively encouraged residents to share their views, both favourable and unfavourable, through a respectful and productive engagement. I have sent letters to them, emails, social media posts, and media interviews, and I note that the Department of Infrastructure and Western Sydney Airport have also used a variety of snail mail and newspaper advertising. My aim is to seek the broadest range of constituent feedback to help problem-solve an extremely vexing issue.

I am very grateful for the active involvement by so many individuals and organisations in Macquarie. With emotions ranging from welcoming the airport and being non-plussed about the flight paths, to despair and rage and everything in between about the changes they may face, they have provided thoughtful and pragmatic responses, and allowed me to quote their submissions in my own.

One constituent sums up the feelings of many people:

“It does appear that our quiet, peaceful communities of the Blue Mountains have been taken advantage of due to their small population. This is unfair and inequitable. Even in its draft stage, the EIS has understandably left residents feeling that they have been forgotten and taken advantage of and has already had a huge negative impact on residents’ mental health. The proposed flight paths have left residents unable to regulate their thoughts and emotions and have therefore placed them in a vulnerable state of mental health. Many Residents are also overwhelmed by the draft EIS, the giant document and are feeling unable to respond, as it seems it is already a lost cause.”

Many residents have spent their summer holidays responding to this Draft EIS, in spite of the long lead time – longer than any I have been aware of for an EIS - that was provided to consider

it. Inevitably, the writing comes as the deadline looms. These are teachers on school holidays, parents who had planned to spend time with children, people who had hoped for a relaxing summer. I hope their input will be seriously considered and responded to, so a better outcome is found for my community.

In the same way, I would expect to see my community's ongoing input and feedback sought through a permanent WSI community forum, run on similar lines to the Sydney Airport Community Forum (SACF) to ensure transparency and responsiveness to the communities' concerns.

Other issues raised with me outside the terms of the Draft EIS

The quality of the information available and the WSI flight paths noise tool and associated online resources exceeded anything that has been made available in the previous airport Environmental Impact Statements. They were appreciated by most residents who could access them, as were the experts available at the community information sessions, and I have provided feedback through appropriate channels when necessary.

Residents who relied on the printed brochures did highlight concerns with the information that was available in the brochures, particularly with the maps, such as *"villages on the Great Western Highway are not on the plan... Height of planes flying over residential areas should also be expressed in figures."* (Elizabeth, Blaxland).

While feedback gathered from my community has focused on the current flight path proposal, it has also emphasised dissatisfaction with earlier stages of the WSI development that are not within scope of this EIS. Factors mentioned include but are not limited to: unsuitability of the Sydney Basin for an airport, noise impacts on Macquarie residents from existing overhead flights, environmental impact of the loss of significant habitat in the Cumberland Plains, alternative uses for the Badgerys Creek site, pollution and heat impacts, and questions about the reliability of estimated economic benefits. These concerns remain front of mind for local residents even if they are technically not within scope for the current Draft EIS. Where submissions on these matters have been made in response to the Draft EIS, I urge careful consideration of their concerns.

Section 1: Flightpaths and noise

The dominant issue for residents in the Blue Mountains and parts of the Hawkesbury that will have overflights is the noise impact.

Residents who were familiar with the previous proposal of a single merge point, which would have seen 100 percent of arrivals “merge” prior to landing over Blaxland, welcomed the announcement of the abandoning of that model in 2016.

However, the consequence of that change is that a wider area is affected and the vast majority of the feedback indicated concerns with the noise of overhead aircraft and impact on residents’ enjoyment of their home environment.

This is not fear-mongering by residents, but is clearly stated in the Draft EIS:

“Increased exposure to aircraft noise in areas in the vicinity of WSI and **under its proposed arrival and departure flight paths** will be an unavoidable consequence of aircraft operations at WSI.” ([Western Sydney International \(Nancy-Bird Walton\) Airport - Airspace and flight path design | Draft Environmental Impact Statement | Technical paper 1: Aircraft noise \(wsiflightpaths.gov.au\)](#) Key Messages pg 13)

Residents submissions, and those from local organisations, strongly urge for a reconsideration of the proposed flightpaths so that the impacts on the Blue Mountains and parts of the Hawkesbury are minimised or removed.

Among the specific issues are:

- Lack of night-time protections, such as a curfew, resulting in unacceptable night-time noise
- The high volume of flights departing across the Blue Mountains
- A failure of the Draft EIS to properly assess what the real noise levels will be
- The low baseline noise level in the Blue Mountains and Hawkesbury, which would make the sound of overhead flights more intrusive both in the day-time and night-time than is indicated in the EIS
- Health and wellbeing impacts from disrupted sleep due to aircraft noise
- The preponderance of older dwellings which do not have double glazed windows or insulation to minimise noise
- Loss of enjoyment in outdoor living, quiet surroundings, sounds of nature
- Residents who leave windows and doors open to assist with natural cooling of their homes in summer, worry about the night-time noise, alternatively the increased electricity costs if forced to leave windows and doors closed and run air conditioning instead, in order to protect themselves from intrusive aircraft noise
- Pre-existing flights from KSA or RAAF operations already have a noticeable noise impact on residents and they worry about the addition of more flights, more frequently
- This area not being eligible for insulation or other assistance for ameliorating measures, and those measures providing little relief.

Noise generated by the proposed flightpaths is, without a doubt, the strongest concern that has been raised in the constituent submissions that have been provided to me. Addressing the noise issues should be a key focus of the final EIS, both in exploring ways to reduce the noise and also including making more information available about the likely usage of the different runway modes so that residents can more accurately understand the impacts.

There is strong support for permanent monitoring stations for residential areas to monitor the noise pollution levels.

Night-time noise and ambient sound levels

The construction of the first airport in the Sydney basin without a curfew and the resultant concerns about the noise of overhead flights, dominates feedback from my community on the flightpaths.

There is a view that the noise overnight will be especially deeply felt by residents of the Blue Mountains and Hawkesbury, given the low ambient sound, as evidenced in the Draft EIS.

While the Draft EIS states: “The existing ambient noise environment is mostly dominated by road traffic noise which is audible at nearly all locations emanating from a combination of relatively busy roads, up to and including the Western Motorway (M4), Westlink (M7 Motorway) and a hierarchy of other connector and local roads that carry varying levels of traffic.” ([Western Sydney International \(Nancy-Bird Walton\) Airport - Airspace and flight path design | Draft Environmental Impact Statement | Technical paper 1: Aircraft noise \(wsiflightpaths.gov.au\)](#) pg 22) that is not the case where testing was done in the Blue Mountains and Hawkesbury. In those places, the ambient noise, particularly at night, was dominated by gusts of wind and insect noises.

The Appendix in the Draft EIS records the following comments about the ambient noise sources at testing sites at Linden, Blaxland, North Richmond and Kurrajong, where nighttime ambient sound was as low as 24dB. To put 24dB into perspective:

- 25 dB is a low value, e.g. the usual criterion for ambient sound level in TV-studios.
- An adult with no hearing loss can generally hear sounds above 25 decibels but may have trouble hearing decibels between 0–25 decibels

Intermittent bird noise. Occasional vehicle passby. Occasional strong wind gusts. A few aircraft movements noted at a distance in the early morning hours.

Intermittent dog barking nearby. Various impulsive noises (e.g. footsteps, and objects falling). Occasional vehicle passbys. Noise induced by strong wind gusts. Intermittent bird and insect noise.

Constant bird song of varying intensity, maximum noise level in the range of 40 to 45 dBA. Occasional vehicle passbys on local streets. Constant insect noise of varying strength at dusk.

Occasional strong wind gusts. Various natural noises (e.g. frogs/toads, birds, dog barks). Occasional vehicle noise, and mechanical noise (e.g. vacuum). Several aircraft flyovers noted, mainly at a distance with some passing overhead.

“Background noise” in these areas, no matter what the time of day or night, is described as “Movement in vegetation induced by wind (e.g. leaves and grass moving).”

So the Draft EIS itself indicates extremely low ambient and background sounds. But what is concerning about these measurements of “nighttime” ambient sound is that the reference in one quote is to “Constant insect noise of varying strength at dusk.” “Dusk” during August-September when the testing was done, occurs well before the nighttime definition of WSI flightpaths, which is 11pm-5.30am. Residents question the accuracy and the depth of the testing, and whether using this as the basis for noise impact assessments is sufficient.

The assessments in the Draft EIS of night-time noise vary but with flights as low as 5000ft above sea level at Linden, there is a very strong view that the noise will be unacceptable and should be reviewed.

As an example, residents themselves tell me:

“The anticipated arrivals using Runway 23 during Night mode (11pm to 5.30am) poses an unacceptable level of noise on lower Blue Mountains townships, especially Springwood, Sun Valley, Warrimoo, Yellow Rock and Woodford. This flight path will result in an average of two flights per hour or up to 11 flights overall every night of the year with noise levels up to 60 decibels. Measurements taken by WSI’s own team show that ambient noise levels in Springwood at night (10pm – 7am) are at 24 decibels (p. 18). It is well known that any noise exceeding 5 decibels above the background level may be offensive. These proposed flights represent an almost 1000-fold increase in noise intensity which is unacceptable.” (Leanne, Springwood)

“I can hear flights at 15,000 feet now so there is no way my family will be able to sleep at night taking off at 3000 feet. I have lived in my home for 24 years, chosen for the quiet and bushland ambience. If I wanted noise, I would have chosen to purchase a property in the city.” (online survey)

Categorisation of day/evening and night operations

One of the most common complaints I received is the categorisation of day/evening and night operations. Overwhelmingly, residents felt that day/evening should not span from 5.30am to 11pm, but instead day/evening should begin at 6am and end at 9pm.

"I would be more supportive of this flight path if the daytime definition provided at least 8 hours over night instead of 6.5hours. In my opinion, daytime should be 6am to 9pm." (online survey)

"It appears that the night period identified in the draft EIS responds directly to the KSA curfew. This is not justified and strays from the accepted standard night hours of 10pm to 6am. Further, the shortening of the nighttime period in the draft EIS (11pm to 5:30am) skews the assessment of night time impacts, given the proposed change in runway modes of operation in this period. While the change in mode is intended to alleviate some impacts, due to the nominated shorter 'night' period, greater impacts could be expected between 10-11pm and 5:30-6am, as these are considered day time hours under the WSI assessment." (Blue Mountains City Council submission)

"The night defined hours that form the basis of the impact assessment do not strictly align with industry standard / accepted practice for describing aircraft noise impacts...It is recommended that noise prediction information and subsequent assessment of impact and mitigation for the night period considers a broader defined night period." (Marshall Day Acoustic peer review as per Blue Mountains City Council submission)

Other noise assessment concerns - reverberation

While the previous section focuses on night-time noise, the level of sound, day and night, is a major concern of residents in the hills of the Blue Mountains and Hawkesbury. These include a view that the impact of noise reverberating through gullies and escarpments has not been adequately assessed or modelled.

"The flight path does not take into account the way noise generated by jets echoes across mountains ridges and carries much further than it would in a flat plain environment." (online survey)

"The dB estimate does not take into account the effect of reverberation through gullies." (online survey response)

"No one has mentioned anything about any rebound noise off the escarpment. This would affect Glenbrook, Lapstone, Mt Riverview, Leonay and Emu Heights/Plains (and possibly other suburbs such as Yellow Rock and Hawkesbury Heights). You may recall this was an issue with the old dragway at Castlereagh and the rebound noise in the lower Mountains and all the way to Kurrajong. I am concerned this may be an issue and would like this investigated. According to the above flight paths, the majority of departures and some arrivals are within 2 and 3 kilometres of the escarpment at some point. This will become a highway in the sky. Can you guarantee no noise will rebound off the escarpment?" (online survey)

"Also concerned noise level will be higher due to echoing and bounce off cliffs and valleys etc" (online survey)

"My concern is reverberating noise over or near the Grose Valley effecting Evans, Govetts Leap, Pulpit and Anvil Rock lookouts plus walks to the southern escarpment of the Grose from

Mt Hay Rd. I've heard planes go over this valley at 17 000 feet and even from the south side of the GWH it sounds like a thunderous, vibrating earthquake. Planes need to fly further north of the main residents and the deep valleys. Residents, businesses and tourists can't cope with this level of tremendous, frequent, early and late noise interruption. Our main attractions of tranquility, biodiversity, walking, looking, cycling etc. would be ruined by planes coming up the Grose Valley.” (online survey)

“The predicted noise levels underestimate the levels over this location because they do not consider the local topography. Noise echoes around the valleys of Shaws Creek and its tributaries so the noise will be louder and persist longer than predicted.” (Warren, Hawkesbury Heights)

“Flights from KSA over my place can currently be heard loudly reverberating and echoing along the ridge for 6 to 10 minutes and this is for planes flying at 18 to 20,000 feet as recorded on Flightradar24 ... and not at the predicted 4-10,000 feet as outlined in the EIS Ch11 Aircraft Noise. If these flight paths are implemented then this situation will feel like a war zone and this is not just for Linden but for the villages that the flight paths will spill over to eg Faulconbridge and Woodford.” (Lyn, Linden)

“The EIS takes very little, if any, account of the distinctive geology of the Blue Mountains. Sound deflects and rebounds around escarpments and valleys. Anyone attempting to assess noise levels in the Blue Mountains should seriously ponder the name of one of the mountains' most iconic lookouts – Echo Point.” (name withheld, Springwood)

“The noise levels indicated are not accurate. Residents know of the echo effect of our topography. Echo Point at Katoomba is a perfect example. Noise bounces around for quite a while after a KSA plane passes over. It takes much longer for the noise to pass.” (Susan M, Glenbrook)

As the resident from Springwood and Susan from Glenbrook highlight, they don't call it Echo Point for no reason.

Feedback on Draft EIS sound methodology

I have been fortunate to receive copies of submissions from constituents and organisations who have expertise in the area of sound measurement and the experience of noise. They have flagged concerns with sound methodologies and measurement, as well as flawed estimates of the height of overhead flights (given Continuous Descent Operation intentions) leading to questions about the validity of information relied on by residents via the noise tool. I urge careful consideration of this valuable input and that these concerns be addressed in the final EIS.

“A very serious concern is the use of dBA measurements for aircraft noise assessments. dBA instruments are designed to mimic the response of the human ear to noise. They are useful to measure a person's noise exposure in a noisy environment, and the data obtained can be used to help prevent noise induced hearing loss (NIHL). However, dBA measurements become more and more irrelevant the further away someone is from a noise source. dBA instruments are

designed to devalue low frequency noise measurements - (noise is devalued by: 39.4dB at 31.5 Hz, by 26.2dB at 63 Hz, by 16.1dB at 125 Hz, by 8.6dB at 250 Hz, by 3.2dB at 500Hz). High frequency aircraft noise is preferentially absorbed by the atmosphere compared to low frequency noise. Consequently with a dBA instrument the noise level you hear will be lowered in both the low and high frequency ranges!" (Christian D and Christine D, Valley Heights)

*"The use of AEDT for calculating maximum noise levels is considered reasonable, however such calculations should be primarily used for understanding the **range** of potential noise levels and for comparison of different scenarios, rather than the direct prediction of the maximum noise level expected to be measured in practice." (Marshall Day Acoustic peer review as per Blue Mountains City Council submission)*

"Nepean hospital is located some 11.4 kms from WSI. A significant range of aircraft over-flight altitudes are reported depending on the actual runway in use. However, at a distance of 11.4kms on CDO, aircraft would normally be at around 2,000 ft. The noise tool also advises that a maximum noise level of 65 dBA during a typical overflight by the aircraft types expected to use WSI would occur. An LMax noise level of 65 dBA is inconsistent with measured aircraft over-flight noise levels reported by Ancich [2]. These measurements showed that the 70 dBA contour for a B747-4D7 aircraft on arrival extends to 23 km and the 70 dBA contour for an A320 aircraft on departure extends to 19.28 km. Clearly, Nepean Hospital is within these noise contours." (Ancich, Blackheath)

"TP 1 also notes a situation of increased noise that can arise, for example, from insects or frogs during the evening and night in the warmer months, or due to temperature inversion conditions during winter (see paragraph following Table 4.1). The limitation of temperature inversions to just winter is an underestimation... The measurements by Colquhoun clearly indicate that temperature inversions are normal and frequent meteorological events in the Sydney basin. Harris, Ingard and the NSW EPA show that temperature inversions are potentially noise-enhancing. Accordingly, TP 1 should have addressed this issue in greater detail." (Ancich, Blackheath [supplementary submission])

Impact of combined pre-existing flight noise from KSA and RAAF operations

In feedback to me, residents point to a lack of understanding that there is already aircraft noise that is noticeable, and for some residents, annoying. As the Draft EIS states, the new flights will add to that noise, not replace it.

"(Any) proposal which seeks to add to the present overload of noise in the vicinity of RAAF base Richmond, from there or Kingsford Smith, is totally unacceptable and must be rejected" (Brian, Kurmond.)

'An example of the severe impact of these proposed flight path will have can be deduced from the noise created by planes currently departing from KSA on runway 34L. These planes are at an average height of 16,000ft and more than 5 kilometres south of my property. I have tracked these flights on radar and measured the time that the sound persists. From the time the planes

can first be heard to the time they can no longer be heard ranges from between 2 minutes 15 seconds and 2 minutes and 35 seconds depending on the type of aircraft. The radar reveals that the planes can still be heard at my home when they are between Wentworth Falls and Katoomba. The reason for the sound persisting is the geology of the mountains, with escarpments, valleys and canyons. The mountains don't absorb sound, they enhance it." (name withheld, Springwood)

"The assessment and description of change in aircraft noise presented in Technical Paper 13, does not appear to consider the cumulative impact of KSA and WSI impacts on areas newly impacted by WSI aircraft and also subject overflight of KSA aircraft operations as a result of flight path changes" (Marshall Day Acoustic peer review as per Blue Mountains City Council submission)

Flight frequency

When I attended community sessions, it was evident that a key piece of information people found difficult to access was the total number of flights over their home, and the type of planes. Additional information in understanding the numbers should be made available.

"The 2023 EIS does not provide estimated flight volumes for aircraft movement across each of the WSA flight paths. Without this information, residents across the Sydney basin and the GBMA have not been provided with adequate information to really understand the impact this airport will have on them. Instead, the EIS only provides volumes of flights per annum (Refer Chapter 7, section 7.2 Aircraft Volumes of the 2023 EIS)." (Hendrike, Springwood)

"I sought clarification in the draft EIS, feeling confident that weather modelling would be part of this document and would help me understand whether to expect zero flights overhead most days (runway 23), or 15-37 flights overhead most days (runway 05), or what the split might be. I have not been able to find such information in the technical papers or chapters of the EIS. Technical paper 2, Air quality, and chapter 11 Aircraft noise were the places I sought out the data. Technical paper 2 contained weather information such as windroses which should have been referenced and more thoroughly explained so that residents could pair up this information with the runway modes to get an indication of the likely preponderance of one mode over another over their homes." (Lisa, Warrimoo)

"TP 1 does not appear to provide sufficient information about the frequency of each operating modes, though it is acknowledged this would primarily be driven by meteorological conditions as to which runway could be used. Accordingly, the resultant overall predicted noise exposure contours are provided based on the annualised average over the year. It is recommended that discussion is provided in the final EIS on the frequency and feasibility of the operating modes, including RRO, noting the limited meteorological conditions under which this could occur (less than 10 %)." (Marshall Day Acoustic peer review as per Blue Mountains City Council submission)

“Seasonal variation: the noise prediction information is only provided for annual average conditions, and therefore subsequent assessment of impact does not consider periods of the year which give rise to increased aircraft noise levels. It is recommended that discussion is provided in the final EIS on the frequency of periods of the year in which meteorological conditions would result in increased aircraft noise levels.” (Marshall Day Acoustic peer review as per Blue Mountains City Council submission)

“There is not enough information about the freight planes” (online survey)

“I went to the meeting at the hub today, and no one can give you a specific answer on the following: Exactly how many planes will be flying over day or night, with both Sydney and western Sydney airports. They don't consider the noise around your house, just directly over. Currently I can hear 3 planes a night fly over at over 19 thousand feet, and now the planes will be somewhere between 5000 and 13000 feet - what quantity of life will I get, as I am woken up now? No discussion on compensation? They speak about 1 runway, but then refer to runway 05 and runway 23. - so that's 2 runways? No disclosure of how many runways in the future? There are no answers” (online survey)

Veracity of flight paths

People also expressed skepticism that planes would stick to the outlined flightpaths, and that the maps provided in the Draft EIS were therefore not an accurate predictor of the noise they would experience.

“The information I have received by attending consultations has convinced me that flight paths are at best hopes and wishes; that “flight paths” are rarely stuck to and that they are a distraction. Aviation is a moveable feast where weather and environmental conditions can force planes to move outside their so-called designated flight paths. We are being sold a fantasy and one that has the potential to destroy the Blue Mountains World Heritage Area and the lifestyle of those of us who live here.” (online survey response)

“To quote the flight path noise tool, my house will be impacted by 'Aircraft departing from WSI could overfly this area as they climb from a WSI flight path (RWY23 Departure North (Non-Jet) Day) to an en-route final path towards their final destination. In transition areas, aircraft do not follow a set flight path, but may be directed by air traffic control (known as radar vectoring) or use their own navigation'. This is vague and gives a lot of latitude to changing conditions.” (online survey response)

“Changes will be made after approval” (online survey response)

“Will it even actually be followed - will there be creep of flights over other parts?!” (online survey)

“Noise travels in these gullies. I doubt the noise maps are correct.” (online survey)

“The hatched transition areas on the flight paths map mean that many flights will fly closer than indicated on the map and may, and undoubtedly will, fly directly over my property. This is

evident from this statement in the Draft EIS Project overview: 'Once in flight, the aircraft is subject to dispersion which would influence where the aircraft would be in relation to the flight path, hence the flight paths are depicted as a flight path corridor. The corridor shows the flight path widening to notionally 2 km either side of the nominal centreline of the SID flight path, transitioning to 5 km as the aircraft join the enroute flight network.' (name withheld, Springwood)

"It is understood that vectors are commonly used to establish the arrival pattern for the airport and includes holding patterns when the airport is busy. This aircraft activity is outside of flight path corridors, and an additional, unmeasured impact on the Blue Mountains... these vector areas extended over the majority of the Blue Mountains and could see planes queuing and circling over the residential areas of the City and over the GBMWA, waiting to land at WSI. This is a further example illustrating the need for the flight path design to be revisited prior to finalisation of the EIS." (Blue Mountains City Council submission)

Non-jet flightpaths

In its submission, Blue Mountains Council includes the concern about noise generated by smaller aircraft flying in and out of Bankstown Airport. This traffic is also highlighted in the submission from Dr AR Green, who notes the noise impact of these aircraft as well as the need to more robustly deal with them in the risk assessment process.

"Based on the information provided, certain new flight tracks are proposed which have the potential to further adversely impact the Blue Mountains through noise and visual intrusion. Figure 21.26 (ch21) identifies new arrival and departure flight tracks into and out of Bankstown airport, showing Cessna and Beech aircraft flying as low as 3500ft, emitting noise at up to 68 dB(A) over residential areas of the Blue Mountains, with villages such as Hazelbrook, Woodford, Linden and Blaxland directly under these new flight tracks." (Blue Mountains City Council)

Lack of curfew

As a consequence of the concerns about noise at night, there is a widespread call for a curfew.

"Why can't (we) be the same as Mascot? 6am to 11pm curfew for Badgerys Creek Airport" (Stephen, Mount Riverview)

"We oppose these flight paths on the basis of the discrimination, unfairness and inequity which they will inflict on the residents of Western, Southwestern and Northwestern Metropolitan Sydney, as well as the Blue Mountains and Wollondilly regions (termed The West)." (Christian and Christine, Valley Heights)

"At the very least we should have a curfew just like Mascot. The idea of no curfew smacks of discrimination and disregard for Western Sydney, the usual story. If Mascot can survive with a curfew so can Western Sydney Airport." (online survey)

“A clear solution is to implement a curfew and implement caps on hourly flights, so that no community is affected by night-time flights and so that all residents can maintain equitable quality of life, as is afforded to residents within the flight paths into and out of Sydney” (name withheld, Woodford)

“There needs to be consideration of the retrofitting of noise abatement to builds within the area and other noise mitigation measures such as a curfew or changes to the flight paths.” (Robert, Linden)

“Flight Paths must be revised so that Linden Observatory can remain in operation. A night curfew and changing the concentration of flights over any one village or town, is the fairest outcome” (Michael, Katoomba)

“The reticence of the Government to attempt to change flight path design for Eastern Sydney and attempt changes to curfews with those very communities with lived experience of aircraft overflight suggests impacts are not minimal but go to the health and wellbeing of communities.” (Blue Mountains City Council)

“A 24-hour situation is completely unacceptable and is not tolerated in the city-based airport, so should not be inflicted on people who bought in good faith into a quiet community” (online survey)

“The courtesy of a curfew at Sydney Airport needs to be extended to the flight paths in the Blue Mountains.” (online survey)

“I oppose these flight paths based on the discrimination, unfairness and inequity they inflict on the residents of Western, Southwestern and Northwestern Metropolitan Sydney, as well as the Blue Mountains and Wollondilly regions (termed The West). These flight paths impose 24-hour aircraft noise and pollution on ‘The West’ and do not provide the same protections given to people in ‘The East’ affected by flight paths for Sydney Airport” (Niels, Faulconbridge)

“The biggest issue is lack of curfew. The people of Western Sydney are disadvantaged once again” (online survey response)

Health and wellbeing impacts - Sleep

The frequency and altitude of night-time flights outlined in the Draft EIS raises concerns among residents about the impact on sleep.

“As a clinical psychologist I can attest to the fact that sleep disturbance has a known deleterious impact on physical and mental health. Humans have 4 stages of sleep and we cycle through different depths of sleep throughout the night. When we reach a less deep stage of sleep we are vulnerable to being fully woken by unnatural noises, such as road and air traffic noise. I foresee that residents who are already vulnerable to sleep disturbance, particularly those who use passive cooling techniques, such as keeping their windows open at night, are going to be adversely affected by aircraft noise.” (Katie, Linden)

“I am concerned about the impact this will have on my sleep and consequently on my health.” (online survey)

“I chose to live in Hawkesbury Heights because it is a very quiet location. The proposed flight paths will impact my ability to enjoy the quiet bushland environment, disrupt sleep and be bad for my physical and mental health.” (Warren A, Hawkesbury Heights)

“High needs autistic kids sensitive to noise” (online survey)

“A lack of curfew and frequent noise from night-time airport operations without flight caps will disrupt sleep patterns, leading to insomnia or poor-quality sleep. Sleep disturbances are associated with various health problems, including cognitive impairment (particularly in children), an increased risk of chronic diseases, poor concentration, depression and stress. Such consequences strongly impact on quality of life, wellbeing, family and community welfare, and effectiveness in the workplace. Project specific mitigation measures outlined in the draft EIS Chapter 11, Aircraft Noise and Chapter 20, Human Health, offer the inadequate solutions of post-implementation reviews and research projects.” (name withheld, Woodford)

“Flight path noise will disturb our sleep, which it is known to have a direct negative impact on all areas of wellbeing. Long term sleep disturbances have been linked, by many research papers, to an increase in heart disease, (which Linden is identified as already having a high prevalence of), and thus a decrease in lifespan. Sleep deprivation leads to reduced emotional functioning (Harvard Health publication), and the EIS itself states “sleep fragmentation can affect psychomotor performance, memory consolidation, creativity, risk taking behaviour, and the risk of accidents”. I fear for the emotional, personal and social negative outcomes resulting from flight affected, sleep deprived lifestyles. I am already suffering from anxiety and disturbed sleep because of my fears for the future.” (Lyn, Linden)

“I am concerned about the impact on the physical & mental health of us residents. Our choice to live here is largely based on our love of a pristine environment, peace & quiet, & the awareness that we live on the edge of nature and are part of it, not superior to it. The presence of endless planes overhead will erode our peace of mind and lead to despair.” (online survey)

“If humans aren’t able to retreat to quiet places (hopefully their home, but at least national park), there is a massive mental health impact. Even if the flight plans are economical for the airport now, health and services will need massive extra funding to pay for the long term impact. Not to mention less people holidaying here, causing more business to shut. We need to protect the few areas of peace that we have, for everyone’s benefit.” (online survey)

Health and wellbeing impacts – quality of life

Multiple residents point out that they moved from inner city areas to this region to escape aircraft noise. They value the comparative quiet, forgoing the conveniences of inner metropolitan areas for the peace and quiet, especially at night.

While the Draft EIS states that the proposed flightpaths are “unlikely” to result in “diminished social values”, that is not supported by most feedback I have received, and I would urge additional analysis to better assess the impacts in this regard.

“I chose to live where I do because it was quiet, peaceful, close to nature and in a world heritage area. I have a friend who chose Stanmore because it was near to the city and cheaper as it was under the flight path. Her home is now worth a lot of money despite the noise. Mine will reduce in value probably but more important to me is that my life will be blighted by noise day and night.” (online survey response)

“We choose to live here, without city convenience, because it’s peaceful and healing.” (online survey response)

“Engagement with nature, tranquility, quiet and dark skies are defining characteristics of the residential areas of the Blue Mountains in indeed the Greater Blue Mountains Area as a whole.” (Blue Mountains City Council submission)

“The residents of Linden, like many Blue Mountains residents, see their homes as an escape from city stresses. Their homes are a sanctuary, a safe retreat from the demands of modern life and a place to restore their mental health. Flight operations 24 hours a day, 7 days a week, below 7500 feet without respite from aircraft movements, will destroy this lifestyle and thus have a destructive effect on residents’ mental health.” (Martin G, Faulconbridge)

“I think it is important to maintain the mountains as a place of peace that all can enjoy. I think a heritage area should be like wilderness and give everyone a place unpolluted and awesome. Flight noise and pollution depletes that experience. We need to preserve that for our wellbeing.” (online survey)

Health and wellbeing impacts – Unable to open windows

Among the lifestyle and wellbeing impacts of the frequency of flights, and the noise they will generate, is the inability to ventilate their homes by opening window and doors.

Across the Blue Mountains and swathes of the Hawkesbury are people who care about carbon emissions and have homes that do not have air conditioning but rely on natural ventilation. There are also people who cannot afford air-conditioning.

I wish to disclose that I am one of those people who does not have air conditioning, having opted to build a passive solar home, designed to capture cross breezes for cooling, following the destruction of my home in the 2013 bushfires.

The Draft EIS does not address the consequences for homes where ventilation, particularly in hotter months, is reliant on open windows and doors. There is no mitigation or sound barrier to stop aircraft noise entering a home that is effective with an open window or door. In fact, Perth Airport’s guide to Reducing Aircraft Noise in Existing Homes (2016 [Reducing-Aircraft-Noise-in-Existing-Homes-Brochure.pdf \(perthairport.com.au\)](#) pg 8 advises:

“The effectiveness of noise control measures requires windows and doors to be closed, which means there is no ventilation provided to occupied areas when closed. This can be addressed by providing new mechanical ventilation or treating existing ventilation.

I note there is no provision in the Draft EIS for retrofitting of Blue Mountains or Hawkesbury homes, as they fall outside the Australian Noise Exposure Concept (ANEC) 20 composite contour. The effectiveness of such measures for this region, whether it be insulation, double glazing or other acoustic sound treatments, is unclear and unexamined by the Draft EIS, however measures to protect homes in the most affected areas should be considered.

This is what residents point out:

“I’m concerned that I won’t be able to open my windows to ventilate my south facing home which will be facing the flight paths in summer when we have temperatures exceeding 40 degrees in summer because of the continuous unpredictable noise” (online survey)

“Given future predictions with regards to global warming, we prefer to be outside or open up our house during the day to enjoy the cool air, rather than opting to put on the air-conditioner. With such noise, we will no longer be able to enjoy the peace and quiet that our area brings and will be forced to use inefficient air-conditioners to enjoy the time in our home.” (Angela, Linden)

“Another consequence of frequent overhead aircraft movement at the WSI proposed numbers and altitudes will be to force us to close our houses in an attempt escape the noise pollution, forcing us to either suffer through increasingly hot summers, or outlay expenses to cover the cost of expensive air conditioners instead of using our normal mountain breezes for cooling. Indoor living will feel more cramped and stuffy – not an ideal situation for family wellbeing. Lack of air movement also leads to mould growing - a very unhealthy atmosphere in a home.” (Lyn, Linden)

“A large number of the population are predicted to experience external maximum noise levels which are sufficient to result in internal noise levels corresponding to sleep disturbance thresholds. This indicates a large number of people may need to sleep with windows closed to maintain an acceptable internal amenity.” (Marshall Day Acoustic peer review as per Blue Mountains City Council submission)

“The position of our house...is impacted on every map we have received, day and night. We must have financial assistance to insulate our home” (Linda, Faulconbridge)

“The Airport Corporate Body needs to be held financially accountable for noise impacts on residents. Few of us will move but others can’t just fork out tens of thousands for soundproofing” (online survey)

Wider noise concerns

While Macquarie residents are concerned about the impacts of the proposed flightpaths on their own homes and lives, they also have concerns for the wider noise consequences.

I note there is minimal mention in the Draft EIS of the impact of flightpath noise on theatre and the arts, including outdoor theatre performances. The impact on recreational activity, for locals and visitors alike, has been highlighted to me:

“I run a small business in Blackheath on Dharug and Gundungurra land, providing holiday retreats in two bush cabins. The proposed flight paths are a huge threat to my business and the whole tourism industry in the Blue Mountains, because if allowed to stand, they will damage every reason for our customers to stay. Our customers come here because we are in a World Heritage Area, with dark skies, with Natural Quiet (the natural ambient sounds of the bush rather than the industrial sounds made by humans with machines). They come for the clean, fresh air. They come to experience a place that habitat for native species, for the biodiversity that can thrive in the Blue Mountains National Park. They come for the serenity of this special place. It is a refuge from the noise and stimulation of the city. It is an important place for them to be able to slow down and be still and quiet.” (Manda, Blackheath)

“As a private arts educator and mentor, we have many visitors with students and professional arts practitioners travelling to work in my studio from all over the Blue Mountains and much further afield.” (Linda, Medlow Bath)

“The draft EIS asserts that “The increased access to key tourist destinations, in particular for tourists visiting areas such as the Greater Blue Mountains, is considered to outweigh the potential adverse amenity impact of the flight paths.” There is no evidence presented to support this assertion. By whom is this asserted conclusion considered to be correct and on the basis of what studies? There is no analysis of economic impact, and no evidence that the authors of the Draft EIS understand the inherent value of the Blue Mountains for residents and visitors.” (Blue Mountains City Council submission)

“I also wanted to speak to the role of respite for the rest of greater Sydney. We have friends and family from the Sydney basin who love to visit and stay with us in the Blue Mountains for the “peace and quiet”. It’s important to not underestimate the value areas like the Blue Mountains have for metro residents to visit and stay so they can experience respite from the hustle and bustle of their urban lives. It is important that we safeguard areas like the Blue Mountains to benefit our larger surrounding communities. Make no mistake, Leura and Katoomba are not the only places Sydneysiders come to visit and stay. We are devaluing one of NSW great assets if we proceed with a 24/7 airport, I have no doubt that visitors will be alarmed and disappointed when they come to find the Blue Mountains is now home to 24/7 traffic noise.” (Katie, Linden)

“The flight paths will make the Blue Mountains a less attractive place to visit which will therefore have an adverse effect on the tourism industry which is a major source of jobs in the Blue Mountains.” (online survey response)

“It flies over the Grand Canyon in Blackheath. How ridiculous - one of the most populous walks in a remarkable setting being exposed to noise.” (online survey response)

“The Oaks Trail is an iconic mountain-biking and bushwalking National Park track that is on the flight path. The feeling of being in the wilderness will be lost” (online survey response)

“This is the reason that visitors come here -to reconnect with nature, to relax, soothe their souls, rebalance themselves, breathe the clean air and so much more. Visitors come here to experience All of this. It's a unique and beautiful environment which is about to suffer horribly” (online survey response)

“Constantly seeing aeroplanes flying overhead will create visual pollution over what has previously been visually unobstructed sky.” (Lyn W, Linden)

“Specialist tourism, including bushwalking in the spectacular wilderness valleys of the GBMWSHA, is increasing in line with environmental tourism across the world. This should not be impacted by the visual, noise and chemical pollution created by overflights. In the US, for example, overflights of national parks are now being severely restricted. Flights over a World Heritage National Park such as the Blue Mountains will definitely lower the attractiveness of the area and have a negative economic impact.” (name withheld, Springwood)

Section 2: Non-noise Health impacts

In addition to the health impacts of noise, residents have raised a range of concerns about other non-noise related impacts including about:

Homes that rely on tank water harvested from rooves

A number of smaller communities across the Hawkesbury and Blue Mountains have no town water, including many homes along the Bells Line of Road.

“We are on tank water relying on catchment of our roofs. Fallout from planes will contaminate our drinking water” (online survey response)

Air quality / air pollution / asthma / particulates

“There is no preoperational air quality baseline data for the Blue Mountains, and none proposed in the draft EIS. As a City in a World Heritage Area, inscribed for its environmental values, this is incomprehensible. Potentially significant adverse impacts on air quality are likely to occur as a result of WSI operations, impacting the health and well-being of the community, and the finely calibrated ecosystems within the sensitive Blue Mountains natural environment.” (Blue Mountains City Council)

“WSI is sited in the pollution capital of Sydney and will exacerbate the health of the residents of western Sydney of which many are in a low social economic group.” (online survey response)

“Western Sydney is known for poor air quality as the haze settles in the Penrith Valley, the airport, and increasing air traffic, cars etc, will only exacerbate this issue.” (online survey response)

"I'm concerned about air quality with aviation fumes & unburnt fuel dumped over the environment." (online survey)

"Aviation fuel 'mist' as the planes fly over." (online survey)

*"The pollutants from the aircraft will affect our health as the air will not be as clean as it is."
(Angela C, Linden)*

Contamination of Warragamba Dam water supply

"I am deeply concerned about any flight path that is near Warragamba dam. Being Sydney's main water source, this should be a no fly zone. Statistically, more aircraft accidents happen near airports (take off / landing), and whilst technology has improved vastly over the years, I don't feel that our main water supply should be at risk for anything... fundamentally, our water source should be protected." (online survey)

"The proposed routes over the World Heritage Areas and surrounds will contaminate the local water supply" (online survey response)

"Fuel being dumped during an emergency" (online survey response)

"Avgas being dumped in the World Heritage National Park and over Warragamba Dam" (online survey)

"There is also concern of contamination to our water supply, being that we are in a catchment area for the Sydney basin" (Angela, Linden)

"How do we maintain safety for our feeder water catchment areas?" (online survey response)

Lead contamination

"The EIS also doesn't even mention the likely impacts of lead contamination. Airline fuel is the only kind of fuel that still contains lead. Lead is a likely carcinogen and can cause other serious health impacts. There has been no assessment done on the impacts of additional airline fuel from the use of WSI on surrounding residential and wilderness areas in relation to lead pollution from expected flights using WSI." (Leanne, Springwood)

Contamination of farmland

The Hawkesbury is frequently referred to as "Sydney's food bowl". Farming is an important economic activity and has been since the earliest days of colonial settlement of the region. Vegetable growing happens in rural parts including Freemans Reach, Yarramundi, Pitt Town Bottoms and Agnes Banks to name a few. While current RAAF operations do overfly these locations, the increase in overhead flights due to proposed WSI flight paths causes concern about contamination of farmland and produce.

In one conversation, a vegetable grower expressed concern about particulate matter or pollutants impacting her crops and some of the value-added operations she performs on-site before selling her potatoes and other produce to buyers. If sample quality checks of her produce by processors/manufacturers were to yield pollutant findings above accepted limits, she would lose valuable contracts which would impact the viability of her farm. Growers therefore need accurate and accessible information on pollutant risk and mitigation to be provided in a proactive way to address these concerns.

“The possibility to impact any farming due to stress to the animals or damage to crops from increased pollutants” (online survey)

Section 3. Aboriginal Cultural Heritage

Technical Paper 9 lists organisations and individuals who were approached to give their input into the assessment of Aboriginal Cultural Heritage impacts. I note that there are quotes and recommendations within the technical paper, including the avoidance of flight paths over key sites of cultural significance, yet these recommendations do not seem to have been included in chapter 17 Heritage, nor do they appear in the mitigation table at 17.6.

So while the mitigation measures that were included at 17.6 are welcomed, including that the detailed design phase involve further consultation, the stated mitigations are incomplete. I would urge consideration of the feedback provided by the Blue Mountains City Council which describes the assessment of Aboriginal Cultural Heritage impacts in the Draft EIS as “cursory” and “grossly inadequate”.

Constituents advise me that the concerns extend to noise, environmental impact and the breaking of the land-sky connections.

Chris Tobin, Dharug Traditional Owner writes:

“Our concerns extend also to the disruption of the Sky Country including the bird and animal migrations and navigations underneath and amongst the constant noise that will be produced.” He notes that the stars, and the *“peace and respite we seek in the last remaining intact ecosystems within our traditional lands...will become harder to find due to the constant descending and ascending of planes from the outside world.”*

The following comments are a sample of the concerns that should be considered and rectified in the final EIS.

“Feedback from local Dharug and Gundungurra Traditional Owners and Custodians confirms that while some early consultation was undertaken, at that time no specific information was available and therefore the feedback that could be provided was limited. Traditional Owners and Custodians were not adequately included in meaningful discussions and decision-making processes related to the proposed flight path design and its potential impacts on Aboriginal lands, skies and waters.” (Blue Mountains City Council submission)

“Instead of invoking the precautionary principle, the EIS, despite claiming that damage to rock art from flight pollution is ‘impossible to evaluate’, simply asserts that the likelihood of damage ‘is considered to be generally minimal’. The EIS has just said it doesn’t know what damage may occur, but then concludes it will be minimal... The EIS admits it doesn’t know what the impact will be on these highly sensitive cultural objects, so it must invoke the precautionary principle and have no flights over them. This failure to apply the NPWS GBMWA Strategic Plan and EPBC Act highlights the degree to which the EIS is a flawed document.” (name withheld, Springwood)

“We note that the proposed flight paths are expected to impact the Traditional Custodian land-sky connectivity by introducing aircraft and associated noise over important Aboriginal cultural areas. In light of these considerations, we express our support for and alignment with the voices and positions of First Nations People.” (Blue Mountains World Heritage Institute)

“Potential impacts to significant places of Aboriginal Cultural Heritage are assessed in a cursory and superficial way in the Draft EIS, including Echo Point and the Three Sisters as a declared Aboriginal Place, which will suffer significant visual intrusion from proposed flight paths. No meaningful consultation with Traditional Owners has been undertaken.” (Leanne, Springwood)

“Some of these sites within the Blue Mountains include: Old Man Kangaroo Rock carving in Lawson; Horseshoe Falls Shelter and Gloria Park Wells, grinding grooves, rock shelter and (potential) rock carving in Hazelbrook; Ticehurst Park grinding grooves, mudoes (footprints), and watering holes and Emu Rock carving in Faulconbridge; King’s Cave shelter and Linden Ridge Fire Trail axe grinding grooves, carvings and stone arrangements in Linden... The Ticehurst Park Aboriginal rock art engraving site in Faulconbridge consists of emu carvings, mudoes (footprints), and axe grinding grooves. The emu carvings found at this site are intrinsically linked to the Emu in the Sky constellation and are a unique and beautiful example of the complex cosmology and knowledge systems of the Dharug and Gundagara People. The Emu in the Sky constellation is of very high importance to many Aboriginal Language groups and with proposed flights in such a high concentration in one area, connections between land, constellation and Dreaming will be lost... The EIS, Chapter 17, Heritage, table 17.4, page 19, acknowledges that these and other Aboriginal heritage sites will have a moderate impact under the proposed flight paths. I argue that moderate negative impact on the fragile state of these sites, will compound over time to have severe impact, not only on the physical sites themselves, but on Aboriginal community values, Aboriginal heritage, land-sky connection, connection to the Dreaming and connection to Country. The EIS mitigation and management strategy is outlined as being a research program to investigate this impact (Chapter 17, Heritage, page 30). However, this program will not begin until 2026, by which time the sites of Linden Ridge Fire Trail and the Emu Rock engravings at Faulconbridge will already be experiencing dozens of aircraft movements overhead every day and night and damage will already be done, given their fragile state and their close proximity to a high concentration of flight paths.” (Tabitha, Linden)

Section 4: Impacts on Natural Environment

The Draft EIS has drawn criticism for its environmental assessment of the impact of flightpaths from a number of expert residents and groups including the Blue Mountains World Heritage Institute, the Blue Mountains Conservation Society, and the Blue Mountains City Council.

In addition, the NSW Parliamentary Secretary for Environment and Energy and Member for Blue Mountains, Trish Doyle, raises concerns in her submission. Included in the serious issues identified are questions about the impact of the Greater Blue Mountains World Heritage Listing. I would urge that the flight path design be revised to provide greater consideration of the unique aspects of the wilderness areas, as well as the residential areas, of this world heritage area.

It is important to the Blue Mountains community in particular that there be baseline and ongoing monitoring of the impacts on animals and plants, with baseline monitoring to commence prior to the operation of WSI.

The Blue Mountains World Heritage Institute additionally recommends the establishment of an Environmental Impact Offset Compensation Fund that would collect a per-passenger levy from airport users, to invest in natural and cultural heritage protection, monitoring, and promotion for the GBMWhA to ensure *“optimal biodiversity outcomes for the region”*.

I would urge detailed consideration of the submissions by these groups and provide a sample of the issues raised.

“The assessment of environmental impacts within the Draft EIS is both inconsistent and inadequate. The potential for significant impact to threatened fauna through strikes, implementation of wildlife buffers and other airport operations has been inadequately assessed, the projected greenhouse gas emissions are misrepresented through the exclusion of international flights, and very real impacts to air quality in the Blue Mountains have not been considered.” (Trish Doyle, Member for Blue Mountains)

“Section 5.3.2.1 regarding biodiversity states that “noise levels not typically expected to exceed around 70 dBA” (based on the L_{Amax} value presented in TP 1). Therefore, these intermittent noise levels are unlikely to disturb fauna within the GBMWhA or affect the habitats of this fauna.” No reference is provided as to how this trigger level for fauna was determined, and the basis for this should be provided.” (Marshall Day Acoustic peer review as per Blue Mountains City Council submission)

“The current Draft Flight Paths Environmental Impact Statement (EIS) falls short in establishing adequate criteria for defining a “significant” impact. Notably, it neglects the proper inclusion of potential negative impacts on biodiversity values, diverging from the guidelines outlined in the EPBC Act, particularly those highlighted by guidelines 1.1 and 1.2 and the application of the Precautionary Principle” (Blue Mountains World Heritage Institute)

“In the bush at night, every sound means something, the presence of prey or predators, an approaching threat or a potential mate, communication between bonded pairs etc. During the day birds communicate as a territorial call, to attract a mate or just to stay in contact.”
(Fitzgerald’s Creek Catchment Group)

“Twice annually, the largest wildlife migration in Australia passes through the Blue Mountains. It is made up of a mix of nectar and insect-eating honeyeaters and other birds which travel great distances south and north in spring and autumn, following the nectar flow... and are counted at a number of locations by birdwatchers each autumn. As the birds are flying, they communicate with distinctive small calls and observers have seen how sudden noise can cause them to disrupt migration and turn away from the noise source. There is potential for constant low-flying aircraft to disrupt the annual migration of the birds with flow-on effects on pollination in other forests. The EIS has failed to address possible impacts on these birds.” (Fitzgerald’s Creek Catchment Group)

“Additionally, the Burratorang State Conservation Area, which lies adjacent to the GBMA and less than 10 km from the airfield within the 13 km wildlife buffer, is known to provide habitat for the EPBC listed endangered Koala, the endangered Spotted-tailed Quoll and the Powerful Owl (listed as vulnerable under NSW legislation). Yet no wildlife surveys nor noise monitoring were performed in this SCA which will be subjected to many flights, some under 2,500 ft and up to 75d(B)A over a 24-hour period.” (Blue Mountains Conservation Society submission)

Impact on World Heritage listing

The Draft EIS considers that the proposed flight paths will have minimal direct impact on the values of the GBMWhA. Residents and organisations have made it clear that they question the veracity of this conclusion. It is therefore vital that a full, independent assessment of the impact on the World Heritage Area is done in line with the Listing criteria, in consultation with UNESCO’s World Heritage Committee.

“The assessment of proposed flight paths on the Greater Blue Mountains World Heritage Area (GBMWhA) lacks thorough consideration of key international conventions and NSW legislation. The Rio Declaration, Agenda 21, the Integrity concept of the GBMWhA World Heritage Listing, and the NSW Wilderness Act (1987) have not been sufficiently addressed concerning potential impacts. While the Draft EIS acknowledges minimal impact on flora, we assert that flight path operations adversely affect the “Integrity” of the GBMWhA and fauna values, potentially breaching responsibilities under the World Heritage Convention (1972) and the EPBC Regulations. Ongoing review is necessary regarding the Wilderness Act obligations on aircraft and noise in protected areas.” (Blue Mountains World Heritage Institute)

“I hold fears for the ongoing status of the Blue Mountains National Park as a World Heritage Area if aircraft are funneled over areas of pristine wilderness. Aircraft noise, fuel dumping and jet engine emissions are incompatible with the heritage and cultural values of the National Park.” (Trish Doyle, Member for Blue Mountains)

“There is no guiding principle in the EIS relating to protecting the important values of the surrounding environment, including the GBMA, which extend beyond consideration of the impacts of noise to include biodiversity and visual amenity. This is inexplicable in the current context, especially given the Australian Government’s recent adoption of the Kunming-Montreal Global Biodiversity Framework (GBF) in 2022, and their ongoing commitment to protecting the Outstanding Universal Value of the GBMA under the UNESCO World Heritage Agreement.” (Blue Mountains Conservation Society submission)

“In September 2023, the World Heritage Committee requested the state government “fully assess the potential impacts of the Western Sydney International (Nancy-Bird Walton) Airport on the Outstanding Universal Values of the property” and submit a report on the implementation of the airport to the World Heritage Centre by 1 December 2024. While UNESCO received notification that the Draft EIS is on public exhibition, there is no confirmation that a report is being prepared to present to the World Heritage Committee in 2024” (Leanne, Springwood)

“It is simply unbelievable that any flight paths would be put over a world heritage wilderness area at heights, as described above, which will impact on the “wilderness” that the Commonwealth is meant to protect as custodian under the relevant acts pursuant to the Blue Mountains being granted World Heritage listing. The degradation to the area that these flight paths will cause will sooner or later lead to the delisting of the Blue Mountains from the World Heritage List” (online survey response)

“It puts all the pain on the most noise sensitive areas, including World Heritage listed wilderness areas that should be free of noise pollution.” (online survey)

“Following an extensive review of the Environmental Impact Statement on the Flight Paths, we believe there may be significant impacts on the GBMWA’s biodiversity, integrity and cultural values... Safeguarding the Greater Blue Mountains World Heritage Area (GBMA) is a legal imperative under the World Heritage Convention and the Environment Protection and Biodiversity Conservation Act (1999) (EPBC) Regulations. Despite assurances in the Draft Environmental Impact Statement, there is a notable concern about potential impacts on the World Heritage Area’s integrity and fauna values, prompting questions about our commitment to national and international obligations, specifically under the Rio Declaration (1992) and the NSW Wilderness Act (1987).” (Blue Mountains World Heritage Institute)

“Section 4.5 of Technical Paper 1 identifies that none of the monitoring locations selected for the draft EIS are within wilderness areas of the GBMWA and there is no evidence of any quantification of ambient soundscape in the GBMWA, which would be required to appropriately assess impacts” (Marshall Day Acoustic peer review as per Blue Mountains City Council submission)

“Advice from the World Heritage’s resource “Guidance and toolkit for impact assessments in a World Heritage Context”¹⁵ clearly states that if there is insufficient data to assess the impact of negative actions, then the action should be avoided or mitigated. This oversight needs to be rectified and the relevant data collected on species. If the data cannot be collected, then the

flight paths over this area should be redirected elsewhere. This action (the proposed flight paths) is incompatible with UNESCO World Heritage advice.” (Blue Mountains Conservation Society submission)

Loss of amenity/enjoyment of the outdoors

“I wish to express my concerns with the flight paths over the Blue Mountains National Park. This is a unique area. Its beauty lies in respects to sights and sounds of the land and skies, and its unique flora and fauna.” (Susan, Glenbrook)

“The EIS, Chapter 15 Landscape and Visual Amenity, identifies Linden as having a high sensitivity of landscape character impact and indeed, being such an unobstructed and visually sensitive area, the impacts of aircraft movements over our homes will be immense. Many of our residents are very fearful of the decline in our outside lifestyle and are already feeling sick at the prospect of it – a direct consequence of “noise annoyance”.” (Lyn, Linden)

“Whilst the adoption of the WHO recommendations would provide a suitable internal noise level, eligible residents would be condemned to living in an air-conditioned sound-proof box. Their loss of a tolerable external amenity would not be addressed and there would be no compensation for the loss of that amenity.” (Eric, Blackheath)

“Wilderness camping experiences at Euroka (Glenbrook), bushwalking and natural recreation activities in the Glenbrook section of the Blue Mountains National Park and acknowledged places of aboriginal significance will be severely impacted by overflights.” (Blue Mountains City Council)

“Having camped at Euroka campground in Blue Mountains National Park annually since 2013, I am very familiar with the enjoyment and value of the dark skies and quiet surroundings it affords. The Draft EIS downplays the impact of the lights and noise of flights above this campground. The small sounds of nature such as wind through trees, frogs, insects, owls and bandicoots are an important part of this experience and if sound testing had been performed in this highly sensitive area, this would likely have been better understood.” (Lisa, Warrimoo)

Concerns for the impact on flora and fauna

The Draft EIS confirms that the proposed flightpaths may have an impact on the biodiversity attributes within the GBMWA resulting from wildlife strike, potential changes to air and water quality, aircraft crashes and changes to existing noise levels. (Volume 6, Technical Paper 8 pg 88)

“Airline activity also results in three major ecological impacts: wildlife–aircraft collisions, atmospheric pollution, and acoustic pollution.” (Hendrike, Springwood)

The Draft EIS notes that the Regent Honeyeater is “susceptible to noise impacts such as the masking of calls, stress inducement or lead to avoidance of areas.” It states that because flight paths will “typically exceed 8000 ft...are unlikely to be affected by the noise generated by the

project". Given Regent Honeyeaters have recently been found at Emu Heights, where planes will be climbing at around this height, there should be much more thorough examination of the likely impacts.

Other concerns are:

"Our analysis is that there is the potential for irreversible impact on endangered species due to ongoing and increasing aircraft noise in the Greater Blue Mountains Area (GBMA). Using the Federal Government's Protected Matter Tool, we identified several critically endangered, endangered, and vulnerable GBMA species under the 60-75 decibel noise contours. These species include microbats, endangered songbirds, and frogs." (Blue Mountains World Heritage Institute)

"Accredited research shows that this noise level results in physiological stress on wildlife. Aircraft noise is not compatible with areas of wildlife protection (already impacted by extensive bushfires, and future fires). I am concerned that impacts on health and wellbeing of human residents has not been adequately considered, and impacts on organisms of the National Park has not been considered at all." (online survey response)

"Noise impacts on birds and animals, many of whom are endangered. Last refuge for species driven out of the Plains by overdevelopment" (online survey response)

"Mostly I am concerned with our environment and the disturbance of wildlife in our World Heritage area" (online survey)

"Ninety-one eucalypt taxa occur within the Greater Blue Mountains Area which is also outstanding for its exceptional expression of the structural and ecological diversity of the eucalypts associated with its wide range of habitats. The site provides significant representation of Australia's biodiversity with ten percent of the vascular flora as well as significant numbers of rare or threatened species, including endemic and evolutionary relict species, such as the Wollemi pine, which have persisted in highly-restricted microsites. The diverse plant communities and habitats support more than 400 vertebrate taxa (of which 40 are threatened), comprising some 52 mammal, 63 reptile, over 30 frog and about one third (265 species) of Australia's bird species. Charismatic vertebrates such as the platypus and echidna occur in the area. Although invertebrates are still poorly known, the area supports an estimated 120 butterfly and 4,000 moth species, and a rich cave invertebrate fauna (67 taxa)... threat to wildlife and wildlife decline as a cause of air pollution, acoustic pollution and aircraft-animal collision" (Hendrike, Springwood)

"A loss of suitable habitat because of the aircraft noise will reduce the bird populations and diversity in the World Heritage areas. Since these birds are important in the ecosystems for pollination of flowers (including eucalypt flowers) distributing seeds of some plants and controlling insect populations, reduced numbers of birds will over time lead to a degeneration of the ecosystems." (Blue Mountains Conservation Society)

Bird strikes and bat strikes – dangers to animals and aircraft

Based on the information provided in the Draft EIS, key wildlife groups have raised with me concerns about the potential for irreversible impact on endangered species including through bat and bird strikes.

The respected Blue Mountains Conservation Society notes that *“flying-foxes are the animal most involved in collisions with aircraft at airports in Australia. At 1 kg, they can do substantial damage to aircraft, including grounding flights and putting aircrew and passengers at risk. The flying-fox is killed by the strike.”*

Additional comments that should be considered in the final EIS are:

“According to the EIS, 93% of bird and bat strikes occur below 3500ft (1150m) with the 93% of flying fox strikes occurring below 1000ft (330m). The other 7% of bird and bat strikes occur above 3500ft (1150m) up to 10000ft (3300m). Figure 7 shows the elevation of flight departures from KSA and WSA through waypoint, KADOM, at Katoomba. The graph indicates that there is a risk along the flight path up to 50-55km along the flight path. It is not just around the immediate departure or arrival zone of the airport as indicated in the EIS but is a risk more generally while over the Cumberland Plain and about 50% of its climb up the escarpment. The birds that impact at heights greater than 3500ft (1150m) are more likely to be larger species that have a larger impact on a strike with a larger risk than the background risk would suggest.” (Dr AR Green)

“Findings in the EIS are contradictory. For example, the EIS acknowledges that Flying foxes are particularly susceptible to wildlife strike by aircraft and flying foxes are killed every year from aircraft operating from other airports in Sydney. The grey-headed flying fox is listed as vulnerable to extinction under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 due to the rapid decline in the population of around 30 per cent over a short period of time. However, at the same time the report also concedes that there are no studies examining the effect of aircraft collision on endangered species populations of Flying fox and no evidence to support whether it is or is not a likely threatening process. This statement directly contrasts with the key finding in the report that the impacts of wildlife strike would not significantly affect the viability of local populations of any species. It is hard to understand how the EIS can suggest the operation of the WSI could have no significant affect on the local populations of flying foxes” (Leanne, Springwood)

“The management and mitigation measures (for wildlife strike) fall short of the claim that they are comprehensive and rigorous. They largely consist of “plans to make a plan” and detail the committees, plans, consultation and negotiation that must occur, but without any detail of what actual mitigation or management might be, and the various alternatives that might be considered. For example, will plans include culling of populations, removal of vegetation, removal of breeding sites, nests or eggs, trapping and relocation of individuals, alteration of flight paths and times of departure or arrivals according to time of most activity of flying-foxes.

What type of monitoring might occur and over what period, and how will this be reported?" (Blue Mountains Conservation Society)

"There should be NO flights over the BM National Park/ World Heritage area. Bird and bat strikes, noise and air pollution are all major concerns." (online survey)

"Wedge-tailed eagles have been in this area for years... I hope that the plane flight paths do not stop them nesting and hunting here. We all care for them here... they fly at 10,000 feet" (Diana, Ebenezer)

"An additional consideration involves the vulnerable Grey-headed Flying-foxes, residing in GBMA habitats within the 75 decibel, 70-65 decibel, and 65 decibel noise contours, that are known to employ updrafts during their nightly commutes to food sources. This "thermallling" behavior involves flying in large groups over substantial distances to access nectar and fruit resources in both the GBMA and residential areas in the Blue Mountains LGA. The significant altitude of their flight poses a potential threat, as Grey-headed Flying-foxes are at risk of direct strikes by aircraft flying over the GBMA. While acknowledging the remote nature of this risk, the Institute asserts that it is a possible known risk." (Blue Mountains World Heritage Institute)

"High risk of wildlife strike, particularly the threatened Grey-headed Flying-fox. Flying-foxes are the animal most involved in collisions with aircraft at airports in Australia. At 1 kg, they can do substantial damage to aircraft, including grounding flights and putting aircrew and passengers at risk. The flying-fox is killed by the strike." (Martin G, Faulconbridge)

"The potential for significant impact to threatened fauna through strikes, implementation of wildlife buffers and other airport operations has been inadequately assessed and the mitigation measures are unrealistic. It is not acceptable that threatened species such as Regent Honeyeater and Grey-headed flying fox are simply referenced and then dismissed, without appropriate and detailed fauna surveys." (Blue Mountains City Council submission)

Emissions and Climate Change

"According to the EIS assessment, around 441,331 tonnes of carbon dioxide equivalent will be emitted by aircraft flights each year by 2055 from WSI operations.. this does not account for emissions from inbound/outbound taxiing operations (on the ground) which can typically account for 25–40 per cent of a LTO cycle carbon footprint (p.60). International flights have also not been included in the projected figures. These figures have clearly misrepresented the likely and full impacts of operating this airport... Recommendation: Conduct a full and accurate assessment of the likely projected carbon emission impacts of operating the WSI airport." (Leanne, Springwood)

"In analysing emission projections, while tables and figures in the draft EIS show full flight emissions, emissions from international flights have been excluded from the discussion, despite representing 89% of the projected 2055 flight CO₂e emissions from the airport. TP3 regularly references emissions for only domestic flights and the portion of emissions from flights under 10,000 feet... Further, emissions from operations, airplane idle, and taxiing are not included in

the report, leading to a material underestimation of the emissions impact. By omitting these emissions sources from WSI the EIS again materially underestimates and fails to provide transparency, around the total impacts of emissions from WSI on climate change” (Blue Mountains City Council)

“Climate change is a major factor in the sustainability of the BMWHA as well the threat to the general population in Sydney. The submission that was made to the Federal Government on policy for the Aviation White paper demonstrated that in order to get to zero emissions in aviation by 2050, there needed to be a reassessment across all transport modes of moving to more efficient energy use in transport.” (Dr AR Green)

Firefighting access and fire risk

Issues raised by residents relating to bushfires fall into three main categories.

One relates to the introduction of greater risk to a bushfire prone area:

“Who in their right mind would fly planes over a known fire area dropping fuel and other particles over such an area. What agreements are in places to stop the commercial flights in times of high fire danger to allow the firefighter to go in with water bombing?” (online survey response)

“I am concerned about fuel dumping over tinder dry bushland that will cause increased fire risk.” (online survey)

“Where will fuel be dumped in an emergency? Over fire prone bush and wilderness which will destroy flora and fauna and risk fire and property damage.” (online survey)

The second relates to the fear that the busy airspace will mean there is not timely access to the skies for fire-fighting aircraft (based at Richmond RAAF) if a fire is burning.

“The current mitigation measure proposed is to ‘continue to consult with emergency operators regarding priorities of airspace’ (p. 11). This is woefully inadequate for an EIS, given the serious nature of this issue and the proposed flight paths across large bushfire prone areas.” (Leanne, Springwood)

“What will happen when there will be fire in the Blue Mountains and we will need planes and helicopters to help stop the fires? Will the planes from WSA stop flying to let the RFS planes do their jobs?” (online survey response)

“How will we be protected in a bushfire situation when we need the air space for helicopters?” (online survey)

A third concern is that the activity of the airport may restrict the ability to undertake bushfire hazard reductions.

“Risks associated with bushfires and hazard reductions” (online survey)

“Our safety (aerial firefighting/ monitoring reqd) when fire season is upon us and we suffer experiences such as Summer of 2020?” (online survey)

I note that *“Priority for emergency aircraft is always factored into airspace operations, such as during rescue or bushfire operations”* (Airspace operations fact sheet March 2023) and *“All aircraft responding to an emergency will be given absolute priority.”* (Frequently Asked Questions – Airspace and flight path design October 2023).

Linden Observatory

Linden Observatory express concerns about the additional light sky from aircraft from dusk to dawn. The Observatory dates back to the 1940s and is the largest operating observatory in Sydney. It is a site where astronomers contribute regularly and significantly to science, and it also has an educational role in astronomy and science-related topics, being used by astronomers from across Sydney. I would urge there to be greater consideration of the impact of the flights, and close, consultative work with the users of the Observatory, to minimise impacts.

“The proposed flightpaths through the airspace above and around Linden Observatory present a serious risk to the viability of the observatory and its ability to continue its long and valuable contribution to the astronomy community. The proposed flightpaths breach the International Astronomy Union guidelines for aircraft in proximity to observatories, guidelines which have been adopted previously in Australia... The draft Environmental Impact Statement incorrectly referred to the Observatory as the “former Linden Observatory” and referenced amateur use without recognising the long-standing partnership between amateur and professional astronomers. The EIS also only mentioned aircraft lighting as a possible effect, ignoring the effects of turbulence and exhaust contrails... As an active site, Linden Observatory is now the most accessible site to Sydney with both the instrumentation and skies of sufficient quality to undertake serious observations. The ongoing and active program of astronomy by astronomers at Linden has led to numerous professional collaborations, including contribution to research papers, contribution of observational data and the discovery of two supernova. Astronomers continue to contribute to ongoing research with active observation programs.” (Trustees of Linden Observatory EIS submission)

“Infrastructure Australia has indicated on a number of occasions that they are consulting with the community in good faith, and that the proposed flightpaths are not set in stone. There is an opportunity to demonstrate this good faith. The observatory is set in stone and has been now for over 70 years. The observatory cannot be moved. The flightpaths can be.” (Trustees of Linden Observatory EIS submission)

“The draft EIS incorrectly refers to the Observatory as the “former Linden Observatory” and references amateur use without recognising the long-standing partnership between amateur and professional astronomers. The EIS also only mentions aircraft lighting as a possible effect, ignoring the effects of turbulence and exhaust contrails.” (Blue Mountains City Council)

“Dark Skies accreditation will be lost if the disturbance to the night sky increases. The Observatory's current Bortle rating (this quantifies the astronomical observability of celestial

objects) is a prized 3-4. Should this deteriorate to 5-6, our view of all stars and especially the Emu in the Sky constellation will be damaged or lost.” (Michael, Katoomba)

“Flights at night will interrupt the viewing and recording of the night sky by professionals and the general public. Turbulence in the air and any contrails will mean that time lapse photography will be impossible. Research will have to be halted which will have a direct impact on the development of scientific understanding. The loss of ongoing research facilities will mean a loss of resources for astronomers, future scientists, STEM Studies, students and general citizens. Computerised conflated images of space which show hidden stars and constellations will no longer be possible - a significant loss to our understanding of earth's place in space.” (Michael, Katoomba)

Section 5 - Airspace Design Principles

Residents have considered the Airspace Design Principles outlined in the Draft EIS (Volume 1 Pg 22), which has been shared online and in printed brochures for many years.

In assessing the proposed flight paths against the 12 criteria there have been questions raised about six of the criteria.

People have expressed the view that the follow criteria have not been adequately applied:

Principle: Overflights of residential areas and noise sensitive facilities will be avoided to the maximum extent possible

Feedback from my community is that they do not feel the residential areas of parts of the Blue Mountains and Hawkesbury have been avoided sufficiently.

“I am staggered that with the technology of today, that flights have to rely on beacons such as Katoomba. Why must flights be directly over the residential areas when not 5 kms north or south are uninhabited valleys? If they cannot work out where they are without a beacon then move the beacon away from Katoomba by 5 - 10 kms. GPS has surely outdated ground beacons and flights must be able to fly over the Mountains without flying directly above residences.” (Lindsay and Jeanette, Woodford)

A case study is Linden. Residents' discussions with representatives from the Department have left them in little doubt that the flightpaths crossing the Great Western Highway at Linden are deliberately placed there because of the relatively small population. As an example of the percentage of respite that it is granted to them - under Runway 05/23 Night Arrivals and Departures, Linden received 0% respite from incoming and outgoing flights. [Western Sydney International \(Nancy-Bird Walton\) Airport - Airspace and flight path design | Draft Environmental Impact Statement | Technical paper 1: Aircraft noise \(wsflightpaths.gov.au\)](#) pg D-70

Linden as a crossover point is key feature of the five different flightpaths proposed.

“Within the EIS, Chapter 19, Economic, it is stated that: “The selection of flight paths appears to have been done with the deliberate intention to minimise impacts to built-up areas, and communities in the townships in the Upper Blue Mountains have largely been avoided” (page 8). However, the village of Linden (along with Blaxland, Warrimoo and Mt Riverview), have been blatantly ignored in these efforts, with the EIS also stating, “a small area on the east side of Linden (is) inside the N60 contour” (page 8).” (Tabitha, Linden)

The impact of overhead flights both day and night-time on the residents of Linden is disproportionate and many suggestions have been made that it could be minimised if flights continued further west before turning north. As certain changes are already being made to KSA flight paths, referred to as *facilitated changes*, it is not clear why additional facilitated changes cannot be made to KSA flight paths to accommodate WSI flights heading further west before turning north.

A number of residents of nearby Faulconbridge have also expressed concerns about the impact:

“Faulconbridge’s sensitivity to noise impact has been overlooked. Linden has been identified in the Environmental Impact Statement (EIS) (Chapter 11, Aircraft Noise) as being a noise sensitive area based on the excessive lack of respite that they are likely to experience, being between 0 and 1% (Chapter 11, Aircraft, 11.7.3.3 Detailed respite charts, Figure 11.40 and Figure 11.41, page 69), and Faulconbridge is only 3.5kms from Linden. The WSI Noise Tool shows that that flight paths will range from 2.5 to 5 kms either side of those indicated, it is no doubt that the community of Faulconbridge will at times also only experience 0 and 1% respite.” (Corinne, Faulconbridge)

Lack of information on the percentage of operations that will be conducted for each runway has hampered residents’ confidence that this principle has been adhered to.

This is the case for residents across a range of addresses in the Blue Mountains. Mention is repeatedly made throughout the community consultative documents, as well as the Draft EIS, the choice of runway mode being dependent on weather. Yet, it is difficult to find information in the Draft EIS to understand prevailing wind direction and wind speed in order to make estimates of likelihood of which runway mode will be likely to be preferred once the airport is operational.

While the noise modelling tools gives predictions, residents have pointed out that there is a large difference in the impact they will feel, for example between *“an average of 15 up to a maximum of 37 departures could overfly this location during the Day-Evening period when this runway mode is in place”*.

There is also a lack of information about the total number of overflights (arrivals and departures) that may occur within the same time window, as well as the impact of overflights from KSA.

There is also a lack of information about likely changes between different modes during a single day. This lack of information constitutes a flaw in the Draft EIS and additional information on

likelihood of preferred runway modes, such as weather data and modelling, needs to be provided to the community as a matter of urgency.

Principle: Where flight paths are unable to avoid residential areas – where possible, these areas should not be overflown by both arriving and departing aircraft

Linden is a striking example of where the proposed flightpath design departs from this principle.

Principle: Procedures will be developed to minimise the impact of night-time aircraft operations on the community while not constraining airport operations

Residents of the Blue Mountains, in particular, feel that this guiding principle was a result of their advocacy in 2016. It is unclear to residents how this principle has been met in the preliminary flight path design. Many residents have pointed out that their home will be subjected to overhead flights during the night, which they find unfair given that residents from other parts of Sydney are protected from overflights at night due to the KSA curfew.

The final EIS should explain how this principle has been met, in accordance with the *Engagement principles* outlined for the community and stakeholder engagement.

Principle: Noise mitigation measures will be developed

There are no mitigation measures in the Draft EIS for homes affected by noise in the Blue Mountains or Hawkesbury, which are considered too far from the airport to warrant such support.

Principle: Airspace design will consider the impacts of air operations on natural and visually sensitive areas

The Draft EIS states that the impact of flights over iconic Blue Mountains sites will be “moderate-high”, yet no mitigation measures are provided to lessen the impacts.

In addition, people have also provided feedback to me that they believe a sixth criteria

Principle: Changes to the current noise sharing arrangements at Sydney (Kingsford Smith) Airport will be avoided – has unfair consequences for much of western Sydney and the Blue Mountains.

Given this airport is to benefit the whole of Sydney, and in fact, the entire NSW and Australian economy, there is criticism of the inclusion of this principle.

“A letter was tabled at a Sydney Airport Community Forum (SACF) meeting from then Federal Minister Paul Fletcher which outlined the Government’s view that Flight Paths for KSA would not change to accommodate flight paths for WSA. This is reflected in both the 2016 Airport EIS and the 2023 Flight Paths EIS. The Minister’s statement goes against the objective embedded in Flexible Use of Airspace. It means that the flight paths for jets and turbo-jets operating into and out of the Sydney basin, are not optimal for either WSA or KSA... In the EIS, the result of this

sub-optimal process is overly complex flightpaths that have to avoid the designated jet and turbo jet paths into KSA... All new flight paths are pushed to the west and overfly the Greater Blue Mountains World Heritage Area. Furthermore, the departure modes are more complicated than they need be.” (Dr AR Green)

“A central instruction to the flight path designers for the proposal in the draft EIS was to avoid impact to existing operations at Kingsford Smith Airport and the Sydney Basin airspace. This has prevented a transparent assessment of flight path options across the Sydney Basin. It has led to an inequitable and unfair burden on the Blue Mountains and Western Sydney, taking 24-hour flights over highly sensitive, low noise environments.” (Blue Mountains City Council submission)

Positive feedback on WSI Airspace and flight path design

I have received some positive feedback about the proposed flightpaths, from constituents:

“I see nothing objectionable considering planned heights and paths considering the advantages we will all gain” (online survey)

“Having lived in the inner west for 30 years, I accept flight paths as a modern inconvenience” (online survey)

“I like the fact we finally have an airport close to home. Flight paths will not be a bother” (online survey)

“Flight path and height appear well coordinated and discrete.” (online survey)

“They seem to avoid densely residential areas while gaining altitude” (online survey)

“It is trying to utilise least populated areas where possible. The planes need to take off and land somewhere. This has been proposed for over 20 years now and it’s time to stop fighting it.” (online survey)

“Can see the effort to keep much of the descent away from populated areas.” (online survey)

Section 6 - Economic impact

In the feedback I’ve received, there are two schools of thought around the forecast economic impacts of the flightpaths – the impact on tourism and the impact on property prices. I note that feedback on the flightpath impacts is different to the impacts from the airport itself, although there are calls for a review of the original work done in the Airport EIS to more accurately assess the economic consequences for a tourism-based economy in the Blue Mountains.

The key concerns about the flightpaths relate to the noise impacts on sensitive areas and the effect that will have on visitors. While the Hawkesbury has a mixed economic base, the whole of the Blue Mountains LGA is *“utilised for tourism and recreation purposes, from the Scenic*

Eastern Escarpment through to Mount York in the West. The draft EIS does not appropriately acknowledge this reality.” (Blue Mountains City Council submission)

Other concerns that should be addressed by the final EIS include:

“The draft EIS states that there is “no specific legislation that guides economic impact assessments”. In fact, there are ample national and international reference points to guide an effective process for assessing economic impacts....Much greater clarity in this part of the EIS is required.” (Blue Mountains City Council)

“I am highly concerned about the impact the flight paths over my property will have on the value of my property and the surrounding properties.” (online survey)

“We believe this flight path will significantly negatively impact the value of our property” (online survey)

Many local businesses are hoping to see an economic benefit, and it would be useful for everyone’s forward business planning for a clearer picture to be developed in the Final EIS.

Section 7 – Specific Flightpaths

This section provides feedback on each Runway mode, as identified in the Draft EIS. Individual residents have looked in much more detail at the impact on their own homes, and provided more specific feedback in their submissions.

Runway 05 Day arrivals and departures

Departures: The loop as flights take off from WSI impacts severely the lower Blue Mountains including Emu Heights, Blaxland, Mount Riverview, Yellow Rock and Winmalee before crossing the Great Western Highway at Warrimoo.

At the same time, it appears to send a large percentage of flights heading north-west and west through the Grose Valley, so the Blue Mountains is effectively blanketed with noise on both sides.

This is the only Runway Mode that doesn’t directly impact Linden, although the noise will track either side of the village.

Arrivals: These are relatively low impact for the Blue Mountains although the Hawkesbury will experience incoming flights from between 13,000 and 17,000 ft.

Runway 23 Day arrivals and departures

Departures: This mode sees departures cross the Great Western Highway at Linden. Residents ask why the planes can’t continue further west before turning right, so that the height at which they cross over residential communities is greater.

Both arrivals and departures heavily target World Heritage Areas.

Runway 05 Night arrivals and departures

In this mode, Linden receives both departures and arrivals.

Arrivals: There is a flightpath option of around 5000ft for Linden, as well as one at around twice that height. The only justification for the lower flight path is that it allows for a shorter run into WSI. This is achieved at significant cost to the residents trying to sleep below.

Departures: There is no doubt that the departures over both the Jamison and Grose Valleys will resonate across the Mountains, particularly the lower Mountains and Bowen Mountain, given the lack of ambient noise.

Runway 23 Night arrivals and departures

In this mode, Linden receives both direct departures and arrivals very close to it.

This mode subjects the lower half of the Blue Mountains to both departures and arrivals at the same time, through both the Jamison and the Grose Valleys. Arrivals in particular travel directly over the most densely populated part of the lower Blue Mountains.

Night Reciprocal Runway Operations (RRO) arrivals and departures

This is the mode of operating that aims to protect residential areas from noise at night-time. While arrivals will have less of an impact on the Mountains in this mode, it appears that 100 per cent of departures heading west and north will fly directly over the mid-mountains at Linden.

A consistent question raised in response to this design is “why can’t **all** the planes continue further west before turning right to head north or north-west, so that the height at which they cross over residential communities is greater?” Alternatively, “can they all be sent south and east, over the water, to provide a night of reprieve for the Blue Mountains?”

Solutions

Solutions for dealing with the impacts these flightpaths create have been canvassed in many submissions, with hand-drawn and computer-generated maps provided, removing some flightpaths, particularly those that traverse the Great Western Highway and the more populated areas of the region. Suggestions for alternative flight paths that take planes further west before crossing the Great Western Highway, or further south, featured.

Other constituents have suggested that a steeper climb rate at takeoff in order to reach higher altitudes before crossing the Blue Mountains be used. (Marshall Day Acoustic peer review as per Blue Mountains City Council submission p10)

I would urge consideration of the suggested alternatives, which I note will inevitably have consequences for other areas, and include a sample:

“Aircraft should be kept as far away from any human habitation even if that means they have further to travel. So they should go around all of the blue mountains city. The route south should be changed to go completely around the blue mountains and gain enough altitude that they do not affect anyone.” (online survey)

“(in relation to runway 05 - daytime departures) By continuing the initial radius of turn... the roar of heavy aircraft struggling aloft will be diverted over unpopulated areas” (Gina, Faulconbridge)

“Move the flight paths further south of the mountains’ villages along the ridge and fly further west before crossing north at a higher altitude” (Lyn, Linden)

“The departure routes for flights heading east and south should not take off to the west and then double back. They should be made to extend further north, over less populated and rural areas, so that when the planes return over the Blue Mountains they are at higher altitude. Thus reducing visual and noise impacts.” (Kathleen, Glenbrook)

“In examining the proposed flightpaths, it appears that minor alterations in direction as they approach this part of the Blue Mountains would take the flight paths away from the populated areas of Mt Wilson and Mt Irvine and move them to go over unpopulated areas with, we believe, minimal if any impact on the viability of these flight paths.” (Mt Wilson Progress Association Inc and Mt Irvine Progress Association)

“Our proposal is to slightly adjust the final turn of the routes, not the heading, but where the last turn is commenced. Our proposed departure routes will slightly adjust the final outbound tracking, approximately following the RWY23 Departure North Night (RRO) final tracking. This alteration appears to have an insignificant affect on the overall aircraft routing but will have a threefold positive affect for the area.” (Mt Tomah and Beraming Community Association)

“The planes seem to be doing an unnecessary loop over the mountains instead of going in the most direct route, causing more concerns to a wider spread of people” (online survey).
