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Nature Conservation Saves for Tomorrow

Date: 17-Dec-2015

To: Department of Infrastructure and Regional Development
Western Sydney Airport Submission
Western Sydney Unit
GPO Box 594
Canberra ACT 2601

Subject: Submission on Draft Environmental Impact Statement
Proposed Western Sydney Airport

The Blue Mountains Conservation Society is a community based volunteer organisation with over 830 members. Its mission is to help conserve the natural environment of the Greater Blue Mountains, and to increase awareness of the natural environment in general.

I write on behalf of our Membership to oppose the proposed Western Sydney Airport on the following grounds:

- A 'Second' Airport is not needed in Sydney
- Growth in passenger movement along the east coast could be better handled by High Speed Rail
- Risk of impact on the Greater Blue Mountains World Heritage Area
- Risk of impact on the Sydney Drinking Water Catchments
- Risk of impact on declared Wilderness Areas
- Increased Greenhouse Gas Emissions
- Destruction of vegetation at the Badgerys Creek Airport site
- Risk of impact on eco-tourism in the Blue Mountains
- Risk of impact on Blue Mountains communities
- Risk to critical infrastructure near the proposed Airport site

We note that the draft EIS does not adequately address these issues and reject your Conclusion that the Environmental Impacts of the proposed Airport can be mitigated in a meaningful way.

We have detailed our objections to the proposed Airport in the following pages, referencing and in a similar order to the draft EIS document.

We respectfully urge you to abandon this project and turn the resources to creating an East Coast Fast Train Network for the 21st Century.

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1. Executive Summary

The Executive Summary is a glossy document that promotes the Airport project, rather than detailing the Environmental Impact.

Most numbers in the Executive Summary are about very early-stage operation of the proposed Airport in the year 2030.

The long-term impacts of the proposed Airport are 5-8 times the impact of this early-stage proposal, and these should have been detailed in the Executive Summary.

1.1. Greenhouse Gas Emissions

We note with distaste this statement from page 34:

Greenhouse gas emissions from the Stage 1 development have been estimated to comprise 0.13 Mt CO₂-e/annum, with the majority of emissions associated with purchased electricity. The Scope 1 and Scope 2 greenhouse gas emissions estimated from the proposed Stage 1 development would represent approximately 0.10 per cent of Australia's projected 2030 transport-related greenhouse gas emission inventory. For this reason, it can be concluded the greenhouse gas emissions from the proposed airport would not be material in terms of the national inventory.

The number of 0.13Mt is the 2030 number, and *excludes Aircraft emissions*, but then compares the number with *all 2030 transport-related greenhouse gas emissions*.

This is akin to calculating the greenhouse gas emissions from a new motorway without including emissions from cars and trucks that will travel on it.

This is a deceptive statement and should be corrected if the Draft EIS proceeds to a Final version.

1.2. Flight Paths

The flight paths in the Executive Summary on pages 20 and 21 have caused considerable angst in the Blue Mountains community.

We note that these flight paths are not final, but are indicative only.

There was no testing of flight path operations prior to release of the draft EIS. Such testing should have been done so that the impacts on people, communities and the Greater Blue Mountains World Heritage Area of the actual proposed flight paths.

Additional work should have been done with Air Services Australia to determine final flight paths, including interaction between the proposed Airport and existing Airports at Mascot and Bankstown.

1.3. Statement from WSROC

We note this statement from WSROC:

The EIS guidelines put out by the Department of Infrastructure and Regional Development in January 2015 state that a draft EIS for the Western Sydney Airport should include discussion and modelling of aircraft noise impacts including consideration of all potential flight paths in the short, mid and long term.

If the EIS was conducted according to the government's own guidelines it would look into different options for flight paths and conduct modelling to determine which of these options work best.

Not only does the Draft EIS not discuss why the presented flight paths were chosen, it does not suggest whether any alternatives were considered.

Contrary to the guidelines' advice, that requires assessment of specific intentions, the flight paths presented are only 'proof of concept'. Meaning a full assessment of the impacts on the community and natural environment cannot be completed.

This uncertainty doesn't just affect western Sydney residents. An entire reconfiguration of flight paths in the Sydney basin is likely once a proper airspace management plan is developed. A reconfiguration of flight paths at Kingsford Smith will be needed within five years of Western Sydney Airport opening.

An independent review into the Draft EIS has already found the document to be lacking in several areas, but if the government can't meet its own basic guidelines what is the point of conducting an EIS at all?

The guidelines ask for transparency, however requests by the independent review team for access to the data and modelling used in the EIS were denied.

The guidelines also state the need to fully address environmental impacts; including an outline for the performance criteria to be met as well as the monitoring and reporting responsibility for each issue.

The mitigation measures themselves have not been described in detail, let alone how they will be carried out and by whom.

It is obvious that this has been a rush job and claims from the Minister Truss's spokesperson that the Draft EIS "did not cut corners and met all legislative requirements" does not cut it.

The government itself saw a need to have the guidelines developed to guide the EIS, so just use them and in doing so earn the trust of the affected communities.

We agree with this statement as extracted.

1.4. Biodiversity Offsets

We reject the proposed use of Biodiversity offsets to allow destruction of Critically Endangered Cumberland Plains Woodland (pages 37 and 38).

How does offsetting maintain the quantity and coverage of the Ecological Community?

Cumberland Plain Woodland that is destroyed is lost forever and cannot be re-created elsewhere.

1.5. Noise Impact

The Executive Summary makes extensive use of ANEC noise contours, which the casual reader cannot possibly understand (pages 24 to 33).

Similarly, the Executive Summary makes extensive use of dBA numbers, again beyond the understanding of most of the community.

ANEC Contours and dBA numbers should have been explained in an easy-to-understand form.

We have seen various Politicians attempt to placate us in recent weeks with comparisons with passing vehicles and normal conversations.

Given the very quiet noise environment in most Blue Mountains homes, these comparisons are meaningless at best, insulting at worst.

1.6. Human Health

The Executive Summary states that there will be additional Human Deaths as a result of the development (pages 34 and 35).

This is completely unacceptable.

How can a development be allowed that we know in advance will kill people?

The deaths appear to be confined to impacts from ozone.

It is our understanding that PM2.5 and Air Toxics are likely to also cause significant health impacts, particularly in the long term.

We note this unsubstantiated statement on page 53: *‘Ongoing improvements in aircraft technology would continue to improve emissions from aircraft’*.

What is this based on? What future improvement to Aircraft engines is envisaged that will reduce output of toxic gases and particulates?

2. Need for an Airport

2.1. Endless Population Growth

This section of the document states that Population Growth is a driver of Aviation Demand.

Population Growth cannot continue forever, it must stop someday, and in fact global population is predicted to peak in about 2100 at 11 billion.

This represents an increase of about 57% of current Population.

The draft EIS however predicts that Australia's population will grow by 66% by 2055.

Why would our population grow faster than Global population in a shorter time frame?

Net migration to Australia is a key component of population growth, and is a number that is under Federal Government control.

So the draft EIS is telling us that the Federal Government will continue to deliberately grow the population, and that such growth necessitates another Airport.

Perhaps a more sustainable path would be to *not* deliberately grow the population?

A projection of 8.9 million people living in Sydney by 2050 is a nightmare which the people of Western Sydney and the Blue Mountains need not endure.

Building infrastructure on the assumption that Growth will go on forever is plainly wrong and is not sustainable.

2.2. International Tourism Growth

International Tourism contributes 25% of Tourism revenues, and tourism is 6% of GDP, so why must we endure a new Airport to help grow a part of the economy that generates just 1.5% of GDP?

Who benefits from increases in International Tourism?

Certainly not the people of the Blue Mountains.

2.3. High Speed Rail

Our figures, extracted from Sydney Airport Web Site, tell us that 24% of passenger movements at Mascot are to and from Melbourne, and that 50% of all passenger movements at Mascot are to and from East Coast destinations that would be serviced by the proposed High Speed Rail network.

Given that domestic flights tend to use smaller aircraft than International flights, the actual aircraft movements to and from East Coast destinations are likely to be higher than 50%.

The statement in the draft EIS that: ‘High speed rail is not considered to be an alternative to the development of a greenfield airport. This is because the two forms of transport cater for different demands and travel markets and are in many ways complementary, rather than alternatives’ is plainly wrong.

The High Speed Rail network, if built, would get passengers to and from East coast destinations faster than flying, with less environmental impact, in a quieter compartment, with mobile phone and internet services available for the entire journey.

The draft EIS states that ‘A high speed rail network may reduce domestic aviation demand and provide an alternative for some domestic travel, particularly between Sydney and Canberra’.

Why only to Canberra?

Travel time to Melbourne from Sydney is currently about 3 hours by air, including getting from the CBD to Mascot, arriving well before the flight as is required, passing through security checks, boarding the plane, taxiing to the runway, take off, flight time, landing, taxiing to the terminal, baggage collection at Tullamarine, and travel from Tullamarine to Melbourne CBD.

The High Speed Rail documents quoted in the draft EIS put the train travel time from Sydney CBD to Melbourne CBD at 2 hours 44 minutes, faster than flying, and certainly far more convenient given there would be no need for multiple changes of transport mode.

High Speed Rail is definitely an alternative the building a new airport.

2.4. Blinkered Rationale

The Western Sydney Airport draft EIS commences with an utterly blinkered justification for another Airport in Sydney when there is one very viable and environmentally justifiable alternative in High Speed Rail already planned and able to be constructed in the same time-span as Badgerys Creek.

The draft EIS provides 5 basic reasons why the second airport is ‘needed’ and therefore ‘necessary for residents to endure’:

- 1) Growth in aviation passenger usage over the past two decades
- 2) Demand pressure upon present facilities: Kingsford Smith Airport/Mascot
- 3) Growth of population in Western Sydney with transport needs
- 4) A boon to the economy of Sydney/NSW/Australia via tourism
- 5) Provision of badly needed jobs for the western Sydney region

Following sections of this submission will analyse each of these justifications and demonstrate the antiquated logic behind them, obviating the need for the principal alternative being adopted internationally: High Speed Rail.

2.5. Growth in Aviation Demand

The draft EIS openly admits its main purpose being the...need...driven principally by the increasing demand for aviation services in the Sydney region...and goes on to provide a host of statistics to show increasing passenger movements at Mascot, with the underpinning reasons given as increasing wealth among travellers, especially Asian travellers, and falling costs of aviation fares driven by cheap fuel, more efficient aircraft and wider competition among low-cost airlines.

At no stage does the draft EIS consider pitfalls in the ‘exponential rise’ of aviation usage, central among these being the reliance on carbon fuels (kerosene, benzene, jet gasoline) for future growth in the aviation industry, and the consequent pending possibility of ‘peak oil’ and/or a sudden increase in carbon fuel pricing due to diminishing supply over time. The much touted alternatives of sustainable crop-fuels and hydrogen would take decades to introduce beyond 2030 and would be considerably more expensive than the current pricing structures.

Nor does the draft EIS consider the possibility of burgeoning business and personal connection over the Internet, an avenue of communication vastly cheaper than long-distance aviation travel which precludes the need to carry out business deals ‘in person’ and increasingly allows people to experience international connections in ever more meaningful ways.

The draft EIS also overlooks the decline in regional air travel throughout Australia. Once a growth industry, a plethora of local/regional airlines have come and gone because the projected ‘markets’ for such flights in small country towns have not been sustained during difficult times for rural Australia. The ‘Fly-In/Fly-Out’ mining ventures are now in decline because the economic conditions do not suit—something for Badgerys Creek proponents to ponder should growth in the Chinese economy continue to slow over future decades.

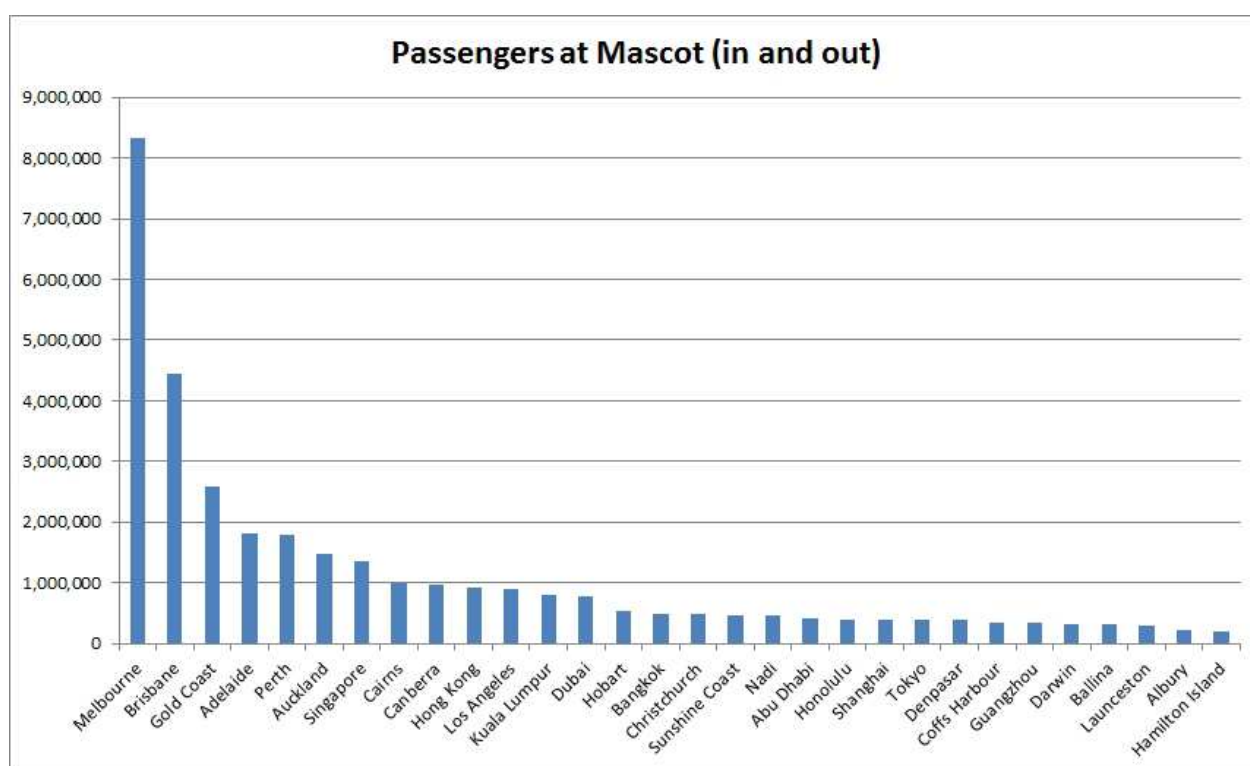
The oft repeated tourist ‘pressure upon Kingsford Smith/Mascot’ mantra can be dealt with summarily with the statement from Sydney Airport management itself which confessed it can “...handle the doubling of passenger movements to 74.3 million by 2033.” (Source: Daily Telegraph 28-4-15)

At present, even considering the continued existence of the curfew, KSA Mascot is operating at 60% capacity. The “massive increase” in passenger numbers since the Howard govt. abandoned the previous attempt to impose a second airport in 2000 has resulted in a mere 3% increase in flights overall.

2.6. Source of Aviation Demand

One of the misleading aspects of the many figures quoted in the draft EIS, ‘tourist numbers’ and ‘visitors to NSW’ is the fact that Domestic and International passenger movements are often conflated into the one category. This is because everyone generally concedes that overseas trips to and from Australia necessarily rely on aviation (99%) - so we tend to forget the domestic situation.

When we examine the passenger movements in and out of KSA Mascot however, a different picture emerges.



Data Source: Wikipedia - http://en.wikipedia.org/wiki/Sydney_Airport

The stunning impression from this bar graph is clear: by far the busiest air route in Australia is the Sydney-Melbourne route, reportedly one of the busiest air corridors in the world. It takes 25% of the air traffic to and from KSA. The top 5 routes are domestic, and three of those five are along the Eastern seaboard. If we include Coffs Harbour, Canberra, Ballina, and Albury with those other three destinations (Melbourne, Brisbane, Gold Coast) we are approaching 50%.

The problem of ‘tourist pressure’ on Sydney Airport, therefore, isn’t international tourist numbers at all, but domestic travellers—travellers who have been channelled into aviation or vehicular car transport as their only ‘rapid transit’ options, when there is a mode of travel equally as rapid (almost certainly quicker), safer, vastly more comfortable, and which carries zero carbon emissions in its operation, namely, High Speed Rail.

Dismissing the 2013 HSR proposal which quoted an overall cost of \$114B for completion in 2030 as ‘too expensive’, the draft EIS made no effort to update more recent quotes nor examine the exponential strides in HSR construction made in China over the past 5 years. During the past decade China has laid 16,000km of High Speed Rail and networked a country the same size as Australia and with even greater logistical difficulties. (Wikipedia, 2015)

The spread of high-speed rail has forced domestic airlines in China to slash airfares and cancel regional flights. The impact of high-speed rail on air travel is most acute for intercity trips under 500 km. By the spring of 2011, commercial airline service had been completely halted on previously popular routes such as Wuhan-Nanjing, Wuhan-Nanchang, Xi’an-Zhengzhou and Chengdu-Chongqing. Flights on routes over 1,500 km (930 mi) are generally unaffected. As of October 2013, high-speed rail was carrying twice as many passengers each month as the country’s airlines. (Wikipedia, 2015)

Local HSR research by ‘Beyond Zero Emissions’ (BZE), has revised the cost of construction of the Eastern Seaboard rail line to \$84B, but that is the total length of the line from Melbourne-Sydney-Brisbane and involves full track construction, project management and rolling stock of some 87 trains operating in and out of Sydney every 10 minutes in peak times.

If the Sydney-Melbourne link was built as the first stage, the cost would reduce to \$44B, with a further \$6B taken off if the line entered via the ‘back door’ of Sydney, at Badgerys Creek.

Clearly, the outset costs of HSR are higher than the projected Western Sydney Airport bill of \$6-8B, but considering the long-term costs of air pollution, carbon emissions, health care, water purification, angry residents and vehicular traffic chaos, a large initial outlay seems much more judicious. According to BZE, carbon emissions created in construction would be offset within five years.

Therefore, using HSR would mean millions fewer passengers using KSA Mascot in 2030, and a reduction of dozens of flights per day, taking all “pressure” off Sydney’s major international airport and providing an exciting new alternative for domestic and international travellers wishing to see more of regional Australia.

We also note that HSR to Melbourne would remove the need to *ever* upgrade Tullamarine Airport as is currently being discussed.

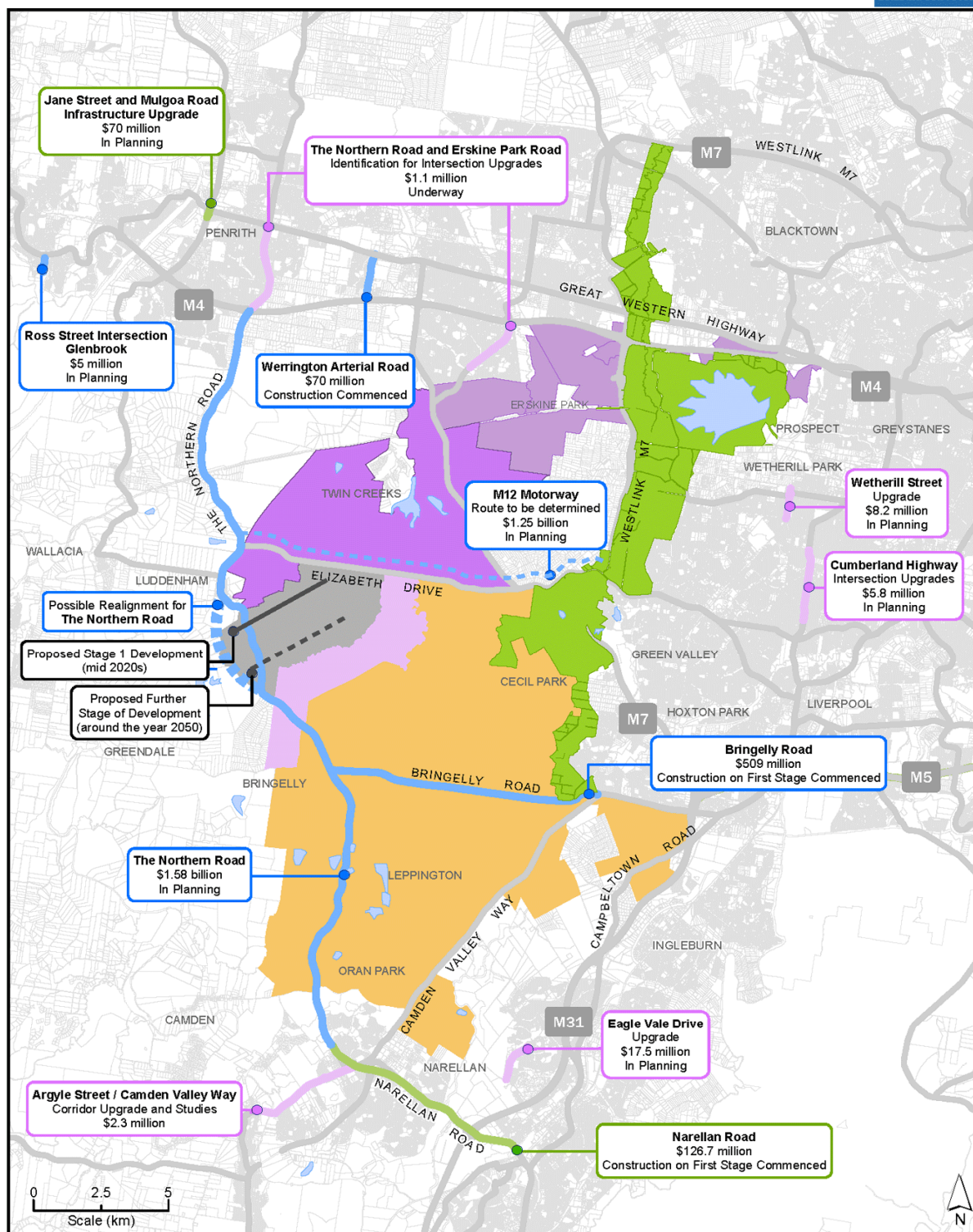
2.7. Western Sydney Population Growth

It is undeniable that western Sydney’s demographic explosion will continue into the next two decades—particularly focussing on the ‘Northern Road’ corridor running from Campbelltown/Narellan through to Badgerys Creek, Penrith-Castlereagh and then on to Richmond-Windsor.

One of the coy secrets of the draft EIS is that land denoted as ‘South West Growth Centres’ currently containing Oran Park and Harrington Grove, is earmarked for urban development northward beyond Bringelly Road and within 5kms of the proposed WSA at Badgerys Creek...(see map below)



WESTERN SYDNEY - AIRPORT SITE AND INFRASTRUCTURE



A Deutsche Bank report (<businessinsider.com.au>July8 2015) found that forecast passenger numbers from the region for Badgerys Creek were far too ambitious. Western Sydney, with a current 2015 incomes average below \$50,000 a year, would not supply strong regular users of an air travel service at WSA, which would have to be subsidised for at least a decade if it was to survive.

Proposed and much touted roads infrastructure surrounding the airport would do nothing to improve life amenity for residents of the Northern Road Corridor, since expansions of the Northern Road itself, Elizabeth Drive ('M-12') and Bringelly Road all lead to established Motorways (M-4 and M-5) that are already becoming 'car-parks' moving commuters to the CBD and their destinations at a morbidly slow average rate (more roads = more vehicles = more accidents = more injuries and deaths). The lack of a rail link, even of 'slow suburban rail' (eg: Leppington-Badgerys Creek-St. Marys) does not help the situation, and certainly would not solve much even if it were provided.

Compare the demographic facts above with the following: 60% of Australia's population resides within 50 kms of the proposed High Speed Rail route - that's more than 13 million people within an hour's access to rapid transport all along the South-Eastern zone. 46% of all of Australian regional travel lies within this corridor!

Can we begin to break out of the fixation of 'big cities' being fed by big airports and start to rebuild the beautiful regional zones around Wagga, Albury, Taree, Port Macquarie, Grafton and Lismore, both as unique 'production zones' as well as being international tourist destinations in rural Australia? There is far too much population pressure on the Brisbane-Sydney-Melbourne triumvirate and insufficient attention paid to regional amenity.

Meanwhile, the residents of western Sydney might be more appreciative if \$6b of NSW govt. revenue was spent on finding a rapid transit route ('bullet train'?) from Badgerys Creek to the CBD non-stop, within 40 mins. It would surely allow them to feel more a 'part of Sydney' than having to endure a second airport.

2.8. Economic Boom for Western Sydney

The draft EIS simply has NOT explored the supposed 'tourist benefit' of an airport located at Badgerys Creek, some 50kms from Sydney CBD. There are many tourist numbers and dollar figures quoted but none relate to any specific advantage to the location of Western Sydney Airport. The draft EIS does, in fact, reassert that...

Sydney(Mascot) Airport is Australia's busiest regular public transport airport and will continue to be the major focus for international and domestic airlines operating in and out of Sydney. (draft EIS Vol 1 p.107)

Passengers do not "decide" the landing location of their booked flights, airlines do. But airlines must respond to complaints, and to ticket demand. If any foreign tourist had their choice of flight into Sydney, they would surely prefer to land near the major hotels, the Harbour Bridge and Opera House, Bondi beach and all the other 'tourist sites' of the CBD. That is why it is a 'CBD' in the first place. They would not prefer, after a long endurance flight from Europe, the USA or China to land at a place where there is a further 1-2 hour taxi journey to that self-same CBD as this would lead to complaints.

Proponents of the WSA need to beware the type of excessive optimism that drove authorities in Montreal to direct airlines to use the new (in 1975) 'Mirabel Airport', 55kms from Downtown

Montreal and lacking any linking rail infrastructure, instead of the older, closer, and more popular 'Dorval Airport'. The result was an overall decline in visitors to Montreal, who now preferred to stop at Toronto, and a general decline in aviation usage at both Dorval and Mirabel airports, the latter being the biggest loser. The whole project was an abject failure due to poor planning.

There is no guarantee whatsoever that WSA will be a success simply because it is plonked amidst a big population. Other factors, not in the least connected to population or 'jobs', determine tourist choice and behaviour. The draft EIS indulges in a great deal of wishful thinking.

2.9. Employment Opportunities

Unemployment, especially youth unemployment, has been a persistent feature of life in western Sydney ever since its rapid expansion in the 1960's and 70's. Urban housing tended to develop way ahead of transport and industrial infrastructure, so that job-seekers generally had to head eastwards to secure employment. Thus most announcements designed to curry favour relating to Western Sydney incorporate the lure of 'jobs', Badgerys Creek Airport is no different.

The upside claim of the draft EIS of 61,000 'direct and indirect jobs' (out of an extra population of 500,000 remember) is already challenged by a (still optimistic) Deloitte report for the Business Chamber of Commerce which forecast 46,000 'direct and indirect jobs'. All, actually, quite problematic stargazing which depends entirely on that most unpredictable mechanism: 'market forces'. We are told that WSA will not survive in a competitive profit-making environment with a curfew, meaning it must have a 'market advantage'. Surely this is an alarm bell ringing.

In its first five years BCA will primarily be a freight airport. Freight aircraft are the oldest and loudest, will Badgerys Creek survive its first five years as a freight Airport and emerge as a swan of International Travel Excellence?

In this context it is well worth studying the experience of Melbourne's 'second airport', which has been deliberately overlooked by proponents of WSA for very good reason, the comparisons are very close, indeed. A similar "...world class centre of Aviation Excellence" has been operating out of Melbourne's 'Avalon Airport' since 1997 and like Badgerys Creek is around 50kms from the CBD and without a rail link. Despite the fact that Melbourne is growing faster than Sydney and Avalon is located near a major industrial centre at Geelong, it is struggling to survive, increasingly as a freight airport.

This year (2015), the Victorian government was obliged to supply a \$12m 'lifeline' and the LinFox Group (its owner) a further \$14m to entice 'Jetstar' to continue landing there. 'Virgin' has already gone and QANTAS showed its faith by closing down its maintenance workshop at Avalon and moving to Singapore. Likewise Western Sydney Airport will also require either a \$1b govt. subsidy or extra passenger levies to maintain its first 10 years' operations. (Source: Deutsche Bank Report, 2015) The 'direct and indirect jobs' at Melbourne's second airport are looking very insecure right now, and there is absolutely no evidence provided by the draft EIS to convince us that Badgerys Creek's 'market performance' will be any healthier.

What kind of jobs? Mainly behind-the-counter retail, and transport-storage. Forget 'high-tech', 'value-added' jobs often mentioned as a sideways sweetener, these are already earmarked for Pymble, North Sydney and Pyrmont in the CBD, again, that's why it's the CBD.

The Commonwealth Bank even abandoned Parramatta to head 'back into town' The buildings around WSA will be warehouses which connect to vehicular semi-trailer traffic, thus most jobs will

be stacking, unpacking and storage, and automation will mean these will not be plentiful. QANTAS CEO Allan Joyce has enjoined WSA developers not to 'goldplate' Badgerys Creek—he wants it cheap, easy, and second-rate.

2.10. Conclusion

Basically, this airport is not 'necessary' at all. Multiple airport cities like Tokyo (36m), New York (24m), and London (8.5m) have populations way bigger than Sydney's 5 million. The attempt to stampede the residents of Western Sydney and Blue Mountains into an 'urgent need' to develop a second airport at Badgerys Creek is political in its intent and its singular benefactors are the developers themselves, not just of the airport site itself, but of the massive urban surge happening around it.

As the process of this draft EIS is progressing more and more holes are appearing in the Airport's justification. The noise is not 'minimal', the air pollution and CO2 emissions are much worse than admitted and threaten everyone's health, the infrastructure promised goes nowhere for the long suffering residents of Western Sydney, who will get little use from this airport, and much pain.

This submission urges the Western Sydney Airport authorities to cut their losses, invest taxpayers' billions into long term solutions for their isolated and abused suburban amenity by beginning to build a High Speed Rail Hub at Badgerys Creek and provide a transport alternative that we can all be proud of.

3. Noise from Aircraft

3.1. Noise Impact at Various Locations

Initially the draft EIS position on aircraft noise seems to allow for a wide scope of subjectivity in understanding ‘noise impact’: The pattern of noise impacts that would result from operation of the proposed airport is complex, and depends on time of day, season, airport operating modes, weather conditions and potentially other factors. (draft EIS Vol 2 ‘Noise’ p19)

Within our Sub-Committee we have people living at a range of addresses with a range of noise environments:

- Mount Sion Place Glenbrook, where there is no ‘normal’ external noise except the croak of an occasional frog (ie: for the most part ‘total silence’)
- The Avenue, Warrimoo, where there is already heavy vehicular traffic noise from Coal Trucks and other semi-trailers, as well as Rail Freight trains squeaking and rumbling round the ‘Warrimoo Bends’, and repeated sirens and ‘care’ helicopter flights into the bargain

It is self-evident that these two addresses would have totally different reactions to the 200 (2030 figures) flights a day operating between 4,000 and 7,000 ft. above their heads.

The former would have their peace utterly shattered by aircraft noise they had never experienced before, that is, they would suffer a ‘traumatic contrast’, a ‘noise shock’.

The latter could well argue that 24/7 aircraft noise on top of their current background noise level is the ‘straw that breaks the camel’s back’, and that they had already made sufficient sacrifice ‘for the good of the economy’ and for ‘progress’, given that they had originally moved to the Blue Mountains to escape urban noise and enjoy peaceful communion with a natural environment.

The draft EIS does not consider the different subjective circumstances of Airport Noise victims, and offers nothing to alleviate their fundamentally altered lives. At least roads and railways can potentially have ‘walled corridors’ to reduce impact; overhead noise coming from a multitude of directions is another matter.

Simply asserting that ‘technology will solve noise impacts’ or relying on improvements in future aircraft is hardly ‘scientific analysis’.

3.2. Pseudo Science

Using pseudo-scientific data the draft EIS seeks to squeeze noise impact into a ‘One Size Fits All’ formula based upon ‘decibel levels’ on the dBA scale.

It thus arrives at a sliding scale of noise impact based upon distance from the Airport and height. Most residential areas subject to fly-over noise lie in the 32km-16km radius and thus, according to the draft EIS, suffer noise between 54 and 75 dBA from take-off and landing 747’s and Airbus 320’s. (see Fig. 01-2 p.22)

This is then compared to a dBA scale which shows 70 decibels as the infamous “passing car”. It does not suggest the distance of the car from the listener, how long its passage lingers, the type of vehicle (V8 or 4 Cylinder, sedan or 4wd), or the speed at which it is travelling.

It is important to note, at this stage, that in the draft EIS itself there is no statement to say that this level of noise is acceptable for humans throughout a 24 hour day (especially at night) or that it is non-intrusive for humans—it simply states that a mere “1500 residents” close to the Airport may be adversely affected by the noise because their dBA levels are beyond 75 dBA.

3.3. Altitude and Noise

There are a number of caveats that must be applied to this simplistic model. First, the altitude of the planes is measured from the ‘runway level’, which is pretty close to Sea Level. Thus, for communities such as Blaxland-Warrimoo, over which most landing descents occur and which are both between 200 and 300 metres above Sea Level, one would need to deduct 1,000ft from the given height: 7,000ft becomes 6,000, and 4,000 becomes 3,000 and so on.

Second, depending on weather conditions, planes in descent are notoriously inconsistent with their altitude: to place them all in the same constant bracket is misleading. Many may be above the designated 7,000ft and descend faster, others may be at 3,000ft and linger longer at that altitude.

Third, given that the above events may well provide significant variations in flight altitudes, added to the fact that decibel levels do NOT increase on a simple arithmetic progression, but instead DOUBLE in loudness/impact EVERY 10 DECIBELS, one can appreciate how much 24/7 overflight noise may interrupt the activities of affected residents. One might hear a jet above at 54 dBA one minute, and another 5 minutes later at 74dBA. Clearly, the hearing differences between 60 and 70 dBA are crucially different between top and bottom of the decile.

Fourth. The American ‘Federal Aviation Authority’ (FAA) sets a maximal Aircraft Noise limit of 65dBA, beyond which aircraft noise is “...incompatible with residential communities”. Why is this standard not applied to Western Sydney Airport nor acknowledged in its draft EIS? Are Australian standards less stringent than those of the United States? If so, where does this place other ‘estimate’ criteria based on ‘Australian Standards’ elsewhere in the draft EIS?

Fifth, the assumption that flights above 10,000ft have ‘minimal impact’ upon human or animal hearing is more than questionable. Anecdotal evidence already being compiled and attested in the Upper Blue Mountains, (and no doubt forwarded to Air Services Australia as a multitude of complaints) at places such as Wentworth Falls, Katoomba and Lawson allude to many planes purportedly flying above that altitude being singularly intrusive with their noise. This clearly points to a total oversight of the subjective factors in noise impact, or a massively flawed model overall.

Finally, and most importantly, the dBA scale is an inadequate measure when applied to aircraft noise. It is a construct that eliminates extreme high and low sound frequencies to arrive at a ‘safe’, statistically ‘average’ criteria of sound on the human ear. It is rather like the judges’ scores at Olympic events such as Diving and Gymnastics, where the highest and lowest scores are eliminated to avoid corruption of the results. Nevertheless, the high and low scores ARE ‘there’, and they are part of the reality of that event, just as high and low frequencies exist in aircraft noise, and are quite crucial to the health of the listener.

3.4. Low Frequency Noise

Research revealing Low Frequency Noise (LFN) emanating from jet planes and other sources is injurious to health is plentiful:

- Leventhall, H.G, <http://www.noiseandhealth.org/text.asp? 2004/6/23/59/31663>
- Oud, M., <http://nl.linkedin.com/in/mireilleoud>
- Hodgen, K. [web.mit.edu/aeroastro/partner/reports/ proj1/lfnreport-2007-001.pdf](http://web.mit.edu/aeroastro/partner/reports/proj1/lfnreport-2007-001.pdf)

All these suggest the human cochlear is damaged by exposure to LFN, especially among older people. Other illnesses such as heart disease, sleeplessness, and headache are also implicated in LFN, which is a sensation more ‘felt’ than ‘heard’. This frequency is not picked up by the dBA scale but better measured by a “dBC Scale” which does include extreme frequencies—something not used nor referred to in the draft EIS.

3.5. Hypothetical Constructs

The draft EIS goes on to deal with two hypothetical ‘constructs’: the ‘Australian Noise Exposure Forecast’ (ANEF) and the ‘Australian Noise Exposure Concept’ (ANEC). Both were supposedly developed “...after a period of public consultation” (Vol 2 p 27) but there is no clear indication of the parameters of ‘those consulted’.

They set up a chart that allows development of all manner of residential and commercial buildings as long as they fall under some magical noise tolerance number of “20” or “25” - this is convenient because Department of Infrastructure maps indicate massive residential and commercial/industrial development earmarked up to and further northward than Bringelly Road, right up to the near vicinity of the Airport.

In brief, the draft EIS admits the ANEF is a forecast and the ANEC is a concept. Therefore the figures used in Table 10.2 p.27 are fallacious as they are nothing more than an ‘estimate’, ‘indicator’ or, in plain-speak, a ‘guess’ devised for development purposes.

The figures can’t be held to, proven or applied. They are not like a speed limit or height limit on a road, and have no legal application - they simply allow developments to ‘indicatively’ occur if it is ‘appropriately ready’ to be near an Airport. How convenient.

3.6. People Affected

So now to the myth of the mere “1500” to be impacted by severe aircraft noise. It is clear from the draft EIS Noise ‘Summary’ that this figure is a massively underestimated fiction:

For the loudest aircraft operations (long-range departures by Boeing 747 aircraft or equivalent), maximum noise levels over 85 dBA would be experienced at a small number of rural residential locations (this is the ‘1500’) close to the airport site in Badgerys Creek.

Maximum noise levels of 70–75 dBA could be expected within built-up areas in St Marys and Erskine Park as a result of such worst case operations.

The Boeing 747 is, however, being phased out of passenger services by most airlines.

Maximum noise levels due to more common aircraft types such as Airbus A320 or equivalent are predicted to be lower at 60–70 dBA in built-up areas around St Marys and Erskine Park, and over 70 dBA in some adjacent areas to the south-west of the airport site, such as Greendale. (Vol 2 p.19)

From their own maps, the draft EIS is vastly understating the impacts on surrounding residential areas such as Erskine Park: Horsley Park, St. Clair, Colyton and St. Marys also lie in the path for the ‘normal’ take-off noise distance of 70-80 dBA. (ie. between 8 and 16 kms from the Airport as the crow flies).

The suggestion that Boeing 747’s are being ‘phased out’ as passenger liners covers the fact, revealed in draft EIS charts showing ‘freight movements’, that 747’s become the prime freight carriers once they have depreciated beyond passenger usage.

When old, their noise is worse and their air pollution more odious. The suburbs mentioned already contain tens of thousands of residents, several schools, recreational parks and shopping centres.

That is not all. Hundreds of thousands more home-buyers and businesses are destined to be settled in the ‘Northern Road’ corridor beyond Oran Park and Harrington Grove, within a 10-20km radius of Badgerys Creek inside the next decade.

Will these people know what they are getting themselves in for, or will they fall for the ANEC/ANEF ‘appropriate development’ guidelines mentioned earlier?

Such ‘Airport Settlers’ will no doubt confront the same conundrum recently encountered by Tullamarine Airport in Melbourne.

When originally developed as an Airport, Tullamarine was set in a Greenbelt paddock reasonably distant from residential settlement, but subsequent land releases brought housing quite close to the Airport itself and now an extra runway threatens to bring excess noise upon their heads. They are therefore demanding a curfew from Warren Truss and the Victorian government to mitigate their plight (‘The AGE’ August 3rd 2015).

3.7. No Curfew

Regardless of the numbers in the immediate vicinity of Western Sydney Airport, the draft EIS does not adequately address the absurdity of the present curfew situation.

If, as the draft EIS argues, modern aircraft now and into the future are hardly noticeable to surrounding residents, why isn’t the curfew on Kingsford-Smith Airport lifted?

If on the other hand there is some justice in the argument that Inner City residents suffer from aircraft noise and deserve a curfew and noise mitigation subsidies, why should they receive the curfew and the residents of Western Sydney not?

Whether they are 16,000 or 500,000, should they not receive the same treatment on the basic principle of equality? Be given a ‘fair go’?

In reality, it is clearly political expediency and profit motive that rules this debate and once again the people of Western Sydney suffer the insult of a ‘cheap and nasty’, second-rate Airport...as Alan Joyce recommended, “not gold-plated”.

3.8. Other Noise Sources

One such contemptuous lack of consideration lays in a short and abrupt message regarding ‘other aircraft’:

The proposed airport would be developed to address aviation passenger demand and does not make specific provisions for general aviation facilities, which may include helicopter flight support and tourist flight facilities. The potential noise impacts of general aviation operations such as helicopters are not assessed in this draft EIS. (Vol 2 p22)

There is no doubt that in its bid to maximise profit from the Western Sydney Airport, its private owner (probably Sydney Airport Corporation) would seek to encourage tourist flights across the Blue Mountains World Heritage Area.

Past experience of such helicopter and small craft flights when fires and news events occur provides evidence that they fly loud and low, and their operations could become a major intrusive noise factor emanating from the Airport.

Yet the draft EIS commissioned to provide information as to the projected levels of ‘other aircraft activity’ as well as the possible future of Bankstown Airport (reputedly the busiest airport in Sydney) has not bothered to research it.

3.9. Aircraft Noise Ombudsman

Ultimately, there is one person in Australia who may be regarded an authority in the field of ‘Airport Noise’ because every day he fields the plethora of complaints about its impact upon residents around airports across the length and breadth of Australia.

He is the ‘Aircraft Noise Ombudsman’, appointed by the Commonwealth Government.

His name is Ron Brent and he wrote:

...aircraft noise...is very different from the noise created by railways or busy roads. The key differences are that aircraft noise will reach a much wider area, cannot be shielded by barriers along the route, and is not restricted to a narrow and predictable path...Noise from an aircraft in flight does not fall in a straight line, and is not limited to those directly under the aircraft. It spreads widely over an area that gets wider as the aircraft gets higher. It also gets quieter as the aircraft climbs. This means that the noise can reach more people once the aircraft is further from the airport, yet it can be many kilometres from the take-off point before the noise stops becoming intrusive for most people. (Ron BRENT: ‘The Truth About Aircraft Noise’ 2013 p.2)

From anecdotal evidence assembled since the Western Sydney Airport was announced, gleaned from hundreds of people from various corners of Western Sydney who already experience overflying aircraft, Roy Brent’s comments are far more accurate than the ‘gilded lily’ picture provided in the proposed Airport’s Environmental Impact Statement.

In fact, the lives of many hundreds of thousands of residents throughout the Western Sydney basin and the Blue Mountains will be adversely affected by noise intrusion: at parks where families are trying to relax in peace, or when they must turn up their television to hear it adequately, or when their sleep is broken by a distant growl in the sky—the constant ebb and flow of low flying aircraft,

in effect, the long term DOUBLING of airflights over Sydney, will inevitably have a profound and widespread impact.

3.10. Noise Measured rather Than Modelled

The following text was written by one of our associates about measuring noise rather than modelling it:

Measurements of aircraft noise arising from existing airport operations report that at 5,000 feet aircraft noise is generally higher than the modelled 55dBA, indicating that draft EIS estimates of noise levels is too low for the Greater Blue Mountains World Heritage Area.

For example, the Airbus A319, a medium sized aircraft generates 69.7 dBA at 4,800 feet while climbing and the Airbus A321, another medium sized aircraft generates 60.2 dBA at 6,000 feet while descending.

Nats Limited in the United Kingdom provides a range of Lmax data for aircraft.

Lmax is a measure of the loudest part of a flight passing overhead for a number of current aircraft at a range of heights.

These measurements for aircraft are all louder than the 55dBA estimate at 5,000 feet for all aircraft.

Twin engine single isle jets at 5,000-6,000 feet generate 60-63 dBA ascending and 57 to 59 dBA descending.

'Normal' sized jets, such as twin isle jets, generate 64-67 dBA ascending.

So the assumed 55dBA estimate appears to be an underestimate.

Data from NATS in the United Kingdom is the source of these statements:

<http://www.nats.aero/environment/aircraft-noise/representative-aircraft-lmax-data/>

We believe that this brings into question all of the “you will barely hear them” statements from Minister Truss, and that the numbers in the draft EIS cannot be trusted.

This controversy could of course be silenced by some simple test flights and measurements in the area of the proposed Airport.

Fly some aircraft around on the ascent and descent flight paths, let people experience the *real* noise, measure the noise, give us the *real* numbers.

3.11. Effect of Topography on Noise

The Blue Mountains formation is essentially an incised plateau, comprised mainly of sandstone.

The plateau slopes down from the west to the east.

The height at Mt. Victoria being 1100m(3600ft) above sea level to Glenbrook at less than 200m (660ft) above sea level.

The hard surfaces on cliff faces and the underlying bedrock would amplify any aircraft noise.

This noise would reverberate through the valleys, intensifying decibel levels over the Blue Mountains World heritage area and the towns along the ridges.

The denseness of cold air and clouds (mountain mist) also add to this intensification.

Modelling is very unlikely to accurately predict these effects.

We again ask that actual overflights with on-ground testing be conducted over a range of weather conditions and times to accurately *measure* rather than *predict* noise impacts.

3.12. Noise Effects on Human Health

Noise can have serious health consequences. Hypertension, leading to higher rates of stroke, cardiovascular disease , mortality, sleep disturbance and also decreased school performance.

<http://www.abc.net.au/news/2013-10-09/aircraft-noise-leads-to-higher-rate-of-cardiovascular-disease/5011988>

<http://www.smh.com.au/national/health/research-links-aircraft-noise-to-higher-rates-of-heart-disease-20131010-2vbir.html>

<http://www.bmj.com/content/347/bmj.f5432>

Imposing these Health effects on the people of the Lower Blue Mountains and Western Sydney is not acceptable.

3.13. Greater Blue Mountains World Heritage Area

Noise impacts on *people* are of course of primary concern to Blue Mountains residents, and to residents of Western Sydney.

We are however also concerned about the impacts of noise on the World Heritage Listed Blue Mountains National Parks.

It is obvious that quiet enjoyment of Wilderness and recreation areas within the parks will be ruined by aircraft noise.

This quote from the ‘Social’ section of the draft EIS is alarming:

The wilderness amenity of the Greater Blue Mountains Area has the potential to be impacted by an increase in aircraft overflight noise. However, aircraft noise would generally be limited as the height of the aircraft is expected to be in excess of 5000 feet above ground level, limiting noise impacts at sensitive locations to below 55dBA.

Noise at 55dBA in a Wilderness area will be very obvious, very disturbing and is completely unacceptable.

3.14. Impacts on Wildlife and Plants

What will be the impact of Aircraft Noise on wildlife and vegetation?

We have found two studies:

- Halfwerk, Holleman, Lessells and Slabbekoorn
 - Francis, Kleist, Ortega and Cruz
- that discuss the effect of noise on birds.

It is likely that bird numbers will decline in a noisy environment, and that pollination and seed dispersal will decline along with them.

The Blue Mountains is World Heritage Listed on the grounds of Eucalypt Biodiversity.

A project that threatens this Biodiversity cannot be allowed as Australia has an obligation to protect World heritage for all people for all time.

It can be assumed that the health effects of noise on people will be similar in other mammals, birds and even reptiles.

A project that causes such animal health impacts in a World Heritage Area is not acceptable.

4. Air Quality and Greenhouse Gases

We have found what we believe to be gross errors in the document.

In summary:

- Greenhouse Gas Emissions numbers are different in different parts of the draft EIS, by as much as 1,000 times
- Greenhouse Gas emissions from Aircraft departing the proposed Airport are omitted from the Executive Summary
- The Greenhouse impact of the proposed Airport is dramatically understated in comparisons with the total transport related national inventory

We are aware that the document Chapter 12: Air quality and greenhouse gases', file name '16-volume-2-chapter-12.pdf' has been updated on 3-Dec-2015 to fix this error after we wrote to various Politicians and the media about this error.

We consider that this change to the published document during the exhibition period is highly inappropriate.

4.1. Ground Operations Emissions Error

This Table (8-1) is in Appendix F1 ‘Local Air Quality and Greenhouse Gas’:

Table 8-1: Stage 1 – Summary of Estimated Annual Scope 1 & 2 GHG Emissions

Scope	Source	Fuel Type	Annual Quantity	Units	Annual Emissions (t CO ₂ -e)
1	Ground Support Equipment	Transport Diesel Oil	0.85	ML	2,292
		Transport Gasoline	2	ML	4,776
1	Auxiliary Power Unit	Stationary Gasoline	5	ML	10,975
1	Boilers	Stationary Natural Gas	1,489,809	m ³	3,005
1	Generators	Stationary Diesel Oil	0.04	ML	113
1	Fire Training	Stationary Kerosene (Jet Fuel)	0.01	ML	14
1	Waste Water Treatment Plant	N/A	1,935	ML	1,204
1	Fugitive Emissions	Transport Kerosene (Jet Fuel)	985	ML	104
1	Fugitive Emissions	Transport Diesel Oil	0.85	ML	0.1
1	Fugitive Emissions	Transport Gasoline	2	ML	0.2
2	Electricity	N/A	124,392,000	kWh	106,977
				TOTAL	129,462

Note: Fuel Type reflects the categories in DoE (2014)b

Note: Assumptions made within the GHG calculations are provided within Appendix C.

This Table (12-40) is in the draft EIS Volume 2 sub-document ‘Chapter 12: Air quality and greenhouse gases’, file name ‘16-volume-2-chapter-12.pdf’:

Table 12–40 – Summary of estimated annual Scope 1 and 2 greenhouse gas emissions

Scope	Source	Fuel type	Annual quantity	Units	Annual emissions (t CO ₂ -e)
1	Ground support equipment	Transport diesel oil	0.85	ML	2
		Transport gasoline	2	ML	5
1	Auxiliary power unit	Stationary gasoline (jet fuel)	5	ML	11
1	Boilers	Stationary natural gas	1,489,809	m ³	3005
1	Generators	Stationary diesel oil	0.04	ML	113
1	Fire training	Stationary Kerosene (jet fuel)	0.01	ML	0.01
1	Wastewater treatment plant	N/A	1,935	ML	1204
1	Fugitive emissions	Transport gasoline (jet fuel)	985	ML	104
1	Fugitive emissions	Transport diesel oil	0.85	ML	0.1
1	Fugitive emissions	Transport gasoline	2	ML	0.2
2	Electricity	N/A	124,392,000	kWh	106,977
				TOTAL	111,422

Note: Fuel Type reflects the categories in DoE (2014b)

Assumptions made within the greenhouse gas calculations are provided within Appendix F1.

Emissions factor was not available for jet fuel, emissions have been assumed to be the same as Avgas.

Note that this table has different figures because the Emissions from some Airport Operations have been scaled down by 1,000 times.

Specifically:

- Burning 0.85 ML of Transport Diesel in Ground Support Equipment has gone from 2,292 tonnes to 2 tonnes
- Burning 2 ML of Transport Gasoline in Ground Support Equipment has gone from 4,776 tonnes to 5 tonnes
- Burning 5 ML of Jet Fuel in Auxiliary Power Units has gone from 10,975 tonnes to 11 tonnes
- Burning of jet fuel in fire training operations has gone from 14 tonnes to 0.01 tonnes

The data in Table 12-40 appears to be wrong.

4.2. Aircraft Emissions Error

This Table (8-2) is in Appendix F1 ‘Local Air Quality and Greenhouse Gas’.

Table 8-2: Stage 1 – Summary of Estimated Annual Scope 3 GHG Emissions

Scope	Source	Fuel Type	Annual Quantity (ML)	Annual Emissions (t CO ₂ -e)
3	In Flight Aviation Fuel	Transport Kerosene (Jet Fuel)	986	2,524,504

It shows emissions from Aircraft on their outbound journey as 2,524,504 tonnes.

This Table (12-41) is in the draft EIS Volume 2 sub-document ‘Chapter 12: Air quality and greenhouse gases’, file name ‘16-volume-2-chapter-12.pdf’:

Table 12-41 – Summary of estimated annual Scope 3 greenhouse gas emissions

Scope	Source	Fuel type	Annual quantity	Annual emissions (t CO ₂ -e)
3	In flight aviation fuel	Transport gasoline (jet fuel)	986	2,187

Note: Emissions factor was not available for jet fuel, emissions have been assumed to be the same as Avgas.

It also shows emissions from Aircraft on their outbound journey, but this time as 2,187 tonnes.

Again the data has been scaled down by 1,000 times.

The data in table 12-41 appears to be wrong.

4.3. Summary Statement Error

This statement is on the opening page of draft EIS Volume 2 Section 12 ‘Air Quality and Greenhouse Gases’:

Greenhouse gas emissions from the Stage 1 development have been estimated to comprise 0.11 Mt CO₂-e/annum, with the majority of emissions associated with the consumption of purchased electricity. The Scope 1, Scope 2 and Scope 3 greenhouse gas emissions estimated for the proposed Stage 1 development would represent approximately 0.1 per cent of Australia’s projected 2030 transport-related greenhouse gas emission inventory. For this reason, it can be concluded that the greenhouse gas emissions from the proposed airport would not be material in terms of the national inventory.

The numbers used here appear to be wrong as:

- They are based on Table 12-40 which appears to be wrong (should be 0.13 Mt)
- They *exclude* Aircraft Emissions on their outbound journey as they are ‘Scope 3’ and ‘it is not commonplace to report Scope 3 emissions due to the potential of double counting greenhouse gas emissions’ (**should be 2.634 Mt**)

If we are choosing between building a second airport using planes that burn jet fuel, and building a High Speed Rail that uses renewable electricity, the Scope 3 emissions are *very* relevant and should be included in any summary statement.

4.4. Long Term Operations Emissions

We bring to your attention these long-term emissions numbers which are not mentioned in the Executive Summary or Volume 2 of the draft EIS.

This Table (8-3) is from Appendix F1 ‘Local Air Quality and Greenhouse Gas’:

Table 8-3: Longer Term Development – Summary of Estimated Annual Scope 1 & 2 GHG Emissions

Scope	Source	Fuel Type	Annual Quantity	Units	Annual Emissions (t CO ₂ -e)
1	Ground Support Equipment	Transport Diesel Oil	6	ML	16,910
		Transport Gasoline	13	ML	30,728
1	Auxiliary Power Unit	Stationary Gasoline	33	ML	88,566
1	Boilers	Stationary Natural Gas	11,735,513	m ³	23,674
1	Generators	Stationary Diesel Oil	0.05	ML	143
1	Fire Training	Stationary Kerosene	0.03	ML	74
1	Waste Water Treatment Plant	N/A	9782	ML	6,092
1	Fugitive Emissions	Transport Kerosene (Jet Fuel)	8030	ML	846
1	Fugitive Emissions	Transport Diesel Oil	6	ML	0.7
1	Fugitive Emissions	Transport Gasoline	13	ML	1
2	Electricity	N/A	755,112,000	kWh	649,396
TOTAL					816,430

Note: Fuel Type reflects the categories in DoE (2014)b

Note: Assumptions made within the GHG calculations are provided within Appendix C.

It shows total emissions from the Ground based operations of the proposed Airport as 816,430 tonnes.

This Table (8-4) is from Appendix F1 ‘Local Air Quality and Greenhouse Gas’:

Table 8-4: Longer Term Development Stage – Summary of Estimated Annual Scope 3 GHG Emissions

Scope	Source	Fuel Type	Annual Quantity	Units	Annual Emissions (t CO ₂ -e)
3	In Flight Aviation Fuel	Transport Kerosene (Jet Fuel)	8,030	ML	20,570,033

This table shows that in the long term outbound Aircraft will be generating 20.5 *million* tonnes of greenhouse gases.

The total Airport Emissions, Ground Based and outbound Aircraft, will exceed 21.3 *million tonnes* in the longer term.

We believe that this is completely unacceptable in a Greenhouse-constrained world.

4.5. Trends in Background Ozone

The following text is from the NSW Environment, Climate Change and Water document entitled:

“Current air quality in New South Wales - A technical paper supporting the Clean Air Forum 2010”

Duc and Azzi (2009) have examined the trend in background ozone concentration, defining ‘background ozone’ as ozone occurring without photochemical production.

They determined that no photochemical production is occurring if nitrogen dioxide concentration is zero for two consecutive hours.

This led to using ambient ozone concentrations overnight, from 7 pm to 8 am.

Their analysis shows there is a clear upward trend in the period 1998 to 2005 for nearly all monitoring sites in Sydney.

*Figure 8.7 shows this trend for one site in **western Sydney**.*

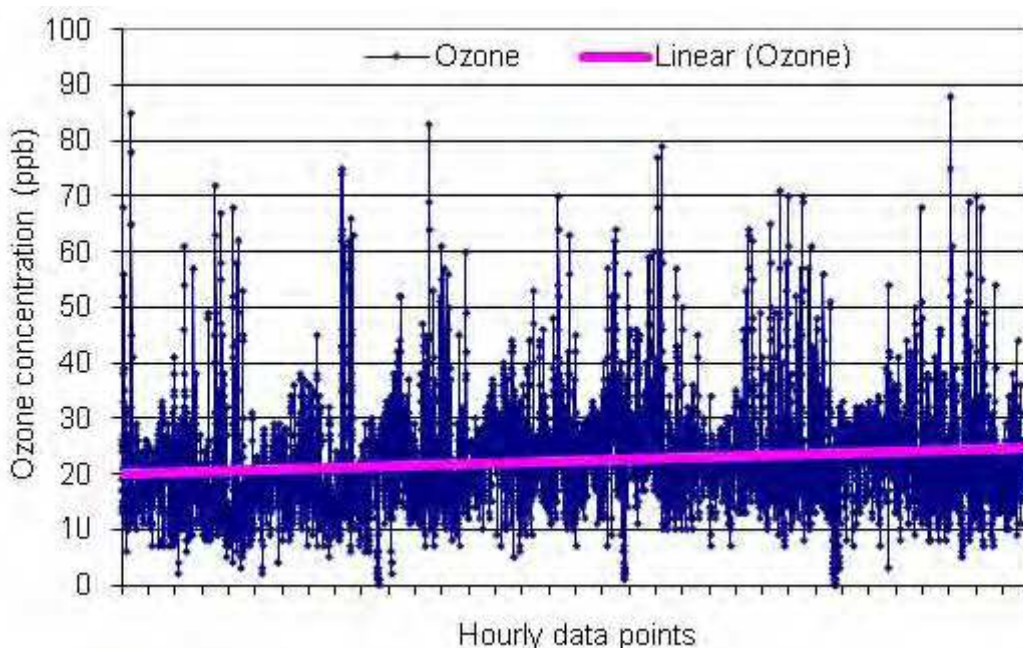
An upward trend in surface ozone concentration has also been reported for the United States (Jaffe and Ray 2007) and Europe (Simmonds et al. 2004).

Jaffe and Ray suggest increasing global emissions as one possible explanation for these observed trends.

An upward trend in background ozone increases the difficulty for a single jurisdiction to take effective action to meet its air quality standards.

Duc and Azzi also found this statistic varies within the Sydney Basin, being lowest at sites in the south-west, slightly higher at sites in the north-west and highest for sites in the east of the region.

The median concentrations varied from 15 to 21 ppb.



Given this long-term increase in background ozone concentrations, a project that *increases* ozone levels cannot be condoned.

4.6. High Density of Sensitive Sites

We note the following statement in section 12.2 of ‘Air Quality and Greenhouse Gases’:

The airport site is located in an area with a high density of sensitive receptors.

This is because the Badgerys Creek site is surrounded by residential areas and is totally unsuitable for an Airport!

4.7. Neutral or Beneficial Test

When developing land within the Sydney Drinking Water catchments, developers are required to pass a ‘Neutral or Beneficial Effect’ test on water quality.

In short, if a development is to be approved, it must either not degrade water quality, or improve it.

A similar test should now be applied to *all* Federal Government projects in terms of Air Quality Effect.

The Federal Government should *not* be proposing, building or authorising any project that will degrade Air Quality, for citizens or for wildlife, either locally or globally.

The recent Paris Climate Change Agreement requires us to reduce our net emissions of Greenhouse Gases to zero by 2050.

An Airport that produces 21 million tonnes of Greenhouse Gases cannot be allowed under this agreement.

4.8. Airport Emissions of Pollutants

In Table 12-24 of the ‘Air Quality and Greenhouse Gases’ section of draft EIS, the emissions of CO, VOC, NO_x, PM₁₀ and PM_{2.5} are larger for ‘external roadways’ than for Aircraft.

How can this be?

Perhaps the draft EIS has counted emissions from cars using the ‘external roadways’, but excluded emissions from planes using the Airport?

Are these emissions numbers only for ground operation of aircraft?

Why is this deception in the draft EIS?

4.9. Eliminate or Offset Emissions

We strongly believe that any emissions of Greenhouse Gases from ground operations of the Airport (if it must be built) must be reduced to zero.

The obvious ways to do this include:

- Purchase of 100% Renewable Electricity by the Airport and all of its tenants
- Purchase of offsets (from Greenfleet or similar) for those emissions that cannot be eliminated

Building a project that increases Greenhouse Gas emissions is not acceptable.

4.10. Low Emission Technologies

We note the following recommendation in Table 12-44:

Issue 12.55 Greenhouse Gases: Consider the use of high capacity public transport to and from the proposed airport as part of the ground transport plan. Support the use of the low emission vehicles to and from the proposed airport, including the provision of recharging stations.

We agree completely with this recommendation.

If an Airport must be built, it *must* have a high-speed electrified rail link powered by renewable electricity to key public transport hubs (Penrith, Blacktown, Parramatta, Sydney CBD), and all ground vehicles *must* be low emission vehicles.

5. Hazard and Risk

5.1. Setting the Scene

The proposed site of Badgerys Creek Airport is in a compromised location.

It is located close by Public Utility Easements which define much of this area as being open space.

It is highly probable that there is a conflict operating aircraft in this location due to the Public Infrastructure in place and the consequences of an aircraft crashing into any of this infrastructure:

- The proposed site is surrounded on 3 sides by “Electric Fences” 30m high; these are the multiple High Tension Electricity Transmission lines (and towers) criss-crossing this area. Cables above the ground are taking electricity to and from West Sydney Sub Station.
- The Sydney Water Supply (2) Pipelines cross this area in an easement from Warragamba Dam to Prospect Reservoir. As these pipelines are above ground they are vulnerable to impact from a crashing aircraft.

5.2. Take Off to the North East

The Flight Path (as shown for only 1 of the proposed 2 runways) is most logical.

(When expanded to the 2 runway airport as proposed, a much wider and therefore more compromised Flight Paths would be needed).

After taking-off to the North East, the aircraft should tend North flying over Erskine Park, St Clair, St Marys and various Mt Druitt suburbs. The hazards (should a plane crash) include:

- About 6km from take-off, aircraft will fly over an electricity transmission line; usually at a safe height
- About 8km from take-off, aircraft will fly over the above ground Sydney Water Pipelines
- About 10km from take-off, aircraft will fly over a major electricity transmission line; major as this is 2 “lines” running parallel to each other along the Southern boundary to St. Clair and Erskine Park
- Further North the of flight path over St. Clair/Erskine Park, has one North tending transmission line about 2km to the West and 5 NNW tending transmission lines about 2 km to the East. (If an aircraft was in crash mode over St. Clair/Erskine Park area, the pilot could decide to not crash into an urban area BUT crash in the easement areas containing the transmission lines.)
- It is possible that a crashing aircraft could impact with the railway line between St. Marys, Mt. Druitt and Rooty Hill
- Additional transmission lines are located North of the railway line between St Marys and Rooty Hill

5.3. Landing from the North

This would be the reverse of the risks detailed in 5.2 above.

Reverse of course, gives the same hazards.

5.4. Risk of Crash

From the data supplied:

“Percentage of Fatal Accidents by stage of flight”:

It is noted that crashes are most likely:

- Take-off 8%
- Initial climb 6%
 - Total 14%
- Final Approach 22%
- Landing 25%
 - Total 47%
- Combined Total 61%

For the following analysis/questions only the appropriate data in the Crash Zone indicated in 5.2 above will be considered, that is:

- Initial climb 6%
- Final Approach 22%

Given the expected low incidence of crashes, it is significant to consider the implications of crashes in the Crash Zones in 5.2 which would be during the “Initial Climb” and “Final Approach” phases of a flight.

5.5. Implications and Questions

Following are “ball park” figures which seem reasonable for a basic understanding of “take-off”.

If take-off speed is about 250km/h (70m/s) the aircraft might average about 350km/h (100m/s) over the first minute of flight.

During the first minute of flight, the plane would travel about 6km and have climbed to about 2500ft.

But in the unlikely crash scenario (risk assessment calculations will be low) what are the implications if the impact damages Public Infrastructure in the easements “criss-crossing” this location.

As detailed in 5.2 above:

- Should the aircraft crash within the first minute of flight it could impact the Electrical Transmission Line about 5.5km from take-off
- The crash-site would need to become a construction site to replace damaged transmission towers and cables:
 - What percentage of Sydney’s electrical power would be lost by this outage?
 - How many days would this outage disrupt power distribution to the Sydney area?
- Should the aircraft crash 7km to 8km from take-off it could impact the Sydney Water pipe lines being the main water supply carriers to the Sydney region:
 - What percentage of Sydney’s water supply would be lost by this damage?
 - How many days would this damage totally disrupt water distribution to the Sydney area?
- Should the aircraft impact the major electrical transmission lines (2 lines) just south of the residential areas of St. Clair and Erskine Park about 10km from take-off:
 - What percentage of Sydney’s electrical power would be lost by this outage?
 - How many days would this outage disrupt power distribution to the Sydney area?
- Should the aircraft impact 10km from take off, the pilot could steer for an impact in either easement with its electrical transmission line rather than impact in the residential area:
 - What percentage of Sydney’s electrical power would be lost by this outage?
 - How many days would this outage disrupt power distribution to the Sydney area?
- Should the aircraft impact with the east/west running railway line between St. Marys, Mt Druitt and Rooty Hill:
 - How many days would it require to repair and re-establish normal rail services?
 - The services disrupted would include:
 - Suburban and Blue Mountains passenger services, on the very busy 4 track western line.
 - “Indian Pacific” (Sydney/Perth), 2 services each way per week.
 - Numerous coal trains transporting export coal to either Newcastle or Wollongong; required to make definite connections with sea transport.
 - Significant freight rail transport of containers, and also ore trains from Orange and Cobar.
- Should the aircraft impact with the east/west running electrical transmission line north of the railway line:
 - What percentage of Sydney’s electrical power would be lost by this outage?
 - How many days would this outage disrupt power distribution to the Sydney area?

5.6. Risk Assessment Calculations

When the Risk Assessment calculations are done on each of the above scenarios it is considered that the first 3 impact zones are most significant.

Should the distribution/delivery of electricity and/or water to the Greater Sydney Region be significantly/completely disrupted:

- For 1 week, this would prove disastrous
- For more than 1 week, this would be untenable

How many days is an acceptable risk?

5.7. Stage 1 Conclusions

At this point it is possible that the proposed Western Sydney Airport fails the E.I.A. process.

But there is more to consider.

5.8. Future Growth

Flight Paths not yet considered.

- To South/West of proposed airport
- 1 runway at maximum capacity
- 2 runways at maximum capacity

5.9. South West of the Airport

Using the current E.I.A documents, Aircraft taking off to the South West (and landing from the South West) cross another Electricity Transmission Line 5km from the proposed airport. This situation is very similar to other locations in the above discussion.

Should the aircraft crash within the first minute of flight it could impact the Electrical Transmission Line about 5.0km from take-off.

The crash-site would need to become a construction site to replace damaged transmission towers and cables:

- What percentage of Sydney's (or South West region's) electrical power would be lost by this outage?
- How many days would this outage disrupt power distribution to the Sydney/South West area?

5.10. Lake Burragorang

Should an aircraft crash into Lake Burragorang how would this impact on Sydney's water supply?

While not a likely possibility; should aviation fuel become mixed with the freshwater/potable water supply will the Sydney region's water supply be disrupted and for what period of time?

5.11. One Runway Maximum Capacity

It is noted that much of the operational report is based on anticipated 2030 traffic volumes at the proposed airport. This is a mere five (5) years from a possible 2025 start.

"Your" above Risk Assessment calculations would be seen to be based on relatively low air traffic volumes. Surely anticipated traffic volumes for 2040,2050 etc, up to maximum capacity should have been given for a "correct" E.I.A. to have been achieved.

(is this a deliberate attempt to understate the impact of the proposed airport to ensure it passes the E.I.A?)

Possibly, if considered at maximum capacity this "one runway option" would fail the E.I.A. process.

Please ensure that "impacts at maximum One Runway capacity" is fully assessed.

5.12. Two (2) Runways at Maximum Capacity

Should the second runway be brought into operation, the air traffic volumes will be hugely greater than the 2030 volumes given. This creates significant concerns with appropriateness of the current E.I.A.

The proposed second runway will create much wider Flight Paths (towards the East). Consider the above "discussion" concerning the 1 Runway Option, taking-off to the North East (North over St. Clair and Erskine Park).

The wider Flight Path from Runway 2. will take aircraft to the East of the former Flight Path and:

- Over 4 Electrical Transmission Lines in the first 12km of flight
- Close by, if not over the Sydney West Electrical Sub Station (the major switching and distribution station for Sydney east of this location)
- Across the Sydney Water Pipelines
- An out-of-control aircraft could also impact with Prospect Reservoir. The volume of aviation fuel in this reservoir would have a much higher concentration than the above example of a crashing plane impacting the water of Lake Burragorang

Of course, incoming flights would traverse the above hazards but in reverse order.

A Risk Assessment for an aircraft crashing in each of the above scenarios is necessary.

Impacts with the Sydney West Sub-Station and/or the Prospect Reservoir would leave the Sydney Region without Electricity and Water for longer than considered for the 1 Runway Scenarios.

5.13. Stage 2 Conclusion

It is possible that the “1 runway WSA” could pass the requested expanded E.I.A. process.

However given the increased Air Traffic Volumes with the “2 runway WSA”, due to the increased number of aircraft concentrated into slightly wider Flight Paths, “your” Risk Assessment including the possible destruction of Sydney West Sub-Station and the contamination of water in Prospect Reservoir could result in the “2 runway WSA” failing the E.I.A.

If only the “1 Runway WSA” was to pass the E.I.A. with “2 Runway WSA” being not feasible, should this project be abandoned based on risk now?

6. Bird and Bat Strike

This section of our Submission refers to “Appendix 1 Bird and Bat Strike” section of draft EIS for the proposed Western Sydney Airport at Badgerys Creek.

6.1. Setting the Scene

Avisure consultant biologists were engaged by GDH to “conduct an assessment of the bird and bat strike risk at the proposed Western Sydney Airport as part of its Environmental impact Statement” page 1 of their report

In the executive summary on page 1 of the report Avisure notes that it is a “preliminary risk assessment of birds and bats present on and in the vicinity of the airport site and has been used to inform the Hazards and risk and the Biodiversity assessment components of the draft EIS”.

“The survey requirements and distance used area were based on International standards: International Civil Aviation Organisation (ICAO), World Birdstrike Association and National Guidelines, National Airports Safeguarding framework; that recommend identifying and where necessary managing potential wildlife attractants within 13 km of runways.” (refer to page 1 of their report).

“The report found that there would be a bird and bat strike risk at the proposed airport due to species presence and abundance, habitat available on the airport site and within the study area, projected aircraft movements and staged construction”. Page 1 of document.

“They did however consider that each potential contributor to bird and bat strike risk at the proposed Western Sydney Airport can be managed to an acceptable risk level so the preliminary assessment of overall bird and bat strike risk for the airport is low” page 1 and p 39 of the report. However Avisure made recommendations that further assessments are needed to confirm the preliminary findings and this is repeated throughout the report on pp20, 21 section 6 and tables 28-32.

6.2. The Seriousness of Bird and Bat Strike

Page 8 of their report outlines the serious impact of bird and bat strike on aircraft. Bird and Bat strike can cause a catastrophic event for an aircraft. The history of aviation accidents, including the deaths of 297 people, the serious damage to aircraft caused by bird strike incidents and the very significant costs involved are clearly stated on this page of the document.

Page 1 of the Guideline C ‘National Airports safe guarding Framework Managing the risk of wildlife strikes in the vicinity of airports (included at the end of the report) point 3 states “ Wildlife strikes and/or avoidance can cause major damage to aircraft and / reduction of safety”

6.3. Factors Determining Strikes

Page 8 of their main report (ie: not the attachment) also lists “the main factors determining the consequences of a strike including the number and size of animals struck, the phase of flight when struck, and the part of the aircraft hit”.

Generally the larger the animal the greater the damage and birds that flock increase the risk of multiple strikes”. Page 1 of the attachment included with the report Guideline C also states that “The Consequences of wildlife strike can be influenced by the number and size of wildlife involved, phase of flight and the aircraft part hit by the wildlife” . In addition Avisure notes on page 8 of their report that strike risk is specific to individual airports.

6.4. Strike Risk is Specific to Individual Airports

The report discusses on page 8 “that the probability of strikes is specific to each airport” and that “the number of aircraft movements approach and departure paths and flight times can influence the likelihood of bird and bat strikes”.

Page 20 of the document discusses the birds and bats/flying foxes most recorded in bird and bat strike incidents as identified by the Australian Transport Safety Bureau and also highlights the risk that is then further elevated due to flocking behaviour which can result in multiple strikes occurring which increases the risk of damage to aircraft.

The attachment provided with the report ‘Guideline C National Airports Safeguarding Framework Managing the Risk of Wildlife Strikes in the Vicinity of Airports’ provides significant information regarding the responsibilities in the management of wildlife strike risk at airports and has links to the international requirements ICAO within the attachment.

6.5. Concerns and Limitations with the Report Findings

The biologists from Avisure were time limited with a scope only to survey during the day at the airport site for 1 day and then 2 days in the 25 km radius area surrounding the airport. The survey was done over 3 days only, in March. Seasonal variations are not included. No nocturnal data was collected.

Preliminary findings only are presented which require further data collection to be confirmed (p 1 of report and p 39). Species considered to be of moderate to high risk of bird and bat strike were recorded in their preliminary findings (pp 20 & 21).

On page 9 of the document Avisure have acknowledged the **significant limitations of their survey results** as only the scope to complete one set of surveys and only over 3 days was given, completed in March only during the day and that limited data reduces the power of risk assessments . This has been further acknowledged throughout the document including on pp 20 and 21 and in tables from pp 28 to 32 where further assessment is recommended for a number of areas that were surveyed. They have also identified on p 9 that terrestrial animals also need to be considered. Avisure recommended on p 20 that “additional surveys are required to determine if the observed averages are a true indication of abundance”.

On p 9 Avisure have made recommendations for further work to address the limitations of the preliminary study and these recommendations are outlined in section 6 on p 42. **These recommendations in item 6.2 point 1 include the need for “monthly bird and bat surveys for one year before the airport design for Stage 1 is completed,** in order to have a more thorough understanding of abundance and distribution and to account for seasonal changes” other recommendations are also included see items 6.1 and 6.2 on page 42.

On p 42 of the document they also stated that they recommend “the inclusion of radar data to track bird and bat movements to further inform the assessment”.

In their overall conclusions on p 43 they have stated “to confirm the preliminary findings of the bird and bat strike risk assessment, it is necessary to complete further works at the airport site and broader study area during subsequent stages of design development”.

6.6. Land Use Review Needed

Avisure also recommended a review of land uses within the 13km of the airport re bird and bat strike risk; section 6 p42 item 6.2.

This is a requirement of the National Safety Framework that this review occur; see the report attachment Guideline C.

The concerns with identifying land use that is attractive to wildlife in and around airports is outlined on page 1 of the attached Guideline C point 4 and the need to manage these areas for safety reasons is in point 5 and throughout the attachment.

Avisure have given an overall low risk finding for their preliminary results in their executive summary however they have stated on page 39 and on page 43 that **further works are needed to confirm their preliminary conclusions.** They have noted that it is difficult to determine mitigation processes at this stage due to the lack of design and construction details p 40.

6.7. Gaps in Data

In addition to the very limited bird and bat/flying fox data that has been collected during the survey period, **it is of very significant concern that within the 8km to 13 km from the airport site, are found parts of the Greater Blue Mountains World Heritage area, Burratorang Conservation area, Warragamba Dam, Lake Burratorang and parts of the Nepean river which have not been included in the preliminary survey despite being within the 8km to 13 km survey area - see figure 1 and figure 7 of the document.**

These are wildlife attractant areas and highly likely to have significant numbers of species of birds and bats/flying foxes living or transiting through these habitat areas including birds identified to be of moderate to high risk of aviation strike.

There is a significant gap in bird and bat species & abundance data for these areas in the report.

Migratory bird routes and flight paths of all birds have also not been considered for these areas. In addition to surveys of all bird and bat species being needed for these areas, any threatened and

vulnerable species who may also be at risk of being involved in collisions with aircraft, who may reside in these areas or transit through them also need to be identified and surveyed.

Given that proposed flight paths go over these areas this is a serious concern for the safety of aircraft, the safety of passengers, flight crew and potentially people on the ground should a catastrophic event occur, that this gap in data exists.

The proposed no night curfew is also of concern with no data collected for nocturnal birds including migratory birds.

Although these areas are further from the airport they still fall within 8-13km of the proposed Badgerys Creek Airport site for which regulations apply (ICAO International Standards and World Bird Strike Association and national guidelines National Airports Safeguarding Framework as referenced in the document on page 1 and page 11 and in attachments to the document).

Attachment A table attached at the end of the report, which is aligned to International benchmarks set by ICAO lists the following under Conservation on the table:

Conservation

- Wildlife sanctuary/conservation area- wetland as **High Wildlife Attraction risk**
- Wildlife sanctuary/ conservation area- dryland as **Moderate Wildlife Attraction risk**

Mitigation or monitor processes are also listed on the table for varying distances from the airport.

It is significant that Avisure have stated on page 40 of their report “ the airport lessee company has the opportunity to design the airport in a way that limits its attractiveness to birds and bats. The current design and construction specifications lack sufficient detail to provide specific recommendations to reduce the strike risk”.

6.8. Flight Paths

Planning an airport so close to land which is used for conservation & water catchment raises serious concerns regarding the high safety risk of bird and bat/ flying fox strike occurring in these areas and the very limited power or no power to mitigate it to reduce the risk due to the nature of the land use.

On pp 35 & 36 Avisure have stated that the proposed flight paths for Stage 1 aircraft “will be at approximately 2,250 feet (Prospect Reservoir and Warragamba Dam) on arrival and at approximately 630 feet (Eastern Creek landfill) on departure and that “the altitude at which aircraft intersect these locations partially determines the risk level as 93% of bird strikes occur below 3,500 feet (Doblar 2006)” and this needs to be considered when finalizing flight paths.

This again raises serious concerns re the lack of data. Avisure have also stated on page 17 of their report that “a flight path positioned over attractive habitats increases the likelihood of a strike”.

Existing /potential flyways (regular bird flight paths) between separate bird attractant sites identified in Guideline C point 23 page 5 of the report attachment) have not been considered for these areas. Consideration needs to be given to birds and bats/flying foxes that may transit through the airport site to the wetlands and drylands conservation areas on the other side of the proposed airport site for which data has not been collected.

Page 2 point 12 of Guideline C attached to the report states “Most wildlife strikes occur on and in the vicinity of airports, where aircraft fly at lower elevations. The risk of a strike on airport relates to the level and form of wildlife activity both within the boundary of an airport and in surrounding areas. Wildlife attracted to land uses around airports can migrate onto the airport or across flight paths, increasing the risk of strikes”.

6.9. Desktop review and Wildlife Data Bases

It is also of note that in the desktop review outlined on page 10 of the report did not also include a review of current or historical bird and bat/flying fox data from existing wildlife databases for the airport site or the surrounding 25 km radius to assist with informing the report.

Time limitations may have prevented this from occurring due to the very short scope time.

A consideration of this existing recorded data is needed from the following suggested databases e.g:

- The wildlife atlas of the Wildlife Unit of the NSW Office of Department and Heritage, www.bionet.nsw.gov.au
- The Atlas of living Australia www.ala.org.au
- Birdlife Australias Atlas of Australian Birds birddata.com.au
- Eramaea ebird ebird.org/content.australia

All of which allow searching for data for specific areas to occur. This would assist to further inform the risk assessment. Further surveys would still be required as per Avisure recommendations in section 6.

We have also found a fauna survey of the Warragamba special area part of which is included in the 13km from the proposed airport site in the Birds and Bat strike document.

Specifically table 1 page 9 of the link below lists fauna that are threatened. Several are birds that could be impacted on by Bird Strike.

<https://www.environment.nsw.gov.au/resources/threatenedspecies/07472tpagssvol3pt1.pdf>

The fact that we found this data, but that Avisure did not, is unacceptable.

6.10. Conclusion

The safety of aircraft and passengers, flight crew and people on the ground who may be adversely affected, should a bird or bat/flying fox aircraft strike occur that can be catastrophic, must be paramount in decisions being made by the Australian Government about proposed airports, airport design and flight paths.

The Australian Government has a duty of care to ensure that safety is not compromised and that safety risk assessment is thorough. Australia has obligations under International Aviation safety standards (ICAO) and Australian Civil Aviation safety legislation (designed to ensure that International obligations can be met) to ensure that this occurs (see points 9, 10 & 13 pp 2 & 3 of Avisure report attachment ‘Guideline C National Airports Safeguarding Framework Managing the Risk of Wildlife Strikes in the Vicinity of Airports’).

The protection of wildlife from being involved in a bird or bat/flying fox aircraft strike also needs to be considered.

The data provided in this section of the draft EIS is very limited.

The safety risk cannot be assessed as a low risk based on the very limited bird and bat/flying fox collected in the very short scoped survey time period that occurred, and where significant gaps in data exist in what was and what was not surveyed within the required area.

The collection of more detailed information has been recommended by Avisure to confirm preliminary findings and collected over a much longer period of time using different methods.

Although mitigation processes can be used to reduce risks Avisure have also stated that insufficient details currently in the airport design and construction documents prevents them from being able to give specific recommendations to reduce the risk of bird and bat strike.

It is a serious safety issue that sufficient detail is not available.

Additional survey information needs to be collected & the survey area also must include the conservation & water areas identified above that have been missed within the 25km radius area surveyed, before any further decision is made regarding the feasibility of the Badgerys Creek proposed airport location as a suitable location for an airport or further design plans are commenced.

The data collected in the surveys at the site and surrounding areas for the current report in the draft EIS are inadequate in the consideration of the likely safety risk from bird and bat strike and the **draft EIS should not be accepted** with the current limited data that has been collected for this section of the report. **Safety is essential, and should not be compromised at any stage and legislative requirements must be met.**

7. Traffic, Transport and Access

7.1. A Recipe for Strangulation

The draft EIS assessment starts badly when it proclaims the road network in the vicinity of the proposed airport at Badgerys Creek to be relatively uncongested (Vol 1 p.209). We all need to ask 'relative to what?', since any journey along the Northern Road or its environs these days is fraught with anxiety, a single small accident along the route can automatically back-up for up to 10-20 kms, with little chance of escape.

Accidents along this road in the time frame covered by the draft EIS (2009-2013) show an already high 320 crashes with a 43% injury rate and up to 6% fatalities. As population builds in areas to the south of Badgerys Creek, like Oran Park and Harrington Grove, and Penrith expands southwards, usage of this road would've grown prodigiously even without the Airport, and widening would have been necessary in any case.

Further present developments around Mulgoa and Warragamba are intensifying traffic levels at peak hour, and locals now remark on 'traffic jams' at key intersections in and around the areas concerned that had not occurred previously. The point is, these roads are not in good shape or direction now, so that any additional traffic would cause a worsening of mobility for residents and projected passengers alike.

7.2. Impact of Western Sydney Airport

Traffic levels upon the arrival of the Airport would reach an extra 41,858 vehicles per day in Stage 1 (2030) according to the draft EIS. This would be mainly cars, taxis and light utilities but would also include 180 Rigid, Semi-Trailer and B-Double truck movements carrying freight, and a further 43 B-Doubles carrying jet fuel, making an additional 220 major truck movements crammed within the rest overall.

Claiming that the wondrous 'Infrastructural betterments' in roads provided by Federal funding will improve the situation, the draft EIS concludes the extra vehicular movements would not generate the level of traffic required to significantly impact the operation of the surrounding network...(Vol 2 p.238)

This astounding claim is made even against the factual evidence of the draft EIS itself!

At the outset the draft EIS explains the concept of LoS, the 'Level of Service' of a given road.

Categorisation 'A' means 'free flowing' and 'comfortable', 'B' means 'stable flow', 'C' less stable but irregular flow, 'D' is 'approaching unstable flow' because all drivers are 'restricted and the general level of comfort is poor'. When the LoS category falls to a level 'E' travel is seriously slow, 'minor disturbances cause breakdown of the system', and 'F' is basically 'Queues', the volume of traffic is greater than capacity, and delays are common.

The draft EIS at least has the honesty to categorise all three: M4, M5, and M7 surrounding Motorways in the 'E' and 'F' categories as they currently stand. They are rapidly becoming 'car-parks' and not just at peak hour, but on weekends as well.

So, do the 'improvements' really improve the situation, considering the addition of Airport traffic?

Well, the Northern Road is to be redirected around the Airport and widened to 4 lanes, an 'M-12' Motorway is to run parallel to Elizabeth Drive and link with the M-7, and Bringelly Road is expanded to 4 lanes near the Airport. Several billion dollars of expenditure later and the draft EIS claims these upgraded roads are expected to provide sufficient capacity to cater for the expected passenger and employee traffic demand associated with the proposed airport in 2031. (Vol 2 p.245)

Consider, however, the logic of these 'improvements'.

Certainly, the roads immediately around the WSA are spared, at least superficially, the impact of constant log-jam. But the surrounding, main, arterial roads are made worse, and are being strangled by heavier traffic burdens from all directions.

A passenger taxi heading for a hotel in the CBD zooms up the M-12 to meet the M-7, which may or may not be in gridlock. The driver then has the choice to drive directly ahead into the 'Liverpool Knot' to get to the city, turn left to join the pain of the M-4 ('Westconnex' tollway), or turn right to partake of the M-5 tollway car-park. Generally speaking, it will be a one-to-two hour journey, whichever the case.

In a summary graph on p. 239 (Vol 2), the draft EIS provides an overall picture of the surrounding roads 'Level of Service', comparing traffic performance now, 'without' the Airport in "D's", "E's" and "F's", and 'with' the Airport. Changes for the better show the letter in Green, changes for the worse, in Red.

Amongst all the 'no difference' letters (clearly these MUST be worse with more traffic!) there are 12 'Reds' and 8 'Greens'...in short, the roads system is 50% worse off with, than without the Airport, and the city of Sydney continues to be strangled by expensive gridlock (remember the M-4 will be 're-tolled' when WestConnex is completed).

7.3. An Alternative

Some people maintain that a 'rail link' from Leppington to Badgerys Creek and thence to St. Marys will alleviate the situation. It is hard to see how. A 'Rail Cavity' is supposed to be built in preparation for 'Rail Readiness' sometime beyond 2031.

Passengers may well take a train ride out of the Airport, but at St. Marys they link up with the standard suburban rail timetable to the CBD. Unless there is a 'purpose-built' extra line along the Western rail corridor, the train must necessarily make the same stops as is regularly the case, and arrive in Central over an hour later. If I were an international traveller, I would not be tempted.

A more realistic, albeit more expensive option would be to construct a purpose-built, direct, non-stop 'bullet train' tunnel into the city that could get there in half an hour or less. Most of the land between Badgerys Creek and Prospect Reservoir is Crown Land, so the cost-burden of corridor purchase is neutralised. A tunnel could be dug from that point into Martin Place, where the station is currently built deep enough to receive passengers comfortably.

Such a suburban line ought to be built by the State government and serve residents of the 'Northern Road' corridor as a rapid transit to the city, as well as tourists. Large scale parking stations surrounding the 'Rapid Hub' could be constructed to cater for the demand, and certainly, pressure would be taken off all three major Motorways in western Sydney since all residents, at some time or another, have the need to visit the CBD. Just as importantly, this fast suburban link could then also

join the (Commonwealth built) High Speed Rail timetable initially taking people to Canberra and Melbourne, then ultimately the whole Eastern seaboard to Brisbane.

In short, it is surely feasible to make the cavity already planned for Badgerys Creek a ‘Central Station’ based in western Sydney. This is not unusual in civilised cities. Paris, for example, has ‘North’, ‘South’, ‘East’ and ‘West’ Stations in different parts of the city, with Metro links to each one. Several of these have ‘High Speed Rail’ (‘TGV’) emanating into the French countryside, and they are widely used by tourists and French locals alike.

This argument takes place in the context of the Paris Summit to reduce Climate Change temperatures to 1.5% (with Australia lagging behind in ‘the tail’ of emissions reductions), as well as a current ‘spike’ in road fatalities in NSW and Australia (‘22% Increase in NSW Road Fatalities’—Source ABC News 4/2/2015). A strange conjunction, but nevertheless telling.

Isn’t it time the Car Fetish was confronted for what it is: a source of anxiety, heart troubles, ‘road rage’ and repeated frustration and a mounting health bill from crippling injuries and death. Instead of building extra lanes for Freeways (which only encourage more cars and trucks!) politicians should have the courage to be looking at long term solutions, irrespective of short term cost.

High Speed Rail is a rational, relaxing, zero emissions method of moving large groups of people to their destinations. Let’s use the debunking of an unwanted Airport to bring it on, not put it on the shelf, yet again...

8. Biodiversity

8.1. The Basics – Offsetting

Almost all native vegetation & wildlife habitat at the airport site will be destroyed.

The biodiversity impact assessment is therefore based on the idea of ‘offsetting’ this destruction by protecting and restoring other bushland in Western Sydney.

The government proposes to use the NSW BioBanking scheme to do this.

The idea that destroying critically endangered bushland is OK if we ‘save’ some elsewhere is nonsense.

In fact the scheme was rejected by the governments own NSW Scientific Committee.

However the NSW Office of Environment & Heritage succeeded in making it law.

So the best you can achieve with this submission is to push for a better offsetting outcome, even though we know the system is fatally flawed?

We especially need to oppose some dodgy practices proposed or these will be repeated in offsetting other future developments.

8.2. Quick Figures

The figures provided in the draft EIS for vegetation types and extent to be destroyed are accurate:

- 88.9 hectares of Critically Endangered Cumberland Plain Woodland in good condition to be destroyed
- 295 hectares of Cumberland Plain Woodland ‘offset’ needed to meet BioBanking and federal policy
- The government have only been able to demonstrate 180 hectares of potential Cumberland Plain Woodland offsets available (61% of those needed) – a serious shortfall

The draft EIS figures for Threatened species to be destroyed are not accurate:

- The endangered vine population *Marsdenia viridiflora* subsp. *viridiflora*
 - Draft EIS: Notes 2 groups of plants totalling 93 individuals
 - Actual: At least twice as many (4 groups) are known to be present
 - Locals emailed photos of the other groups of plants to the Department when the preliminary EIS was released in December 2014. This information has been ignored
- Endangered wildlife species are present including:
 - Cumberland Plain Land Snail
 - Grey-headed Flying-fox
 - Little Eagle
 - Little Lorikeet
 - Scarlet Robin
 - Varied Sittella
 - Black Bittern
 - Blue-billed Duck

- East Coast Freetail Bat
- Eastern False Pipistrelle
- Eastern Bentwing Bat

However offsetting legislation allows these species to be killed without further assessment under the assumption they will be present on potential ‘offset’ sites.

This is completely unacceptable.

Destroying threatened species makes a mockery of the whole process of finding, identifying, listing and protecting threatened species.

8.3. What offset sites are proposed?

No specific offset sites are proposed.

The maps presented in the draft EIS are just a proof-of-concept to identify the current availability of land for offsets.

The actual offset sites delivered may be different to those shown.

The draft EIS doesn’t show clearly where these potential sites are.

8.4. Are Enough Offsets Available?

The draft EIS shows that there are not enough potential offset sites to meet their required 295 hectares of Cumberland Plain Woodland.

In fact the draft EIS was only able to find potential sites to make up 180 hectares* of good condition Cumberland Plain Woodland – just 61% of the 295 hectares needed.

We refuse to be misled by the figure of ‘218 hectares’ which includes other vegetation types.

All of this ignores the fact that the government already needs to find 2,400 hectares of Cumberland Plain Woodland offsets to meet the Sydney Growth Centres approval.

The law allows the proposal to be approved even if enough offset sites are not found.

We request that sufficient offset sites are identified before approval to meet both the Growth Centres and Badgerys Airport developments.

8.5. Plantings as Offsets for Woodland

The potential Ropes/South Creek offset sites are not remnant woodland.

They are pasture which have been planted with tree lines over the last 20 years.

Planted paddocks are not suitable offsets in compensation for the loss of remnant woodlands!

8.6. Re-Using Offsets

Most of the potential ‘offsets’ identified (360 hectares or 40%) are public reserves, purchased years ago by the tax payer as green space to compensate for urban encroachment in Western Sydney.

This includes the Western Sydney Parklands and the public land along Ropes and South Creeks.

Of course the legislation has changed since then and BioBanking guidelines on ‘additionality’ allow these offsets to be reused.

But none of this changes the reality: The Airport proposal wants to compensate Western Sydney for development by ‘protecting’ the land we got years ago for the same compensation.

Once again Western Sydney is given a dud deal. Do you think that’s fair?

We request real additionality in offsets - not just ticking the box under the BioBanking regulations.

There should be no offsets on public land – this land is already purchased and protected to compensate Western Sydney for urban development.

These lands include the Western Sydney Parklands and Ropes/South Creek green belts.

8.7. Marsdenia Vine

The premise of offsetting (BioBanking) is that you protect the best patches of biodiversity and pay for this by developing the rest.

But if the good quality habitat is developed there’s nothing left to be the ‘offsets’ and the scheme fails - we lose everything.

However that’s exactly what the government proposes here.

Badgerys is one of the largest populations of Marsdenia so the draft EIS correctly notes that there’s nothing left to offset it.

Legally the endangered plants are known as ‘Marsdenia viridiflora subsp. viridiflora in the Bankstown, Blacktown, Camden, Campbelltown, Fairfield, Holroyd, Liverpool and Penrith local government areas’.

Badgerys is one of the largest populations of this plant (93 individuals in the two clumps they report) and on that basis 524 plants are needed as an offset. However the draft EIS proposes to not meet this requirement.

For an offset scheme to work the best habitats - like these ones - need to be protected.

If they are developed then nothing will be left to offset the destruction of lower-quality habitats.

But the draft EIS proposes to clear these plants.

And since there are no available offsets no habitat will be protected at all.

Instead some cuttings will be ‘translocated’ – i.e. planted and maintained elsewhere.

The proposal abandons any attempt at stemming the loss of this precious plant in the wild – leaving a free-for-all to private development.

We request that the Marsdenia be protected unless sufficient plants can be protected as offsets elsewhere.

8.8. The Missing Marsdenia

Only two of the four known clumps of Marsdenia have been acknowledged by the draft EIS.

In other words half of them have been simply ignored.

The Department of Planning received letters in December 2014 with photos of these ‘missing’ plants.

No response was received and the draft EIS simply pretends these plants do not exist.

This is unacceptable.

8.9. Proper Survey Required

While the draft EIS meets legislative survey requirements, no genuine threatened flora survey has been conducted.

The draft EIS notes that 18 days were spent on ‘Targeted flora searches’ but these were the same 18 days during which everything else was surveyed.

Can you really detect cryptic plants in a survey area of 1,700 hectares while surveying all the other wildlife as well?

A valid survey of the area is needed.

One of our associates doubled the number of Marsdenia (in just 2 hours) how much other endangered biodiversity is present that hasn’t been recorded?

The Airport proponents simply do not want to survey Badgerys Creek properly.

Because if more of the biodiversity is recorded, more offsets would be needed for western Sydney.

We request a thorough survey of the site’s biodiversity including confirmation of the additional two known (unacknowledged) locations of Marsdenia viridiflora.

9. Landscape and Visual Amenity

9.1. Methodology

The methodology provides a framework which is reasonable as far as it goes - evaluating visual impact in terms of a combination of visual sensitivity and visual magnitude - but any standardised system is inadequate to take into account the manifold complexities of differing on-ground sites, let alone rate the visual impact at these sites as it might be rated by the actual persons affected.

9.2. Existing Environment – Site Context

This section of the draft EIS provides a brief description of the major elements of the landscape. It falls outside the purpose of the draft EIS to emphasise the positive landscape values that would be lost if an international airport were to be built here. The open, spacious character of the landscape is however inherently pleasing, with individual views of great attractiveness, especially where there is a backdrop of the Greater Blue Mountains World Heritage Area. In addition to such views, the area as a whole derives visual interest from farm animals, groves of trees, reflective dams (some so large as to constitute small lakes).

This area contains productive farms - dairy, fruit and vegetable, for example - which contribute to the pleasant countryside character of these districts; indeed this is one of the few areas east of the Divide where people from western Sydney can conveniently enjoy rural views and show their children real horses, cows, sheep, etc. It is doubtful how many of these farms would be viable, even short-term, if the proposed airport is built, since the animals would be subject to the same health stresses from the outrageous noise as humans, and the fresh produce could be contaminated by the air pollution from both air and ground traffic. This entire rural landscape would be irrevocably denatured and degraded by constant reminders of the airport's presence.

There is however no good reason why most of this could not and should not be conserved. Sydney should not be allowed to spread uninterrupted right to the foot of the Blue Mountains. A sensitive and responsible town and country planning would retain a buffer zone, as substantial as possible, between the outlying western suburbs of Sydney and the Greater Blue Mountains World Heritage Area. Decentralisation, rather than an ever-expanding megapolis, is urgently needed.

The airport site also contains patches of critically endangered Cumberland Plain vegetation which could become attractive and valuable biodiversity reserves within the broader landscape planning if the airport is not built.

The proposed airport is said to be being built within the context of the South West Growth Centre, the Western Sydney Employment Area, and the Western Sydney Infrastructure Plan, but it is not a necessary part of this equation. These schemes could be scaled down to preserve some visual amenity, both within and outside the ex-airport site. It is thoroughly inequitable that, because of a curfew-less airport, residents of western Sydney and the Blue Mountains should have to pay the price of reduced quality of life and impaired health and educational outcomes simply to attain benefits that eastern Sydney takes for granted.

9.3. Visual Catchment and Viewpoints

The draft EIS limits its examination of the visual catchment of the proposed airport to areas within a 10 km radius of the site, but the theoretical visual impact would extend well beyond this, taking in higher areas in Silverdale, Werombi, Theresa Park and St Mary's to the SW and NE; and, to the NW, areas in Lapstone, Glenbrook, Mt Riverview and Blaxland; and, within the Greater Blue Mountains World Heritage Area, a series of higher points approximately 4 km from the Blue Mountains National Park boundary and extending from Blaxland to the level of Silverdale.

Nor does the visual catchment of the development as against that of the site stop here, since there would be visual (as well as aural) intrusion into vast areas of the Greater Blue Mountains World Heritage Area (see below).

9.4. Assessment of Impacts

The draft EIS selects for consideration a number of viewpoints which are either environmentally sensitive, or close to, or significantly higher than, the airport site; the sensitivity of these is defined by duration of view, importance of visual amenity or the large number of receivers.

9.5. Construction

The draft EIS notes that the airport site would be changed from a naturally undulating rural landscape to an artificially levelled one, and furthermore that "This would occur in the context of an area that has limited capacity to absorb the change due to limited vegetation cover, the form of the land, the frequency of views, and the distance between viewers and the Stage 1 development." This sums up the major deleterious effect this 1700 ha levelling would have on the surrounding landscape, but worse is to follow.

9.6. Operations - Airport Infrastructure

Permanent views of the airport site would figure a 35m high air traffic control tower, numerous buildings, many substantial, a 3.7 km long runway and associated taxiway system, and ongoing views of aircraft taking off and landing. The enormous reduction in visual amenity from all this scarcely needs to be emphasised.

9.7. Airport Lighting

An airport would create light pollution, both from local light sources and from sky glow.

The local light sources would be less likely to affect local residents, though this would depend on the height of the major buildings (Appendix O, 5.1 says that there will be some light emitted, however this could be limited as buildings may be relatively low rise; in the Conclusion of App. O however it is stated that the light "will be limited as the buildings will be relatively low" (our emphases).

The local light sources would pose a potential risk to birds and bats attracted to the insects drawn by the locally bright lights and thereby subject to aircraft strike. The insects themselves could find

their populations decreased to the point where specialised pollinators become endangered, at least locally, with flow-on effects for local flora and then possibly fauna.

The sky glow would impact both locally and on the eastern face of the Blue Mountains National Park. According to the draft EIS, "the majority of lighting is directed skyward".

Because of the peculiarities of its topography this area receives air pollution from eastern Sydney via NE sea breezes, and this is then trapped by the eastern face of the Blue Mountains. Because it is further inland than Kingsford Smith the differential between day and night time temperatures is greater, leading to an increased incidence of fogs.

If an airport were to be built here, the vastly increased air pollution would lead to more and denser fogs (smogs), since the extra fine particulate matter would serve as condensation nuclei for vapour molecules. (The current largely rural land in the area is very suitable for preventing such an exceptional increase in air pollution.) The point here is that the minute fog globules, while making ground surface lighting unclear from the air, reflect and diffuse light upwards to altitudes up to approximately 3 km. The lit runways would also serve as a vast condensation nucleus (wet with fog/dew), thus reflecting even more light upwards.

Vice versa, light pollution may even contribute to air pollution: nitrate radicals (NO₃) build up in a darkened sky and neutralise some of the nitrogen oxide (NO_x) that lead to higher levels of ozone (O₃). This reaction may be exacerbated by certain types of lighting.
(www.skyandtelescope.com/astronomy-news/night-lights-worsen-smog/)

9.8. Effects of Photopollution on the Ecology

In animals, melatonin (the chronobiotic hormonal regulator of neoplastic cell growth) is secreted at night only, but its production is suppressed by light, including artificial light. This leads to disruption of circadian rhythms, and in humans has been linked to certain disease outcomes, including breast cancer.

In addition to this effect of photopollution, night light alters and interferes with the timing of necessary biological activities. Nocturnal species, like so many Australian marsupials, are especially at risk, as extra light exposes them to predators and reduces time for foraging, finding shelter and mates.

Part of a World Heritage natural area faces onto this light pollution. (Ecological consequences of artificial night lighting. Catherine Rich and Travis Longcore (eds.) 2006, Island Pres, Covelo, CA. pp 15-42)

9.9. Aircraft and Flight Paths

The draft EIS states that according to the indicative flight paths "aircraft may be directed over a range of visually sensitive areas, including residential areas, recreational areas and national parks, which may result in visual impacts beyond the airport site".

It is hard to envisage where aircraft could go to avoid all of these sensitive sites. In fact, it is obvious from the indicative flight paths for both Stages 1 and 2 that a decision has been made that as many flights as possible will arrive and depart over vast areas of the Greater Blue Mountains World Heritage Area.

This section of the draft EIS states: "Many aircraft approaching and departing Sydney Airport fly over the Blue Mountains. Aircraft arriving and departing from the proposed airport would further contribute to the existing density of flights over the Blue Mountains and would likely be at lower altitudes compared to aircraft using Sydney Airport". Yet the claim is made elsewhere in the draft EIS that the impact on the World Heritage Area will be "minimal". This is quite simply unbelievable.

Since approximately March 2014, residents in parts of the Blue Mountains have expressed concern over the apparent increase in overflights, or possibly lower overflights, from Kingsford Smith Airport. Even though they have come so much further, the aircraft are both visible as well as audible (and very much more audible than visible).

The frequent roar and thunder of these aircraft is already having a deleterious effect on residents' ability to appreciate their natural surroundings, conduct other than loud conversations, listen to certain types of music, etc, etc.

And yet, having come so many kilometres, these aircraft are presumably flying at a higher altitude above areas in the Greater Blue Mountains World Heritage Area than the projected altitudes for planes using the proposed new airport would be (supposedly 5,000-10,000 ft above sea level, but much closer to the actual ground level because of the terrain).

The integrity of bush scenery includes the backdrop of a sky which is free from anything except clouds and birds (a very occasional high plane may be tolerated, but only as an intrusive exception).

Moreover scenery is not only visual but has an aural component: part of the scenery experience for most people is the presence of sounds which corroborate the visual - bird calls, sound of wind in the trees, plashing of creeks and waterfalls. It may be necessary at this point to mention that dollar-bearing tourists also appreciate these things. They come from Sydney for contrast, not an aerial extension of the city painfully intruding into scenery of such great natural beauty.

9.10. Representative Viewpoints

Even from what is said in the text accompanying the assessments it appears that both the assessments and the impact levels proposed represent an underestimation of likely visual impacts.

A few examples:

Luddenham Village, east of the Northern Rd: At merely three km from the airport site, the overall Impact Level is rated as only Moderate-High, even though it is admitted that visual amenity would be important to local residents and the surrounding landscape has "limited" capacity to absorb the adverse visual impacts. Luddenham deserves a better fate: it has a certain relaxed charm and two historic churches dating from 1871 and 1886 respectively, while at nearby Bringelly Kelvin Homestead dates from 1820 and is a State Heritage item.

Badgerys Creek Road, Bringelly: The overall Impact Level is rated as only Moderate, even though these rural residences and farms are only one to two kilometres south of the airport boundary, and the residents are assumed to value visual amenity. These residences would be on approximately the same level as the airport, and it is claimed vegetation would obscure much of the airport site, but with a 35m high air traffic control tower and large high buildings it is doubtful whether the vegetation would be high enough to provide visual protection.

Silverdale Road, Silverdale: The overall Impact Level is rated as only Moderate-Low, even though it is "an elevated, residential rural area with broad expansive views over surrounding areas, where visual amenity is important and where residents are subject to long duration views" and a number of residents would have an unobstructed view of the airport site, while other residents would have limited views, and all would have clear views of aircraft movements.

Mt Portal Lookout, Blue Mountains National Park: The overall Impact Level is rated as only Negligible, a clearly biased evaluation. This lookout is approximately 70 m above the proposed airport site of 1,700 ha. It is within the Greater Blue Mountains World Heritage Area, yet its Sensitivity is only rated as Moderate-High. To enjoy a walk unawares through this natural bushland only to emerge on to a lookout with a view onto an international airport and industrial area would for most people be shocking and disturbing.

The visual impact of the airport would not be able to be absorbed by the wider view, as is claimed by the draft EIS, since, because of its sheer scale, the size of major buildings, the length of the runway(s), the height of the air traffic control tower, and the constant coming and going of aircraft, with associated noise, it would irresistibly draw people's attention. The magnitude of the contrast could not be greater, nor the visual impact more severe, even if on a short-term basis, for large numbers of people.

9.11. Mitigation and Management Measures

Only two of the mitigation measures put forward are not subject to qualification and those are measures 22.1 for a management plan and 22.7 for rehabilitating construction site areas.

Measures 22.2, 22.3, 22.4, 22.5, 22.6 and 22.10 are all qualified by "where practical", "where practicable", or "as far as practicable".

Measure 22.8 considers revegetation strategy, but only subject to bushfire risks and potential impacts on aviation operations.

22.9 looks at possibilities for a not too visually confronting perimeter fence, but only subject to safety and security requirements.

It is obvious that there is not to be much actual mitigation of untoward visual impacts, since economics in particular will take precedence over aesthetics at almost every turn.

9.12. Further Development

The draft EIS states that progressive, unpredictable development of the airport site is expected to occur from Stage 1 onwards, and that these developments cannot be accounted for by the proposed Stage 1 development. This admission in itself further reduces the worth of the already imprecise assessments for Stage 1, and does so likewise for those for Stage 2.

9.13. Visual Context

The draft EIS envisages increasing urbanisation and industrialisation in districts around the proposed airport, transforming the area from a predominantly rural to a predominantly urban

environment. This would over time reduce the contrast between the Stage 1 development and its surroundings, and thus reduce sensitivity in the more urbanised east of the airport but increase it to the west, and likewise increase visual magnitude and therefore visual impact to the west, that is the Greater Blue Mountains World Heritage Area. To reiterate what was said above, there needs to be as much as possible of a buffer zone between the GBMWhA and the stark and unlovely contrast of the industrialised, urbanised areas - a logical progression from these unnatural (even taking into account a bit of landscaping) areas to a semi-natural open space to natural bushland.

9.14. Assessment of Impacts During Operation

Table 36.1, "Predicted aircraft movements", shows a total number of aircraft movements per 24 hours ranging from 198 in 2030, or one every 7.27 minutes, to a horrific 110, or one every 1.29 minutes, night and day.

This would be appalling visually and in every other way to residents near the airport and near the flightpaths. It would thoroughly degrade those areas of the Greater Blue Mountains World Heritage Area near flightpaths, adversely impacting wildlife and habitat features as the sound reverberating off the valley walls of this vast, intricate noise amplifying chamber draws attention to the stream of aircraft overhead, or to the right, or left.

Since the GBMWhA is a complex area with differing landforms, microclimates, habitats, and flora and fauna species in different areas, sometimes even from one valley to the next, the significant adverse impact on these considerable areas would degrade the integrity of the Greater Blue Mountains World Heritage Area as a whole.

9.15. Mitigation

The largely ineffectual mitigation measures proposed to address the visual impact of Stage 1 are also to apply to Stage 2, where given the enormous increase in the scale of visual impacts, especially those relating to overflights, they would be even less effective..

9.16. Summary of Findings

It is claimed here that the transition from a rural to an urban environment would be expected to "reduce the visual impact of the proposed airport development, including night-time lighting effects, as the proposed airport is integrated into the changing urban visual character of the area".

The worse it gets, the better it gets - light pollution from the airport is no longer much of a problem because it is largely absorbed by the more general light pollution from surrounding development.

In fact, Stage 2 would see much worse photopollution of the area, impacting even more the eastern face of the Greater Blue Mountains World Heritage Area, with all the adverse effects mentioned above (22.3.5.2).

9.17. Conclusion

Adverse and un-mitigatable impacts on visual amenity for both existing residential and World Heritage natural areas are unavoidable if the proposed airport goes ahead and are yet another reason why it must not be built.

10. Societal Impacts and Consequences

10.1. Setting the Scene

Sydney's Kingsford Smith Airport has achieved a state of equilibrium over many years/decades of dispute and compromise. As a consequence KSA has:

- Carefully determined Flight Paths
- These Flight Paths exclude flying over the Eastern Suburbs
- Permit flights/aircraft noise over certain suburbs while excluding flights and aircraft noise over other suburbs
- Certain “noise sharing” arrangements have been negotiated
- A “night time curfew” ensuring uninterrupted sleep between 11pm (2300) and 6am (0600)
- Effectively a political/societal stalemate or “checkmate”

While this present arrangement is not totally “fair and equitable”, the fact that KSA is effectively not-operational between 11pm and 6am (7 hours) means that all residents of Inner Sydney, Greater Sydney and beyond (Central Coast, Blue Mountains, Illawarra and Southern Highlands) should be able to sleep without interruption.

This “state of equilibrium”, or “checkmate”, has been achieved as a contest between:

- Residents of affluent suburbs, middle income suburbs, low income suburbs (sometimes close to KSA) using their relative political strengths to influence KSA outcomes
- Political Parties and their candidates seeking support in influencing Flight Paths and Aircraft Noise for various Electorates
- New “political groupings” seeking to influence political decisions for KSA. The “No Aircraft Noise Party” was one such stakeholder seeking an equitable sharing of aircraft and noise as generated by operations at Kingsford Smith Airport.

This “not totally fair and equitable” situation at Kingsford Smith Airport must be compared with the planned operating environment of the proposed Western Sydney Airport at Badgerys Creek.

10.2. Proposed Western Sydney Airport

The proposed Western Sydney Airport would have Flight Paths and associated Aircraft Noise in areas presently with little aircraft noise such as:

- All suburbs along all Flight Paths within 30km of Badgerys Creek. This largely effects St. Clair, Erskine Park, St. Marys, Rooty Hill and Mt. Druitt and its northern suburbs
- National Parks including Blue Mountains National Park, the Blue Labyrinth and Grose Valley
- Towns and villages of Lower Blue Mountains
- Emu Plains, Penrith, Kingswood and Werrington through to St. Marys

BUT the intrusion/interruption due to Aircraft Noise in all the above localities will be “24 hours per day/7 days per week/365 days per year” ie. anytime, day and night.

This is a consequence of the decision that “Western Sydney Airport” be a “no curfew airport” Undeniably this is NOT “fair and equitable” in our “fair-go” society !!

10.3. Politics and Lobbying

How were the decisions for the proposed “Western Sydney Airport” determined?

Did the Federal Government have a mandate to propose Western Sydney Airport with the proposed operating conditions?

Did the Federal Government have a mandate to develop the proposed Western Sydney Airport as a “NO Curfew Airport”?

Where did the urging and influence come from, pushing the Federal Government in this direction?

Who were the lobbyists and stakeholders seeking to benefit from the Western Sydney Airport development?

10.4. Societal Implications

What are the Societal Implications of this decision for a “NO Curfew Airport” in Western Sydney?

“Winners”

- All residents close by Kingsford Smith Airport. These people anticipate reduced aircraft operations at KSA as some of the load will be shared with WSA. But for these residents the prospect of the “lifting of the curfew” is gone forever. No aircraft noise after 11pm through to 6am ever!
- All residents east of Parramatta will never be affected by aircraft noise between 11pm and 6am as the KSA curfew will remain. Possibly this zone could be east of an arc through Rouse Hill, Wentworthville, Liverpool to Campbelltown.
- This means that the vast majority of the residents of Greater Sydney will retain the benefits of KSA curfew. No overnight aircraft noise!

“Losers”

All “losers” will experience aircraft noise at any time, day and night. No overnight curfew here!!

- The biggest losers are the residents of the area bounded by St. Clair, Erskine Park, Colyton, St. Marys, Mt. Druitt Suburbs and Rooty Hill. This area includes many of Greater Sydney’s lowest socioeconomic “battlers” with high rates of intergenerational unemployment. (The Mt. Druitt area was originally “stocked” with residents displaced from Public Housing being demolished in the inner city suburbs.) The biggest losers will be the long term battlers of Western Sydney.
- All other residents from Werrington west to Penrith and Emu Plains, then further west to the Lower Blue Mountains (Lapstone west to Faulconbridge) and possibly further west to the Mid Blue Mountains (Linden west to Bullaburra) will be effected by aircraft noise without the protection of an overnight curfew.

How were the “winners and losers” selected?

The announcement that the proposed Western Sydney Airport would be curfew free was summarised as “aircraft noise would be dumped on Western Sydney”. But what are the societal mechanisms which have bought this decision about?

10.5. Decisions and Impacts

The decision that the proposed Western Sydney Airport:

- Would not be protected by an overnight curfew is one of elitist bastardry
- Western Sydney residents (“the Westies”) have been deliberately targeted knowing the majority of Sydneysiders would silently approve the disadvantage being dumped out west, on “the Westies”
- The “planners” of the proposed WSA have demonstrated social discrimination in proposing further discrimination/disadvantage to those currently recognised as “the most disadvantaged low socioeconomic suburbs of Greater Sydney”
- This is also a form of “bullying” knowing that the residents targeted for maximum overnight aircraft noise have few, if any, resources to oppose the further disadvantage

In summary, the proponents of WSA have used elitist bastardry, discrimination and “bullying” in proposing this airport with NO curfew.

10.6. Political Process

This has come about (as part of the political process) due to:

- The majority of Greater Sydney residents, due to the locality in which they live, approve that KSA should have a curfew and so support the proponent (including possibly the Coalition Government). Labor has suggested bi-partisan support.
- The majority of Electorates remain in the “NO aircraft noise overnight area” and so this is NOT a defining issue as to how the Electorate would vote. Many voters could even approve of “dumping overnight aircraft noise in Western Sydney” - “Dump on the Westies”.

In contrast:

- Given the 30 seat “majority” of the current Government, and the voters in the few Electorates disadvantaged by the WSA with NO Curfew, it would be unlikely for the Federal Government to lose power, based on this issue, in the next Federal Election. The disaffected voters, in Electorates effected by WSA with NO Curfew are disenfranchised lacking Political power.
- Therefore the majority of voters, not only in the Greater Sydney Region, but rather Australia wide are able to inflict Aircraft Noise (24 hours each day) on Western Sydney and Blue Mountains residents.

Fair and equitable?

Or discrimination and bullying?

10.7. Disinformation

Many Western Sydney residents are “blinded” by the mantra “jobs for Western Sydney”.

These people think that:

- Presently unemployed people from Western Sydney will find jobs because of the demand for extra employees

- However normal market forces will apply. People presently employed with needed skills and contacts will relocate to the WSA project. Unskilled workers will also come from the pool of unemployed including migrants which continue to arrive into the Sydney region
- Unless Government policies target the long term unemployed with quotas and traineeships, little will change for the residents at greatest disadvantage living close by the proposed Western Sydney Airport

10.8. Discrimination

A major industry with many negative local environmental impacts is permitted to build in a suburb where many disaffected ethnic and migrant people reside. This is far from the residential and commercial localities chosen by the majority of local residents.

This is what we would expect.

It's called discrimination, a blunt application of power over disadvantaged people.

So what of Australian Society as it "progresses" into the 21st Century?

Is Australia a:

- Classless society?
- A fair and equitable society?
- A "fair go" society?

Members of the "team" writing these E.I.A. and E.I.S. documents are shaping our society.

We need them to get it right, which has not happened in the current draft EIS document.

11. Economic

11.1. Antipathy

Given the usual antipathy of Sydneysiders to Western Sydney, many/most residents from North and South of the Harbour and the Parramatta River will continue to regard Sydney's Kingsford Smith Airport as "their" airport.

They will NOT want to use the proposed "Western Sydney Airport"; due to travel time and additional costs.

Most Sydneysiders do NOT wish to travel west; even to Parramatta. Most of these people would have little if any intention to fly out-of or in-to WSA.

The majority of these Sydneysiders would consider WSA too far from home AND in a "foreign region" in which they would feel uncomfortable, even alienated.

During normal KSA operating hours, most people across the Sydney basin will continue to want to fly from KSA.

Demand for flights from WSA will be very limited and even the "budget airlines" with possibly cheaper airport charges (hardly a favourable scenario given the huge costs in building WSA) and marginally lower fares from WSA will provide sufficient incentive for many potential passengers from the general Sydney area.

11.2. Demand

How many people will be wanting to access WSA during the hours of the KSA Curfew ?

People flying out of WSA "overnight"

- If an International Flight, people could be arriving from about 7pm onwards; for flights leaving after 10pm.
 - How many people would want to arrive at WSA towards the end of a "full" day to then embark on a long overseas flight ?
 - If the flight was to New Zealand, the flight could arrive inconveniently too early in the morning. When to sleep and when to wake up can disrupt the day of arrival; who is wanting to do that?
 - Who would want to "hang around" to between midnight to 2am to catch their flight ?
- If a Domestic Flight, people could be arriving from about 9pm onwards; for flights leaving after 10pm
 - There would be some market for people to fly to Melbourne, Brisbane and Adelaide to arrive about midnight but we would expect very limited demand for flights after midnight
 - Flights of about 3-5 hours duration (Cairns, Darwin, Perth etc) could arrive inconveniently too early in the morning. When to sleep and when to wake up can disrupt the day of arrival; who is wanting to do that?

11.3. Questions for the Proponents of Western Sydney Airport

11.3.1. Which of the airlines have done a Business Study / Market Appraisal for WSA operating “overnight” during KSA curfew hours ?

11.3.2. Which of these airlines consider operations to WSA as being:

- Highly profitable ?
- Profitable ?
- Marginally profitable ?
- “a drag on the bottom line” ?

11.3.3. What is the “business success” of operating Avalon Airport, the second airport in Melbourne ?

(It would seem that most people would want to fly to & from Tullamarine Airport rather than Avalon Airport).

11.3.4. Unless “our” major Australian Airlines are keen to use WSA 24 hours/day due to a favourable business studies, why are we persisting with this project?

11.3.5. If “our” major Australian Airlines are keen / intend to use KSA 17 hours/day (outside the curfew) but will use (possibly reluctantly) WSA “overnight” (during KSA curfew hours) why are we persisting with this project?

11.3.6. Do the Proponents / Advocates for WSA have a strong commitment to use WSA 24 hours/day from:

- All major airlines?
- All Unions whose members are required for basic operations of the WSA?
(Does this include most influential and skilled operators, the Pilots?)

11.3.7. Do the Proponents / Advocates for WSA) have a strong commitment to use WSA during only 7 hours/day (during KSA curfew hours) from:

- All major airlines?
- All Unions whose members are required for basic operations of the WSA?
(Does this include most influential and skilled operators, the Pilots ?)

11.3.8. Is WSA planned to be built on the basis of “build it and they will come” ??

- This mantra has been a spectacular failure with several motorways built and proposed in Melbourne, Sydney and Brisbane
- Western Sydney Airport could well become a “White Elephant” with HUGE financial consequences for Australian taxpayers

11.4. Statement from No Airport Noise

We note the following extracts from a document from 'No Aircraft Noise' entitled:

"Badgery's Creek Airport – Presentation - Revised from NAN 2015 AGM"

Key issues:

- *How do passengers get there? Lack of fast, convenient rail link to Sydney CBD, Sydney Airport and greater Sydney Area. Note that only 11% of Sydney's air passengers come from Western Sydney with the majority starting / ending trips in Sydney CBD, North Shore and Eastern Suburbs (2006 Sydney Airport Ground Transport Study)*
- *Why would Passengers choose to fly from Badgery's Creek? Passengers won't go to an airport which isn't convenient to use especially with limited flight destinations particularly for peak hour flights*
- *Airlines given option to "opt in" to use Badgery's Creek but won't until it is beneficial for them e.g. lack of access or slots at Sydney Airport or new entrants*
- *Only 11% of Western Sydney people are using the present Sydney Airport according to figures in the 2006 Sydney Airport Ground Transport Plan*
- *No Aircraft Noise analysis shows how CBD, Eastern and Northern Sydney create the greatest air travel demand*
- *Passenger growth from Western Sydney to drive need for the airport will not lead to a viable airport*
- *Western Sydney demand will grow, but without a fast rail connection to the rest of Sydney it will take decades to make a viable airport at Badgerys*
- *Very slow start up of Badgery's Creek Airport will result in the majority of Sydney airport traffic being handled by Sydney Airport and this won't change until the capacity limits of Sydney Airport are reached*
- *Strategy of domestic flights first at Badgery's Creek will only replace smaller domestic / regional planes with noisier International planes at Sydney Airport*
- *Impact on Sydney Airport flight paths and noise levels is unknown*
- *Unwillingness to use Badgery's Creek Airport to spread flights and noise across the greater Sydney area or keep Sydney Airport within LTOP noise sharing*
- *Unwillingness to move shoulder period noisier international flights to Badgery's to restore Sydney Airport curfew to 11pm to 6 am (without shoulder period) or extend curfew to 8 hours*
- *Operational issues such as the lack of a Sydney wide Airspace Plan, the lack of Sydney Airport passenger and flight movement forecasts in this two airport scenario make it impossible to determine the impacts on the residents of Sydney*

Conclusion

- *Badgery's Creek Airport is not a viable airport as proposed as passengers will have difficulty to get there and airlines have no incentive to opt to use it*
- *If Sydney Airport is the lessee they will maximise Sydney Airport and defer expenditure at Badgery's Creek Airport*
- *Sydney Airport will grow until it's operational constraints are reached*
- *Impacts on Sydney Airport, it's flights paths and future of noise sharing is not known as Sydney Air Space design is not complete*
- *There is a lack of political will to use Badgery's Creek Airport to constrain Sydney Airport to the LTOP noise sharing.*

While the intent of NAN here is to call for a faster ramp up of Western Sydney Airport to *replace* KSA (which the draft EIS says is *not* the plan), it is also an excellent summary of the reasons that WSA is not a viable project economically.

12. The Greater Blue Mountains World Heritage Area

12.1. Introductory Comments

The GBMWhA also has National Heritage Listing and comprises eight protected areas, seven of which are National Parks. In addition to the National Parks there are, largely peripheral to the GBMWhA, several State Conservation Areas (SCAs) and the Gardens of Stone Stage 2 proposal ; the latter aims to have the nominated areas added to the National Parks estate and, where appropriate, added to the GBMWhA.

Much attention has been paid to the GBMWhA in the draft EIS in terms of the values on which the inscription was based and the extensive additional values (currently under consideration for further inscription).

The draft EIS also notes the pieces of Commonwealth and State legislation which (hopefully) ensure the GBMWhA's protection from proposals such as the current one regarding the WSA.

The approach adopted by the draft EIS is to identify potential impacts and then systematically dismiss or minimise them.

In V3 S38 Section 38.3.2.1 pp150-151 noise is treated thus:

- P150 *"...a Boeing 747 aircraft operating on certain departure paths would be expected to produce noise levels exceeding 60 dBA over a large area of the GBMWhA. In some areas, primarily within the Warragamba exclusion zone, the maximum noise level would exceed 70 dBA. A south west departure by an Airbus A320 is predicted to produce noise levels of 60 to 65 dBA in the southern area of the Blue Mountains National Park."*

"...aircraft technology is continually evolving to improve the noise performance...Given that the full operating capacity...is not anticipated to be achieved for close to 50 years, it is likely that older generation aircraft...would be replaced...by quieter and more efficient aircraft..."

This is possible, but what will happen to the GBMWhA in the intervening 20, 30 or 50 years?

- P151 Noise impacts on fauna include *"...changing foraging behaviour, impacting breeding success and changing species occurrences. Low-flying aircraft can give rise to flight response in some species, causing them to abandon nests, and other species are known to avoid higher elevation areas where noise levels are higher, potentially resulting in fragmentation of habitat..."*

"Given the height at which flights...are likely to be over the GBMA, these impacts are unlikely. While noise would increase marginally above background levels on an intermittent basis directly under the flight paths, fauna are likely to become habituated to the elevated noise levels in the long term...Operation of aircraft in the long term is highly unlikely to permanently alter foraging or breeding behaviour of any fauna species. Any impacts would be localised, with impacts occurring under the main flight paths. The majority of fauna within the vast GBMA would not be impacted by aircraft noise. As such, noise would not result in a loss of biodiversity and would not interfere with the ecological viability and capacity for ongoing evolution of species within the GBMA."

Yes, it happens in some places, but it won't happen here, and if it does it will only be under flightpaths so it won't happen all over, all of which means we can predict no loss of biodiversity and no interference with ecological viability, etc.

This is obviously not correct!

In V3 S38 Section 38.3.2.1 pp152-155 in relation to amenity there is a similar lack of even-handedness:

- P152 "...almost all aircraft departures and arrivals in the long term would occur at an altitude of more than 5,000 feet and most would occur at more than 10,000 feet above sea level over the GBMWhA...No flights are expected to occur less than 6,000 feet from ground level in the vicinity of sensitive areas."

Yet looking at Figures 38-2 and 38-3, the flightpaths north of Warragamba Dam would be <5000 feet above several official picnic, camping and lookout site.

The flightpaths in Figure 38-2 would barely have 5000 feet clearance in the regions west of the northwest-trending arm and along the southwest-trending arm of L Burragorang; but perhaps these don't count because they are in the No Entry Special Areas?

Many other examples could be provided.

12.2. Impacts on the Spectrum of Visitors

This falls into two parts: those visiting the villages and car-accessible lookouts, and those visiting the National Parks for more serious hiking, camping, other recreational activities, and/or research and educational needs.

12.2.1 Visitors to Villages and Easily Accessed Lookouts

The upper Blue Mountains in particular has an extensive system of scenic lookouts and easy walking tracks. It is one of the major nature-based tourism destinations in Australia, not least because its proximity to Sydney facilitates numerous day-visitors and short-stay visitors.

Their reasons for coming are typically to breathe clean air, experience the scenic beauty from popular lookouts, and see the autumn leaves and the spring blossoms.

In many parts of Sydney, their amenity is severely compromised by aircraft noise, so few come to the mountains to watch and hear aeroplanes.

It follows that such visitors will certainly have their enjoyment impacted by overflights.

The views that the planes will be too high above the land surface to be visually distracting, and the aircraft noise will not be intrusive, are rejected..

12.2.2 Visitors to the National Parks Including Wilderness

These types of visitor spread far more widely through the GBMWHa than those seeking lookouts. They value the scenic beauty of the region, tend to be far more environmentally aware, appreciate the importance of Wilderness and declared Wild Rivers, and almost above all else value the silence and the night sky. Such visitors will find overflights particularly intrusive.

V2 S26 Table 26-6 and V3 S38 Table 38-4 in relation to 'tourism and recreation' and also to 'wilderness' state :

"Key areas of recreation and tourism have been identified and assessed in regard to potential impacts from operation of the proposed airport. Whilst some areas are expected to experience intermittent noise levels above 50 dBA, such areas are limited in the context of the entire property."

"The major tourism areas around Katoomba and Wentworth Falls would not be impacted by aircraft noise."

"Some areas of Nattai National Park and Wollemi National Park would be affected by maximum noise levels associated with infrequent overflights of Boeing 747 aircraft, an aircraft type gradually being phased out by airlines." "...lower noise levels potentially also affect[ing] Blue Mountains and Kanangra Boyd National Parks (e.g. effects on Grose and Kanangra Boyd Wilderness Areas). Access to these areas is generally limited to hikers and low impact tourism. These limitations restrict the number of people within the area and as such limits the number of people potentially affected."

Largely based on the above, the 'assessment of significance' (in the above Tables) in relation to all three Stages of the WSA is that the proposed and long-term airport would have no significant impact on either recreation and tourism, or on wilderness values.

Very simply, the 'operational assessments' and the 'assessments of significance' derived from them are categorically rejected in relation to all stages of the WSA based on the following:

- The overflight height above the terrain are overstated. This would increase the levels of noise considerably. Some areas of ≤ 5000 feet clearance are in the Blue Mountains National Park and also impact wilderness and the No Entry Special Area around Lake Burragarang.
- 50 dBA is above a reasonable trigger level of day/evening/night of 40/35/30 dBA. Day-time measurements of 'background' in the Blue Mountains National Park have yielded values below 30 dBA over several hours – such differences between the aircraft noise and the ambient environment would severely compromise the experience of those enjoying the solitude.
- Examination of Figures A1 and B1, and V3 S38 Figure 26-2, together with V4 App E1 Figures 7-2 to 7-5 in which numbers of flights are indicated, will demonstrate that visitors to the various National parks of the GBMWHa will be subject to considerable numbers of flights creating significant levels of intrusive noise.

The progressive WSA proposal will have the capacity to create substantial noise impacts linked to 24/7 operation. This will compromise large parts of the GBMWHa and peripheral SCAs, and detract from the amenity of the many Australian and International visitors. The parts of the GBMWHa impacted include: the Blue Mountains National Park and contained Grose Wilderness,

the southern half of the Wollemi Wilderness within the Wollemi National Park, the Kanangra Boyd National Park and Wilderness, the Nattai National Park and Wilderness, and the Burrangorang SCA.

12.3. Impacts on Sydney's Water Supply and Special Areas

There are several possibilities to consider:

- Emergency dumping of fuel while over Lake Burrangorang or within the catchment would seriously affect the water supply.
- Similarly, an aircraft crashing into the Lake or in the catchment would have adverse consequences.
- In addition to the contamination aspect, there is also the problem of accessing the catchment and effecting a rescue operation and clean-up.

The draft EIS seem not to see these aspects as a threat because they are extremely unlikely. **If the WSA goes ahead, we wonder how long it will be before the 'unlikely' happens?**

12.4. Impacts on the Region's Native Fauna

V3 S38 p151 indicates that noise adversely impacts fauna by changing foraging behaviour, lowering breeding success modifying a species occurrence, engendering fear such that nests are abandoned, and moving to lower elevations. Yet the draft EIS seems to feel that any impact is localised and of negligible significance.

The particular issue is hard to resolve, but the following comments are made:

- Noise certainly affects and annoys humans and long-term exposure is likely to affect hearing. Occupational health and Safety Requirements stipulate the use of ear plugs as at least a precautionary measure.
- Empirical evidence is that noise frightens many animal species and this can lead to adverse consequences, some of which could be permanent.
- The West Australian EPA introduced guidelines in 2014 dealing with the evaluation of noise and its impacts.
- It would seem that the jury has yet to decide, so from the point of view of a new airport impacting on the GBMWSHA comprising parks, wilderness, substantial biodiversity, and Sydney's principal water supply with its No Entry Special Areas, and all contributing to a thriving tourism industry, it must surely be prudent to observe the Precautionary Principle.
- An excellent evaluation of many papers on the impact of noise concluded (p14) :

"By remaining unconcerned or unaware of the potential harm that this unnecessary noise is having on wildlife we are valuing our anthropocentric wants over the very survival and future of other creatures."

http://wfae.proscenia.net/library/articles/radle_effect_noise_wildlife.pdf

12.5. World Heritage Listing

The following paragraphs are from the document:

1999 WORLD HERITAGE NOMINATION IUCN TECHNICAL EVALUATION THE GREATER BLUE MOUNTAINS AREA (AUSTRALIA)

One threat not mentioned in the nomination is the proposal for a new international airport at Badgerys Creek 10km from the eastern boundary of the GBM. IUCN has reviewed relevant portions of the draft Environmental Impact Statement as well as copies of submissions against the proposal by conservation and community groups. The proposed airport would maximise use of airspace over the Blue Mountains area resulting in aircraft noise levels of 70 to 80 decibels. Such flights would also be visually intrusive and adversely affect the natural quiet and ambience of this part of the GBM. The airport would also increase air pollution through vehicle traffic to the site and airborne fuel emissions and fuel dumping. As noted in the submission by the City of Blue Mountains, the World Heritage nomination of the GBM "... would be unacceptably compromised by the adverse impact...caused by aircraft flights over the Blue Mountains". Other local governments and the State Government also oppose the project. A decision by the Commonwealth Government on construction of the new airport is expected to be announced in mid-1999.

*At its twenty-third ordinary session, the Bureau decided to defer the present nomination under natural criteria and to invite the Australian authorities to consider the possibility of a serial nomination to cover the full range of values of eucalyptus ecosystems. The Bureau also noted a number of impacts, including 155 inholdings and the **potential for an airport at Badgerys Creek, which might compromise the integrity of the area.***

This makes it obvious that an Airport in Western Sydney threatens the Worlds Heritage Listing of the Blue Mountains National parks.

This line is from the Australian Government Department of the Environment Web Site at:
<https://www.environment.gov.au/heritage/places/world/blue-mountains/values>

*Since listing, proposals for a second Sydney airport at Badgerys Creek, adjacent to the GBMA, have been **abandoned**.*

The sentence is also found on the UNESCO Web Site at:
<http://whc.unesco.org/en/list/917>

The Airport must not be built!

The proposal must be abandoned permanently!

13. Biosecurity

13.1. No Biosecurity Analysis

It is a major concern that the proposed Western Sydney Airport Environmental Impact Statement has overlooked the impact of Biosecurity issues on the Blue Mountains National Park and the Greater Blue Mountains World Heritage Area.

Airports are places notorious for the detection of invasive species and the biosecurity systems do not always work. To have an airport situated so close to a world heritage area is absurd. Recent examples of invasive species impacting in areas near airports in Australia include:

13.2. Red Fire Ants

In December 2014 Red Imported Fire Ants (*Solenopsis invicta*) were detected at Botany near Sydney Airport. A 500 hectare surveillance area has been declared around this site.

Fire Ants are a huge problem in the USA. They cause many serious economic and social impacts. They sting people, occasionally causing the deaths of infants and elderly people, damage crops, rob bee-hives, harm young domestic animals, and damage roads, footpaths and electrical equipment.

They have caused more than 80 human deaths. Stings easily become infected. They are harming a wide range of native animals.

It would be devastating if these ants impacted on the Blue Mountains National Park.

Australian plants may face risks from fire ants grazing on seedlings and disrupting seed dispersal, pollination and germination. Fire ants have more ecological impacts than most ants because they can reach extremely high densities of up to 2600 mounds per hectare.

The reduction in the biodiversity of Australian native fauna and flora due to the red imported fire ant, *Solenopsis invicta* is listed as a key threatening process under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)

The amount of money spent on controlling Red Imported Fire Ants is estimated to be \$900 million in the USA annually.

13.3. Zebra Chip Disease

In 2014 Zebra Chip Disease (*Candidatus Liberibacter solanacearum*) and associated Tomato-Potato Psyllid (*Bactericera cockerelli*) were both detected near the Norfolk Island International Airport (an Australian territory).

The vector for the zebra chip complex is the tomato-potato psyllid *Bactericera cockerelli*.

This insect and bacterium complex is a serious threat to Australia's potato, tomato and capsicum/chilli crops. It causes crops to become unmarketable. The disease occurs in New Zealand and both north and central America and causes millions of dollars damage to crops which have to be extensively sprayed with pesticides to control the disease.

13.4. Browsing Ants

In 2013 Browsing Ants(*Lepisiota frauenfeldi*) were detected at Perth Airport WA. That site has not yet declared the ants eradicated.

They are an ant-eating species that form super-colonies that can displace native ant species and most other invertebrates in the area of infestation. They have since been detected near port areas at Darwin.

Browsing ants are ideally suited to Australian conditions. They can also cause plant damage.

Browsing ant is a homopteran-tending species which 'farm' pests such as aphids, mealy bugs and scale insects, and so would become significant horticultural and garden pests.

13.5. Asian Honey Bees

In 2007 Asian Honey Bees (*Apis cerana javana*) were detected near Cairns International Airport QLD. They are now established in far North QLD and cannot be eradicated.

They are a natural host for varroa mites which, if introduced, would pose a serious threat to the honey bee industry and crops that are dependent on European honey bees for pollination.

13.6. Electric Ants

In 2006 Electric Ants or Little Fire Ant, (*Wasmannia auropunctata*) were found near Cairns International Airport QLD.

The name, Electric Ant (or little fire ant) derives from the ant's painful sting.

This ant's impact in those environments and countries outside of its place of origin has caused the reduction of species diversity, reducing overall abundance of flying and tree-dwelling insects, and eliminating spider populations.

On the Galápagos Islands, it eats the hatchlings of tortoises and attacks the eyes and other body parts of the adult tortoises. It is considered to be perhaps the greatest ant species threat in the Pacific region and is one of the worst alien species in the world according to The Global Invasive Species Database.

Where electric ants are present, they have displaced 95 per cent of native ants. Without native ants, local plants, crops and trees in the ecosystem may suffer. They have the potential to ruin both the agriculture and the tourism industry.

13.7. Yellow Crazy Ants

In 2001 Yellow Crazy Ants (*Anoplolepis gracilipes*) were found near Cairns International Airport QLD.

They have spread extensively.

Despite Biosecurity Queensland's ongoing treatment and surveillance activities, the known infested areas have increased since 2007 and given the number of new infestations found in the past 18 months, statewide eradication is not considered possible.

Infestations have been found at Townsville, Caboolture, Hervey Bay Maryborough, the Gold Coast and various Brisbane suburbs including Eagle Farm.

It is included as one of the world's 100 worst invasive species. Yellow crazy ants can form densely populated super-colonies with more than one queen. These super-colonies can have a huge impact on natural environments, including both native plants and animals. Yellow crazy ants can damage crops, horticulture and honeybee hives, and can adversely impact on our outdoor lifestyle. The ants spray formic acid which may cause burning and irritate the skin and eyes of animals and potentially humans.

13.8. Conclusion

There are a huge range of invasive species which are exotic to Australia.

As shown by past examples it is easy for these species to escape from around airport entry points.

Exotic insects and disease are regularly detected at airports by Biosecurity Officers but as the examples above indicate some invasive species do escape detection.

To have an airport so close to a World Heritage area is inconceivable and without any sensible environmental reasoning.

Emerging disease issues are also of major concern for an airport being so close to the Greater Blue Mountains World Heritage area.

As recently as November 2015 an emergency alert was issued by the Department of Agriculture and Water Resources regarding the disease *Xylella fastidiosa*. This is a bacterial disease which is difficult to eradicate. Outbreaks in America, Italy and France have been devastating. *Xylella* affects a range of important plants: wine and table grapes, citrus, olives, forestry trees, ornamentals (including *Rhododendrons* and *Camellias*), almonds, cherries, peaches, plums, avocados, blueberries, coffee, pecans and alfalfa. It is causing hundreds of millions of dollars of damage in the Americas.

Some leafhoppers in Australia are likely to be able to transmit the bacterium. This disease has the potential to infect 52 native plant families which includes 768 species in the Greater Blue Mountains World Heritage Area.

Species include Eucalypts, Acacias, Banksias and Callistemons. An outbreak would leave the Greater Blue Mountains World Heritage Area devastated.

Rhododendrons and Camellias are also a potential host. Say goodbye to the Blue Mountains Rhododendron Festival if this disease ever escapes.

To prevent the devastation of the Greater Blue Mountains World Heritage Area a High Speed Rail system linking Sydney to Brisbane, Melbourne and Canberra is the only sensible option.

13.9. References

<http://www.agriculture.gov.au/import/industry-advice/ian/15/88-2015>
<http://www.agriculture.gov.au/pests-diseases-weeds/bees/the-asian-honey-bee-in-australia>
<https://www.agric.wa.gov.au/biosecurity/browsing-ants>
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<https://www.environment.gov.au/biodiversity/invasive-species/insects-and-other-invertebrates/tramp-ants/red-imported-fire>
<http://www.goodfruitandvegetables.com.au/news/magazine/industry-news/general/zebra-chip-found-on-island-neighbour/2730670.aspx>

14. ‘Conclusion’ Section of the Draft EIS

These comments relate to the document: “Volume 2 Chapter 29 Conclusion”.

14.1. Underlying Drivers of Aviation Demand

We note this statement in 29.2.2:

Developing a high speed rail link to Canberra or Newcastle airports, were found to require significant capital investment and would not necessarily address the underlying key drivers of aviation demand growth such as demand for international services.

This statement is misleading and incorrect.

The statement assumes that the ‘significant capital investment’ would be greater than that required for an Airport at Badgerys Creek, along with road and other infrastructure, yet no cost comparison is provided!

We have already established that the main drivers of aviation demand at Mascot is travel to Melbourne and Brisbane (see 2.6 above), not International travel.

We also reject the idea that a High Speed Rail link should stop at either Canberra or Newcastle.

The Australian Government Department of Infrastructure and Regional Development has in-hand *its own report* into High Speed Rail along the East coast, which includes lines to Brisbane and Melbourne.

The complete HSR, if and when built, will substantially *reduce* aviation demand in Sydney (and in Melbourne and Brisbane).

14.2. Convenient Omission of Aircraft

In section 29.3, we see this statement:

Marginal ozone impacts would result from the operation of Stage 1 and greenhouse gas emissions are not expected to be material in terms of the regional air-shed.

This is a deliberate deception as it does not include emissions from Aircraft once they are airborne!

Aircraft emissions must be included in any such calculation and this blasé statement removed.

14.3. Biodiversity Impacts

Table 29-1 includes this list of biodiversity impacts:

- *The proposed airport would result in the removal of approximately 1,065 hectares of vegetation during construction, including about 280.8 hectares of native vegetation*
- *Removal of vegetation would result in the loss of fauna foraging, breeding, roosting, sheltering and/or dispersal habitat*
- *Threatened species, populations and ecological communities listed under both the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) and the Threatened Species Conservation Act 1995 (NSW) (TSC Act) would be affected by Stage 1*
- *There is an associated risk of fauna strike from contact with aircraft and ground transportation vehicles both on and surrounding the airport site*
- *Indirect impacts would be associated with light, noise and vibration and the introduction of exotic species*
- *Offset package prepared to compensate for the removal of approximately 90.8 hectares of Cumberland Plain Woodland, the removal of about 120.6 hectares of foraging habitat for the Grey-headed Flying-fox, and impacts on other features of the natural environment including plant populations, fauna populations and several species and communities listed under NSW legislation*

This list of impacts is outrageous and unacceptable.

It is not acceptable for the Federal Government to propose and build a project that ‘impacts’ (read destroys) threatened species protected under Commonwealth law!

‘Offsets’ are legalised destruction, do nothing to restore or extend threatened species or habitats and are rejected.

The risks from introduction of exotic species are real and unacceptable.

14.4. Social and Economic

Table 29-1 also includes a list of Social and Economic impacts.

All of these are listed as positives!

The Western Suburbs of Sydney are already crippled by air pollution, poor infrastructure, traffic congestion and health issues.

Growth in population, traffic, pollution, industry and health issues are not positives, they are a nightmare we do not want to endure.

If the goal is to generate jobs, why must an Airport be the solution?

14.5. Ecologically Sustainable Development

This section of the conclusions document is an offense to the informed reader.

- The precautionary principle is ignored as this project has known impacts that are not acceptable
- Intergenerational equity is ignored as this project will generate noise, pollution and congestion for decades, getting worse with time
- Conservation of biodiversity is ignored as this project will completely destroy threatened plants and animals at the site and will have wider consequences for the region and the Blue Mountains

There is nothing ‘ecologically sustainable’ about a project that results in the burning of 8 *billion* litres of jet fuel and produces 21 *million* tonnes of greenhouse gas emissions (Appendix F1 Table 8-3)!

15. Acknowledgments

This Submission was compiled from the work of the following people (in alphabetical order):

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- Peter Ridgeway (Biodiversity)
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