

OUTCOMES SUPPLEMENTARY REPORTS

Meeting Date 8 December 2015

Item Number. 177

SUBJECT: Western Sydney Airport Environmental Impact Statement

FILE NUMBER: 08/00629

PREVIOUS ITEMS: 114 - Outcomes Committee - 8 September 2015
55 - Outcomes Committee - 12 May 2015

REPORT BY: Diane Cuthbert, Group Manager City & Community Development; Eber Butron, Manager Strategic Planning

RECOMMENDATION:

That Council, based on the findings and recommendations of the Independent Peer Review and its own analysis of the Western Sydney Airport Draft Environmental Impact Statement (EIS), dated 25 November 2015:

- 1.1 Endorse the issues outlined in the report as the basis for Council's submission to the Department of Infrastructure and Regional Development in response to the public exhibition of the Western Sydney Airport Draft EIS.
 - 1.2 Raise serious concern about the EIS due to its inadequacies and request the Department of Infrastructure and Regional Development to amend the Western Sydney Airport Draft EIS to address the issues outlined in the report.
 - 1.3 Request the Department of Infrastructure and Regional Development to publicly re-exhibit the amended Western Sydney Airport Draft EIS to provide an opportunity for Council, the community and other interested stakeholders to publicly review and comment on the amended Draft EIS.
 - 1.4 Oppose the 24 hour operation of the airport due to the inadequacies of the EIS, particularly related to mitigation measures to address the adverse impacts of aircraft noise.
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SUPPORTING DOCUMENTS:

AT-A	Review of Western Sydney Airport Draft Environmental Impact Statement	68 Pages
AT-B	Merge Point Operations - Prefer 05 and Prefer 23	2 Pages
AT-C	Explanation of Noise Measures ANEC, N70 and N60	2 Pages
AT-D	Aerial Photos with Noise Contours	9 Pages

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CITY PLAN

This report is linked to *Theme 2 Places and Infrastructure* in the Fairfield City Plan.

SUMMARY

Councils in Western and South-Western Sydney formed a consortium to engage consultants to undertake an independent peer review of the Airport EIS. In summary, the Peer Review Report highlights many shortcomings and data gaps in the EIS document. These issues are identified in the body of this report. Various shortcomings of the report are considered significant and require review and amendments to the EIS document. Many of the issues identified with the EIS, and the assumptions and concepts upon which the EIS is based on, have made it difficult to undertake a proper assessment and review of the EIS document.

During the public exhibition period the Peer Review Consultants requested data from the Department of Infrastructure and Regional Development (DIRD) to assist in their review and assessment, however, none of this data has been made available.

It is recommended Council use the issues identified within this report as a basis to formulate its submission to the public exhibition of the draft EIS. Given the number of deficiencies evident and the significance of some of these matters it is recommended Council request the draft EIS be amended to address these matters and the amended draft EIS be re-exhibited to provide Council, the community and other stakeholders an opportunity to comment on the amended draft EIS.

BACKGROUND

The Western Sydney Airport Environmental Impact Statement (EIS) has been placed on public exhibition between 19 October and 18 December 2015. As reported to Council in September 2015 Councils in Western and South Western Sydney established a steering group to oversee an Independent Peer Review of the EIS. The steering group comprises of 11 reps from Auburn, Blacktown, Blue Mountains, Holroyd, Liverpool, Parramatta, Penrith, Camden, Campbelltown, Wollondilly, and Fairfield Councils. This process was co-ordinated with the assistance of Western Sydney Regional Organisation of Councils (WSROC) & Macarthur Regional Organisation of Councils (MACROC).

As reported to Council in September 2015 the following Consultants were engaged to peer review various key aspects of the EIS document:

- Aviation Planning / Flight Path Analysis - Arup
- Acoustic and Noise and Vibration – Aircraft Noise – Marshall Day
- Air Quality – Katestone
- Traffic and Transport – Arup
- Economic, Employment and Social – Hill PDA
- Human Health Risks – CHETRE

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- Acoustic and Noise Vibration – Ground Noise – WSP PB
- Groundwater and Surface Water / Flooding – Cardno
- Biodiversity – EMM

Copies of these Peer Review Reports have been circulated to Council separate to this report, with copies available at the Council meeting for inspection, if necessary.

In addition, WSROC engaged WSP/Parsons Brinckerhoff (WSP/PB) to undertake a review of the Blue Mountains World Heritage Area, expanded the scope of the Air Quality component to include Greenhouse Gas Assessment, and a review of Waste consideration with regards to the development of the proposed Western Sydney Airport. The cost of these additional components of work was covered by WSROC.

WSP/PB was required to prepare a summary report of the Peer Review Reports (Attachment A).

THE PROPOSAL

The project as proposed in the EIS is a staged development. The EIS seeks approval only for the construction and operation of the Western Sydney Airport until 2030. The draft proposal is an initial single runway development with a capacity of 185,000 aircraft movements (37 million passengers per annum) by around 2050. The proposed Airport is to be a 24 hour operation, capable of handling a full range of domestic and international passenger and freight aircraft, a business park, parking and cargo facilities. The development up to around 2050 will be subject to subsequent approvals pursuant to the Airports Act. An airport masterplan will be required within 5 years of the commencement of the project, superseding the current draft Airport Plan.

A dual runway is proposed as future stages with a total maximum capacity of 370,000 aircraft movements (82 million passengers per annum) to be reached by approximately 2063. This stage of the airport development will require more detailed assessment and will be subject of a further EIS.

LIMITATIONS OF PEER REVIEW

The peer review undertaken by the various consultants was based on a desktop assessment only. No site inspections or modelling was undertaken as part of the review. The Peer Review consultants did not consult with the consultants that prepared the EIS. The results of several specialist reports (noise, air quality, transport) relied on results generated from a project specific model. Despite a request from WSROC the project specific modelling was not made available to the peer review consultants. No additional modelling was undertaken to verify the results of the technical reports within the EIS.

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BROAD SHORTCOMINGS and ADEQUACY OF THE EIS

Timing for preparation of the EIS

The consultants noted the compressed EIS preparation time. It is estimated the EIS was prepared over approximately 8 months. This is very rapid when compared to the previous EIS for the project (in the late 1990's) prepared over a 2 year period. It is also advised the period whereby the Department of Environment reviewed the adequacy of the draft EIS to be publicly exhibited was also compressed.

The consultants formed the opinion the compressed preparation and review times have resulted in a number of omissions and limitations of the exhibited EIS. A brief summary of the key issues raised by the specialist consultants is provided in Appendix A – Executive Summary pages viii – x. The items highlighted in the peer review assessments give rise to question the adequacy of the EIS.

The EIS does not provide assurances that acceptable environmental thresholds will not be breached and it does not set hard limits on environmental impacts. This is particularly the case with regards to aircraft noise however it is evident with other aspects of the EIS, the mitigation measures not being prescriptive, and there is little on limits on impacts. This is because an Airport Operator has not yet been appointed and DIRD is seeking flexibility over management and mitigation. The major problem with this process is the uncertainty created over the likely future impacts.

Airport Plan is Indicative Only

The draft Airport Plan is considered to be a transitional document until an operator is determined and a detailed masterplanning and project development process commences. This creates significant uncertainties for the draft EIS, which acknowledges key aspects of the draft EIS are effectively indicative only. It is understood development of the airport, until a dual runway is required, will be undertaken subject to the Airports Act and future airport masterplans.

Given the uncertainty created by the draft Airport Plan, a transitional document, it is unclear:

- What would trigger further referrals and approvals pursuant to the Environment Protection & Biodiversity Conservation (EPBC) Act;
- What further assessment and approvals are required, beyond the current EIS) once an ALC is appointed and more is known about the actual airport layout and operations;
- What limitations the EPBC approval will place on the airport;
- What further community and stakeholder engagement is envisaged in the process going forward.

Draft Environmental Impact Statement Guidelines

Given the issues raised by the peer review consultants the EIS compliance with the guidelines is questioned and needs to be reviewed by the Department of Environment. Issues outlined include:

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- Despite WSROC's formal request to DIRD for specific data/modelling this data was not made available during the public exhibition period. The general advice provided in the guidelines recommends any additional supporting documentation and studies, reports or literature not normally available to the public from which the information has been extracted be made available at appropriate locations during the period of public exhibition.
- The EIS does not fully consider all the impacts on the environment during this period as it uses indicative flight paths. The long term environmental impacts (beyond 2030) are unclear. All impacts beyond 2030 are not known and does not form part of the works to be assessed under stage 1 of the EIS and draft Airport Plan.
- Greater discussion could be provided on the impacts of other projects in the region including significant state infrastructure (roads, rail, water, sewer etc) and urban development projects (WSEA, WS Priority Growth Areas etc).
- Greater detail on about feasible alternatives, especially in relation to airspace planning and the short, medium and long term advantages and impacts of the options.
- Not all sensitive receivers have been considered as part of the environmental evaluation.
- A key concern of the EIS is the description of impacts and residual impacts. As the airspace planning is based on indicative flight paths a detailed assessment of the nature and extent of likely short-term and long-term relevant impacts cannot be undertaken with any certainty. Prior to determination of the EIS greater certainty around airspace planning is required so a more comprehensive assessment of impacts regarding noise, air quality and health can be undertaken.
- A detailed description of mitigation measures and their expected effectiveness has not been provided.
- Given the uncertainty surrounding the airspace planning and indicative flight paths a more precautionary approach is recommended.
- Strong focus on economic benefits of WSA in EIS, needing more balance in economic and social costs
- Previous community issues and concerns were inadequately or not assessed and addressed.
- The EIS does not provide a cost benefit analysis in accordance with Australian Treasury Guidelines.
- Modest over estimation of jobs within proposed business park based on benchmark occupancy ratios.
- Strong EIS focus on regional economic impacts, with a gap on local and economic and social impacts.

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AIRPORT OPERATIONS

The process with regards to the EIS is outlined below.

The draft EIS has been prepared to support the draft Airport Plan. The draft Airport describes proposed Stage 1 works. Stage 1 includes the construction and initial operations of a single 3,700 metre runway located in the north-western portion of the site and a range of aviation support facilities including passenger terminals, cargo and maintenance areas, car parks and navigational aids. Predicted demand for the first 5 years of operation to 2030 of approximately ten million passengers per year as well as freight traffic. Site preparation activities are proposed to commence by mid-2016.

Development beyond Stage 1 will be undertaken pursuant to the provisions of the Airports Act including the preparation of a major development plan for any significant development.

It is anticipated that the first runway will be at capacity in 2050.

Stage 2 is the longer term development of the airport anticipated in 2063, such as development of a second runway, will require the development of an EIS and will follow the same process currently being undertaken for this stage of development.

Predicted Numbers

Predicted numbers of passengers and flights are as follows:

Summary of Activity Forecasts

	Stage 1 (c.2030)	First runway at capacity (c.2050)	Long-term (c.2063)
Annual passengers (arrivals and departures)	10 Million Annual Passengers (MAP)	37 MAP	82 MAP
Busy hour passengers (international and domestic)	3,300	9,500	18,700
Total annual aircraft traffic movements (ATM) (passenger and freight)	63,000	185,000	370,000
Total busy hour ATM	21	49	85

Source: Commonwealth of Australia (2015) Draft Airport Plan

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Total Predicted Daily Aircraft Movements by Type by Year

Year	Aircraft Movements Per Day		
	Freight	Passenger	Total
Stage 1 (2030)	28	170	198
First runway at capacity	74	480	554
Long term (2063)	104	1006	1110

Source: EIS Volume page 243

The mix and type of aircraft used in EIS is similar to that which currently occurs at Sydney Airport (Kingsford Smith).

The EIS is based on indicative flight paths (or airspace architecture).

A future airspace design process is expected to be undertaken closer to the commencement of the airport's operations and is not part of an EIS process.

The EIS states as follows:

"It is important to note that the conceptual design did not consider potential noise abatement opportunities, which will form an essential part of the formal airspace design process".

Operating Strategies

Assessment of aircraft overflight and runway operations noise for the proposed Stage 1 development focuses on the point at which passenger demand reaches 10 million annual passenger movements, currently expected to occur around 2030. At this stage, the airport would comprise a single (northern) runway and would have been operating for approximately 5 years.

The approximate north-east/south-west or 50/230 degree runway orientation for the Stage 1 development resulted in 3 primary operating modes being considered:

- Mode 05 – aircraft arrive from the south-west and depart to the north-east;
- Mode 23 – aircraft arrive from the north-east and depart to the south-west; and
- Head-to-head – all landings and take off movements occur in opposing directions, to and from the south-west. Note: Head-to-head operations can only be used for up to 20 movements per hour.
- Prefer 05 strategy – all aircraft would be directed to approach and land from the south-west and directed to take-off to the north-east. If this is not possible for meteorological or operating policy reasons, then second priority would be given to operations in the opposite direction (i.e. the 23 direction);

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- Prefer 23 strategy – all aircraft would be directed to approach and land from the north-east and take-off to the south-west. If this is not possible for meteorological or operating policy reasons, then second priority would be given to operations in the opposite direction (i.e. the 05 direction);
- Prefer 05 strategy with head-to-head – as Prefer 05, except that during the night hours of between 10.00pm and 7.00am, head-to-head operating mode to the south-west would be used when:
 - there are no more than a total of 20 aircraft movements in the hour following the relevant time; and
 - wind conditions allow the use of both runway directions.
- Prefer 23 strategy with head-to-head – as per Prefer 05 with head-to-head, except that when head-to-head operating mode is not in use, Prefer 23 applies rather than Prefer 05.

If Prefer 05 or Prefer 23 is in use during the night-time period, the operating mode would revert to head-to-head under the following conditions:

- the use of head-to-head has been allowed for at least 2 hours before the change time; and
- the use of head-to-head would be allowed for at least 2 hours after the change time.

Point Merge System

The Point Merge System is a way of synchronising arriving aircraft and directing them to the runway in a structured manner through a single final approach track. By directing aircraft through a series of predictable routes, the vertical and lateral path taken on approach is more accurate and can result in a reduction in the number of level flight segments required at a low altitude.

The point merge system is indicated at Attachment 'B' for Prefer 05 and 23 operating modes with the point merge above Blaxland.

COMMENTS & CONCERNS (Airport Operations)

Council staff endorse the following concerns/inadequacies identified in the Independent Peer Review.

General Matters

- The approach of determining flight paths (or airspace architecture) and the indicative nature of the flight paths.

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- That the flight paths presented in the EIS were determined based solely on operational and aviation safety considerations and not a consideration to minimising noise impacts.
- Location of the merge point at Blaxland is also indicative until the flight paths are finalised. Currently Blue Mountains City Council and Penrith City Council are very affected by aircraft noise associated with this merge point, however, this is also only indicative.
- Lack of consideration of alternative flight paths including greater consideration of Kingsford Smith, Camden, Richmond and Bankstown airports. In particular it is thought that the impacts on Bankstown airport have not been fully addressed.
- The draft EIS lacks sufficient detail in airspace architecture including a detailed description as what the underlying principles were, how was it developed and any alternatives which were considered.
- The draft EIS did not look at any scenarios beyond the normal/scheduled operation of the airport such as queuing in the event of unscheduled interruption.
- Further analysis of the proposed fleet mix is required. It is not considered suitable to adopt the fleet mix used from Kingsford Smith Airport (KSA) and that further analysis of the preferred fleet mix at the Western Sydney Airport should be undertaken.
- A detailed discussion to determine whether a curfew is required. The Independent Peer Review (IPR) consultants recognise that this is a substantial political issue, and sought to investigate the level of night time impacts that might provide a clear basis for the need or otherwise for a curfew. Based on current information, there is not enough information to determine if a curfew is required (from the perspective of compliance with noise standards for sleep disturbance) or not.

Other Matters

The Aviation Planning consultant considers that the information on airspace architecture presented in the draft EIS does not meet requirements given the matters below:

- Airspace, OLS and PANS-OPS – In terms of requirements, the evaluation of protection volumes for flight paths and airspace containment is in accordance with normal methods mentioned in the Airports (Protection of Airspace) Regulations and under the Airports Act 1996. Analysis of Obstacle Limitation Surfaces (OLS) and Instrument Flight Procedure protection volumes (known as PANS-OPS surfaces) indicates that, operationally, the Western Sydney Airport can operate unrestricted from terrain and artificial obstacles.

However, the following impacts are identified which are either unresolved or which require further clarification:

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1. The proposed airspace architecture is 'indicative' and has not been rigorously tested. The draft EIS proposes that another airspace model is tested closer to commencement of operations.
 2. The modelling indicates several flight paths over water storages, such as Warragamba Dam and Prospect Reservoir. Other flight paths traverse the Blue Mountains National Park. The environmental impact is unclear.
 3. The requirement under the Guidelines, produced by the Department of Infrastructure and Regional Development (DIRD), for feasible alternatives to be included has not been met. This is particularly important in consideration of concentration of approaching traffic over the township of Blaxland for the Stage 1 development and departure tracks.
 4. There is no consideration of community sentiment regarding changes to flight paths, proposed in the draft EIS, when the Airport operates with 2 runways.
 5. An alternative Stage 1 airspace model, based on the long term proposal but operating with a single runway, is not tested.
 6. Except for Sydney Kingsford Smith, flight paths for aerodromes, affected by the Western Sydney Airport are not evaluated.
 7. The draft EIS suggests that Western Sydney Airport will detrimentally affect the operations at Bankstown and Camden, and affect Richmond (military). The environmental impact is not quantified.
 8. Re-location of light aircraft traffic to other airports, the definition of new training airspace and consequent environmental impact, is not assessed.
- There is a degree of variability in the forecasts and demand information used in the draft EIS and draft Airport Plan. In addition, the forecast passenger loads per aircraft for Western Sydney Airport as presented in the draft EIS appear to be high i.e. more planes than predicted.
 - It is unclear what benchmarks or planning decisions sit behind the 1900m runway separation shown for Western Sydney and it is noted that other airports in Australasia are proposing wider runway separation.

The widening of the runway separation would have a greater impact on the Fairfield LGA.

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- There is consistency issues in terms of the base set of planning parameters used in developing the airport. The Airport Plan described the expectation of 21 passenger aircraft stands and four freight aircraft stands to provide Stage 1 capacity. However, the Airport Plan also says that Multiple Aircraft Ramping System (MARS) and swing gates may be used to meet the Stage 1 Capacity and reduce the overall stand requirements to approximately 19.

When considering 10 million annual passengers on 21 stands, this gives passenger throughput of 467,190 passengers per stand which is a very high through put as opposed to Atlanta, Dubai, Amsterdam, Hong Kong and Denver.

- The bird and bat strike risk for the airport is considered low, however, the assessment is preliminary. The fieldwork is limited to one set of surveys, therefore seasonal/temporal changes cannot be identified. Various sites within the study area were also not assessed due to limitations in access.
- There is no analysis presented on fuel dumping in the draft EIS. They simply conclude that the likelihood to cause significant environmental or social impacts is low given the rarity of fuel jettisoning globally, the standards set in the Aeronautical Information Package (AIP) and the high evaporation rates known at high altitude. Further clarification is needed.

Matters that the consultant believe should be included but are not

1. Any alternative airspace model and flight paths. It is considered that alternative scenarios should be developed to determine an acceptable overall model for airspace.
2. Environmental impact on selection of flight paths needs to be included to minimise impacts on the community.
3. There is no consideration of community acceptance of change to aircraft flight path and altitudes. The effect of noise is not restricted solely to loudness, but also to perception, and this has not been tested. Metrics of noise evaluation should be considered for the proposed paths.
4. Height restrictions on buildings not located in the immediate vicinity of the airport. Locations such as the Blue Mountains Council region, Camden, Penrith, Parramatta etc are potentially affected by the airport at Western Sydney and should be evaluated. This would include Fairfield.
5. Noise abatement procedures are promulgated for major airports around Australia. They define modes of operation at certain times to reduce the effect on surrounding population centres. No consideration has been given to operational management to minimise public impact.

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OVERFLIGHT NOISE

General Matters of Concern

The matters have been raised by the IPR consultant or Council staff.

Stage 1

- **Low Stage 1 Movement Numbers**

The total aircraft movement numbers for the Stage 1 development are relatively low when compared to other international airports in Australia. The low movement numbers cast doubt over the suitability of the 5 year time horizon as the primary assessment scenario for the purpose of obtaining approval for a major international airport. In this context, it is unclear how the incremental and periodic approvals that would need to occur as part of the ongoing expansion of the airport provide a sufficient basis for considering the initial 5 years of operation as the primary period for the assessment of noise impacts.

- **Airspace Management Strategy Uncertainties**

The draft EIS states that the airspace management strategy used as the basis for noise modelling is a proof-of concept design, and that further work is required to determine the actual flight paths which would be flown in practice. Information about the extent of potential flight path changes is limited. The uncertainty surrounding the final airspace management design that would be implemented represents a significant source of uncertainty in the noise assessment. The potential significance of this source of uncertainty has not been quantified and, with exception of alternative merge points for Stage 1, there has not been any sensitivity analysis carried out to assess the implications of potential flight path changes.

- **Assessment of Community Annoyance**

The draft EIS includes exposed population statistics which provide a useful indication of the number of people who may be affected by aircraft noise to varying degrees. However, in isolation, this data does not provide an indication of the scale or significance of potential community reaction to aircraft noise levels as a result of annoyance. The Health Risk Assessment in the draft EIS provides the most discussion of community annoyance, including references to research concerning the relationship between noise exposure and community annoyance. However, the Health Risk Assessment ultimately states that no quantitative assessment of annoyance was conducted as part of the study.

Dose-response relationships of the types referenced in the Health Risk Assessment can be used with noise levels and population data to provide a quantitative measure of the potential reaction. The use of these established relationships to represent the reaction of a separate community exposed to aircraft noise must be used with caution. In particular, due consideration must be given to the increased reaction that may be expected from a newly exposed community. However, this type of analysis provides an objective basis for comparing the impacts of alternative operating strategies and, more broadly, establishing the risk of community noise impacts relative to other established international airports in Australia.

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While the assessment of the risk of community annoyance is complex, the scale of the proposed airport, and the number of people potentially affected, are sufficiently large to warrant further evaluation of the subject. The introduction of a new 24-hour international airport at a greenfield development site introduces a risk of widespread and prolonged community annoyance. A quantitative analysis of this potential risk would be prudent to inform the environmental impact assessment process and the extent to which operational noise mitigation should be prioritised relative to other non-safety related airspace management considerations.

- **Mitigation Measures and Residual Noise Impacts**

The draft EIS noise modelling is based on an indicative proof-of-concept air traffic management design which does not present a comprehensive airspace and final air route design. Given the uncertainties concerning the final form of the airspace design, the final form of noise mitigation measures to be implemented is not yet known. Accordingly, the mitigation measures that have been referred to in the aircraft noise assessment are generic in nature.

This is a particularly important point for an airport development as, unlike other forms of infrastructure development, the policies used to manage aircraft overflight noise do not generally stipulate noise limits that airport operations must adhere to at surrounding noise-sensitive locations.

Accordingly, without a defined airspace design, a defined noise mitigation strategy or defined noise criteria to adhere to in practice, the residual impacts and the location of these impacts is subject to considerable uncertainty. Further, without defined noise criteria, it is unclear how noise considerations would be prioritised among other non-safety related airspace management and operational considerations associated with the proposed airport site. These uncertainties may therefore warrant consideration of performance criteria as part of the approval process for the proposed airport.

In addition to the generic operational measures for the mitigation of noise, the draft EIS also refers to mitigation related to dwelling acquisition or dwelling insulation upgrades. There is however no detail provided in terms of the circumstances in which these measures would be implemented, other than a general reference to the guidance of AS 2021. It is unclear if this is intended to infer that such measures would only be considered within certain Australian Noise Exposure areas, or if such measures would be considered at all locations where internal levels may be expected to exceed AS 2021 internal design criteria as a result of the proposed aircraft operations.

Long Term Development

- **Land Use Impacts**

The draft EIS presents ANECs for a range of operating scenarios in 2050 and 2063 as part of the discussion of potential land use impacts which may result from a future ANEF for the proposed airport.

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However, the latest Australian Standard (AS 2021) which defines how Australian Noise Exposure data should be used to inform land use planning includes guidance on how ANECs for multiple operating scenarios may be combined to define an overall area where planning controls should apply. The draft EIS does not refer to this guidance and it is therefore unclear how the various ANECs should be interpreted when assessing land use impacts.

Further, while the draft EIS provides population counts for the various ANEC bands, no assessment is provided of the extent to which land use controls may change as a result of a future ANEF prepared as part of the detailed airspace design for the project. Specifically, the draft EIS does not quantify the potential extent of changes to land use controls relative to the measures which have been in place since the original EIS was undertaken in 1985.

Furthermore, the discussion of land use planning impacts in the draft EIS notes that the National Airports Safeguarding Framework would *'be instrumental in managing potential future operational noise impacts for future land use planning and development around the airport'*. The Framework could potentially translate to the creation of land use planning controls which extend over significantly greater areas than either the current land use planning controls (based on the 1985 EIS) or the 2063 ANEC contours provided in the draft EIS. This has however not been discussed or assessed in the draft EIS.

- **Cumulative Impacts**

The draft EIS notes that the parallel runway scenario (2063) would introduce a number of issues which would need to be addressed in the final airspace design. In particular, the chapter concerning airspace architecture notes the following issues that would need to be addressed:

- ❖ Changes to Sydney Airport flight paths.
- ❖ Changes to flight paths serving Bankstown Airport.
- ❖ Resolution of a potential constraint associated with the restricted airspace over Defence Establishment Orchard Hills.

The EIS guidelines establish a requirement to *'identify and address cumulative impacts, where potential project impacts are in addition to existing impacts of other activities'*.

The above issues concerning the airspace architecture are considered to represent potential cumulative impacts which have not been quantified in the draft EIS. Further information concerning this issue is therefore considered necessary to address the requirements of the EIS guidelines.

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Aircraft Noise Impacts on Fairfield LGA

It is important to note that Stage 1 of the airport's operation goes between the period of commencement in roughly 2025 to 2063 when the second runway is proposed. Aircraft movements and associated noise increases over that period.

In assessing these noise impacts various measures have been included in the EIS including ANEC and noise numbers i.e. N70, N60 etc. While the independent consultants undertook a broad assessment of the noise impacts, Council staff have analysed the ANEC data and the N70 and N60 data for 3 periods being 2030, 2050 and the long term airport proposal of 2063.

It should be noted that a further EIS will be undertaken prior to the development of the second runway, however, it is clear from the nature of the airport site that this runway will run parallel to the proposed Stage 1 runway and will have greater impacts on the Fairfield Local Government area and therefore needs to be considered at this stage.

In this analysis, Council staff have examined Prefer 05 and 23 but excluded head-to-head operations given that this is limited to 20 aircraft movements in any 1 hour.

Council staff have interpreted the diagrams from the EIS and overlaid them on aerial photos to demonstrate the impacts on the Fairfield Local Government area. As Council did not have access to the EIS data, these diagrams have been interpreted and therefore are a general guide of impact.

The ANEC contour bands are graduated as follows from the outside band to the inner band:

ANEC 20-25
ANEC 25-30
ANEC 30-35
ANEC 35+

The following comments are provided:

ANEC 2030	No contour goes within the City of Fairfield.
ANEC 2050	Contours for preference 23 extend into the north-western corner of the City in close proximity to Greenway Place.
ANEC 2063	Both Prefer 05 and Prefer 23 extend extensively into Horsley Park with ANEC between 20-25 and 25-30.

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N70 Daily	<p>N70 presents the number of aircraft noise events per day exceeding 70 dBA.</p> <p>A noise level of 70 dBA outside a building would generally result in the internal noise level (if the windows were partially open) of approximately 60 dBA.</p> <p>A noise level of 70 dBA equates to a passenger car travelling on a suburban road. A noise level of 60 dBA equates to an average conversation.</p> <p>The contour lines measure the areas where the flights exceed 70 dBA.</p> <p>The N70 and N60 contour bands are graduated as follows from the outside band to the inner band:</p> <ul style="list-style-type: none">N70 or N60 5-10N70 or N60 10-20N70 or N60 20-50N70 or N60 50-100N70 or N60 100-200N70 or N60 200+
N70 Daily 2030	<p>Prefer 23 direction appears to impact on the industrial estate adjoining the north-western section of Council's Local Government area.</p>
N70 2050	<p>Prefer 23 direction impacts on Council's Local Government area in the north-western quarter.</p>
Long Term 2063	<p>Both Prefer 05 direction and Prefer 23 direction have significant impacts on Council's Local Government area with a good third of the rural area impacted with contours indicating from 5 occurrences in excess of 70 dBA to approximately 200.</p>
N60 Night	<p>A noise level of 60 dBA outside a building generally results in an internal noise (if the windows are partially opened) of approximately 50dBA. The internal noise of 50 dBA is commonly used as a benchmark for noise in a bedroom to protect against sleep disturbance.</p>

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| 2030 | Both the Prefer 05 and Prefer 23 shows impacts on the north-western corner of Council's Local Government area. The worst of these is Prefer 23 which indicates properties including Greenway Place could have noise affectation of more than 20-50 flights which exceed the N60 rating. |
| 2050 | Both Prefer 05 and Prefer 23 impact on the rural areas with 23 as the worst outcome with 50-100 flights exceeding N60. |
| N60 2063 | More than two thirds of the rural area affected by large numbers of incidents, where the N60 is affected by up to 100 exceedences of the N60 level. |

The Council prepared interpretation maps are shown at Attachment 'D'.

Comments

While daytime operations in the short term do not appear to significantly affect Fairfield, the night time activities will significantly impact the residents of Horsley Park and the upper sections of Cecil Park particularly from 2050.

The EIS under 'health impacts' clearly indicates that in relation to awakenings, the affected residents would largely be in the areas to the north-east of the airport, including Horsley Park and parts of Blacktown.

Mitigation Measures

Due to the fact that the noise modelling is based on an indicative proof-of-concept, air traffic management design the mitigation measures in the aircraft noise assessment are generic in nature.

In addition to the generic operational measures for the mitigation of noise, the draft EIS also refers to mitigation related to dwelling acquisition or dwelling insulation upgrades. There is however no details provided in terms of the circumstances in which these measures would be implemented, other than a general reference to the guidance of AS 2021. It is unclear if this is intended to infer that such measures would only be considered within certain Australian Noise Exposure areas, or if such measures would be considered at all locations where internal levels may be expected to exceed AS 2021 internal design criteria as a result of the proposed aircraft operations.

Conclusion on Aircraft Noise Impacts

In light of the residual uncertainties in the assessment, the IPR consultant advised that further information and assessments are necessary before stakeholders can reach an informed view on the potential scale and significance of aircraft overflight noise impacts associated with the proposed airport site.

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Conducting these further assessments as part of the environmental impact assessment process represents an opportunity to:

- Provide clarity to affected communities and stakeholders about the nature of the noise impacts.
- Provide clarity to regulators about the form of noise controls which will be needed in the project approval to ensure that noise is appropriately managed.
- Reduce the potential for unforeseen impacts and the associated risk of reactionary noise management procedures which could subsequently jeopardise the operational flexibility of the proposed airport.

Clearly, many residents, schools and churches will be affected by the Stage 1 proposal, particularly at night.

There is no clarity around how mitigation measures would apply, who pays or when they would be implemented.

This is of great concern given that Stage 1 will develop overtime to the equivalent aircraft flight numbers of Sydney Airport 2012 by 2050.

The nature of the site means that the 2 runways as shown in the long term proposal in the EIS will significantly impact on the Fairfield LGA not only by noise but also potential restrictions in the height of development.

This Stage 1 proposal was based on no impacts on the operation of KSA, operational or aviation safety and not on minimising noise impacts. Alternatives should have been assessed.

This is considered to be a flawed process given that environmental considerations should be paramount.

HEALTH

The Health chapters of the EIS are those associated with changes in air quality, water quality and noise.

The EIS contains a Health Risk Assessment (HRA) rather than a Health Impact Assessment (HIA).

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The Independent Peer Review states:

“Impact assessment, an important decision-support tool, providing information to decision makers on the impacts of proposed action and their management, needs to cover health impacts adequately to be fit-for-purpose. Historically, health impacts within environmental impact assessment (EIA) have been addressed narrowly, assessing only changes to traditional environmental determinants such as air quality, noise or water quality. Health Risk Assessment (HRA) is a quantitative methodology that takes changes to these environmental determinants and estimates their risk to health (i.e. the chances or risk of a disease or fatality occurring). This narrow approach does not address the full range of determinants of health and makes no use of the large evidence based on the association between health determinants, particularly social, and health outcomes. The narrow approach has over the years been found to be of limited use to policy and decision-makers and a fuller, more comprehensive qualitative and quantitative assessment of health impacts is often called for. This has occurred internationally as well as in Australia, with guidelines and practical guides published on how to undertake a comprehensive assessment of health impacts”.

The International Association for Impact Assessments definition of HIA is as follows:

“A combination of procedures, methods and tools that systematically judges the potential, and sometimes unintended, effects of a policy, plan, programme or project on the health of a population and the distribution of those effects within the population. HIA identifies appropriate actions to manage those effects”.

The Peer Review further states:

“The aim of HIA is to inform and add value to the decision-making process by providing a systematic analysis of the potential impacts as well as recommending options, where appropriate, for enhancing the positive effects, mitigating the negative ones and reducing health inequities/inequalities. It uses a psycho-social definition of health and considers the full range of environmental and social determinants of health. To do this HIA uses a range of structured and evaluated sources of qualitative and quantitative evidence that includes public and other stakeholders’ perceptions and experiences as well as public health, epidemiological, toxicological and medical knowledge. It is the preferred methodology to ensure development proposals are undertaken in a way that safeguards the health and wellbeing of affected communities, promotes health opportunities, reduces health inequalities and promotes health equity. HIA is therefore particularly concerned with the distribution of effects within a population, as different groups are likely to be affected in different ways, and therefore looks at how health and social inequities/inequalities might be reduced or widened by a proposed plan or project”.

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The IPR findings for Stage 1 Compliance with EIS Guidelines include the following concerns:

- Considering the most significant health impacts/effects/risks considered in the draft EIS are those related to changes in air quality, noise and water quality, the level of analysis and detail presented in the Health Chapters is reflective of the potential significance of these descriptors. However, the potential inequality/inequity impacts have not been sufficiently assessed or discussed. This is a significant gap.
- Some of the information is presented in a way that makes it difficult for interested stakeholders to fully understand the scope and scale of the potential health impacts. The information provided is not always clear, succinct and supported by maps or other accessible materials. Technical jargon is generally avoided without losing technical precision or the validity of the statements made. Cross-referencing is used however summaries of the findings of other chapters often do not fully explain key issues. Not all relevant sensitive population sub-groups or receptors have been considered in the areas assessed.
- The rationale and justification for why a HRA has been undertaken rather than a HIA are not discussed. There is national and state level guidance on HIA that should have been consulted in the development of the scope and methodology of the health assessment of the draft EIS. Key guidance documents include Health Impact Assessment Guidelines (enHealth, 2001), and Health Impact Assessment: A practical guide (UNSW and NSW Health, 2007). Ideally the health assessment would have used a HIA framework incorporating a HRA approach.
- Ecologically sustainable development in relation to health is not considered, EPBC guidance states that ecologically sustainable development should ensure that the *health*, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations.
- The Health Chapters of the draft EIS should assess the health impacts/effects of changes in the full range of environmental and social determinants of health and the potential inequalities/equity issues due to the proposed development. The level of analysis and detail should be reflective of their likely significance. Examples are changes to road traffic movements and their potential health consequences (community severance, risk of traffic accident and injury), changes in qualities and characteristics of the surrounding areas (including land values and other economic impacts) and changes in recreational use, amenity of natural areas and access to greenspace and nature and their associated health and wellbeing impacts through, for example, changes to levels of physical activity; effects on services and amenities.
- Findings should be presented in a way that helps to communicate the scale of the population affected, by determinant of health, and also what the synergistic (combined) impacts are likely to be to various communities from exposure to the combined hazards.

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- Not all unknown variables, assumptions, and limitations are included in the assessment. A specific comment relates to certain health impacts (eg air quality-related health impacts on children, other chronic effects such as incidence of chronic bronchitis in adults) known to occur from exposure to air pollution but for which the level (extent/magnitude) of the health impact associated with a certain level of pollution exposure is uncertain or unknown. These additional health impacts, for which quantification is uncertain or unknown, are not discussed. The Health Chapters should consider and discuss health impacts where quantification is not currently recommended by national guidance (eg Australian Government *Guidelines for Health Risk Assessment*) such as air quality impacts on children, other chronic effects, and other additional morbidity effects of short-term exposure but for which there is a widely acceptable evidence base supporting their likely occurrence.

The IPR consultant's comments on the Assessment of Noise are as follows:

- The assessment of noise-related health impacts follows a health risk assessment approach, focussing on quantification of health endpoints from exposure to a range of noise. The quantitative methodology used is adequate. The range of noise metrics used is adequate. The range of health endpoints considered is also adequate and follows Australian and international evidence and guidance, namely the enHealth Guidance *Health Effects of Environmental Noise other than Hearing Loss* (enHealth, 2004). Risks are estimated for 2030, 2050 and 2063 period for three different operation phase scenarios.
- A qualitative analysis and discussion of impacts/risks/effects on vulnerable/sensitive groups and on health inequality/equity issues has not been undertaken.
- There is no discussion of the implication of the distribution of effects for inequality and equity.
- Community feedback and any potential perceptions or concerns of local residents are not discussed. Community feedback on health concerns should be described and how this feedback was considered and addressed in the assessment should be discussed. Where community comments have not been incorporated or addressed, an explanation justifying this should be presented. If there were no specific comments or concerns about health impacts/effects or some determinants of health then this should also be stated explicitly. There should also be a discussion of how communities were consulted.
- Perception effects are different from biological or epidemiological risks, can cause stress and anxiety and should be considered separately from mortality and morbidity effects.

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- Mitigation measures are only discussed in passing and readers are cross-referred to the noise chapter. An outline of proposed measures (i.e. a noise management framework or plan) should be presented in the Health Chapters and an explanation provided for how and to what extent these measures will mitigate the identified health impacts.

“Long Term Development Findings – as stated in the IPR

The long-term development section (Chapter 39, Section 8) provides a summary of the long term health impacts that are discussed in more detail in the appendix. While the report does, at times, make reference back to the appendix, there is a lot of pertinent detail that is missing that should be referenced to the appendix. This section also lacks core components for clarity – such as discussing the methods used or mitigation measures – that would make this section acceptable as a standalone piece of work without having first read the appendix. This section also misses any discussion of long term cumulative impacts. Cumulative impacts are considered elsewhere in the report however this report does not make clear if the cumulative impact assessments were used in this assessment. It would be particularly relevant to include discussion of cumulative impacts here as there is no mention of health impacts in the cumulative impacts chapter. This section should also provide better characterisation of health impacts or otherwise provide a reference to where it is located in the appendix”.

Opportunities in relation to assessment of health effects

Council staff endorse the following recommendations suggested by the IPR consultant under the following categories:

a. Reporting of the identified health impacts

Currently the results of the health risk assessment are presented in a way that it is difficult for readers of the report to identify the scale of the health impacts identified.

The review team recommend:

1. Presenting total number of people potentially affected by health outcomes (i.e. not just presented for individual communities).
2. Presenting information for all affected geographic areas not just worst affected area.
3. Presenting information in formats from which people can easily extract key information (i.e. clearly identifying significant impacts within tables, providing all necessary information within tables, clearly labelling tables).
4. Using consistent measurements of risk (eg number of cases per year) and detailing risk according to the community impacted, in terms of geographic areas and where appropriate by vulnerable/sensitive sub-groups.

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5. Where numbers are presented, identify levels of certainty and assumptions used. For example, indicate possible range of estimates by including results from sensitivity analysis; where predictions of health outcomes are made for future scenarios (2030, 2050) state clearly if population growth predictions have not been taken into account and if the numbers presented are likely to be an underestimation.
6. Describing (qualitatively) the synergistic (combined) health impacts on communities close to the airport.
7. Disaggregating the assessment to identify the potential differential health impacts on:
 - a. population groups (eg younger people, older people, low socio-economic people); and
 - b. 'sensitive social infrastructure', such as education and health care facilities.
- b. Scope of impacts included in the Health chapter
Currently the 'non health' sections of the draft EIS contain information about a number of potentially significant impacts on the determinants of health (e.g. housing affordability, amenity, and employment). These impacts have not been identified as health impacts and the range and magnitude of potential health outcomes resulting from these impacts have not been assessed. This means that the potential health impacts resulting from these changes are currently unknown. This is likely the result of a Health Risk Assessment rather than a Health Impact Assessment being carried out. It is unclear why a health risk assessment rather than a health impact assessment, which would have incorporated the full range of health impacts, was not carried out. The review team recommends that the health implications of changes in determinants of health identified in 'non health' chapters be reported to the health chapter. This would enable interested stakeholders to identify the range and scale of potential health impacts.

The review team recommend:

8. The full range of potential significant impacts on health should be assessed and appropriate mitigation measures developed. Consideration should be given to including:
 - 8.1 Assessment of the public and community health impacts of the loss of agricultural land, green, open and recreation space.
 - 8.2 Potential impacts on health caused by perceived risk, stress and anxiety about the airport development.
 - 8.3 Loss of greenspace and loss of amenity of greenspace and the impact of this on health and wellbeing of current and future generations.

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- 8.4 Detailed information on the likely mix of part-time and full-time, low vs high skill and low vs high paid jobs generated by the airport and the likelihood of jobs being taken up by local communities and unemployed people to assess the quality and uptake of the employment likely to be generated and corresponding health benefits.
- 8.5 The permanent loss of agricultural land should be considered from a food security, sustainability and public health perspective.
- 8.6 The potential impacts on housing affordability on health, in particular the impacts on health inequalities resulting from increased housing prices and potential exposure of lower SES populations to residential areas with higher noise levels.
- 8.7 Impacts on communities (eg social capital, community severance, social cohesion, community identity) due to noise and increases in traffic.
- 8.8 Perception effects from noise and air quality – different from biological or epidemiological risks and can cause stress and anxiety – should be considered separately from mortality and morbidity effects.
- 8.9 The potential for an increase in road traffic incidents, accidents and congestion including impacts on physical health and communities.
- 8.10 The residual impact on communities resulting from compulsory relocations.

Mitigated measures

“The review team recommend:

9. An outline of proposed measures (i.e. a noise/air quality/water management framework or plan) should be presented in the health chapter and an explanation provided for how and to what extent these measures will mitigate the identified health impacts.
10. In line with our previous recommendation to broaden the scope of the health chapter to include all relevant health impacts, the review team also recommend that corresponding health specific mitigation measures be provided.
11. This should include targeted mitigation measures for addressing impacts on vulnerable groups and sensitive social infrastructure.
12. Mitigation measures that take into account the synergistic (combined) nature of the impacts on communities close to the airport should be developed. This would include consideration of impacts due to: noise, air quality, traffic, loss of amenity, changes in populations, perceived risk, and community identity.”

Health Impacts on Fairfield LGA

1. Children’s Learning and Cognitive Development
The EIS examines Sensitive Receptors and includes Residential locations and Educational receptor.

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This analysis identifies Horsley Park Public School but incorrectly states there are 70 receptors, which is assumed all students number. In fact there are 102 students with another 205 at Marian Catholic Primary School on the opposite side of Horsley Road from the public school. No mention is made of other Sensitive receptors like places of public worship.

The EIS clearly indicates the significant impacts on health from Aircraft noise particularly on children and their learning and cognitive development.

Aircraft noise for Learning and Cognitive Development exceeded the 35dBA threshold for daytime noise exposure inside for certain operation stages and flight scenarios at the Horsley Park Public School.

2. Awakenings

The EIS Noise report includes the following table:

Table 34: Effects of Different Levels of Night Noise on Population Health (WHO, 2009)

Average night noise level over a year $L_{\text{night outside}}$	Health effects observed in the population
Up to 30 dB	Although individual sensitivities and circumstances may differ, up to this level no substantial biological effects are observed. $L_{\text{night outside}}$ of 30 dB is equivalent to the no observed effects level (9NOEL) for night noise
30 to 40 dB	A number of effects on sleep are observed in this range: body movements, awakening, self-reported sleep disturbance, arousals. The intensity of the effects depends on the nature of the source and the number of events. Vulnerable groups (for example children, the chronically ill and the elderly) are more susceptible. However, even in the worst case the effects are modest. $L_{\text{night outside}}$ of 40 dB is equivalent to the lowest observed adverse effects level (LOAEL) for night noise.
40 to 55 dB	Adverse health effects are observed among the exposed population. Many people have to adapt their lives to cope with noise at night. Vulnerable groups are more severely affected.
Above 55 dB	The situation is considered increasingly dangerous for public health. Adverse health effects occur frequently, a sizeable portion of the population is highly annoyed and sleep-disturbed. There is evidence that the risk of cardiovascular disease increases.

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The World Health Organisation (2009) adopted 40 dB as the night noise guideline necessary to protect public health including the most vulnerable groups – children, the chronically ill and the elderly. An interim target of 55 dB was recommended in situations where the night noise guideline was not feasible in the short term but WHO emphasized that this value is not a health-based limit. Vulnerable groups cannot be protected at this level (WHO 2009).

From Fairfield's viewpoint the impacts are greater for Prefer 23 but both Prefer 5 and 23 impact on Horsley Park from 2030. While the EIS indicates Head to Head reduce awakenings, this method of operations is only used in limited circumstances.

The EIS states that residents in the areas affected by 'awakenings' are to the north-east of the airport, including Horsley Park and parts of Blacktown.

The above relates to Stage 1 with adverse impacts increasing progressively from 2030.

The lack of a night time curfew will impact on the residents of Horsley Park.

The health outcomes from the long term development only exacerbate the health issues to not only the residents of Horsley Park but also parts of Cecil Park and possibly further.

The mitigation measures are generic and uncertain.

EUROPEAN HERITAGE

The EIS limited the heritage study to the Airport site and surrounds and did not examine the impact on significant items of heritage that will be impacted upon by the proposal, specifically Horsley House, which is a State listed heritage item and is also listed on the National Estate Register.

The N6O for 2050 indicate that Horsley House is just outside the contours but is significantly impacted by the long term development.

Unlike contemporary housing, noise attenuation in a significant heritage property is anticipated to be difficult and expensive.

Even in the short term, there are likely to be impacts.

There are a limited number of significant heritage items in the region and it is important that its ongoing residential use is protected.

Measures should be put in place to provide mitigation measures at Stage 1 to allow the ongoing preservation and residential use of the property.

Note: A Council staff member is a part owner of Horsley House.

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TRAFFIC AND TRANSPORT

Vehicular traffic resulting from the construction of the Airport on the local road network is predicted to be relatively low. The EIS predicts the road performance and operations 'with' and 'without' construction traffic to remain relatively stable.

It is difficult to confirm validity of impacts with confidence. Further information that could be provided to provide this clarification would be:

- Vehicle travel time comparison (as predicted by strategic modelling);
- Intersection performance (as predicted by intersection modelling);
- Intersection layout requirements (as predicted by intersection modelling);
- Implementation of Construction Traffic Management Plan (CTMP) to mitigate construction impacts on the road network.

It is recommended this additional information be provided through a revised EIS document.

Stage 1

Key issues are:

- Freight traffic generation within the Airport precinct (outside of air cargo);
- Private vehicle traffic generation from land uses within the Airport precinct (outside of air passengers);
- Vehicle travel time comparison (as predicted by strategic modelling);
- Intersection performance (as predicted by intersection modelling);
- Intersection layout requirements (as predicted by intersection modelling).

Limitations with the Traffic and Transport sections of the assessment include:

- Potential gaps in and/or potential lack of supportive information for:
 - Explicit future land use assumptions in the region of the Airport
 - Potential land use within the Airport precinct that has not been accounted for
 - Airport related freight generation (above and beyond air cargo tonnage)
- Methodologies that measure traffic impacts that may not be considered industry best practice, including:
 - Intersection modelling not undertaken
- Sections of analysis and commentary that may not be considered industry best practice, including:
 - Quantifiable values of road capacity (volume to capacity)
 - Vehicle travel time comparisons on major road links, 'with' and 'without' the Airport not provided
 - Intersection performance values, 'with' and 'without' the Airport, are not provided (intersection modelling not undertaken)
 - Intersection layouts (and subsequent potential land acquisition impacts) required to accommodate future Airport traffic are not provided or not described.

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- Most significantly the project does not envisage the construction of rail connection to the airport. It is considered the development of rail as part of Stage 1 of the project is critical.

Long Term

The following issues identified include:

- Key issues with the Airport Access Drive identified various fail predictions.
- The Northern Road, M7, Elizabeth Drive, Mamre Road, Luddenham Drive reach capacity with the Airport operations before and leading up to 2063. Limited assessment on strategic measures for these roads.
- Insufficient information has been provided to determine how air passenger demand would access and egress the Airport beyond 2050 (when the Airport Access Road reaches capacity).

Further detailed transport network planning including road and rail network planning is required.

The draft EIS also lacks in detail regarding public transport and opportunities which should be pursued as part of the proposed WSA development.

A key opportunity that should be considered is the development of a dedicated bus transit way be incorporated into the proposed M12 Motorway or Elizabeth Drive with linkages to the Liverpool – Parramatta Bus Transit way at Bonnyrigg. A dedicated bus transit way would provide a much needed east – west public transport link directly to the Western Sydney Airport. A dedicated bus transit way would provide direct access to the airport and its employment opportunities for residents of Liverpool LGA, Fairfield LGA, Holroyd LGA and Parramatta LGA.

What is absent from the EIS is a comprehensive risk assessment of the transportation of aviation fuels to and from the proposed WSA. It is estimated at the commencement of operations there will be approximately 43 B-Double Truck movements per day. If no alternative transportation methods are implemented these B-Double truck movements may escalate to over 110 per day. There is no comprehensive assessment of proposed forms of transportation, transportation routes, transportation risk management plans, reflection of communities that may be affected and there isn't an assessment of the potential impacts to human health and safety. Given the forecasted flight movements from commencement through to beyond 2050, this is a significant concern that requires greater assessment and clarity as to the potential impacts on communities and which communities may be impacted.

SOCIAL AND ECONOMIC

A summary of the social and economic issues resulting from a review of the EIS are:

- Main benefits of WSA relate to the generation of jobs in Western Sydney and associated regional economic activity, however no discussion of economic or social implications of this transfer of economic activity from other areas in Sydney or Australia.

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- Lack of a balanced discussion of the local economic and social costs and benefits, with limited or relatively minor references to local issues and the impact on local communities which will give rise to greater community angst in understanding the duration and severity of impacts.
- Mitigation of impacts focuses on using land use zoning to exclude residential uses; however there is no discussion on how to address specific impacts of the WSA and who would be accountable to address these, thereby running the risk that impacts will not be addressed.
- Addressing social and economic concerns identified through the initial stakeholder engagement program is required. Providing the most appropriate mitigation measures would minimise community angst. The EIS is lacking in its addressing of stakeholder concerns.
- Concerns regarding validity of statements, assumptions and claims within the draft EIS without any independent modelling or testing of assumptions. Economic generation and job creation have not been explicitly tested in the EIS.

Assessment gaps identified as part of the review include:

- How community health such as noise is impacted;
- How social cohesion and cultural connections impacted by physical airport;
- How urbanisation impacts upon locals in a rural setting and their values;
- How housing, facilities and services and the relocation of people are impacted
- How existing jobs and business relocations that are impacted are addressed;
- How the degree and duration of construction works will impact residents ;
- Congestion impacts on businesses reliant upon M4, M5, M7 and Hume Hwy;
- Impacts upon local businesses during construction and operational phases;
- Assessment of impact on operation of Western Sydney Employment Lands(WSEL);
- Impact upon the existing centres in the south west;
- Impact upon proposed business parks in South West ;
- Impact of 845,000sqm of additional industrial floor space in WSEL;
- Assess social infrastructure impact and demand for 4,400 to 27,000 people.

The EIS identifies certain mitigation measures however questions remain:

- How mitigation would be resourced, monitored or coordinated by an accountable authority lacking;
- A number of economic uncertainties regarding risks associated with WSA have been identified concerning costs to health services, travel times, viability to existing and proposed centres;
- A number of social uncertainties regarding risks associated with WSA have been identified concerning costs to community dislocation, airport related hazards, housing supply and affordability.
- With regards to the long term development of the airport the same approach taken as with Stage1. General mitigation measures (zoning etc), noting scale of growing WSA increases risk over long term about needed facilities, services and who would fund and be accountable for impact mitigation for assessment required and long term accountability needed.

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The following is recommended with regards to Social and Economic issues:

- Greater assessment of the potential social and economic impacts to communities, their degree of significance or duration and alternative approaches that may be required to alleviate them so that community angst and concerns about the accuracy of information can be minimised.
- A more balanced discussion of costs and benefits, including impacts to local business and potential new business parks and to existing and proposed centres in the South West region, so that potential impacts are considered and where possible quantified.
- Greater reference on the likely adverse impacts to local communities within relevant chapters and within the Executive Summary so as to strengthen the appreciation and acknowledgment of the issues.
- A summary consultation paper be prepared and made publicly available and that each issue raised by stakeholders is considered and responded to by the specialist studies, with the most appropriate mitigation measures to minimise community concerns.
- A review of the parameters or ranges of assessment of longer term impacts needs to be undertaken in light of the information gaps identified in the Stage 1 draft EIS, so that potential social and economic impacts can be understood.
- Identification of the main body responsible for managing and mitigating longer term impacts and risks over time, or how the mitigation framework will be managed, so that the coordination and resources are in place to manage specific impacts associated with Western Sydney Airport.

AIR QUALITY

A major fundamental concern highlighted in the independent review is that critical assumptions (including input and output files) that underpin the air quality assessment information was not included in the EIS. The provision of such information is a routine expectation and is a minimum requirement of the NSW Environment Protection Authority (EPA) for such studies.

In addition to the above the EIS documents relating to Air Quality contain many typographical errors and inconsistencies that undermine the credibility of the air quality assessment. These sections require a further technical and editorial review to address the issues outlined in the review to improve transparency and credibility of the air quality assessment. To enable confidence in the assessment, all information and data used in the emission estimation, model inputs and outputs should be made available to any interested party

Overall significant uncertainty remains in regard to the findings for air quality issues compromising the adequacy and level of confidence the community can have in relation to this aspect of the EIS.

Impact on Sensitive Receptors

The air quality study did not adequately address the implications for sensitive receptors in the area surrounding the proposed airport as it:

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- Failed to identify all sensitive receptors;
- Failed to identify a representative subset of sensitive receptors - whilst a small subset of sensitive receptors was identified, the subset does not appear to be representative of potential air quality impacts at all existing locations of sensitive receptors;
- Did not identify future sensitive receptors; and
- Incorrectly classified community receptors separately and as having a lesser importance than residential receptors. Community receptors included various land-uses such as schools, parks, childcare facilities, churches and shopping centres.
- Does not include an outline or clarification of measures that would be required to mitigate air quality impacts on sensitive receptors. This includes the question of whether acquisition of these properties would be required.

Assumptions made for Stage 1 and Longer Term Development

Air quality associated with Stage 1 is critically dependent on the traffic volumes generated by the airport. Consequently, the impact on air quality due to the Longer Term Development is critically dependent on the existence of the assumed rail services to the airport.

The Western Sydney Airport EIS is not seeking approval for the rail infrastructure that is necessary for its feasibility and the EIS does not contain a detailed proposal for the rail infrastructure. As a consequence, the air quality assessment of the Longer Term Development is speculative at best and does not provide a sufficiently robust basis to support approval of the Longer Term Development at this stage.

The Stage 1 Development assessment of the EIS was based on the annual throughput of the airport would be 63,302 Aircraft Transport Movements (ATM) by 2030. However the stated maximum capacity of the airport following completion of Stage 1 is three times higher at 185,000 ATM in 2050.

The local and regional air quality assessment all use this assumption in the generation of the emissions and resultant impacts. Consequently, the assessment has underestimated the potential impact of the Stage 1 Development by a considerable margin.

The impact on future development potential in the South West has not been considered. Through the Sydney Metropolitan Plan the South West region is identified as a significant future growth corridor and is considered the fastest growing sub-region in Sydney. The South West region is envisaged to play a significant role in the provision of housing and jobs in the future. An assessment on how the airport operations are to impact, or complement, future development in the south west. Further, no cumulative assessment has been undertaken on the overall potential impact on future communities in the South West.

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CONCLUSION

The findings of the Peer Review reports and Council's own assessment highlight numerous deficiencies within the draft EIS. It is recommended Council use the issues identified within this report as a basis to formulate its submission to the public exhibition of the draft EIS. Further, given the number of deficiencies evident and the significance of some of these matters, it is recommended Council raise serious concerns about the EIS due to its inadequacies and request the draft EIS be amended to address these matters and the amended draft EIS be re-exhibited to provide Council, the community and other stakeholders an opportunity to comment on the amended draft EIS.

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***** END OF ITEM 177 *****