SYD

29 November 2019

Mr Jim Betts
Secretary
Department of Planning, Industry and Environment
GPO Box 39
Sydney NSW 2001

Dear Mr Betts

Re: Application number SSI 18_9714 – Botany Rail Duplication

Thank you for the opportunity to comment on the Environmental Impact Statement (EIS) for the Botany Rail Duplication Project (the project).

The project aims to improve road and freight transport through the important trade gateways of Sydney Airport and Port Botany.

The majority of the existing Botany freight rail line has twin tracks except for the section between Mascot and Botany, where there is currently only one track. This constrains the ability for freight to enter and depart from Port Botany concurrently. The forecast significant growth in freight has the potential to create a bottleneck along the line, impacting which will inevitably undermine the efficient movement of freight across the broader Sydney freight rail network.

As such, Sydney Airport supports the duplication of the Botany freight rail line.

Sydney Airport has attended four meetings with ARTC, at which our concerns with the project as originally proposed were discussed. We also requested further information and asked to have input into relevant wording in the EIS before it was released for public comment. Our concerns were not resolved and the requested further information was not provided.

Therefore, we still have a number of concerns with the EIS, which are outlined in the **Attachment** to this letter. We believe these concerns are significant and, unless satisfactorily resolved, have the potential to adversely affect Sydney Airport's ability to operate efficiently, as well as impacting on the delivery of other related infrastructure projects.

If you would like any further information, please feel free to contact me on 9667 6423 or at joseph.chan@syd.com.au.

Yours sincerely,

Joseph Chan
Manager, Development and Planning
Sydney Airport

ATTACHMENT

Issue	Implications for Sydney Airport	Mitigation	Comment	Sydney Airport Stakeholder Comment
Consultation				
The Botany Rail Duplication EIS does not adequately address airport operational impacts in a comprehensive or cohesive manner. As a key impacted stakeholder and operative of a key national infrastructure asset, Sydney Airport has had limited visibility into dratting of the EIS, and makes the comments below accordingly.				
The Secretary's environmental assessment requirements for the project required consultation with "*relevant government agencies, infrastructure and service providers, special interest groups, affected landowners, businesses and the community*". The Environmental Impact Statement indicates that a briefing(s) has been provided to Sydney Airport Corporation and that it has been consulted with respect to Obstacle Limitation Surface intrusions as part of the Roads and Maritime Airport East consultation (refer to the Environmental Impact Statement, Section 4.2.1, Table 4.2). There is no suggestion or evidence that Sydney Airport Corporation has been consulted on the specific details of the Botany Rail Duplication project or its potential impacts on Sydney Airport.	There appears to be significant potential for key issues relevant to the operation of Sydney Airport to have not been identified, considered and addressed as part of the Environmental Impact Statement.	Further consultation with Sydney Airport Corporation would be required to address this issue.	Further consultation may require significant rework of modelling and assessment of impacts currently presented in the Environmental Impact Statement.	• Applications are determined on a case by case basis and should not be presumed • Following consultation and agreement with Sydney Airport, a formal (transient obstacle) application for the duplicated rail line must be submitted to Peter Bleasdale, Manager, Airfield Spatial & Technical Planning, Sydney Airport, for approval by the Department T +61 2 9667 9246 M +61 0408 479 192 E peter.bleasdale@syd.com.au
Traffic and transport				
The traffic and transport assessment indicates that 50 car parking spaces would be available at the General Holmes Drive compound site, with some other spaces (not quantified provided at other construction sites (refer to Technical Report 1 – Traffic and Transport Impact Assessment, Section 5.1.3). It recognises that with a typical construction workforce of 177 and a peak construction workforce of 272 (with up to 405 during rail possessions, around four times per year), there would be some reliance on existing on-street parking spaces.	The occupation of on-street parking spaces for construction workers may have flow-on implications for Sydney Airport though congestion, illegal parking, unavailability of parking for airport visitors, workers or support services, and potentially greater pressure placed on Sydney Airport parking infrastructure.	Further, more refined consideration of construction workforce and parking management should be carried out.	N/A	• Overall: Gateway modelling incorporating time and impacts to be considered in Tandem with ARTC program • Sect 2: Where Road closures are required these should be completed during non-peak periods (e.g. non-school holiday periods) with consultation with Sydney Airport and overlayed to Gateway program • Works should cease by 4am for flights at 6am and consideration for Northern winter/summer schedule especially around the Southern Cross Drive area. Overlay of Gateway program impacts to ascertain true impact during simultaneous construction • Sect 3: Provide a consistent framework to modelling traffic and transport assessment • Sect 4: refer to sect 2 comments above
To enable bridge works to be carried out, the project will involve (refer to Technical Report 1 – Traffic and Transport, Section 3.3.2 and Section 5.2.2): • **Robey Street and O'Riordan Street road closures for 54-hour weekends, 10 times over the three-year construction period** • Southern Cross Drive closure (23:00 to 05:00) subject to Traffic Management Centre requirements, six times over the three-year construction period. Closure of Robey Street would result in significant deterioration in performance (to level of service F) of the following intersections: • Qantas Drive/ Robey Street (degree of saturation 1.46) • O'Riordan Street/ Robey Street (degree of saturation 1.03) • General Holmes Drive/ Wentworth Avenue (degree of saturation 1.10)	Closure of roads during construction is likely to affect travel times to and from Sydney Airport, increase local road network congestion around the airport and require greater travel time allowances for both motorists and public transport users. No consideration is given in the Environmental Impact Statement to the timing or coordination of road closure times with peak daily/ weekly/ seasonal operational periods at Sydney Airport.	A much more refined consideration of the timing, coordination and management of road closures is required in the context of potential impacts on Sydney Airport. Particular attention will need to be given to timing relative to Sydney Airport daily/ weekly/ seasonal peak times. Further consideration and development of traffic mitigation and management measures during road closures is also required,	It is anticipated that significant input will be required from Sydney Airport to adequately accommodate consideration of potential impacts on airport-related traffic.	Key operational impacts: • Average delays to traffic during Robey Street closures would be 10 to 20 minutes • Average delays to traffic during O'Riordan Street closures would be about 10 minutes • ARTC has not consulted with SYD during the EIS assessment stage • Sydney Airport requires a formal, comprehensive consultation process to fully understand the construction staging plan, including diversion routes, other non-road mitigation measures

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• Botany Road/ Wentworth Avenue (degree of saturation 1.39) Average delays to traffic during Robey Street closures would be 10 to 20 minutes. Closure of O'Riordan Street would result in significant deterioration in performance (to level of service F) of the following intersections: • Robey Street/ Botany Road (degree of saturation 1.01) • Botany Road/ Wentworth Avenue (degree of saturation 1.46) Average delays to traffic during O'Riordan Street closures would be about 10 minutes. Intersections would continue to operate at an acceptable level of service during full and partial closure of Southern Cross Drive (a key factor being the intended closure from 23:00 to 05:00). The most affected travellers during Southern Cross Drive closures would be those travelling eastbound from the M5 Motorway, with an increase in travel time of about 9.5 minutes (a 42 per cent increase). Bus services utilising these routes would be similarly affected by proposed road closures.				
The traffic and transport assessment applies a mix of modelling approaches, with unclear and in some cases unjustified assumptions (refer to Technical Report 1 – Traffic and Transport, Section 3.3.2). The modelling of the closure of Robey Street and O'Riordan Street has been undertaken using SIDRA, whereas the modelling of the closure of Southern Cross Drive has used a micro-simulation (AIMSUN) model. It is not clear how or why SIDRA has been used, and specifically: - How has SIDRA been applied? Modelling of isolated intersections or as a network? - How has queuing back through intersections been considered in the modelling? - An AIMSUN model – that included all the relevant intersections affected by the closures - was used for the Sydney Gateway project. Why has it not been used to assess closure of Robey Street and O'Riordan Street? Very little detail is provided on the assumptions in the modelling on traffic volumes, and particularly assumptions regarding traffic to and from Sydney Airport.	Differences in modelling approach, lack of justification for model selection and a lack of clarity over a number of key assumptions means that the outputs from traffic modelling and potential implications for Sydney Airport cannot be conclusively determined. Subject to clarification, the potential impacts presented in the Environmental Impact Statement may or may not reasonably reflect anticipated traffic impacts during road closures.	Further detail and justification is required to support the modelling approach applied to road closure assessment, including justification for not using a more rigorous micro-simulation to test the impact of road closures. Reference to the Roads and Maritime Services Traffic Modelling Guidelines (2013) should be made to demonstrate consistency with acceptable traffic modelling and assessment practice in New South Wales.	It is anticipated that significant input will be required from Sydney Airport to adequately accommodate consideration of potential impacts on airport-related traffic.	• Further detail and justification is required to support the modelling inputs, methodology and approach applied to road closure assessment
The traffic and transport assessment uses relatively low construction traffic volumes relative to existing road network traffic volumes to justify only assessing construction traffic impacts qualitatively (refer to Technical Report 1 – Traffic and Transport, Section 5.2.1). While observation of relative traffic volumes is likely to be reasonable (ie less than three per cent in the AM peak, and less than one per cent in the PM peak), the conclusion that a qualitative assessment approach is appropriate does not recognise that the road network is currently highly	Potential construction phase traffic impacts may not have been adequately and sufficiently assessment, and implications for Sydney Airport may have been underestimated.	Further justification for the construction traffic impact assessment approach is required, and particularly the decision not to carry out a quantified assessment of potential impacts. Subject to this further justification, it is expected that a quantified assessment would	N/A	• See comment above

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congested at times, and any additional traffic is likely to be significant (regardless of relative volume contributions). Key issues include: - This is a heavily congested road network - any additional traffic is undesirable. The increase in vehicles at each intersection might be minimal, but the combined effect across the network might be more significant - The assessment notes there may be occasional localised impacts from the construction site access gates on the efficiency of intersections and adjacent roads as a consequence of slow-moving heavy vehicles. Many of these gates are in close proximity to T2/T3 precinct - There is no account taken of the coincident construction of the Sydney Gateway Motorway project.		be more robust and appropriate in this case.		
The traffic and transport assessment makes reference to the potential need for temporary lane closures, in addition to closure of Robey Street, O'Riordan Street and Southern Cross Drive. Insufficient information regarding the timing/ nature/ location of the closures and assessment of the impacts of the closures is presented to enable consideration of the implications for Sydney Airport.	Temporary lane closures may lead to increased travel times and congestion affecting access to/ from Sydney Airport	Further details of potential lane closures are required, and where relevant, assessment of impacts of the closures on the road network and key origins/ destinations in the region (including Sydney Airport).	N/A	
The traffic and transport assessment notes that construction of Sydney Gateway Motorway is expected to coincide with construction of the Botany Rail Duplication, and that "construction of the two projects is likely to increase the potential impact and duration of traffic delays and other impacts experienced by drivers and pedestrians / cyclists". However, there is no detailed consideration of the simultaneous construction in the traffic assessment. It appears that the cumulative construction traffic impacts of the two projects has not been assessed in the Environmental Impact Statement for either project.	The Environmental Impact Statements for the Sydney Gateway Motorway and the Botany Rail Duplication individually present adverse traffic impacts from construction of those projects on the road network around Sydney Airport. Concurrent construction of the two projects is likely to increase predicted traffic impacts beyond those presented for the individual projects, with greater adverse implications for Sydney Airport.	Assessment of the cumulative traffic impacts of concurrent construction of the Sydney Gateway Motorway and Botany Rail Line Duplication projects is required.	Cumulative traffic impacts during construction may be significantly greater than impacts associated with any individual project. Specific mitigation and management measures will need to be developed, which are likely to differ from those applied to either project (particularly in relation to scheduling and coordination of construction works to minimise potential traffic impacts).	• It is imperative that construction staging plans for the Gateway Road and Rail projects are aligned to offset major impacts/minimise the collective impacts • Detailed cumulative construction traffic impact assessment that considers Gateway is not included in the EIS and is required so Sydney Airport can provide comment
Noise and vibration				
The construction noise modelling for the project indicates that construction noise management levels for hotels at Sydney Airport (Mantra Hotel and Ibis Budget Hotel, as well as the proposed future hotel) and the existing Qantas Flight Training Centre would be exceeded by more than 20 dB(A) during several periods of construction works (generally during enabling works and peak track works) (refer to Technical Report 2 – Noise and Vibration Technical Report, Section 5.4). It notes that the Qantas Flight Training Centre is proposed to be relocated, and that airport hotels are likely to include noise attenuation to manage impacts from aircraft noise. The level of noise attenuation currently included in airport hotels has not been confirmed, and the assessment recommends that this be considered further during detailed design. Minor (<10 dB(A)) and moderate (11-20 dB(A)) exceedances of construction noise management levels are predicted at Sydney Airport structures adjacent to Qantas Drive and Joyce Drive during some construction works (generally during enabling works and peak track works) (refer to Technical Report 2 – Noise and Vibration Technical Report, Section 5.5). No exceedances at airport terminal buildings are predicted.	Construction noise management levels are likely to be exceeded, at times by a significant degree, at sensitive receiver locations within Sydney Airport at times during the three-year construction period. The Environmental Impact Statement for the project gives little consideration to how construction noise impacts at these receivers would be mitigated and managed.	Further consideration of noise mitigation and management, including at-source options, intervening noise barriers, and/ or at -receiver measures is required.	The noise assessment appears to rely on assumptions about the timing of relocation of the Qantas Flight Training Centre and existing noise attenuation at Sydney Airport hotels which do not seem to have been confirmed or sensitivity tested.	• Flight Training Centre (FTC) is considered critical aviation infrastructure as it includes sensitive flight simulators which are used by pilots and flight crews for recurrent testing and licencing of airline pilots and flight crew • Assumptions by ARTC on noise impact and mitigation measures on Sydney Airport IBIS and Mantra hotels are unsubstantiated. ARTC to engage with Sydney Airport on noise impact and sleep disturbance

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For construction works outside of standard construction hours, exceedances of applicable noise management levels at receiver locations within Sydney Airport are predicted (refer to Technical Report 2 – Noise and Vibration Technical Report, Appendix C). These receivers are not identified in detail in the assessment, but it is assumed that they are the two existing hotels within Sydney Airport (Mantra Hotel and Ibis Budget Hotel). No exceedances of sleep disturbance criteria are predicted for relevant receivers within Sydney Airport.				
Vibration-intensive construction activities are likely to be carried out within 'safe working distances' for structural cosmetic damage of heritage structures comprising the Sydney (Kingsford Smith) Airport Group heritage item (refer to Technical Report 2 – Noise and Vibration Technical Report, Section 5.7.3). Other airport structures along Qantas Drive and Joyce Drive are predicted to experience construction vibration above human comfort levels during some construction activities.	Construction vibration has the potential to generate discomfort for employees/ visitors and to cause cosmetic damage to structures immediately along Qantas Drive/ Joyce Drive, within Sydney Airport.	Further consideration of communication of potential impacts and management of vibration effects would be beneficial, prior to the commencement of relevant construction works. Where there is potential for cosmetic damage to structures, dilapidation surveys prior to and following construction would be useful, if not necessary, to attribute responsibility for any damage.	N/A	
The operational noise modelling for the project indicates that operational noise trigger levels would be exceeded at the Mantra hotel (conservatively assessed as a residential receiver) and the existing Qantas Flight Training Centre (assessed as an educational facility) (refer to Technical Report 2 – Noise and Vibration Technical Report, Section 6.2-6.3). The assessment notes the proposed relocation of the Qantas Flight Training Centre and the expectation that airport hotels would already include noise attenuation to manage aircraft noise impacts. With respect to potential future development, the assessment notes that a proposed future airport hotel would be designed with noise attenuation to take into account existing (approved) noise (including from the project) (refer to Technical Report 2 – Noise and Vibration Technical Report, Section 6.7). It also notes that there are no other noise sensitive developments proposed under the Sydney Airport Masterplan.	Operational noise trigger levels (above which further consideration of mitigation and management measures is required) are likely to be exceeded, at times by a significant degree, at sensitive receiver locations within Sydney Airport during operation of the project. The Environmental Impact Statement for the project gives little consideration to how operational noise impacts at these receivers would be mitigated and managed.	Further consideration of noise mitigation and management, including at-source options, intervening noise barriers, and/ or at-receiver measures is required.	The noise assessment appears to rely on assumptions about the timing of relocation of the Qantas Flight Training Centre and existing noise attenuation at Sydney Airport hotels which do not seem to have been confirmed or sensitivity tested.	• ARTC are assuming FTC will relocate during the ARTC rail duplication project timeline. ARTC to directly engage with Qantas to ensure they maintain continuous operations for Flight Training Centre (FTC
In addition to predicted operational noise exceedances (refer above), the noise source levels presented in Table 22, Section 4.4.3 appear to be incorrect. Based on a preliminary assessment, these incorrect source levels may have resulted in underestimation of operational noise impacts by up to 10 dB(A).	Incorrect noise source levels may have resulted in underestimation of operational noise impacts by up to 10 dB(A), further exacerbating the issues outlined above.	Review and confirmation of noise source levels is required, with an update to noise modelling, assessment and mitigation identification as necessary.	N/A	
Predicted operational noise impacts appear to be lower than expected based on documented increases in locomotive numbers and speeds (refer to Technical Report 2 – Noise and Vibration Technical Report, Section 6.1). Noise impacts at local receivers are expected to increase by more than 4 dB(A), but predicted impacts presented in the assessment are around 2 dB(A). This discrepancy raises the potential for the noise modelling, model inputs or presentation of results to contain one or more errors leading to an under-presentation of potential impacts.	There appears to be a potential error(s) in the noise model, model inputs or presentation of results such that predicted impacts at Sydney Airport receivers may be understated.	Review and confirmation of the robustness and veracity of noise modelling, model assumptions and presentation of results is required, with an update to noise modelling, assessment and mitigation identification as necessary.	N/A	
The noise impact assessment (refer to Technical Report 2 – Noise and Vibration Technical Report, Section 4.4.3) identifies that locomotive wheel squeal, particularly around Robey Street, could further exacerbate noise impacts in the area. The noise impact assessment notes that the noise model does not accommodate wheel squeal well, leading to an underestimation of noise impacts from this source.	Locomotive wheel squeal may further exacerbate predicted noise impacts on Sydney Airport, beyond predictions currently presented in the Environmental Impact Statement	Review and confirmation of locomotive wheel squeal contributions to noise impacts is required, with an update to noise modelling, assessment and mitigation identification as necessary.	N/A	
The noise impact assessment does not expressly consider ground-borne noise impacts on Sydney Airport hotels and the Qantas Flight Training Centre. However, the ground-borne noise modelling that is presented	Ground-borne noise impacts may be, subject to adequate assessment, identified as significant	Further consideration of ground-borne noise impacts at Sydney Airport receivers is required, based	Ground-borne noise from rail infrastructure is usually addressed at the source through measures	• ARTC to assess ground-borne noise impacts on Sydney Airport Ibis and Mantra

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(refer to Technical Report 2 – Noise and Vibration Technical Report, Section 6.5) suggests exceedance of ground-borne noise criteria within 20 metres of construction activities, which raises the potential for impacts on Sydney Airport receivers. Further, some of the methodology applied to the assessment of ground-borne noise does not appear to be robust and may affect the veracity of the assessment, including: • Ground-borne noise levels have been compared to the external L_{AFmax} from the locomotive, rather than the internal L_{Aeq} from the train passby. This approach is incorrect and misleading • There is little information on how the ground-borne noise levels have been calculated • Impacts from non-residential receivers should be assessed using criteria provided by Australian Standard 2107. • Vibration sensitivity of the Qantas Flight centre appears to not have been investigated.	at sensitive receivers within Sydney Airport. Ground-borne noise has the potential to be greater than airborne noise, and requires a different mitigation and management approach.	on robust assessment methodology, with consideration also given to mitigation and management where appropriate.	such as the use of track slabs. Because this type of noise is carried through the ground, rather than the air, mitigation measures such as architectural treatment of receiver buildings (eg façade treatments) is not an effective mitigation approach for ground-borne noise.	hotels and the Qantas Flight Training Centre
The noise impact assessment for the project takes a qualitative approach to the assessment of cumulative construction noise impacts between the project and the Sydney Gateway Motorway. The assessment concludes that concurrent construction of the projects may increase predicted construction noise impacts by around 3 dB(A).	Cumulative construction noise impacts may exacerbate implications for Sydney Airport receivers, requiring greater attention to be given to mitigation and management measures.	Further consideration of noise mitigation and management, including at-source options, intervening noise barriers, and/ or at -receiver measures is required. Specific measures should be identified to address cumulative impacts, including approaches to coordinating noise-intensive works across projects to minimise concurrent peak noise generation.	N/A	
As with the draft Environmental Impact Statement for the Sydney Gateway Motorway project, the noise impact assessment for the Botany Rail Duplication project does not include a cumulative operational noise impact assessment for the two projects. It justifies the absence of such an assessment on the different noise metrics used to assessed road and rail projects.	There is no reasonable assessment of potential cumulative operational noise impacts from the Sydney Gateway Motorway project and the Botany Rail Duplication project, including on Sydney Airport receivers.	Consideration needs to be given to the potential for cumulative operational noise impacts, particularly in the identified and development of mitigation and management approaches to address noise contributions from more than one source.	Noting the different natures of noise from road and rail infrastructure, broader consideration of noise mitigation and management options would be required to fully account for cumulative noise impacts. Noise contributions from one or the other source may be more easily and/ or more efficiently addressed than the other.	
Air quality				
The air quality impact assessment predicts that applicable ambient air quality criteria would be met at the construction boundary under worst-case conditions, with the exception of PM_{10} (24-hour) and $PM_{2.5}$ (annual), which would extend beyond the boundary of the construction site by six metres and seven metres, respectively. These distances beyond the site boundary do not encroach onto operational airport lands or into hotel properties (refer to Technical Report 3 – Air Quality Impact Assessment, Section 5.4 and Figure 5.5).	Construction air quality impacts from the project are unlikely to raise significant material implications for Sydney Airport.	No additional mitigation is considered necessary.	N/A	
The air quality impact assessment does not present a robust, qualitative cumulative impact assessment of potential construction air quality impacts with other projects (such as with the Sydney Gateway Motorway project). However, based on comparison of predicted air quality impacts from the project and the Sydney Gateway Motorway project on Sydney Airport land, it is expected that any such cumulative impact would be dominated by contributions from the Sydney Gateway Motorway project. Construction air quality impacts from the Sydney Gateway Motorway project have been separately assessed as being acceptable in the Environmental Impact Statement for that project.	The project is unlikely to make a significant contribution to construction air quality impacts on Sydney Airport, when considered with other works such as the Sydney Gateway Motorway.	No additional mitigation is considered necessary.	N/A	
In most cases, operational air quality impacts associated with the project (locomotive operation) are well below applicable ambient air quality	It is unclear from the information presented in the Environmental	Further specialist consideration (including potential modelling) is	Note that given the complex atmospheric chemistry responsible	

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criteria. The key exceptions relate to oxides of nitrogen, for which modelling presented in the air quality impact assessment indicates that more than half of the applicable ambient air quality criterion is consumed by project-only contributions to NO_2 (one hour), and more than half for both NO_2 (one hour) and NO_2 (annual) when added to background air quality concentrations at some receiver locations (including Sydney Airport receivers) for some operational scenarios (refer to Technical Report 3 – Air Quality Impact Assessment, Table 6.7). Background air quality concentrations do not take into account cumulative contributions from projects such as the Sydney Gateway Motorway, and the air quality impact assessment provides little substantive consideration of potential cumulative air quality impacts on surrounding receivers, including Sydney Airport. The Environmental Impact Statement for the Sydney Gateway Motorway project indicates that road traffic emissions, taken together with background air quality concentrations, could be around 70 to 80 per cent of the NO_2 (one hour) ambient air quality criterion at many of receiver locations close to that project. This raises the potential for an additional contribution of 50 per cent of the NO_2 (one hour) ambient air quality criterion from the Botany Rail Duplication project to result in a total (rail + road + background) concentration of NO_2 above the applicable criterion. It should be noted that it is not possible to form a clear view on this potential based on the different mix of receiver locations and NO_2 calculation techniques presented in the two Environmental Impact Statements – but on face value there is at least some potential for exceedances of the NO_2 (one hour) criterion at Sydney Airport operational receiver locations. It is also relevant to note that the Sydney Gateway Motorway Environmental Impact Statement did not include an express, quantified assessment of cumulative operational air quality impacts with the Botany Rail Duplication project. It states that air quality modelling data from the Botany Rail Duplication project was not made available at the time of preparing the Environmental Impact Statement for the Sydney Gateway Motorway project.	Impact Statements for the Sydney Gateway Motorway project and the Botany Rail Duplication project whether applicable ambient air quality criteria would be met at Sydney Airport receiver locations during concurrent operation of those two projects. The key air quality criterion relates to NO_2 as a one-hour average.	required to address the potential for significant air quality impacts on Sydney Airport receivers during concurrent operation of the Sydney Gateway Motorway project and the Botany Rail Duplication project.	for the generation of NO_2, it is not possible to simply add contributions from two different sources (without more detailed analysis).	
Biodiversity				
The project is unlikely to raise biodiversity impacts of relevance to Sydney Airport.	The project is unlikely to raise biodiversity impacts of relevance to Sydney Airport.	No additional mitigation is considered necessary.	N/A	
Contamination				
The contamination assessment presents data from investigations carried out for the WestConnex Enabling Works – Airport East Project (EES, 2018), including areas of identified PFAS contamination around Ross Smith Avenue and General Holmes Drive (refer to Technical Report 5 – Contamination Assessment, Figure 6.1 and associated text). Although the extent of this identified PFAS contamination is limited, the contamination assessment identifies and presents the entire Sydney Airport site as an area of environmental concern (AEC 4) (refer to Technical Report 5 – Contamination Assessment, Figure 8.1).	Labelling the entire Sydney Airport site as an area of environmental concern based on a limited number of PFAS-contamination data points may be generate perception and reputational issues with Sydney Airport amongst some stakeholders.	For Sydney Airport to note, in anticipation that concerns may be generated about the extent (and potential migration) of contamination across the whole airport site.	N/A	
The contamination assessment identifies areas of known and potential contamination with asbestos containing materials requiring remediation (refer to Technical Report 5 – Contamination Assessment, Section 8.4 and Figure 8.2). Some of this land includes Lot 8 DP1050923 along Qantas Drive, which is proposed to be leased by ARTC from Sydney Airport for construction purposes (materials storage, laydown areas, site access and compound site). The contamination assessment commits to	It is unclear from the information presented where responsibility for remediation lies, and whether commercial arrangements exist, or will exist, between ARTC and Sydney Airport to address remediation requirements in	For Sydney Airport to note, and where relevant, consider whether remediation responsibilities need to be clarified/ agreed with ARTC.	N/A	

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the preparation of a Remedial Action Plan (RAP) and remediation of the land in accordance with that document.	association with lease and use of the land.			
Flooding				
Construction activities have the potential to displace flood volumes if a major flood event occurs during the construction of the project (Technical Report 6 – Flooding, Table 5.1 and Figure 5.1). However, the extent of flood volume displacement is likely to be minor and would not significantly affect Sydney Airport.	Construction of the project is unlikely to raise flooding impacts of relevance to Sydney Airport.	No additional mitigation is considered necessary.	N/A	
The flooding impact assessment indicates that flooding depths may increase by up to around 0.03 metres during a 1% AEP event along parts of Qantas Drive and parts of Sydney Airport immediately to the west. Parts of Sydney Airport affected by this minor increase in flood depth are proposed to be required for and occupied by the future Sydney Gateway Motorway project. The assessment identifies design options that could be considered to reduce this impact.	Operation of the project is unlikely to raise flooding impacts of relevant to the ongoing operation of Sydney Airport, noting that affected Sydney Airport land would be required for and occupied by the future Sydney Gateway Motorway project.	No additional mitigation is considered necessary.	N/A	
Groundwater				
The groundwater impact assessment proposes a network for monitoring of groundwater during construction and operation. Proposed monitoring locations are shown in Appendix A of the groundwater impact assessment (refer to Technical Report 7 – Groundwater Impact Assessment), several of which are located within Sydney Airport.	The proposed groundwater monitoring network includes locations within Sydney Airport. Suitable arrangements will need to be made for the installation/ maintenance of groundwater monitoring bores, and access for monitoring and maintenance. Sydney Airport may also wish to consider the benefits of access data from the groundwater monitoring network (if it does not do so already) for its own environmental monitoring and management requirements.	For Sydney Airport to note, and where relevant, consider whether arrangements need to be made with ARTC for the establishment and operation of the groundwater monitoring network within Sydney Airport, and the sharing of monitoring data.	N/A	
Surface water				
The project is unlikely to raise surface water impacts of relevance to Sydney Airport.	The project is unlikely to raise surface water impacts of relevance to Sydney Airport.	No additional mitigation is considered necessary.	N/A	
Non-Aboriginal heritage				
The non-Aboriginal heritage assessment identifies that the project will have a negligible to minor impact on the Sydney (Kingsford Smith) Airport Group heritage item through temporary visual curtilage impacts during construction, and limited minor disturbance associated with vegetation clearing, establishment of crane pads and stockpile/ storage areas. No structures or significant elements of the heritage item would be directly affected.	The project is unlikely to raise significant or permanent impacts on the heritage values within Sydney Airport.	No additional mitigation is considered necessary.	N/A	
Aboriginal heritage				
The project is unlikely to raise Aboriginal heritage impacts of relevance to Sydney Airport.	The project is unlikely to raise Aboriginal heritage impacts of relevance to Sydney Airport.	No additional mitigation is considered necessary.	N/A	
Landscape and visual				
Although the landscape and visual impact assessment considers some viewpoints from Sydney Airport, it does not consider the visual impacts during construction of the project on the hotels within Sydney Airport (refer to Technical Report 11 – Landscape and Visual Impact Assessment, Chapter 5).	Reduced visual amenity for Sydney Airport hotels during construction of the project may have negative commercial implications.	Further consideration of the visual impacts of the project on Sydney Airport hotels, particularly during construction, and the associated commercial implications is required.	There may be cumulative commercial implications associated with concurrent construction of the Sydney Gateway Motorway and Botany Rail Line Duplication projects. Further, impacts may be	

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			exacerbated by other construction-related issues, including noise and traffic impacts.	
The landscape and visual impact assessment does not adequately consider the visual impacts of the project on advertising structures, including those within Sydney Airport, during construction of the project. Importantly, there is no assessment of obstruction of sightlines towards advertising structures and reductions in the visual desirability of these views, with associated marketing/ commercial implications.	Obstruction of or reduction in the visual appeal of the setting around advertising structures, including those within Sydney Airport may temporarily reduce their commercial viability during construction of the project.	Further consideration of potential impacts on advertising structures and their settings, and any mitigation measures to minimise commercial implications, is required.	N/A	
Social				
The social impact assessment recognises that the project will have adverse social (and business) impacts, particularly during construction, including in relation to noise impacts and additional travel times/ road network congestion resulting from temporary road closures (refer to Technical Report 12 – Social Impact Assessment, Chapter 6). The assessment includes no specific consideration of social and business impacts on Sydney Airport.	Impacts associated with construction and operation of the project would have socio-economic implications for Sydney Airport, particularly with respect to commercial and air transport operations. These potential impacts have not been considered in specific detail and there is no consideration of mitigation and management measures to minimise adverse effects on Sydney Airport operations.	Further consideration of impacts on Sydney Airport is required, particularly in relation to implications for commercial and air transport operations. Key impacts include construction and operational noise, and disruptions to the surrounding road network during construction.	Addressing issues raised with respect to other impacts will facilitate consideration and resolution of social and business impacts relevant to Sydney Airport.	• Consideration and consultation with impacted businesses such as KFC, Krispy Kreme, AMG, McDonalds is required
Health				
The health impact assessment broadly predicts a reduction in human health risks as a result of the project in 2024, and a marginal increase in human health risks as a result of the project in 2034 (refer to Technical Report 13 – Health Impact Assessment). Changes in health risks at Sydney Airport and for populations using the airport would be negligible.	The project is unlikely to raise significant human health risks for Sydney Airport or the populations who use it.	No additional mitigation is considered necessary.	N/A	
Hazards and risk (non-airport operations/ aviation hazard)				
The hazard and risk assessment identifies the potential disruption of utilities and services during construction, including in a cumulative sense with the Sydney Gateway Motorway project, some of which are likely to supply Sydney Airport (refer to Technical Report 14 – Hazard and Risk Assessment). The assessment proposes to manage risks associated with disruption of utilities and services through construction planning and management.	There is potential for planned or unplanned disruption to utilities and services supporting Sydney Airport during construction of the project, which may be extended or duplicated by similar risks associated with construction of the Sydney Gateway Motorway project.	Consultation and management will be required to ensure that essential utilities and services supporting Sydney Airport are not adversely affected, and that any unavoidable disruptions are managed to minimise impacts on airport activities.	The frequency and duration of utility and service disruptions could be magnified if works associated with the Botany Rail Line Duplication and Sydney Gateway Motorway projects are not well coordinated.	
Airport operations				
The airport operations assessment indicates that construction activities, including the use of cranes and piling rigs, would be carried out below the Obstacle Limitation Surface where possible, and otherwise approval for crane operation would be sought and obtained from Sydney Airport (refer to Technical Report 15 – Airport Operations Assessment, Section 5.1.2). The assessment accepts that there are likely to locations and times when intrusions into the Obstacle Limitation Surface are unavoidable, but provides limited detail about the nature, timing, duration and location of such intrusions, beyond broadly indicated that the intrusions would be in associated with construction works around Robey Street, the O'Riordan Street bridge, Southern Cross Drive and Mill Stream. From the information provided, it is not possible to form a conclusive view on the potential scale of implications for operational airspace, and particularly whether the proposed intrusions are manageable in the context of an operational airport.	Construction of the project will involve intrusions into the Obstacle Limitation Surface, but insufficient information is provided to determine whether the nature, timing, duration and location of such intrusions would be acceptable in-principle. It is unclear whether the intrusions could be practically managed alongside an operational airport. Limiting operations on Runway 07/25 – including if that runway were to be closed – could have a significant impact on Airservices Australia's ability to implement the	More detailed information on the nature, timing, duration and location of intrusions into the Obstacle Limitation Surface is required to form a view on the acceptability (and practicality) of the intrusions. Not being able to implement the LTOP prevents aircraft noise sharing from being implemented, thus significantly changing the existing pattern of aircraft noise sharing in areas within 20 km of the airport. The magnitude of any change will depend on the duration of any closure. A noise impact	This issue principally relates to construction intrusions into the Obstacle Limitation Surface, but would be equally relevant to maintenance activities during operation. Currently the Environmental Impact Statement is not clear on the nature and frequency of operational maintenance activities, and how these may be relevant to impacts on prescribed airspace. An accurate understanding of the extent to which operations on Runway 07/25 will be affected is	• Airport operations will be significantly impacted by the closure of Runway 07/25 and could prevent aircraft noise sharing from occurring, affecting several hundred thousand households to the north and south of the airport. An accurate understanding of the extent to which operations on the runway will be affected, or the runway actually closed, is needed. • An alternative construction method that does not require the long term closure to be considered in consultation with Sydney Airport • Any request for runway closures must be accompanied by appropriate documentation, and discussed and agreed

Issue	Implications for Sydney Airport	Mitigation	Comment	Sydney Airport Stakeholder Comment
	Long-Term Operating Plan (LTOP) for Sydney Airport.	assessment will need to be prepared to quantify any likely changes in noise sharing and consultation undertaken with the community and other stakeholders, including the Sydney Airport Community Forum.	needed as part of the EIS process because, if operations will be significantly affected, the environmental impact of the project will be much wider than originally anticipated (particularly affecting communities to the north and south of the airport). Similar information was provided as part of the RMS Airport east project works, which proved to be wildly inaccurate and bore no resemblance to what actually happened during the life of the project. Information provided this time needs to be accurate.	with Sydney Airport up to six months prior to the proposed closure. As Airservices Australia implement the noise sharing policy (or LTOP), the Commonwealth will also be involved. • Approval is subject to prevailing weather and operating conditions, and is not necessarily guaranteed, and will require short-notice stand-down procedures for dismantling cranes and rigs should the runway be recalled for emergency operational reasons. Any closure of the runway should also be planned to avoid those times of the year when westerly winds are more prevalent, thus avoiding the situation where none of Sydney Airport's three runways can be safely used, which would significantly disrupt air operations around Australia. • Sydney Airport must be consulted at tender engagement stage to ensure airport operational impacts and mitigation measures are identified and agreed.
The airport operations assessment (refer to Technical Report 15 – Airport Operations Assessment, Section 5.1.2) suggests that instruments into the Obstacle Limitation Surface would only be required for short periods when cranes are required, and it is expected that these activities would be limited to the airport curfew period of 11:00pm to 6:00am.	It is unclear whether limiting Obstacle Limitation Surface intrusions to only 11:00pm to 6:00am would be manageable, and how this might be achieved in practice.	More detailed information on the nature, timing, duration and location of intrusions into the Obstacle Limitation Surface is required, including how the timing of intrusions relative to airport curfew hours would be managed and achieved in practice.	N/A	• See comment above
The airport operations assessment commits to the use of lighting to comply with maximum light intensities specified in the Civil Aviation Safety Authority Manual of Standards (refer to Technical Report 15 – Airport Operations Assessment, Section 5.1.3). The assessment doesn't demonstrate how these requirements would/ could be met in practice. The assessment also does not adequately consider the potential for locomotive headlights to be a pilot distraction, particularly given an increase in locomotive movement frequency with implementation of the project. The assessment relies on assumptions that the current situation is not an unacceptable distraction risk, and that future conditions (including increased locomotive movement frequency) would not significantly change this.	ARTC has committed to not exceeding maximum light intensities around Sydney Airport, and subject to this commitment being achieved, there should be no significant impact on airport operations. The issue of potential pilot distraction from locomotive lighting has not been adequately addressed.	It would be useful to ensure a formal mechanism to ensure that maximum lighting intensity requirements are not exceeded, which may include a formal role for Sydney Airport to review and agree to lighting designs for the project, or otherwise apply this commitment through a condition of the project approval. Further assessment of locomotive lighting distraction risks is required.	N/A	• All construction lighting must comply with CASA's lighting in the vicinity of Aerodromes
Freight trains currently using the Botany Line (up to 20 per day per direction) are transient obstacles that protrude through the Runway 25 approach and Runway 07 take-off sections of the Obstacle Limitation Surface, and are currently declared in the Sydney Airport En Route Supplement Australia (ERSA) (refer to Technical Report 15 – Airport Operations Assessment, Section 5.2.3). It is anticipated that the project would result in an increase in freight train movements by 2030 of up to 45 per day per direction. ARTC has committed to consulting with Sydney Airport to address any potential changes to the transient obstacle conditions as currently declared. The airport operations assessment does not provide any assessment of potential implications for more than doubling transient obstacle movements on airport operations.	The number of transient obstacle movements through the Runway 25 approach and Runway 07 take-off sections of the Obstacle Limitation Surface are anticipated to more than double by 2030. No assessment of the potential impacts on Sydney Airport operations has been presented, and this outcome has not been demonstrated as acceptable.	Further information and assessment of the potential implications of more than doubling transient obstacle movements on Sydney Airport operations is required, including demonstration that such an increase could be acceptably managed with ongoing airport operation.	N/A	• Subject to approval by The Department

Issue	Implications for Sydney Airport	Mitigation	Comment	Sydney Airport Stakeholder Comment
The airport operations assessment does not present a detailed assessment of potential windshear effects, citing that the project does not involve any significant new structures or changes in topography (refer to Technical Report 15 – Airport Operations Assessment, Section 5.2.6). It notes that the new bridge at Southern Cross Drive, the new bridges at Robey Street, the new bridges at O'Riordan Street and the new bridge over Mill Stream are all low level structures that do not warrant further assessment under the National Airports Safeguarding Framework Guideline B because they would all be located below the 1:35 surface. The Environmental Impact Statement does not include sufficient information to determine the veracity of this statement, and whether not completing a windshear assessment is justified.	It is unclear whether an acceptable level of windshear impact has been carried out and therefore whether the project raises a material implication for Sydney Airport.	Further information/ demonstration is required to support the statement that the project would be located so as to be below thresholds for the formal, quantified estimation of windshear effects.	Some consideration of potential cumulative windshear effects with the Sydney Gateway Motorway project may also be required, depending on the adequacy of additional information/ demonstration for the Botany Rail Duplication project.	
The airport operations assessment commits to consideration of the National Airports Safeguarding Framework Guideline G (Protecting Aviation Facilities – Communication, Navigation and Surveillance) during detailed design (refer to Technical Report 15 – Airport Operations Assessment, Section 5.2.9). Early consideration of the impacts to communication, navigation and surveillance systems does not appear to have been undertaken.	The Project would benefit from early engagement with Sydney Airport and Airservices Australia to consider potential impacts on airport communication, navigation and surveillance systems, to ensure that the project design can, in-principle, achieve acceptable outcomes.	Further consideration of the project's ability to meet the requirements of the National Airports Safeguarding Framework Guideline G should be completed.	N/A	• ARTC to engage with Sydney Airport and Airservices Australia on concept reference design
Climate change				
The project is unlikely to raise climate change impacts of relevance to Sydney Airport.	The project is unlikely to raise climate change impacts of relevance to Sydney Airport.	No additional mitigation is considered necessary.		