



Sunshine Coast Environment Council (Narelle McCarthy) - Attachment 1: Sunshine Coast Airport Expansion – additional information to the EIS
EIS SUBMISSION METHODOLOGY

SUMMARY OF GENERAL CONCERNS

The “Summary of Major Findings” document was reviewed to identify key issues / points of concern. Where necessary reference was made to further documents in the EIS suite. Some of our *general concerns* are summarised in this section. Specific references to the EIS document are considered in a subsequent section.

AEIS SUBMISSION METHODOLOGY

The “Additional Information to the Environmental Impact Statement (AEIS)” document was reviewed to identify ‘*whether the AEIS adequately responds to the issues raised in submissions on the EIS*’. Where necessary, reference was made to further documents in the AEIS suite. Some of our *general concerns* for the EIS are summarised in this section. Specific references to the EIS document are considered in a subsequent section.

Issues from our EIS submission that do not appear to have been adequately addressed have been repeated below with references to AEIS topics as well as our comments on the AEIS responses and suggested solutions. New issues raised by the AEIS have also been added.

Section	Describe the issue	Suggested solution
Comments Referring to Economic Assessment		
De – amalgamation	<p>It is not clear from the EIS whether the Cost / Benefit Analysis has taken the Noosa Council into account. The extent of the region (as referred to in the EIS) appears to include the Noosa Council area, which may also raise a question of cost sharing arrangements.</p> <p>The studies for the EIS were all completed prior to 1 January 2014, references being to the Sunshine Coast Local Government Area (LGA) and relevant statistical information. There does not appear to be a statement that Noosa Council area has been excluded from the information. Resident populations at 30/6/2013 - 84% SCRC: 16% Noosa.</p>	<p>If Noosa has been included, then the ‘regional’ economic benefits attributable to the Project (resulting in a BCR of 2.45) should be adjusted to account for the de-amalgamated region.</p>



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<p>AEIS TOPIC NO. 40 - Benefit Cost Ratio 197 – Project funding</p>	<p>AEIS RESPONSE: Topic 40 - Noosa Council <u>is</u> included in the local benefit area (ie Sunshine Coast) for the economic assessments (eg \$4.1 billion up to 2040).</p> <p>Topic 197 – <i>‘At this stage, the funding of the project is yet to be determined. Sunshine Coast Council has engaged the Royal Bank of Canada to look at various funding options.’</i></p> <p>AEIS SCEC: Accordingly, Noosa should be included in the cost sharing arrangements, for consistency. This has generally not been publically disclosed, nor deemed necessary to modify the EIS (eg as per original SCEC suggested solution). Topic 197 is by others, but is also relevant – <i>‘ratepayers should not be made to pay for project’</i>.</p>	<p>AEIS ACTION: NONE</p> <p>AEIS SCEC: There should be public disclosure (other than AEIS) that Noosa Council area has been included in the assessment of economic benefits, thus, should also be a part of cost sharing arrangements. <u>OR</u>, adjust economic assessment to allow for only the current Sunshine Coast Regional Council area.</p>
<p>Economic Assessment of Option 2</p>	<p>There is only minimal economic assessment of Option 2: ‘Do Minimum’.</p> <p>This is the only other practical option identified in the EIS. Although there are references to a positive BCR and passenger movement forecasts, there are no details included in the EIS. However, aircraft movement forecasts have been included which show only 11% less movements in 2040 than the New Runway option. An estimated capital expenditure of \$80m is also stated, compared to \$182m (runway and building upgrade) for the New Runway.</p>	<p>There should be a full disclosure of relevant available information and a full economic assessment of Option 2: Do Minimum to allow a proper comparison of the 2 alternatives.</p>
<p>AEIS TOPIC NO. 85 – Economic Analysis 90 - Economics – demand and growth rates 93, 96 – Economics 183, 184 – Options 187, 188 - Options</p>	<p>AEIS RESPONSE: Topic 85 states that information for “Do Minimum” has been included in Appendix M.</p> <p>Topic 90 states that demand projections (in Appendix 2A:B), prepared by recognised aviation demand experts, were used in deriving the benefit cost ratio and regional economic benefits of the Project.</p> <p>Topic 93, 96 provides a results summary for the “Do Minimum” option:- benefit cost ratio (BCR) of 9.651 and Net Present Value (NPV) of \$297.6 million. The estimated capital expenditure is \$70 to \$80 million (Topic 184).</p> <p>Topic 184 - <i>‘The Do Minimum option is not consistent with the SCC’s objectives to support the region’s economy</i></p>	<p>AEIS ACTION: see Appendix M & NO OTHER</p> <p>AEIS SCEC: The ‘Do Minimum’ economic assessment details should be provided and made available for public comment. Notwithstanding, the economic assessment summary results are significantly in favour of ‘Do</p>



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	<p><i>through increased access to domestic and international destinations, and be a stimulus to tourism and commercial activities. This option was discounted on this basis.'</i></p> <p>Topics 187, 188 - <i>"The length of the current 18/36 runway is a significant constraint to airline efficiency in the context of domestic and international airline operations. It also does not improve the community noise outcomes as the proposed 13/31 runway orientation does nor is it possible to achieve the required 300m wide flight strip for the 18/36 alignment due to existing airport and surrounding development."</i></p> <p>AEIS SCEC: App. M only contains reference to the 'Do Nothing' option and the 'Project Case'. It is a different economic assessment done by the consultant (AECgroup). There is <u>NO</u> information or reference to "Do Minimum". The AEIS has not provided any other details. However, the results summary for "Do Minimum" is of significant interest. Topic 84 states that the Project (ie 'New Runway') has a BCR of 2.45 at a cost of \$347 million, and NPV is \$243 million (Ch A2 EIS pg 44). The economic assessments will include the effects / limitations of access to domestic and international destinations (unless there has been an error by the consultants). The EIS did <u>NOT</u> include the results of economic assessments for the "Do Minimum" option to allow a proper comparison of the options.</p> <p>The economic assessment results are summarised as follows:- New Runway – NPV \$243m; BCR 2.45; Capital cost \$347m Do Minimum – NPV \$297.6m; BCR 9.561; Capital cost \$70 to \$80m</p> <p>The results indicate that 'Do Minimum' is significantly better economically (NPV, BCR and capital cost) than the 'New Runway' option, even with increased access to destinations for the 'New Runway'. The "Do Minimum" is also intended to address CASA requirements for improved aircraft operation, but it is not clear as to how it addresses any current noise issues.</p> <p>The AEIS has deemed <u>NO</u> further action is necessary.</p>	<p>Minimum'. The project should be re-evaluated.</p>
<p>Future Costs</p>	<p>Costs do not appear to include future stage costs for full development of the airport for projected passengers to 2040 (ie Option 4).</p>	<p>As stated above, there should be full disclosure of relevant information.</p>



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	<p>A 'value engineering exercise' has been carried out as part of this EIS process and the revised staging and layout is now the subject of the EIS. There has been a significant reduction in works but very little information on capacities of the amended works to confirm that additional works are not required before 2040. The comparison is to the previous Design Report (Airport Planning & Design Report 15 Oct 2010 by AECOM Australia Pty Ltd prepared for Master Plan Implementation Project).</p>	
<p>AEIS TOPIC NO. 41, 42 – Benefit Cost Ratio</p>	<p>AEIS RESPONSE:</p> <p>Topic 41 - Query as to why expenditure was only provided to 2019 and not 2040. <i>'The capital spending is projected to be ended in the 2019/20 financial year.'</i></p> <p>Topic 42 - Query as to why the benefit cost ratio does not take into account any future stages of infrastructure development. <i>'SCA has costed the project as it is proposed and as outlined in the EIS. Beyond that, no additional infrastructure is proposed or can be costed at this stage.'</i></p> <p>AEIS SCEC: The AEIS still has not provided any details / reports of the 'value engineering exercise' (VEE) carried out as part of the EIS. The VEE significantly reduced the extent of much of the previously proposed infrastructure (eg runway, terminal buildings, aprons, future business buildings) within the airport. Capacities of the reduced facilities still have not been provided, nor any explanation for size reductions (and still be able to provide until 2040). The economic benefits assessment is until 2040. Thus, all works needed until 2040 should also be identified, as well as the assessment of associated impacts.</p>	<p>AEIS ACTION: NONE</p> <p>AEIS SCEC: The details of the Value Engineering Exercise should be provided to confirm that capacities of the proposed infrastructure are adequate until 2040. Any additional works to provide capacity until 2040 need to be identified and costed for inclusion in the economic assessments, <u>as well as</u> any associated environmental and social impacts.</p>
<p>Assumptions</p>	<p>Various assumptions have also been noted and need further review. They include allowable aircraft types and loadings, centroid for passenger drive distances (Mudjimba), types of economic benefits, domestic / international traveller breakdown.</p> <p>'Perceived' benefits (foregone consumer surplus) are also a large component of the assessed benefits. The value is a perception of the costs of time that it takes for business or personal travel and not necessarily a real cost, so possibly does not translate as a tangible benefit.</p> <p>The possible errors / inconsistencies in the assumptions would reduce the economic advantages stated in the EIS.</p>	<p>The assumptions of concern (as noted in our submission) should be reviewed and adjustments made as necessary. The same adjustments would need to be made for an assessment for Option 2: Do Minimum.</p>
<p>AEIS TOPIC NO.</p>	<p>AEIS RESPONSE:</p>	<p>AEIS ACTION: NONE</p>



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<p>39 - Queries around the BCR and how it was calculated (49?) 50 – Code 4C aircraft 70 – Demand and Demand Forecasting 71 – Destinations 89 – Economics – cost benefit analysis modelling 223 - Temperature</p>	<p>Topic 39 –. The Response simply states that the analyses have been carried out by experts in accordance with standard approaches.</p> <p>Topic 50 – Code 4C aircraft. <i>‘The runway infrastructure required for Code E aircraft is the same as that required for Code C aircraft that currently visit the Sunshine Coast.’</i></p> <p>Topic 70 - Comments around the efficacy of forecasts in Chapter A2. <i>‘Full details of long-term forecasts of aviation activity at SCA for 2013 – 2050 are contained in Appendix A2:B. Forecasts have been prepared by experts in the field using proven industry standard methods.’</i></p> <p>Topic 71 – Queries about the number of aircraft flying to various destinations. <i>‘The expected number of aircraft using Sunshine Coast Airport in 2020 and 2040 has been analysed and reported on in the EIS – refer Chapter A2 of the EIS and the associated Appendix.’</i></p> <p>Topic 89 - Cost-benefit analysis in A2 of the EIS is derived solely from input output (I-O) modelling and multipliers. <i>‘This is a well-recognised issue with I-O models and is the reason that the model developed and used for this Project has been extended from a standard I-O model to be a “demographic-economic” (DECON) model.’</i></p> <p>Topic 223 - Comments about operating in high temperatures. <i>The longer length of the new runway will reduce the operational impacts of high ambient temperatures on passenger services.</i></p> <p>AEIS SCEC: The SCEC submission identified significant concerns about the accuracy / suitability of some of the assumptions and information in various consultant studies in the EIS. These primarily would affect the economic analysis, potentially reducing the BCR to about 1 for the “new Runway”. Such errors would also affect the Do Minimum option, but its initial BCR is 9.651, not 2.45. The individual issues noted by SCEC have not been listed separately in the AEIS, only a collective statement at Topic 39 – <i>Queries around the BCR and how it was calculated</i> (as well as some other Topics). Various other topics are also noted above, but do not appear to relate either. Experts do make mistakes. A simple dismissal is an inappropriate response.</p> <p>Some of the issues are:-</p>	<p>AEIS SCEC: Important specific issues (including comments / suggestions) have been included in a separate section.</p>
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	<ul style="list-style-type: none"> • The Do Minimum Scenario indicates that a significant amount of aircraft movement will still occur within Australia and New Zealand, only 11% less than the New Runway. Correspondingly, a significant amount of benefits will still accrue for this Do Minimum Scenario. • Capacity of (new) runway will be exceeded by about 2035, and perhaps other infrastructure before 2040. • Over estimation of up to 44% less for travel savings appear to be included. The ‘weighted average’ travel location should be determined based on census statistics demographic information and then used to revise the economic assessment, rather than Mudjimba. • The possible significant omission of the contingency item, should be reviewed and the economic assessment amended as necessary. • A B787-800 (design aircraft) can only take-off fully loaded from the SE end (for the New Runway), the temperature is less than 15C and the aircraft has hi-thrust engines, otherwise load restrictions will apply (from Boeing design charts). <p>SEE DETAILED COMMENTS BELOW (in Specific References Section)</p>	
<p>Comments Referring to Environmental Assessment</p>		
<p>Management of Compliance Issues</p>	<p>Although current legislation appears to have been considered, there remain issues of concern as to how environmental matters and species protection will be adequately addressed.</p> <p>The Council and the Airport are effectively the same organisation. The EIS generally addresses issues as necessary but does not appear to comment on processes / procedures /bonds which are designed to monitor and /or ensure that the Council / Airport comply with the requirements of the EIS and any subsequent approval conditions. It is noted in Ch E3 EMP, that the SCA and Project Superintendent / Administrator will be responsible during construction and SCA for ongoing matters. Will the Co-Ordinator General continue to check SCA / Council?</p>	<p>Further information on compliance should be provided based on independent overview, rather than self-appraisal.</p>
<p>AEIS TOPIC NO. 56 – Conflict of interest</p>	<p>AEIS RESPONSE: Topic 56 - Perception that Council is the approving body. <i>‘Sunshine Coast Council is the proponent for the project. The EIS will not be determined by Council, instead being determined by the State and Commonwealth governments.’</i></p>	<p>AEIS ACTION: NONE</p> <p>AEIS SCEC: Further information on the methodology of long term</p>



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	<p>AEIS SCEC: There does not appear to be any other reference to the issue raised by SCEC in relation to long term monitoring of SCRC and SCA for their compliance with any conditions that may be imposed by the EIS process.</p> <p>As was outlined in the EIS, the project has the potential to have a number of environmental impacts. Some of these impacts can be avoided through appropriate management strategies (e.g. dredge impacts, salt water intrusion etc.) whereas others are likely to have a residual impact requiring offsets.</p> <p>In relation to impacts that are proposed to be avoided through management strategies we acknowledge that that the proposed management strategies are adequate but stress that it is imperative that these strategies are implemented and that their effectiveness be subject to ongoing monitoring and reporting.</p> <p>Additional comments on issues where residual impacts have been identified are provided below (Appendix B Biodiversity Strategy comments).</p>	<p>compliance (by SCRC and SCA) with any EIS conditions should be provided based on independent overview, rather than self-appraisal.</p>
<p>Effect of 'Value Engineering Exercise'</p>	<p>It is noted that Mt Emu She Oak disturbance has been reduced by removal of an area for a proposed future passenger terminal. A connectivity corridor between the northern and southern sections of the Mt Coolum National Park has also been improved by the 310m reduction in the total length of the runway at the NW end.</p> <p>The 'value engineering exercise' identified these improvements but the extent/timings of the outcomes should be subject to further review as noted above in the economic assessment comments.</p>	<p>Any effects on the current EIS environmental proposals (from the public review of the EIS), will also need to be considered.</p>
<p>AEIS TOPIC NO. 41, 42 – Benefit Cost Ratio</p>	<p>AEIS RESPONSE:</p> <p>Topic 41 - Query as to why expenditure was only provided to 2019 and not 2040. <i>'The capital spending is projected to be ended in the 2019/20 financial year.'</i></p> <p>Topic 42 - Query as to why the benefit cost ratio does not take into account any future stages of infrastructure development. <i>'SCA has costed the project as it is proposed and as outlined in the EIS. Beyond that, no additional infrastructure is proposed or can be costed at this stage.'</i></p> <p>AEIS SCEC: The AEIS still has not provided any details / reports of the 'value engineering exercise' (VEE) carried out as part of the EIS. The VEE significantly reduced the extent of much of the previously proposed</p>	<p>AEIS ACTION: NONE</p> <p>AEIS SCEC: The details of the Value Engineering Exercise should be provided to confirm that capacities of the proposed infrastructure are adequate until 2040. Any additional works to provide capacity until 2040 need to be identified and costed for</p>



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	<p>infrastructure (egg runway, terminal buildings, aprons, future business buildings) within the airport. Capacities of the reduced facilities still have not been provided, nor any explanation for size reductions (and still provide until 2040). The economic benefits assessment is until 2040. Thus, all works needed until 2040 should also be identified, as well as the assessment of associated impacts.</p>	<p>inclusion in the economic assessments, <u>as well as any associated environmental and social impacts.</u></p>
(construction program)	<p>Remedial actions are to occur on the airport site as well as ‘offsets’ at Council owned land at Palmview.</p> <p>The construction program for the runway does not appear to include environmental actions such as relocation of the She-Oaks. Many of the actions should be commenced sooner rather than later.</p>	<p>A program of actions should be prepared for environmental issues, if not done already, with appropriate ‘hold points’ included in any construction programs.</p>
<p>AEIS TOPIC NO. 103, 104, 105, 117, 124, 131 - Environment 181 - Offsets</p>	<p>AEIS RESPONSE:</p> <p>Topic 103 – Wide ranging comments about the environmental impacts of the proposed project including reduction in habitat and loss of connectivity.</p> <p>Topic 104 - Query about fire regime for Mt Emu she-oak.</p> <p>Topic 105 - Impacts on Mt Emu she-oak.</p> <p>Topic 117 - Impact of the project on acid frogs.</p> <p>Topic 124 - General comments on impacts of flora and fauna of the project.</p> <p>Topic 131 - Query re impacts to Mount Emu she-oaks, Allocasuarina thalassoscopica Mount Coolum she-oak and Acacia baueri subspecies baueri tiny.</p> <p>Appendix B; Biodiversity Offsets Strategy. - Ch 9 Risk Management and Offset Delivery - Offset Area Management Plans (OAMP) will be developed for approval by Co-ordinator General and Department of the Environment. Table 7 provides an indicative program for planning, delivery, implementation and management of offset tasks. Delivery of the offsets is to commence prior to any clearing and construction works</p> <p>AEIS SCEC: The AEIS has provided more detail (in Appendix B) including a proposed works program, but does</p>	<p>AEIS ACTION: Appendix B; Biodiversity Offsets Strategy now addresses many of the issues raised.</p> <p>AEIS SCEC: Co-ordinator General, Department of Environment (or others) should be formally noted as monitoring agencies for ongoing compliance with OAMP’s (as well as any other conditions).</p>



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	not explicitly state that SCA / SCRC will be monitored for compliance by COG/DOE on an ongoing basis.	
AEIS TOPIC NO. Appendix B - Biodiversity Offsets Strategy	<p>AEIS SCEC: Residual environmental impacts are described in Appendix B (Biodiversity Offsets Strategy) to the Additional Environmental Impact Statement (AEIS). The residual impacts are proposed to be offset through a number of initiatives described in Chapter 5 of the Biodiversity Offsets Strategy.</p> <p>The commitments are welcomed but it is our view that the on-site offset is inadequate in relation to the significance of the residual impacts. There is potential to deliver a greater on-site offset, as well as the potential to enhance the biodiversity values of the site and surrounding area through a more appropriately designed offset.</p> <p>Attachment 2 outlines in detail our concerns as well as proposed solutions.</p>	AEIS SCEC: Suggested solutions are outlined in Attachment 2.
AEIS TOPIC NO. 163 – Loggerhead and green turtles 166 - Marine Ecology	<p>AEIS SCEC: A number of comments was made about light impacts on turtles, in particular AEIS Topics 163 & 166. The sections of the EIS dealing with light impacts do not address the operational phase impacts of lights from the airport creating glow over the beach but only look at light impacts associated with dredge activity during construction.</p> <p>This is a serious omission as light glow is known to have an impact on marine turtles that are known to nest along Marcoola beach.</p>	AEIS SCEC: Additional information must be provided by the proponent to assess the likelihood of operational phase light impacts on turtles.
Comments Referring to Social Assessment		
	<i>[Note: This issue is from our second submission by Karen Robinson]</i>	
Need for the Project A2 - 2.2.2 Social Drivers	<p>Based on the projections on intrusive noise levels (i.e. using N70 >20 and ANEF >20 and L_{Amax} >80dBA thresholds), it is certain that more people will experience intrusive noise levels under the “new runway” option than under the “do minimum” option.</p> <p>Counts of dwellings that change N70 and ANEF using the Sunshine Coast Airport (SCA) noise tool indicate that</p>	Review the diminished noise impact evidence as a justification for the project



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	substantially more dwellings are adversely affected than benefit from the new runway alignment.	
<p>AEIS TOPIC NO. 31 & others – Aircraft Noise Appendix L – Noise Assessment</p>	<p>AEIS SCEC: Indication that issue may have been done previously but perhaps better shown now in Appendix L. Notwithstanding, there is still a different area affected adversely by the New Runway. Do Minimum and New Runway have been compared with results favouring New Runway. (Note: This has been only very briefly reviewed in time available).</p>	<p>AEIS SCEC: SCEC is currently not in a position to be able to comment on noise issues.</p>



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SPECIFIC REFERENCES TO THE EIS DOCUMENT

Our desktop review has identified significant statements / findings (as referenced) in this document. The Summary of Major Findings document was reviewed to identify key issues / points of concern. Other documents have also been reviewed as noted. *[Additional comments by SCEC are in italic & brackets.]*

AEIS SUBMISSION METHODOLOGY

The “Additional Information to the Environmental Impact Statement (AEIS)” document was reviewed to identify *‘whether the AEIS adequately responds to the issues raised in submissions on the EIS’*. Where necessary, reference was made to further documents in the AEIS suite. Specific references to the EIS document are considered in this section.

In the time available it has not been possible to individually review (in detail) issues previously raised in this section. It has been noted that many issues do not appear to have been specifically addressed by the AEIS. Many of the specific issues relate to the economic assessments. Specific issues from our EIS submission that do not appear to have been adequately addressed (shown as **NOT DONE), AND are deemed to be important to us, have been repeated below. **Significant comments have also been highlighted.** Comments on the AEIS responses and suggested solutions have generally been done in our General Concerns section as above. The complete list of our Specific References to the EIS document is included as Attachment 3.**

Section	Describe the issue	Suggested solution
Summary of Major Findings – Volume A: Background to the Project		
Pg 10, Economic benefits, Operating Phase	Project to increase Gross Regional Product in region by \$4.1 billion over period 2020 to 2040. <i>[The ‘region’ includes Noosa Council (and to a lesser extent Cooloola) – what is their view and their level of contribution?]</i>	To Note. The separation of information for Noosa and the Sunshine Coast since de-amalgamation on 1 January 2014 needs to be done to provide a current ‘local’ as well as the ‘regional’ and ‘state’ assessments. NOT DONE
Qld Government Statistician’s Office website (statistics.oesr.ql)	demographic profiles at 30 June 2013 - SCRC 278,079; Noosa SC 52,419; total 330,498 <i>[SCRC 84.1%; Noosa 15.9%]</i>	To Note. This population distribution indicates a possible reduction of benefits of the order of 16% for the ‘local’ assessment as referred to above. IMPORTANT



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d.gov.au) Regional Profiles		
A2:B Long Term Forecasts of Aviation Activity at Sunshine Coast Airport for 2013-2050 Final Report	(by Leading Edge Aviation Planning Professionals Pty Ltd, Nov 2012) <i>[references and comments as below]</i>	To Note
Pg 73 10.1 Runway Development Scenarios	Schedules have been produced for the 3 scenarios of New Runway (unconstrained aircraft movements), Do Minimum (domestic & NZ only) & Do Nothing (turbo-props and small jets only), but it is not clear how movement forecasts were developed, or used at all. <i>[It may be that the baseline forecasts for passenger movements have been used to develop the busy day /hour aircraft movements for the New Runway scenario. These busy day / hour aircraft movements have then been reduced to match the runway limitations of the Do Minimum and Do Nothing Scenarios. Alternatively, passenger movement forecasts have been done for each scenario, but have not been included in the EIS. It also appears that there could be a typing error in the paragraph.]</i>	To Note. Passenger movement forecasts, including a breakdown of passenger types, should be provided for all options, or at least the 'Do Minimum'. NOT DONE
Pg 106 10.6 Summary of Runway Scenarios	results for aircraft movements for each Scenario summarised in Exhibit 10.17:- <ul style="list-style-type: none"> Busy Day for 2020 & 2040 respectively:- <u>New Runway</u> (baseline) 33 & 67 <u>Do Minimum</u> 31 & 58 [11.1% reduction from New in 2040] <u>Do Nothing</u> 29 & 18 Busy Hour for 2020 & 2040 respectively:- <u>New Runway</u> (baseline) 6 & 11 <u>Do Minimum</u> 5 & 10 <u>Do Nothing</u> 4 & 2 <i>[Although there does not appear to be any passenger movement forecasts for the Do Minimum / Do Nothing Scenarios, aircraft movements have still been determined, probably based on aircraft limitations from the New Runway(baseline) Scenario. The Do Minimum Scenario indicates that a significant amount of aircraft movement will still occur within Australia and New Zealand, only 11% less. Correspondingly, a significant amount of benefits will still accrue for this Do Minimum Scenario.]</i>	An economic assessment should be presented for the Do Minimum Scenario inclusive of passenger movement forecasts to allow proper comparison of the 2 options. DONE, but only summary of results provided DO MINIMUM IS ECONOMICALLY BETTER FOR NPV, BCR & COST



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	<p><i>[If economic benefits were only 11% less than the New Runway Scenario, and the cost less than half, then the NPV and BCR for the Do Minimum are likely to be significantly better than the New Runway ie Do Minimum would be the preferred option based on the economic assessment. Thus, there appears to be strong evidence to support an economic assessment to be presented for the Do Minimum Scenario.]</i></p>	
Ch A2 Need For The Project		
Pg 30 2.3.7 Ultimate Runway Capacity	<p>10 RPT take off movements per hour (based on apron capacity of 7 Code 4C aircraft) which is stated as well beyond forecasts and the planned capacity of the terminal building</p> <p><i>[Table 2.3e shows 11, 7 & 14 respectively for baseline, conservative and aggressive for busy hour aircraft movements for 2040, with 9 in 2030 for baseline case, so 10 probably exceeded in 2035?? This also appears to ignore larger Code E aircraft. And the terminal building?? checked – nothing known in EIS]</i></p>	<p>The statements and information provide appear to be inconsistent and need to be reviewed, including the capacities of the proposed infrastructure. NOT DONE. The details of the Value Engineering Exercise need to be released, because this statement indicates that additional work WILL be required before 2040. IMPORTANT</p>
Pg 31 2.4 The Sunshine Coast Economy, 2.4.1 The Sunshine Coast's competitive advantages	<p>refers to the region as the Sunshine Coast local Government Area (LGA)</p> <p><i>[The EIS and associated documents have probably all been completed prior to 1 January 2014 when Noosa Shire Council de-amalgamated. It is most likely that all economic assessments including Gross Regional Product (GRP) are on the basis of the Sunshine Coast Regional Council LGA inclusive of Noosa.]</i></p>	<ul style="list-style-type: none"> • Question on Noosa Council contribution to project • The separation of information for Noosa and the Sunshine Coast since de-amalgamation on 1 January 2014 needs to be done to provide a current 'local' as well as the 'regional' and 'state' assessments. <p>NOT DONE</p> <p><i>[If the information in the EIS does include Noosa, then the public have generally not been properly informed, because this has not been disclosed on general information fact sheets, nor shown as 'local' as required by the Terms of Reference.]</i> NOT DONE IMPORTANT</p>



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Pg 39 Fig 2.6a BCA methodology for the Project	The flowchart includes steps for identifying Project options, carrying out benefit cost assessments on each option then identification of a preferred option. <i>[There does not appear to be results of a BCA (Benefit Cost Analysis) for any other option (particularly Option2: Do Minimum) included in the EIS. Peter Pallot, Sunshine Coast Airport Manager-presentation to SCEC 27/10/14 - "No"]</i>	Full BCA assessment of options should be done, at least Do Minimum. NOT DONE, but only summary of results provided DO MINIMUM IS ECONOMICALLY BETTER FOR NPV, BCR & COST POTENTIALLY IMPORTANT
Pg 40 Quantifying project benefits	focus on travel time savings to and from Brisbane (as below). Key assumption - 30% of forecast passengers will transfer from other routes (such as Brisbane Airport) and 70% will be totally new and now choose to fly due to direct services from a new runway (from work by Tourism Futures International) <i>[70% new induced air travellers seem large? They may have driven or transferred via shuttle elsewhere for their trips for business or leisure.]</i> <u>Avoided travel costs</u> – reduced travel time, fuel, accidents and car pollution (costings as per national guidelines and standard project evaluation criteria) <u>Consumer foregone surplus</u> – for new induced passengers who would not travel because of higher travel costs to Brisbane. The full cost of a road trip has deterred them from travel so economic value is less than this trip cost (assumed to be 25% of cost of road trip but tested for sensitivity). <i>[What is this? (difficult to understand)]</i> <u>Avoided flight diversions</u> – historically 2%, but not included in this BCA but done previously (assumes RPT ceases at the SCA under the Do Nothing Scenario. <i>[?? To be checked]</i>	The relevance of the identified benefits, including the underlying assumptions, should be reviewed. NOT DONE?? A new economic assessment for the "New Runway" option has now been done by the consultant (Appendix M) – not reviewed in detail due to time constraint IMPORTANT
Pg 41 2.6.1.2 Regional benefits methodology –	GRP and employment benefits (direct / initial and indirect / flow-on) assessed in a demographic-economic model (DECON) with 66 intermediate sectors specified in the model (including range of statistical data for 2011/12). <i>[effort presumed commensurate for findings?]</i>	To Note. The same assessment should be done for other options, modified by comments in this submission. AS ABOVE
Pg 42 2.6.2 Assessment of net economic benefits of the Project	travel savings (time & vehicle costs between Brisbane Airport and Sunshine Coast – majority of benefits); foregone consumer surplus (passengers who forego satisfaction of a trip because they could not fly in / out Sunshine Coast); car accident savings; car pollution savings	To Note. The relevance of the identified benefits, including the underlying assumptions, should be reviewed. AS ABOVE
Pg 42 Table 2.6b Approach to quantifying benefits	<ul style="list-style-type: none"> Travel savings (time 77mins and vehicle costs 109km) based on Mudjimba (central point of Sunshine Coast) and Brisbane Airport (from Google maps) <i>[Mudjimba may be a geographical central point of the coast from Noosa to Caloundra but is not likely to be a central point for population distribution, more likely Maroochydore (73 mins / 101km) or Kawana Waters]</i> 	<ul style="list-style-type: none"> Over estimation of up to 44% less for travel savings appear to be included. The 'weighted average' travel location should be determined based on census statistics



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	<p>(64mins / 93km), particularly if Noosa is now excluded from the LGA. Further, travel distances back to Sunshine Coast Airport need to be deducted for net benefits – Maroochydore (11mins / 9km); Kawana Waters (21mins / 21km). Net benefits values are then Maroochydore (62mins / 92km) or Kawana Waters (43mins / 72km) ie up to 44% / 34% less.] [Google Maps]</p> <ul style="list-style-type: none"> • Business and private travel time values from Austroads 2012 Project Evaluation Guidelines - \$46.53 & \$14.54 per hour per occupant; 1.25 passengers / vehicle and vehicle operating cost 25c /km • Proportion of business / private from LEAPP Report (passenger survey data) [see pg 40 above and also Appendix A2:B pg 42 above – details of actual assumptions not given] • Consumer Surplus – deterred passengers determined under Do Nothing scenario from Tourism Futures International 2010 	<p>demographic information and then used to revise the economic assessment. This should be done for both the 'local' and 'regional' cases. NOT DONE IMPORTANT</p> <ul style="list-style-type: none"> • Details of actual assumptions for type of traveller should be provided, including future forecasts. NOT DONE
Pg 43 Table 2.6c Overview of benefits estimated in the BCA	<p>Travel cost and travel time savings (\$226m) are the most significant benefits, avoided car pollution (\$63m) and accidents (\$47m), and foregone consumer surplus (\$132m), less operating costs (\$56m) – ie Net Present Value 2014 (\$411m). [Total car / travel related benefits are \$336m, subject to any reduction as noted above eg \$222m at 34% reduction. Foregone consumer surplus is 28% of total benefits.]</p>	<p>To Note. Re-evaluation should be done. NOT DONE IMPORTANT</p>
Ch A2 Need For The Project		
Pg45 2.6.3 Sensitivity analysis on the BCA	[individual items as follows]	The items should be reviewed and the economic assessment amended as necessary.
<u>Construction cost contingencies</u>	<p>allowance, not a resource cost, \$58m so not included in central case BCA. If included, NPV decreases from \$255m to \$201m and BCR to 1.96 and sensitive to costs. [error? - NPV is \$243m above in Table 2.6e]</p> <p>[Contingencies are usually an allowance for unforeseen costs that may occur between the time of estimate and completion of construction. \$58m is 25% of total runway and terminal upgrade costs which is a standard allowance at a preliminary concept or design stage and will be reduced to 15 or 10% as detailed design progresses as the unforeseen aspects are reduced, but not eliminated. Further unforeseen circumstances generally arise during construction particularly with ground and weather conditions. Hence, it is probably not appropriate to</p>	<p>The minor error, as well as the possible significant omission of the contingency item, should be reviewed and the economic assessment amended as necessary. NOT DONE IMPORTANT</p>



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	<p><i>leave contingencies completely out of any case. At this stage for the EIS, the optimistic case should probably have 10%, conservative 25% and baseline 15% (ie for Present Value net cost \$168m, extra cost \$25m). Baseline total net cost would be \$193m, and for reduced car travel benefits (\$364m), NPV reduces to \$151m and BCR to 1.89.]</i></p>	
<p>Pg 45 2.6.4 Assessment of regional economic benefits of the Project (ie new runaway) –</p>	<p>assesses GRP and employment impacts on the economies of the Sunshine Coast LGA and Queensland. Construction phase costs of \$232.6m (for 2014 – 2020 excluding contingency allowance and escalation). Operating phase will have expenditure stimuli of \$7.3m operating costs per annum (assumed constant) and a net increase in visitors. This data is used to determine economic impacts using the 2011/12 I-O models for the Sunshine Coast and Queensland. <i>[Expect that ‘Sunshine Coast’ includes Noosa Shire.]</i></p> <p><u>Pg 46 construction phase</u> – 60% of expenditure in local region and boosts GRP in region by 0.3% in peak construction year 4, and by 0.02% in Queensland. (Pg 47) Employment (FTE) will be 0.3% of total in region for peak year and 0.01% in Queensland. (includes direct and flow-on effects)</p> <p><u>Pg 47 Operating phase</u> – assumes 70% of passenger growth due to new runway will be new visitors (previous studies by PwC 2010 and LEAPP 2012). <i>[breakdown of passenger types – business / private duration etc (see LEAPP Report Appendix A2:B) How do these breakdowns affect the direct and flow-on benefits. Local business trips will be different, as will local people travel and tourist travel. How have different classes of travellers been accounted for in the modelling? (checked - assumed to be from passenger survey data, LEAPP)]</i> includes direct and flow-on benefits:- <u>Pg 48 GRP/GSP</u> – GRP rises from \$29m in 2020 to \$312m in 2040. 2040 amount is 2.7% of regional total for 2011/12. (Table 2.6k - total 2020 to 2040 is \$4.1billion) GSP is \$32m and \$345m (0.12%) respectively. <u>Pg 48 Employment (FTE)</u> – 2% increase in regional total in 2040 (2,231) over 2011/12; State is 2295 in 2040 (0.11% of 2011/12)</p> <p><i>[The economic modelling methodology does include passenger projections and expenditures for the New Runway. However, there are no modelling results included in CH A2 for the Do Minimum option. It too will involve expenditures and new visitors due to a continued operation at a higher level than Do Nothing (base comparison case for the New Runway). Thus, it is not possible to compare value for dollar. Further, if less money is spent on</i></p>	<p>As noted, the comments should be reviewed, and additional information and revised economic assessments should be provided as necessary. NOT DONE?? (review App M)</p>



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	<i>the Do Minimum option, the money saved on this project will presumably still be spent on other public infrastructure with flow on benefits.]</i>	
Summary of Major Findings		
Pg 12, Option 2: 'Do Minimum'	Work includes widening of runway to 45m (for CASA compliance), and extend runway by 60m beyond ends, and requires capital expenditure of \$70m to \$80m. Discarded because it only maintains access to existing limited domestic markets and was not consistent with SCRC objectives to support region's economy by additional stimulus to economy from extended destinations. <i>[New Zealand is currently accessible (Ch A2, 2.2.1 - 138 seats instead of 168) and possibly some other destinations depending on aircraft type.]</i>	Insufficient detail, including costs, has been provided (in this EIS) for the Do Minimum option, to be able to assess 'discarding'. All relevant information should be provided and a full BCA should be done. NOT DONE, but summary of results provided. DO MINIMUM IS ECONOMICALLY BETTER FOR NPV, BCR & COST
Pg 12, Option 4: 'New Runway'	has runway construction cost of \$174m and total Project cost of \$347m (2020\$). <i>[It is not clear what the 'Do Minimum' estimated cost includes, but there appears to be no other work on economic benefits to be able to properly compare this option with the 'New Runway' (checked as above). Ch A3 Options and Alternatives 3.1.3.2 Do Minimum option pg 52 – no additional cost details]</i>	To Note. As above for Option 2.
Pg 14, Staging Construction	<i>The extent of works only covers the initial construction stage of 5 years for the new runway and buildings. [It does not include the full extent of taxiways, terminal buildings stage 1 by 2028), northern aerospace precinct(assumed 2025-2026, to cater for the full development of the airport to 2050 as identified in the Airport Planning and Design Report, AECOM 2010. Also note Design Report Ch 3.1 Gold Coast Airport – 88 % of domestic flights go to Sydney / Melbourne & 12% to Adelaide, Newcastle, Canberra; International routes are 17.4% of total passenger traffic – NZ 6.5%, Kuala Lumpur 2.8%, Japan 6.8%).</i> <i>[This apparent exclusion of the taxiways and terminal building precinct is reflected in all the plans that show the extent of the project. What is proposed to cater for future passenger growth until 2040. (ChA3 – see below)]</i>	<ul style="list-style-type: none"> To Note – In 2010, only 10.9% of flights at Gold Coast airport were to destinations outside of Australia and New Zealand. This is relevant to the BCA if comparing New Runaway and Do Minimum options. The capacities of works identified by the value engineering exercise for this EIS should be provided to confirm that they are adequate until 2040, or added to costs if needed prior to be compatible with the benefits to 2040. NOT DONE IMPORTANT Any impact on the assumptions for the passenger forecasts for aggressive and



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		baseline scenarios for the new runway should also be reviewed, as well as any flow on benefits, due to the omission of airport infrastructure as well as the proposed uses of existing and new aerospace precincts. NOT DONE IMPORTANT
Ch A3 Options and Alternatives		
Pg 54 3.1.3.1 New Runway 13/31 (EIS option)	A value engineering exercise was undertaken during the EIS process to identify further improvements and cost savings. Shifted runway ends 310m south east along the same alignment, to avoid poor clays in NW of site and reduce fill / surcharge requirements. Flood impacts have been lessened. New terminal now not forecast to be required until after 2040, so opportunity to upgrade the existing until after 2040 (significantly reduces fill and costs), and parallel taxiway not needed now because the turning loops at each end have been lengthened to allow more queuing. Costs reduced to \$350m which makes Project viable and is the subject of the EIS (details - see Ch A4 Project Description <i>Checked – see below</i>).	The details to support the outcomes of the value engineering exercise should be provided (as referred to in this submission); including effects on any previous reports for business benefits, noise levels, etc. NOT DONE
	<ul style="list-style-type: none"> <i>[How was it shifted 310m?]</i> <i>[Comparison against previous Design Report appears that it has simply been moved 310m along existing alignment with omission of NW end and reduction of SE end beyond the landing zones. These extra lengths allowed longer take-off lengths to be achieved ie the available total length appears to be 310m shorter. Apron areas also appear much smaller than previous Design Report (at the new terminal site).]</i> <i>[Also, what happens to redevelopment of existing building for other industries and proposed new northern aerospace precinct?]</i> <i>[This can all be added at a later date, but unless passenger forecasts have been reduced and / or aircraft movements and types have been refined to support the forecasts, then it should all be declared in the EIS to be consistent with the economic forecast until 2040.] [checked - No details of value engineering exercise given other than outcomes. see below also]</i> 	To Note (comments relevant to above) IMPORTANT
Airport Planning	(Completed for Airport Master Plan Implementation Project)	



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<p>& Design Report AECOM, 2010</p>		
<p>pgs 14 to 16, Runway Length</p>	<p>The Landing Distance Available (LDA) is stated as 2430m (ie between landing zebras) with extra distances of runway for take-off purposes of 140m (total 2570m) at NW end (Fig 4.4), and 300m (total 2730m) at SE end (Fig 4.5) starting at the existing runway. The total length is 2870m. The Report also recommends that the ‘declared distance’ of the LDA (2430m) be used as the referenced ‘length’ of the runway, noting that it is only the landing length (and not available take-off).</p>	<p>To Note</p>
<p>Pg 22 Table 4.4 Selected Aircraft/Runway/ Range/Take-off and Landing Length Requirements</p>	<p>B787-800 has a take-off length, fully loaded, of 2650m. It is the only one of 7 listed Code E aircraft that could take-off fully loaded from the proposed lengths as above, and then only from the SE end.</p>	<p>To Note (This is the ‘Design Aircraft’ for the New Runway and terminal precinct.) NOT DONE IMPORTANT</p>
	<p><i>[If the EIS total runway length is now shorter by 310m at the NW end on the same alignment, the total length is now reduced to 2560m, which is less than that required for the B787-800 (unless this has been improved since the 2010 Report) . The available take-off lengths are probably also shortened, and / or moved closer to the existing housing. No lengths are stated. Note: 2450m length stated on Airport Expansion Project Sheet. (checked – see Ch A4 below)]</i></p>	<p>To Note. The capability of the New Runway to provide ‘full load take-off’ for proposed aircraft should be reviewed. NOT DONE</p>
<p>Ch A4 Project Description</p>		
<p>Pg 82 4.6.5 Runway length Table 4.6a Declared distances for RWY 13/31 -</p>	<p>Landing Distance Available (LDA) 2450m both directions; Take-off Run Available (TORA) 2450m from NW and 2630m from SE; Total length 2630m. These take-off lengths will facilitate unrestricted operations by new generation B787 aircraft, but with restrictions for A330/B777. <i>[This statement is not consistent with 2010 Report for B787 as noted above, unless design improvements have occurred since then. checked – see below. Not consistent with Boeing either.]</i></p>	<p>The capability of the New Runway to provide ‘full load take-off’ for proposed aircraft should be reviewed. NOT DONE IMPORTANT</p>
<p>787 Airplane Characteristics</p>	<p>(issued by Boeing (Boeing Commercial Airplanes), March 2014)</p>	



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<p>for Airport Planning</p>	<ul style="list-style-type: none"> 3.3.1 pg 24 Standard Day, Dry Runway B787-800 (Typical Engines) – temperature at sea level 15C, length 3100m 3.3.2 pg 25 Standard Day+15C, Dry Runway B787-800 (Typical Engines) – temperature at sea level 30C, length 3300m 3.3.3 pg 26 Standard Day+25C, Dry Runway B787-800 (Typical Engines) – temperature at sea level 40C, length 4800m (load limited to 224,000kg) 3.3.5/6/7 (High Thrust Engines) – at 15C, 2600m; at 30C, 2700m; at 40C, 3350m <i>[A B787-800 (design aircraft) can only take-off fully loaded from the SE end, the temperature is less than 15C and the aircraft has hi-thrust engines, otherwise load restrictions will apply.]</i> <p>AEIS SCEC: A copy of the design charts is now included as Attachment 3.</p>	<p>The capability of the New Runway to provide 'full load take-off' for proposed aircraft should be reviewed as a high priority. If there are significant limitations as possibly indicated by this current information from Boeing, then impacts on all aspects of the operation, noise levels, passenger forecasts and benefits of the New Runway option need to be carefully reviewed. NOT DONE. The Boeing design charts indicate that the 'design aircraft' will NOT be able to take off fully loaded, as claimed in the EIS. IMPORTANT</p>
<p>Ch A4 Project Description</p>	<p>all fill will be delivered in 1 operation. <i>[Does this include fill for any further expansion of taxiways, new terminal, northern aerospace precinct? – unlikely because they are not noted in the EIS.]</i></p>	<p>The question of the full extent of works up to 2040 needs to be resolved. It is a requirement of the Terms of Reference for full disclosure of all works up to decommissioning, or at least 2040 in this instance. NOT DONE. Details of Value Engineering Exercise not provided. IMPORTANT</p>
<p>Pg 87 4.8.4 Fill staging</p>	<p>all fill will be delivered in 1 operation. <i>[Does this include fill for any further expansion of taxiways, new terminal, northern aerospace precinct? – unlikely because they are not noted in the EIS.]</i></p>	<p>The question of the full extent of works up to 2040 needs to be resolved. It is a requirement of the Terms of Reference for full disclosure of all works up to decommissioning, or at least 2040 in this instance. NOT DONE. Details of Value Engineering Exercise not provided. IMPORTANT</p>
<p>Summary of Major Findings</p>		
<p>VOLUME B: AIRPORT AND</p>		



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SURROUNDS		
Pg 22, Terrestrial Flora	<ul style="list-style-type: none"> • Mt Emu She-Oak (4.41 ha) is to be relocated by ‘proven tiling method’ to northside of runway (‘moderate adverse risk’) [see Ch B7 below.] • Connectivity between sections of Mt Coolool National Park are to be ‘partially mitigated’ by a vegetated corridor on the western site boundary (‘minor residual impact’) (Ch B7, Table 7.7a, pg283 - discussed in Ch B8, Terrestrial Fauna). <p>[Note: Ch A5 Project Construction, pg 103, 5.3.2.3 Site clearing – There is no reference to the relocation or connectivity corridor in this section of the EIS.]</p>	<p>The Project Construction schedule should be amended to note requirements or at least reference to relevant management plans.</p> <p>NOT DONE Work programs for Offset Area Management Plans are provided in App B, but Project Construction programs have not been updated in Ch 5. IMPORTANT</p>
<p>Ch B7, pg 265, 7.6 Impact Assessment, 7.6.1 Mitigation inherent in design</p>	<p>In the final design, the total development footprint has been reduced by excluding the proposed new terminal building from the Project, to minimise clearing of heathland and Mt Emu She-oak (Table 7.6a, pg 267 impact is 18% of area and 5% of plants in Finland Rd).</p> <p>[This could be a temporary measure with a new EIS done when the new terminal building is required to be completed by 2028 (Design Report 2010), or whenever. Other offsetting and relocation should be established by then. OR How will the increased number of passengers be handled? (checked – as above) [This is also included in Ch E2 Matters of National Environmental Significance, pg 425 & 427, 1.5 Impact Assessment, 1.5.1 Mitigation inherent in design.]</p> <p>[Note: The economic assessments in the EIS generally cover 20 years from start of operation of the project to 2040. The extent of the project in the EIS appears to generally exclude the additional taxi runways and terminal building (including costs) that were identified in the earlier Planning and Design Report to cater for the passenger projections. There does not appear to be any details for this change / omission, other than the value engineering exercise during the EIS preparation.]</p>	<p>To Note. The question of the full extent of works up to 2040 needs to be resolved. It is a requirement of the Terms of Reference for full disclosure of all works up to decommissioning, or at least 2040 in this instance. NOT DONE. Details of Value Engineering Exercise not provided. IMPORTANT</p>
<p>Summary of Major Findings</p>		
<p>VOLUME D: AIRSPACE AND AIRCRAFT RELATED NOISE</p>		
Pg 39 Proposed	23% of arrivals will be from south-east; 77% NW [as only shown in Fly-Through video]	To Note



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Modes of Operation	77% departures will be to SE <i>[as only per video]</i> ; 23% to NW <i>[The video did not include the SE case for arrivals and departures. The proportion of departures is also relevant to the take-off requirements for the design plane in view of the different lengths of available distances from each end.]</i>	
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