Stage 2 Summary Document – V2 CAP1616 Stage 2 Develop and Assess

Appendix A – Design Options Evolution



	Stage 2 Su	mmary Doc	ument – V2			
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history:		-	- <i>Where possible</i> amendments shown in blue.			
Amendments:	Table	Amendme	ent description			
		1	Description of Viable but Poor Fit options updated to reflect the revisions in Section 5.14 of the DOR.			
		<u>2</u>	Runways 05L/05R – North C7 (Viable Poor fit) became D7 (Viable Poor Fit) -Original prefix incorrect (was C rather than D).			
		2	Runways 05L/05R – West A2 (Viable Poor fit) became 2 (Viable good fit) -Reclassified and returned to Viable Good fit.			
			Runways 05L/05R 3,000ft FAF Transition North D10 became F12 (Reordered but not reclassified).			
		<u>3</u>	Runways 05L/05R 3,000ft FAF Transition North E11 became D10 (Reordered but not reclassified).			
			Runways 05L/05R 3,000ft FAF Transition North F12 became E11 (Reordered but not reclassified).			
			Runways 05L/05R 2,500ft FAF Transition North D10 became E12 (Reordered but not reclassified).			
		<u>3</u>	Runways 05L/05R 2,500ft FAF Transition North E11 (Viable Poor Fit) became 10B (Viable Good Fit) -Reclassified and returned to Viable Good fit.			
			Runways 05L/05R 2,500ft FAF Transition North F12 became D11(Reordered but not reclassified.)			

1. Design Options Evolution

1.1 Introduction

Table 2 shows the evolution of the design options through Stage 2 of the CAP1616 process. A Full Options Appraisal (FOA), in Stage 3, will consider the shortlist of design options identified from the work in Stage 2.

1.2 Design Options Report (DOR)

The first step in refining the comprehensive list of design options was the consideration of viability, as presented in the DOR. The DOR divided the design options into three categories, as shown in table 1 below. This process is explained in full in section 5.14 of the DOR and section 16 of the Stage 2 Summary Document.

Classification	Criteria	Outcome	
Unviable	Would not comply with PANS- OPS design criteria or did not have a supporting safety justification for non-compliance.	Not progressed to Design Principle Evaluation (DPE).	
Viable but poor fit	A clear failure to align to one or more of the three 'must have' design principles with which all design options 'must' comply (Safety, Policy and Capacity).	These are identified as lettered options and were not progressed to a full evaluation in the DPE. However, a rationale for misalignment to the three 'must have' design principles is included in both this DOR and the DPE including the results of any trade- off analysis.	
Viable and good fit	Expected to meet the three design principles with which all design options 'must' comply (Safety, Policy and Capacity).	Progressed to full DPE.	

Table 1 – Viability classification

1.3 Design Principle Evaluation (DPE)

The DPE considered all 'viable and good fit' design options, to assess their alignment against the design principles. Those options that best aligned with the design principles were accepted and progressed to the Initial Options Appraisal (IOA). The acceptance/rejection process is described at section 4 of the DPE.

1.4 Initial Options Appraisal (IOA)

This IOA serves as the foundation for a fuller and more quantitative assessment later in the CAP1616 process. The IOA assessed the merits of the accepted DPE design options (including do minimum options) compared to a baseline do nothing scenario. For the IOA, required at Step 2B, high-level criteria were determined and a qualitative assessment or, if available and proportionate, quantitative analysis against each design option was conducted. The design options progressed to the IOA were tested against the criteria contained in CAP1616 (Appendix E, Table E2) and areas of tranquillity and biodiversity have been mapped for further assessment at Stage 3. To further support the evaluation of options, a quantitate element was introduced to the assessments of some measures. For further details see section 2 of the IOA.

Following the completion of the IOA assessment, each design option was annotated with a RAG (red, amber, green) status. The classification of options was based on the professional judgement of the assessor/change sponsor, considering each design option's overall performance against the defined criteria. The colouring of these options as Preferred, Favourable, Acceptable and Rejected is explained in section 2.5.2 in the IOA. Design options categorised as Preferred, Favourable or Acceptable form the shortlisted design options.

Table 2 – Departures

Runway	Envelope	No.	Design Options Report	Design Principle Evaluation	Initial Options Appraisal				
	Runways 23R/23L - North								
23R/23L	North	1A	Viable and good fit	Accepted	Rejected				
23R/23L	North	1B	Viable and good fit	Accepted 23R only Rejected 23L only	Rejected 23R only				
23R/23L	North	2B	Viable and good fit	Accepted	Favourable 23R only Rejected 23L only				
23R/23L	North	3	Viable and good fit	Accepted	Rejected				
23R/23L	North	4A	Viable and good fit	Accepted	Acceptable 23R only Preferred 23L only				
23R/23L	North	4B	Viable and good fit	Accepted	Rejected				
23R/23L	North	A5 (Originally Option 5)	Viable but poor fit	-	-				
23R/23L	North	6A	Viable and good fit	Accepted	Rejected				
23R/23L	North	6B	Viable and good fit	Accepted	Preferred 23R only Favourable 23L only				
23R/23L	North	7	Viable and good fit	Accepted	Rejected 23R only Acceptable 23L only				
23R/23L	North	B8 (Originally Option 2A	Viable but poor fit	-	-				
23R/23L	North	C9	Viable but poor fit	-	-				
23R/23L	North	D10	Viable but poor fit	-	-				
23R/23L	North	E11	Viable but poor fit	-	-				
23R/23L	North	F12	Viable but poor fit	-	-				
23R/23L	North	U	Unviable	-	-				

	Runways 23R/23L - East - Right and Left Turns						
23R/23L	East Right	1A	Viable and good fit	Accepted	Rejected 23R only Favourable 23L only		
23R/23L	East Right	1 B	Viable and good fit	Rejected	-		
23R/23L	East Right	1C	Viable and good fit	Accepted	Rejected 23R only Preferred 23L only		
23R/23L	East Right	2	Viable and good fit	Rejected	-		

Runway	Envelope	No.	Design Options Report	Design Principle Evaluation	Initial Options Appraisal
23R/23L	East	A3 (Originally Option 3)	Viable but poor fit		
23R/23L	East Right	4A	Viable and good fit	Accepted 23R only Rejected 23L only	Preferred 23R only -
23R/23L	East Right	4B	Viable and good fit	Accepted	Acceptable
23R/23L	East Right	5	Viable and good fit	Accepted 23R only Rejected 23L only	Favourable 23R only -
23R/23L	East Left	6A	Viable and good fit	Accepted	Preferred 23R only Reject 23L only
23R/23L	East Left	6B	Viable and good fit	Accepted	Rejected
23R/23L	East Left	6C	Viable and good fit	Accepted	Rejected
23R/23L	East	Β7	Viable but poor fit	-	-
23R/23L	East Left	8A	Viable and good fit	Accepted	Acceptable 23R only Favourable 23L only
23R/23L	East Left	8B	Viable and good fit	Accepted	Rejected 23R only Acceptable 23R only
23R/23L	East Left	8C	Viable and good fit	Accepted	Favourable 23R only Preferred 23L only
23R/23L	East	С9	Viable but poor fit	-	-
23R/23L	East	D10	Viable but poor fit	-	-
23R/23L	East	U	Unviable	-	-

	Runways 23R/23L - South						
23R/23L	South	1	Viable and good fit	Accepted	Rejected		
23R/23L	South	2A	Viable and good fit	Accepted	Rejected		
23R/23L	South	2B	Viable and good fit	Accepted	Preferred		
23R/23L	South	3	Viable and good fit	Rejected	-		
23R/23L	South	4A	Viable and good fit	Accepted	Rejected		
23R/23L	South	4B	Viable and good fit	Rejected	-		
23R/23L	South	4C	Viable and good fit	Accepted	Acceptable		
23R/23L	South	5A	Viable and good fit	Accepted	Favourable 23R only Acceptable 23L only		

Runway	Envelope	No.	Design Options Report	Design Principle Evaluation	Initial Options Appraisal
23R/23L	South	5B	Viable and good fit	Accepted	Acceptable 23R only Favourable 23L only
23R/23L	South	5C	Viable and good fit	Accepted	Preferred
23R/23L	South	6	Viable and good fit	Accepted	Rejected
23R/23L	South	7A	Viable and good fit	Rejected	-
23R/23L	South	7B	Viable and good fit	Accepted	Favourable
23R/23L	South	A8	Viable but poor fit	-	-
23R/23L	South	B9	Viable but poor fit	-	-
23R/23L	South	C10	Viable but poor fit	-	-
23R/23L	South	D11	Viable but poor fit	-	-
23R/23L	South	U	Unviable	-	-

	Runways 23R/23L - South-west						
23R/23L	South-west	1A	Viable and good fit	Accepted	Preferred		
23R/23L	South-west	1B	Viable and good fit	Accepted 23R only Rejected 23L only	Acceptable 23R only		
23R/23L	South-west	1C	Viable and good fit	Accepted	Acceptable 23L only Rejected 23R only		
23R/23L	South-west	1D	Viable and good fit	Accepted	Preferred		
23R/23L	South-west	2A	Viable and good fit	Rejected	-		
23R/23L	South-west	2B	Viable and good fit	Rejected	-		
23R/23L	South-west	ЗA	Viable and good fit	Rejected	-		
23R/23L	South-west	ЗB	Viable and good fit	Accepted 23R only Rejected 23L only	Rejected 23R only -		
23R/23L	South-west	3C	Viable and good fit	Accepted 23R only Rejected 23L only	Rejected 23R only		
23R/23L	South-west	4B	Viable and good fit	Rejected	-		
23R/23L	South-west	5	Viable and good fit	Rejected	-		
23R/23L	South-west	6	Viable and good fit	Accepted	Rejected		

Runway	Envelope	No.	Design Options Report	Design Principle Evaluation	Initial Options Appraisal
23R/23L	South-west	7A	Viable and good fit	Accepted	Preferred
23R/23L	South-west	7B	Viable and good fit	Accepted	Favourable
23R/23L	South-west	8	Viable and good fit	Accepted	Rejected
23R/23L	South-west	9	Viable and good fit	Rejected	-
23R/23L	South-west	10	Viable and good fit	Accepted 23R only Rejected 23L only	Rejected 23R only -
23R/23L	South-west	A11 (Originally Option 4a)	Viable but poor fit	-	-
23R/23L	South-west	B12	Viable but poor fit	-	-
23R/23L	South-west	C13	Viable but poor fit	-	-
23R/23L	South-west	D14	Viable but poor fit	-	-
23R/23L	South-west	E15	Viable but poor fit	-	-
23R/23L	South-west	F16	Viable but poor fit	-	-
23R/23L	South-west	U	Unviable	-	-

	Runways 23R/23L - West						
23R/23L	West	A1	Viable but poor fit	-	-		
23R/23L	West	2	Viable and good fit	Rejected	-		
23R/23L	West	3B	Viable and good fit	Rejected	-		
23R/23L	West	4	Viable and good fit	Rejected	-		
23R/23L	West	5A	Viable and good fit	Rejected	-		
23R/23L	West	5B	Viable and good fit	Rejected	-		
23R/23L	West	6	Viable and good fit	Rejected	-		
23R/23L	West	7	Viable and good fit	Accepted	Favourable 23R only Acceptable 23L only		
23R/23L	West	8	Viable and good fit	Accepted	Preferred		
23R/23L	West	9	Viable and good fit - new option	Accepted	Rejected 23R only Favourable 23L only		

Runway	Envelope	No.	Design Options Report	Design Principle Evaluation	Initial Options Appraisal
23R/23L	West	10	Viable and good fit - new option	Accepted	Rejected
23R/23L	West	11	Viable and good fit - new option	Accepted	Acceptable 23R only Rejected 23L only
23R/23L	West	12	Viable and good fit - new option	Accepted	Rejected
23R/23L	West	B13 (Originally Option 3A)	Viable but poor fit	-	-
23R/23L	West	C14	Viable but poor fit	-	-
23R/23L	West	D15	Viable but poor fit	-	-
23R/23L	West	U	Unviable	-	-

	Runways 05L/05R - North						
05L/R	North	1	Viable and good fit	Accepted	Favourable		
05L/R	North	A2 (Originally Option 2)	Viable but poor fit	-	-		
05L/R	North	3	Viable and good fit	Rejected	-		
05L/R	North	4	Viable and good fit	Accepted	Preferred		
05L/R	North	B5	Viable but poor fit	-	-		
05L/R	North	C6	Viable but poor fit	-	-		
05L/R	North	D7	Viable but poor fit	-	-		
05L/R	North	U	Unviable	-	-		

	Runways 05L/05R - East							
05L/R	East	1	Viable and good fit	Accepted	Rejected			
05L/R	East	A2 (Originally Option 2)	Viable but poor fit	-	-			
05L/R	East	B3 (Originally Option 3)	Viable but poor fit	-	-			
05L/R	East	4	Viable and good fit	Accepted	Acceptable			
05L/R	East	5	Viable and good fit	Accepted	Favourable			

Runway	Envelope	No.	Design Options Report	Design Principle Evaluation	Initial Options Appraisal
05L/R	East	6	Viable and good fit	Accepted	Rejected
05L/R	East	7	Viable and good fit	Accepted	Rejected
05L/R	East	8	Viable and good fit	Accepted	Preferred
05L/R	East	C9	Viable but poor fit	-	-
05L/R	East	D10	Viable but poor fit	-	-
05L/R	East	E11	Viable but poor fit	-	-
05L/R	East	F12	Viable but poor fit	-	-
05L/R	East	U	Unviable	-	-

	Runways 05L/05R - South - Right and Left Turns							
05L/R	South Right	1	Viable and good fit	Accepted	Favourable			
05L/R	South Right	2A	Viable and good fit	Rejected	-			
05L/R	South Right	2B	Viable and good fit	Rejected	-			
05L/R	South Right	3	Viable and good fit	Accepted	Preferred			
05L/R	South Right	4	Viable and good fit	Rejected	-			
05L/R	South Right	5	Viable and good fit	Rejected	-			
05L/R	South Right	6A	Viable and good fit - new option	Accepted	-			
05L/R	South Right	6B	Viable and good fit	Rejected 05L only Accepted 05R only	- Rejected			
05L/R	South Left	7A	Viable and good fit	Rejected	-			
05L/R	South Left	7B	Viable and good fit	Rejected	-			
05L/R	South Left	8	Viable and good fit	Accepted	Preferred			
05L/R	South Left	9	Viable and good fit	Accepted	Favourable			
05L/R	South Left	10	Viable and good fit	Accepted	Acceptable			
05L/R	South	A11	Viable but poor fit	-	-			
05L/R	South	B12	Viable but poor fit	_	-			

Runway	Envelope	No.	Design Options Report	Design Principle Evaluation	Initial Options Appraisal
05L/R	South	C13	Viable but poor fit	-	-
05L/R	South	U1	Unviable	-	-

	Runways 05L/05R - West							
05L/R	West	1	Viable and good fit	Accepted	Preferred 05R only Acceptable 05L only			
05L/R	West	2	Viable but good fit	Rejected	-			
05L/R	West	3	Viable and good fit	Rejected	-			
05L/R	West	4A	Viable and good fit	Rejected	-			
05L/R	West	4B	Viable and good fit	Accepted	Acceptable 05R only Preferred 05L only			
05L/R	West	5A	Viable and good fit	Rejected	-			
05L/R	West	5B	Viable and good fit	Rejected	-			
05L/R	West	6A	Viable and good fit	Accepted	Rejected			
05L/R	West	6B	Viable and good fit	Rejected	-			
05L/R	West	7	Viable and good fit	Accepted	Favourable			
05L/R	West	B8	Viable but poor fit	-	-			
05L/R	West	C9	Viable but poor fit	-	-			
05L/R	West	U	Unviable	-	-			

	Runways 05L/05R - South-west							
05L/R	South-west	1	Viable and good fit	Rejected 05L only	-			
				Accepted 05R only	Favourable 05R only			
05L/R	South-west	2A	Viable and good fit	Rejected 05L only	-			
UJL/ K	500III-wesi	ZA		Accepted 05R only	Rejected 05R only			
05L/R	South-west	2B	Viable and read fit	Rejected 05L only	-			
UJL/K	300III-wesi	ZD	Viable and good fit	Accepted 05R only	Acceptable 05R only			
05L/R	South-west	ЗA	Viable and good fit	Rejected 05L only	-			
USL/K	Soum-west	3A	Viable and good fit	Accepted 05R only	Rejected 05R only			
	South west	uth-west 3B	Viable and good fit	Rejected 05L only	-			
05L/R	Soun-west			Accepted 05R only	Rejected 05R only			

Runway	Envelope	No.	Design Options Report	Design Principle Evaluation	Initial Options Appraisal
05L/R	South-west	4A	Viable and good fit	Rejected	-
05L/R	South-west	4B	Viable and good fit	Accepted	Favourable 05L only Rejected 05R only
05L/R	South-west	5	Viable and good fit	Accepted	Preferred
05L/R	South-west	A6	Viable but poor fit	-	-
05L/R	South-west	B7	Viable but poor fit	-	-
05L/R	South-west	C8	Viable but poor fit	-	-
05L/R	South-west	U	Unviable	-	-

Table 3 – Arrivals

Runway	Envelope	No.	Design Options Report	Design Principle Evaluation	Initial Options Appraisal				
	Runways 23R/23L North - 3,500ft FAF Transition								
23R/23L	North	1A	Viable and good fit	Accepted	Rejected				
23R/23L	North	A2 (Originally option 2)	Viable but poor fit	-	-				
23R/23L	North	ЗA	Viable and good fit	Accepted	Acceptable 23R only Preferred 23L only				
23R/23L	North	B4 (Originally option 4)	Viable but poor fit	-	-				
23R/23L	North	C5 (Originally option 5)	Viable but poor fit	-	-				
23R/23L	North	6A	Viable and good fit	Rejected	-				
23R/23L	North	7A	Viable and good fit	Accepted	Preferred 23R only Favourable 23L only				
23R/23L	North	8A	Viable and good fit	Accepted	Rejected				
23R/23L	North	D9	Viable but poor fit	-	-				
23R/23L	North	E10	Viable but poor fit	-	-				
23R/23L	North	11A	Viable and good fit	Accepted	Favourable 23R only Acceptable 23L only				
23R/23L	North	F12 (Originally option 12)	Viable but poor fit	-	-				
23R/23L	North	U	Unviable	-	-				

	Runways 23R/23L North - 3,000ft FAF Transition							
23R/23L	North	1B	Viable and good fit	Rejected	-			
23R/23L	North	A2 (Originally option 2)	Viable but poor fit	-	-			
23R/23L	North	3B	Viable and good fit	Accepted	Preferred			
23R/23L	North	B4 (Originally option 4)	Viable but poor fit	-	-			
23R/23L	North	C5 (Originally option 5)	Viable but poor fit	-	-			

Runway	Envelope	No.	Design Options Report	Design Principle Evaluation	Initial Options Appraisal
23R/23L	North	6B	Viable and good fit	Rejected	-
23R/23L	North	7B	Viable and good fit	Accepted	Favourable 23R only Acceptable 23L only
23R/23L	North	8B	Viable and good fit	Rejected	-
23R/23L	North	9B	Viable and good fit	Rejected	-
23R/23L	North	1 O B	Viable and good fit	Rejected	-
23R/23L	North	11B	Viable and good fit	Accepted	Acceptable 23R only Favourable 23L only
23R/23L	North	12B	Viable and good fit	Rejected	-
23R/23L	North	U1	Unviable	-	-

	Runways 23R/23L South - 3,500ft FAF Transition								
23R/23L	South	1A	Viable and good fit	Accepted	Favourable				
23R/23L	South	2A	Viable and good fit	Accepted	Rejected				
23R/23L	South	A3	Viable but poor fit	-	-				
23R/23L	South	B4 (Formerly option 4)	Viable but poor fit	-	-				
23R/23L	South	C5 (Formerly Option 5)	Viable but poor fit	-	-				
23R/23L	South	6A	Viable and good fit	Accepted	Rejected				
23R/23L	South	7A	Viable and good fit	Accepted	Rejected				
23R/23L	South	8A	Viable and good fit	Accepted	Acceptable				
23R/23L	South	9A	Viable and good fit	Accepted	Preferred				
23R/23L	South	U	Unviable	-	-				

Runway	Envelope	No.	Design Options Report	Design Principle Evaluation	Initial Options Appraisal			
	Runways 23R/23L South - 3,000ft FAF Transition							
23R/23L	South	1B	Viable and good fit	Accepted	Favourable			
23R/23L	South	2B	Viable and good fit	Accepted	Rejected			
23R/23L	South	A3	Viable but poor fit	-	-			
23R/23L	South	B4 (Originally option 4)	Viable but poor fit	-	-			
23R/23L	South	C5 (Originally Option 5)	Viable but poor fit	-	-			
23R/23L	South	6B	Viable and good fit	Accepted	Rejected			
23R/23L	South	7B	Viable and good fit	Accepted	Rejected			
23R/23L	South	8B	Viable and good fit	Accepted	Acceptable			
23R/23L	South	9B	Viable and good fit	Accepted	Preferred			
23R/23L	South	U	Unviable	-	-			

	Runways 05L/05R North - 3,000ft FAF Transition					
05L/05R		1.4		A	Favourable 05R only	
03L/03K	North	1A	Viable and good fit	Accepted	Preferred 05L only	
05L/05R	North	2A	Viable and good fit	Accepted	Acceptable 05R only	
			viable and good in		Favourable 05L only	
05L/05R	North	A3 (Originally option 3)	Viable but poor fit	-	-	
05L/05R	North	B4 (Originally option 4)	Viable but poor fit	-	-	
05L/05R	North	C5 (Originally option 5)	Viable but poor fit	-	-	
05L/05R	North	6A	Viable and good fit	Rejected	-	
05L/05R	North	7A	Viable and good fit	Rejected	-	
05L/05R	North	8A	Viable and good fit	Accepted	Preferred 05R only Rejected 05L only	
05L/05R	North	9A	Viable and good fit	Accepted	Rejected 05R only Acceptable 05L only	

Runway	Envelope	No.	Design Options Report	Design Principle Evaluation	Initial Options Appraisal
05L/05R	North	D10	Viable but poor fit	-	-
05L/05R	North	E11	Viable but poor fit	-	-
05L/05R	North	F12	Viable but poor fit	-	-
05L/05R	North	U	Unviable	-	-

	Runways 05L/05R North - 2,500ft FAF Transition						
05L/05R	North	1 B	Viable and good fit	Accepted	Preferred 05R only Rejected 05L only		
05L/05R	North	2B	Viable and good fit	Accepted	Acceptable		
05L/05R	North	A3 (Originally Option 3)	Viable but poor fit	-	-		
05L/05R	North	B4 (Originally Option 4)	Viable but poor fit	-	-		
05L/05R	North	C5 (Originally Option 5)	Viable but poor fit	-	-		
05L/05R	North	6B	Viable and good fit	Rejected	-		
05L/05R	North	7B	Viable and good fit	Rejected	-		
05L/05R	North	8B	Viable and good fit	Accepted	Rejected		
05L/05R	North	9B	Viable and good fit	Accepted	Favourable 05R only Preferred 05L only		
05L/05R	North	10B	Viable and good fit	Accepted	Rejected 05R only Favourable 05L only		
05L/05R	North	D11	Viable but poor fit	-	-		
05L/05R	North	E12	Viable but poor fit	-	-		
05L/05R	North	U	Unviable	-	-		

Runway	Envelope	No.	Design Options Report	Design Principle Evaluation	Initial Options Appraisal		
	Runways 05L/05R North - 2,000ft FAF Transition						
05L/05R	North	7C	Viable and good fit	Rejected	-		
05L/05R	North	12	Viable and good fit	Rejected	-		
05L/05R	North	13	Viable and good fit	Accepted	Preferred		
05L/05R	North	U	Unviable	-	-		

	Runways 05L/05R South - 3,000ft FAF Transition					
05L/05R	South	1A	Viable and good fit	Accepted	Rejected 05R only Acceptable 05L only	
05L/05R	South	A2 (Originally option 2)	Viable but poor fit	-	-	
05L/05R	South	B3 (Originally option 3)	Viable but poor fit	-	-	
05L/05R	South	C4 (Originally Option 4)	Viable but poor fit	-	-	
05L/05R	South	D5 (Originally Option 5)	Viable but poor fit	-	-	
05L/05R	South	6A	Viable and good fit	Accepted	Preferred 05R only Favourable 05L only	
05L/05R	South	7A	Viable and good fit	Accepted	Acceptable 05R only Rejected 05L only	
05L/05R	South	8A	Viable and good fit	Accepted	Rejected	
05L/05R	South	9A	Viable and good fit	Accepted	Favourable 05R only Preferred 05L only	
05L/05R	South	U	Unviable	-	-	

Runways 05L/05R South - 2,500ft FAF Transition					
05L/05R	South	1 B	Accepted	Acceptable 05R only Rejected 05L only	
05L/05R	South	A2 (Originally option 2)	Viable but poor fit	-	-
05L/05R	South	B3 (Originally option 3)	Viable but poor fit	-	-

Runway	Envelope	No.	Design Options Report	Design Principle Evaluation	Initial Options Appraisal
05L/05R	South	C4 (Originally option 4)	Viable but poor fit	-	-
05L/05R	South	D5 (Originally option 5)	Viable but poor fit	-	-
05L/05R	South	6B	Viable and good fit	Accepted	Favourable
05L/05R	South	7B	Viable and good fit	Accepted	Rejected 05R only Acceptable 05L only
05L/05R	South	8B	Viable and good fit	Accepted	Rejected
05L/05R	South	9B	Viable and good fit	Accepted	Preferred
05L/05R	South	U	Unviable	-	-



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