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Departure Envelope: SID RWY 22 WEST

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Group	Impact	Level of Analysis	DO NOTHING BASELINE'	OPTION 1A	OPTION 6A	OPTION 7A	OPTION 9A	OPTION 28	OPTION BB	OPTION 115	
Communities	Noise impact on health and quality of life	Initial Options Appraisal: Qualitative	In terms of today's operation, the WEST design envelope is entirely based around the existing UTAVA and NUGBO SIDs. To provide the most representative	Option 1A is an RNAV replication of the current UTAVA SID which incorporates a 6% climb gradient. Based on the change sponsors	Option 6A is an RNAV1 option based on the current UTAVA SID whice incorporates a 6% climb gradient. Based on the change sponsors	h Option 7A is an RNP1 option based on the current UTAVA SID which incorporates a 6% climb gradient. Based on the change sponsors	Option 9A is an RNAV1 option based on the current UTAVA SID which incorporates a 6% climb gradient. Based on the change	Option 28 is an RNAV replication of the current NUGBO SID which incorporates a 6% climb gradient. Based on the change sponsors analysis. Option 28 overfiles 3,299 people and a total of 1,389	Option 88 is an RNAV1 option based on the current NUGBO SID which incorporates a 6% climb gradient. Based on the change	Option 88 is an RNAVI option based on the current NUGBO SID which incorporates a 6% climb gradient. Based on the change sponsors analysis, Option 88 overfiles 11.385 people and a total of	
			and NUGBO SISh. To provide the most representative year of the boseling scenario, the overlight analysis conducted on this SID was based on the model tracks in 2013 so opposed to the blazer far took published on the LK LRF Furthermore, to provide an authentic comparisor, the modelling said scenario of based on a published SID. This provides a more realistic comparisor when compared to today's operation, it must also be admondaged that an element of radar centering its required to maintain said expension in which is the said of the said of the said of the centering its required to maintain said expension.	analysis, Option 1A overfiles 3,693 people and a total of 1,528 residential buildings. When compared to the baseline scenario, in terms of population and residential buildings overflows, Option 1A	analysis, Option 6A overfiles 2,883 people and a total of 1,424 residential buildings. When compared to the baseline scenario, in terms of population and residential buildings overflown, Option 6A	analysis, Option 7A overfiles 2,416 people and a total of 1,206 residential buildings. When compared to the baseline scenario, in terms of population and residential buildings overflows, Option 7A	sponsors analysis, Option 9A overfiles 3,051 people and a total of 1,310 residential buildings. When compared to the baseline	analysis, Option 28 overflies 3,293 people and a total of 1,389 residential buildings. When compared to the baseline scenario, in terms of population and residential buildings overflown, Dation 28	sponsors analysis, Option 88 overfiles 3,159 people and a total of 1,366 ovidential buildings, When compared to the baseline scenario	sponsors analysis, Option 88 overfiles 11,385 people and a total of 5.126 residential buildings. When compared to the baseline scream.	
			conducted on this SID was based on the modal tracks	terms of population and residential buildings overflown, Option 1A performs worse than the existing UTAVA SID and is therefore	terms of population and residential buildings overflown, Option 6A performs better than the existing UTAVA SID and is therefore	terms of population and residential buildings overflown, Option 7A performs better than the existing UTAVA SID and is therefore	scenario, in terms of population and residential buildings overflown, Option 9A performs better than the existing UTAVA	terms of population and residential buildings overflown, Option 28 performs better than the existing NUGBO SID and is therefore	In terms of population and residential buildings overflown, Option 89 performs better than the existing NUGBO SID and is therefore	in terms of population and residential buildings overflown, Option 88 performs worse than the existing NUGBO SID and is therefore	
			the UK AIP. Furthermore, to provide an authentic	considered to be of dis-benefit.	considered to be beneficial.	considered to be beneficial.	SID and is therefore considered to be beneficial.	performs better than the existing NUGBU SID and is therefore considered to be beneficial.	performs better than the existing NUGBU SIU and is therefore considered to be beneficial.	considered to be a dis-benefit.	
			comparison, the modelling was carried out based on a 6% climb gradient rather than 3.3% as ner the								
			published SID. This provides a more realistic								
			companson when compared to today's operation. It must also be acknowledged that an element of radar								
			vectoring is required to maintain safe separation								
			d to de la constante de la con								
			Based on the above, it has been determined that the existing UTAVA SID overflies a 3,628 people and a total of 1,511 residential buildings.								
			of 1,511 residential buildings.								
			Meanwhile, the NUGBO SID overflies 7,923 people and	1							
Communities	Air Ouality	Initial Options Appraisal:	a total of 3,512 residential buildings.		As per the baseline scenario, Option 6A does not directly overfly any	Annual Control of Cont		A second			
communities	All Quality	Qualitative	a total of 3,512 residential buildings. With regards to air quality, the existing UTAVA/NUGBO SIDs does not directly overfly any AQMAs. Given the	AQMAs. Furthermore, as per CAP 1616 (para 874), due to mixing and	# AQMAs. Furthermore, as per CAP 1616 (para 874), due to mixing and	AQMAs. Furthermore, as per CAP 1616 (para 874), due to mixing an	any AQMAs. Furthermore, as per CAP 1616 (para 874), due to	AQMAs. Furthermore, as per CAP 1616 (para 874), due to mixing and	As per the baseline scenario, Option 88 does not directly overfly any AQMAs. Furthermore, as per CAP 1616 (para 874), due to mixing and	any AQMAs. Furthermore, as per CAP 1616 (para 874), due to mixing	
			6% climb gradient included within the Do Nothing scenario, the impact of aircraft below 1,000ft with	dispersion, the impact on air quality above 1,000ft is likely to be insignificant. There are areas within the immediate area surrounding	dispersion, the impact on air quality above 1,000ft is likely to be insignificant. There are areas within the immediate area surrounding	dispersion, the impact on air quality above 1,000ft is likely to be insignificant. There are areas within the immediate area surrounding	mixing and dispersion, the impact on air quality above 1,000ft is likely to be insignificant. There are areas within the immediate	dispersion, the impact on air quality above 1,000ft is likely to be insignificant. There are areas within the immediate area surrounding	dispersion, the impact on air quality above 1,000ft is likely to be insignificant. There are areas within the immediate area surrounding	and dispersion, the impact on air quality above 1,000ft is likely to be insignificant. There are areas within the immediate area surrounding	
			regards to local air quality is limited to areas within the immediate area currenting the aiment	e the airport that will be overflown below 1,000ft, however, for safety reasons, this is unavoidable. Therefore, overall, when compared to	the airport that will be overflown below 1,000ft, however, for safety reasons, this is unavoidable. Therefore, overall, when compared to	the airport that will be overflown below 1,000ft, however, for safety reasons, this is unavoidable. Therefore, overall, when compared to	area surrounding the airport that will be overflown below 1,000ft, however, for safety reasons, this is unavoidable.	the airport that will be overflown below 1,000ft, however, for safety	the airport that will be overflown below 1,000ft, however, for safety	insignificant. There are areas within the immediate area surrounding the airport that will be overflown below 3,000ft, however, for safety reasons, this is unavoidable. Therefore, overall, when compared to the baseline scenario, this option is deemed to be of equal benefit.	
			minuse and automorphic angon.	the baseline scenario, this option is deemed to be of equal benefit.	the baseline scenario, this option is deemed to be of equal benefit.	the baseline scenario, this option is deemed to be of equal benefit.	Therefore, overall, when compared to the baseline scenario, this outlor is deemed to be of equal banefit.	the baseline scenario, this option is deemed to be of equal benefit.	the baseline scenario, this option is deemed to be of equal benefit.	the baseline scenario, this option is deemed to be of equal benefit.	
							,				
Wider Society	Greenhouse Gas impact	Initial Options Appraisal: Qualitative	Current routes do not support continuous climb operations. It must be noted that the exact track	Option 1A has been designed to support continuous climb operations, however, an element of radar vectoring may still be	Option 6A has been designed to support continuous climb operations, however, an element of radar vectoring may still be	Option 7A has been designed to support continuous climb operations, however, an element of radar vectorine may still be	Option 9A has been designed to support continuous climb operations, however, an element of radar vectorins may still be	Option 28 has been designed to support continuous climb operations, however, an element of radar vectorine may still be	Option 88 has been designed to support continuous climb operations, however, an element of radar vectoring may still be	Option 118 has been designed to support continuous climb operations, however, an element of radar vectorine may still be	
		Quantilities	operations. It must be noted that the coact track length flows by aircraft may vary slightly due to the nature of radar vectoring, although aircraft do all follow the estant procedures in a broader sense. The existing procedures do not support optimal aircraft performance and therefore are predicted to have a	required to manage aircraft separation distances.	required to manage aircraft separation distances.	required to manage aircraft separation distances.	required to manage aircraft separation distances.	required to manage aircraft separation distances.	required to manage aircraft separation distances.	consisted to manager signeds consenting distances	
			nature of radar vectoring, although aircraft do all follow the extant procedures in a broader sense. The	The track mileage of Option 1A is 39.09km (21.11NM). Based on this when compared to the baseline scenario, Option 1A is shorter and it	The track mileage of Option 6A is 38.286m (20.67NM). Based on this when compared to the baseline scenario, Option 6A is shorter and is	The track mileage of Option 7A is 37.26km (20.12NM). Based on this when compared to the baseline scenario, Option 7A is shorter and it	The track mileage of Option 9A is 37.09km (20.02NM). Based on this, when compared to the baseline scenario, Option 9A is	The track mileage of Option 2B is 40.07km (21.64NM). Based on this, when compared to the baseline scenario, Option 2B is longer and is	The track mileage of Option 88 is 39.72km (21.45NM). Based on this, when compared to the baseline scenario, Option 88 is longer and is	The track mileage of Option 118 is 34.99km (18.894M). Based on this, when compared to the baseline someric, Option 118 is shorter and is therefore expected to emit less greenhouse gases. As such,	
			existing procedures do not support optimal aircraft	therefore expected to emit less greenhouse gases. As such, this is seen as beneficial. More in-depth analysis at Stage 3 is required to	therefore expected to emit less greenhouse gases. As such, this is seen as beneficial. More in-depth analysis at Stage 3 is required to confirm the asset volumes of manufacture gases released.	therefore expected to emit less greenhouse gisses. As such, this is seen as beneficial. More in-depth analysis at Stage 3 is required to	shorter and is therefore expected to emit less greenhouse gases. As such, this is seen as beneficial. More in-depth analysis at	when compared to the baseline scenario, Option 2B is longer and is therefore espected to emit more greenhouse gases. As such, this is seen as a dis-benefit, More in-depth analysis at Stage 3 is required to	when compared to the baseline scenario, Option 88 is longer and is therefore expected to emit more greenhouse gases. As such, this is seen as a dis-benefit. More in-depth analysis at Stage 3 is required to	and is therefore expected to emit less greenhouse gases. As such, this is seen as beneficial. More in-depth analysis at Stage 3 is	
				confirm the exact volumes of greenhouse gases released.	confirm the exact volumes of greenhouse gases released.	seen as beneficial, more in-depth analysis at stage 3 is required to confirm the exact volumes of greenhouse gases released.	As such, this is seen as denencial, wore in-depth analysis at Stage 3 is required to confirm the exact volumes of greenhouse	seen as a cas-ceneric. More in-ceptin analysis at scage a is required to confirm the exact volumes of greenhouse gases released.	seen as a dis-denent, more in-depth allarysis at stage 3 is required to confirm the exact volumes of greenhouse gases released.	this is seen as beneficial. More in-depth analysis at stage 3 is required to confirm the exact volumes of greenhouse gases released.	
			options. Mithia Stans 2 of the CAR 1616 process there is no				gases released.				
			requirement for a change sponsor to conduct								
			quantitative fuel burn or emissions analysis. This will be covered in Stage 3. In order to make a comparison,								
			track milage is used based on the theory that the								
			are emitted. In the case of the existing UTAVA/NUBGO								
			options. Within Stage 2 of the CAP 1016 process, there is no requirement for a change spoons to consist. quantitative face but no emissions rainlysts. This will be covered in Stage 3.1 in order to make a comparison, track willing is used based on the thorup right of the control of the control of the control of short of the control of the control of see emitted. In the case of the existing "GTAN, PURISO" 500, the modal track length is 33.586 im [21.594M] an \$1.5410 (21.13496) respectively.								
				I							
Wider Society	Capacity and resilience	Initial Options Appraisal:	Maintaining existing procedures would maintain current capacity however, due to the reliance on	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delays (both in air or on the	The introduction of PBN routes is expected to deliver benefits by	The introduction of PBN routes is expected to deliver benefits by	The introduction of PBN routes is expected to deliver benefits by	The introduction of PBN routes is expected to deliver benefits by	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delays (both in air or on the	The introduction of PBN routes is expected to deliver benefits by	
		Qualitative	current capacity however, due to the reliance on ensured hased navigational aids, resilience would be	increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delays thath in air or on the	increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delays (both in air or on the	increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delays (both in air or on the	increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delays (both in air or on the	increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delays (both in air or on the	increasing airspace capacity which subsequently leads to more prodictable flight paths and fewer delays (both in air or on the	increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delays (both in air or on the	
			significantly affected, following their removal in	ground). The reduction of the reliance on outdated ground based	ground). The reduction of the reliance on outdated ground based navigational aids will significantly increase operational resilience for	ground). The reduction of the reliance on outdated ground based	ground). The reduction of the reliance on outdated ground	ground). The reduction of the reliance on outdated ground based	ground). The reduction of the reliance on outdated ground based	ground). The reduction of the reliance on outdated ground based navigational aids will significantly increase operational resilience for	
			December 2022.	navigational aids will significantly increase operational resilience for airlines and operators.	navigational aids will significantly increase operational resilience for airlines and operators.	navigational aids will significantly increase operational resilience for airlines and operators.	ground). The reduction of the reliance on outdated ground based navigational aids will significantly increase operational resilience for airlines and operators.	navigational aids will significantly increase operational resilience for airlines and operators.	navigational aids will significantly increase operational resilience for airlines and operators.	navigational aids will significantly increase operational resilience for airlines and operators.	
Wider Society	Yesom Hite	Initial Options Appraisal:	As per CAP 1616, Appendix B, Para B76, change	Option 1A does not overfly any ADNBs or National Parks. However, i	It Option 6A does not overfly any AONBs or National Parks. However, it	t Option 7A does not overfly any AONBs or National Parks. However,	It Option 9A does not overfly any AONBs or National Parks.	Option 2B does not overfly any AONBs or National Parks. However, it	Option 88 does not overfly any ACN8s or National Parks. However, it	Option 118 does not overfly any AONBs or National Parks. However,	
Withir Society	iranquility	Qualitative	sponsors are required to consider Tranquility with	has been identified that this option overflies 1 Country Park and the	has been identified that this option overflies 1 Country Park and the	has been identified that this option overflies 1 Country Park and the	However, it has been identified that this option overfiles 1	has been identified that this option overfiles 1 Country Park and the	has been identified that this option overflies 1 Country Park and the 3 SSSIs. Overflight of these areas is expected to occur at a higher	it has been identified that this option overflies 1 Country Park and	
			specific reference to AONBs and National Parks only, unless other areas have been identified through	7 SSSI. Overflight of these areas is expected to occur at a higher altitude, minimising the impact of aircraft noise and emissions on	7 SSSI. Overflight of these areas is expected to occur at a higher altitude, minimising the impact of aircraft noise and emissions on	3 SSSIs. Overflight of these areas is expected to occur at a higher attitude, minimising the impact of aircraft noise and emissions on	Country Park and the 2 SSSIs. Overflight of these areas is espected to occur at a higher altitude, minimising the impact of	7 SSSI. Overflight of these areas is expected to occur at a higher altitude, minimising the impact of aircraft noise and emissions on	3 SSSIs. Overflight of these areas is expected to occur at a higher altitude, minimising the impact of aircraft noise and emissions on	the 2 SSSIs. Overflight of these areas is expected to occur at a higher altitude, minimising the impact of aircraft noise and emissions on	
			community engagement. Although no specific areas were identified by community engagement, the change sponsor has decided to include 555Is and Country Parks within the IOA analysis to maintain	these areas. When compared to the baseline scenario, Option 1A is	these areas. When compared to the baseline scenario, Option 6A is	these areas. When compared to the baseline scenario, Option 7A is	aircraft noise and emissions on these areas. When compared to	these areas. When compared to the baseline scenario, Option 28 is	these areas. When compared to the baseline scenario, Option 8B is	these areas. When compared to the baseline scenario, Option 118 is	
			were identified by community engagement, the change sponsor has decided to include SSSIs and	equal in that it does not overfly any AONBs or National Parks and an equal number of Country Parks and SSSIs. As such this option is	equal in that it does not overfly any AONBs, National Parks and Country Parks, but overflies fewer SSSIs. As such this option is	equal in that it does not overfly any AONBs, National Parks and Country Parks, but overflies fewer SSSIs. As such this option is	the baseline scenario, Option SA is equal in that it does not overfly any AONEs, National Parks and Country Parks, but	equal in that it does not overfly any ADNBs or National Parks and an equal number of Country Parks and SSSIs. As such this option is	equal in that it does not overfly any AGNBs, National Parks and Country Parks, but overflies fewer SSSIs. As such this option is	equal in that it does not overfly any AONBs, National Parks and Country Parks, but overflies fewer SSSIs. As such this option is	
			Country Parks within the IOA analysis to maintain consistency with other Stage 2 documentation.	deemed to be of equal benefit.	deemed to be beneficial.	deemed to be beneficial.	overflies fewer SSSIs. As such this option is deemed to be beneficial.	deemed to be of equal benefit.	deemed to be beneficial.	deemed to be beneficial.	
			The existing UTAVA SID does not overfly any AONBs or	,			seleica.				
			National Parks but it does overfly 1 Country Park and 3	1							
			The existing NUGBO SID does not overfly any AONBs or National Parks but it does overfly 1 Country Park								
			or National Parks but it does overfly 1 Country Park and 7 SSSIs.								
Wider Society	Biodiversity	Initial Options Appraisal:	Analysis conducted by the change sponsor shows that the existing operations at STN overfly or fly within the	The rating general has conducted out the individual of each plant partial has an email SM. All his right miles is expected to his an email SM. All his right miles is expected to his an expected plant partial SM. All his right miles is produced by a first a footbase discrete partial progressives. However, the size of the result progressives are all solid and size of the result o	The charge sponor has conducted work to understand where the integrated often are award TTM. At this stage, there is expected to exactly properties to the second of the s	The range genome has conducted on the individual of search in programme the search of the search of the search of the search of the law or change lawly in a first tool wavely at three steet, from an ar- land perspective. Due to see the well be confident and studies above consist perspective. Due in the well be confident and studies above and mining, the one is unlikely to see in impact to focular or quality for control shore. JOSOF Archimence, QP 5015, Carlo air quality for table to the inprecial search of the proposal search of the states to the inprecial search of the search of the search of the states of the inprecial search of the search of the search of the states of the search of the search of the search of the search of the states of the search of the search of the search of the search of the states of the search of the search of the search of the search of the states of the search of the search of the search of the search of the states of the search of the sea	The dange screen's his conducted early to orderstand when the designated lates are caused STA. A this high, there is expected to be no change lably to affect bodiversity at these stress. From an all resultsy respective, the session will be a conformed additional conformation of the session	This sharp groupes has been desired and as surfaces and when the opposited sharp and states of the state of t	The during content has conducted and in a colorated elevent has supported time are most off. 50 ch m sign with a specied to be no charge lawly to effect bloodwards up these sites. From an a best on charge lawly to effect bloodwards up these sites. From an a colorated programmer to the similar and the colorated and	The change operand text conductable and the submittable desire the operand text are sent SIA. She his sign, the sequential be not change likely to effect bedochers at these vibes. From a suit to end change likely to effect bedochers at these vibes. From a suit and supplementable, these sizes all the everifione at influence down and mixing. Here is without the likely to be an impact on local or quality from and mixing, there is without the law maps of one can be a consistent down 2000. The there is states that is greatly, amount of the proposal will not have an state to the supplementable of the supplem	
		Qualitative	Analysis conducted by the change sponner shows that the existing operations and 31% config. 19th within the vicinity of designated sizes in terms of Brookership units as 92%, SCC, BRAMEAR Sheer and Social Lindow, personal, accord are flying above 1,000th within passing over these sites. Our to the effects of mixing and dispersion, there is a timed impact, in terms of the air quality updated to these sizes. Six as existing the air quality updated in these sixes. Six as existing the six post, any potential impact will be accessed by shutter analysis in Six Sixe 3 of the ACP process by Subject Monter Experts.	designated sites are around STN. At this stage, there is expected to be no change likely to affect biodiversity at these sites. From an air	designated sites are around STN. At this stage, there is expected to be no charge likely to affect biodiversity at these sites. From an air	designated sites are around STN. At this stage, there is expected to be no change likely to affect biodiversity at these sites. From an air	the designated sites are around STN. At this stage, there is expected to be no change likely to affect biodiversity at these	designated sites are around STN. At this stage, there is expected to be no change likely to affect biodiversity at these sites. From an air	designated sites are around STN. At this stage, there is expected to be no change likely to affect blockversity at these sites. From an air	designated sites are around STN. At this stage, there is expected to be no change likely to affect biodiversity at these sites. From an air	
			such as SPAs, SACs, RAMSAR Sites and SSSIs. In today's	quality perspective, these sites will be overflown at altitudes above	quality perspective, these sites will be overflown at altitudes above	quality perspective, these sites will be overflown at altitudes above	sites. From an air quality perspective, these sites will be	quality perspective, these sites will be overflown at altitudes above	quality perspective, these sites will be overflown at altitudes above	quality perspective, these sites will be overflown at altitudes above	
			passing over these sites. Due to the effects of mixing	and mixing, there is unlikely to be an impact on local air quality from	and mixing, there is unlikely to be an impact on local air quality from	and mixing, there is unlikely to be an impact on local air quality from	B, Para 874, because of dispersion and mixing, there is unlikely to	and mixing, there is unlikely to be an impact on local air quality from	and mixing, there is unlikely to be an impact on local air quality from	and mixing, there is unlikely to be an impact on local air quality from	
			and dispersion, there is a limited impact, in terms of the air quality specific to these sites. STN	aircraft above 1,000ft. Furthermore, CAP 1616, Appendix 8, Para 880 states that in prograf, aircoace change proposal will not have an	aircraft above 1,000ft, Furthermore, CAP 1616, Appendix B, Para 880 states that in general, aircrace change proposal will not have an	aircraft above 1,000ft. Furthermore, CAP 1616, Appendix 8, Para 880 states that in general, aircraft change proposal will not have an	be an impact on local air quality from aircraft above 1,000ft. Furthermore, CAP 1616, Appendix B, Para 690 states that in	aircraft above 1,000ft. Furthermore, CAP 1616, Appendix B, Para 880 states that in general, aircraice change proposal will not have an	aircraft above 1,000ft. Furthermore, CAP 1616, Appendix 8, Para 880 states that in general, aircoace change proposal will not have an	aircraft above 1,000ft. Furthermore, CAP 1616, Appendix B, Para 880 states that in general, aircpace change proposal will not have an	
			acknowledges that there are sites within the vicinity of	f impact on biodiversity as they do not involve ground-based	impact on biodiversity as they do not involve ground-based	Impact on biodiversity as they do not involve ground-based	general, airspace change proposal will not have an impact on biodiversity as they do not involve ground-based infrastructure. That said, STN acknowledges that arry potential impact to the designated sites around STN will be assessed in Stage 3 of the	impact on biodiversity as they do not involve ground-based	Impact on biodiversity as they do not involve ground-based	impact on blodiversity as they do not involve ground-based	
			further analysis in Stage 3 of the ACP process by	impact to the designated sites around STN will be assessed in Stage	3 impact to the designated sites around STN will be assessed in Stage of the ACP process by Subject Matter Experts.	3 impact to the designated sites around STN will be assessed in Stage	3 That said, STN acknowledges that any potential impact to the	impact to the designated sites around STN will be assessed in Stage 3	impact to the designated sites around STN will be assessed in Stage 3	impact to the designated sites around STN will be assessed in Stage 3	
			Subject Matter Experts.	of the ACP process by Subject Matter Experts.	of the ACP process by Subject Matter Experts.	of the ACP process by Subject Matter Experts.	designated sites around STN will be assessed in Stage 3 of the ACP process by Subject Matter Experts.	of the ACP process by Subject Matter Experts.	of the ACP process by Subject Matter Experts.	of the ACP process by Subject Matter Experts.	
General Awation	Access	Initial Options Appraisal:	No change to existing airspace arrangements. GA users of STN will maintain their current level of access under	No change to the existing airspace arrangements (within the baselin r scenario) are expected as a consequence of this ACP. However, it is	e No change to the existing airspace arrangements (within the baselin	No change to the existing airspace arrangements (within the baselin	e No change to the existing airspace arrangements (within the	No change to the existing airspace arrangements (within the baseline	No change to the existing airspace arrangements (within the baseline	No change to the existing airspace arrangements (within the baseline	
		Qualitative	of STN will maintain their current level of access under extant operational arrangements.	r scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement	recommended that all VRPs and existing Letters of Agreement	e No change to the existing airspace arrangements (within the baselin scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement	baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of	No change to the existing airspace arrangements (within the baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement	No change to the existing airspace arrangements (within the baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement	scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement	
				pertaining to GA access are reviewed prior to implementation to	pertaining to GA access are reviewed prior to implementation to	pertaining to GA access are reviewed prior to implementation to	Agreement pertaining to GA access are reviewed prior to implementation to ensure their continued validity.	pertaining to GA access are reviewed prior to implementation to	pertaining to GA access are reviewed prior to implementation to	pertaining to GA access are reviewed prior to implementation to	
				ensure their continued validity.	ensure their continued validity.	ensure their continued validity.		ensure their continued validity.	ensure their continued validity.	ensure their continued validity.	
General Aviation /	Economic impact from increased effective capacity	Initial Options Appraisal:	No increase to effective capacity anticipated for continued use of estant procedures, therefore no	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which in turn will lead to more	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which in turn will lead to more	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which in turn will lead to more	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which in turn will lead to more	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which in turn will lead to more	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which in turn will lead to more	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which in turn will lead to more	
Communication and the	increased enecore capacity	Quantinos	economic benefit for GA/airlines.	predictable flight paths and fewer delays (both in the air or on the	predictable flight paths and fewer delays (both in the air or on the	predictable flight paths and fewer delays (both in the air or on the	predictable flight paths and fewer delays (both in the air or on	predictable flight paths and fewer delays (both in the air or on the	predictable flight paths and fewer delays (both in the air or on the	predictable flight paths and fewer delays (both in the air or on the	
				ground). This is expected to facilitate economic benefit to airlines by increasing the frequency of air transport movements, increasing	y ground). This is expected to facilitate economic benefit to airlines by increasing the frequency of air transport movements, increasing	ground). This is expected to facilitate economic benefit to airlines br increasing the frequency of air transport movements, increasing	y the ground). This is expected to facilitate economic benefit to airlines by increasing the frequency of air transport movements.	ground). This is expected to facilitate economic benefit to airlines by increasing the frequency of air transport movements, increasing	ground). This is expected to facilitate economic benefit to airlines by increasing the frequency of air transport movements, increasing	ground). This is expected to facilitate economic benefit to airlines by increasing the frequency of air transport movements, increasing	
				passenger numbers and increasing cargo tonnage carried. It is not proportionate for London Stansted Airport to predict the precise	passenger numbers and increasing cargo tonnage carried. It is not proportionate for London Stansted Airport to predict the precise	passenger numbers and increasing cargo tonnage carried. It is not proportionate for London Stansted Airport to predict the precise	increasing passenger numbers and increasing cargo tonnage carried. It is not proportionate for London Stansted Airport to	passenger numbers and increasing cargo tornage carried. It is not proportionate for London Stansted Airport to predict the precise	passenger numbers and increasing cargo tonnage carried. It is not proportionate for London Stansted Arport to predict the precise	passenger numbers and increasing cargo tornage carried. It is not proportionate for London Stansted Airport to predict the precise	
				economic benefit to commercial airlines using the new procedures	economic benefit to commercial airlines using the new procedures	economic benefit to commercial airlines using the new procedures	predict the precise economic benefit to commercial airlines	economic benefit to commercial airlines using the new procedures	economic benefit to commercial airlines using the new procedures	economic benefit to commercial airlines using the new procedures	
				as any increase in individual airline capacity will depend on private commercial business characteristics. It is not proportionate for	as any increase in individual airline capacity will depend on private commercial business characteristics. It is not proportionate for	as any increase in individual airline capacity will depend on private commercial business characteristics. It is not proportionate for	using the new procedures as any increase in Individual airline capacity will depend on private commercial business	as any increase in individual airline capacity will depend on private commercial business characteristics. It is not proportionate for	as any increase in individual airline capacity will depend on private commercial business characteristics. It is not proportionate for	as any increase in individual airline capacity will depend on private commercial business characteristics. It is not proportionate for	
				London Stansted Airport to assess the economic benefit to the GA community however they are expected to benefit from increased	London Stansted Airport to assess the economic benefit to the GA community bosewer they are expected to benefit from increased	London Stansted Airport to assess the economic benefit to the GA community however they are expected to benefit from increased	characteristics. It is not proportionate for London Stansted Almost to assess the economic benefit to the GA community	London Stansted Airport to assess the economic benefit to the GA community however they are expected to benefit from increased	London Stansted Airport to assess the economic benefit to the GA community however they are expected to benefit from increased	London Stansted Airport to assess the economic benefit to the GA community however they are respected to benefit from increased	
				predictability of commercial aidine movements which is expected to	predictability of commercial airline movements which is expected to	predictability of commercial aidine movements which is expected to	however they are expected to benefit from increased	predictability of commercial aidine movements which is expected to	predictability of commercial aidine movements which is expected to	predictability of commercial airline movements which is expected to	
				lead to reduced on-ground and in-air delays for all users.	lead to reduced on-ground and in-air delays for all users.	lead to reduced on-ground and in-air delays for all users.	predictability of commercial airline movements which is expected to lead to reduced on ground and in-air delays for all	lead to reduced on-ground and in-air delays for all users.	lead to reduced on-ground and in-air delays for all users.	lead to reduced on-ground and in-air delays for all users.	
				I			users.				
General Aviation /	Fuel burn	Initial Options Appraisal:	The existing STN procedures do not support continuous climb operations. Fuel burn is expected to	Object 15 Adds - specific confidence of one operation, mover by the most header of the remain the velocities of the object of the control to the order of the product of the object of the control to the order of the control to the order of the object of the control to the object of	Option 6A does support continuous climb operations, meaning that	Option 7A does support continuous climb operations, meaning that	Option 9A does support continuous climb operations, meaning	Option 28 does support continuous climb operations, meaning that aircraft would not be required to level off during departure, reducing	Option 18 years appear constrained in this appearance, menting that processing a contrained and processing a contrained within a conduction of sugar. Therefore, or enable a composition, the large of once Certification for sugar as the conduction of sugar. Therefore, or enable a composition, the large district of such that the form of sugar and the sugar and that the conduction of sugar as the conduction of sugar and that the configuration of the baseline scenario, Option 88 is longer and at this compared to the baseline scenario, Option 88 is longer and at this configuration of the baseline scenario. Option 88 is longer and at this configuration of the baseline scenario option 88 is longer and at this configuration of the baseline scenario option 88 is longer and this contrained and the scenario option 88 is longer and the large of the scenario option 88 is longer and the large scenario option 88 is longer and this large scenario option 88 is longer and the large scenario o	Option 118 does support continuous climb operations, meaning that aircraft would not be required to level off during departure, reducing the overall amount of fuel burnt. There is no requirement within from 3 of the CRINGE concept or purposition land burn this will be	
commercial airlines		qualitative	The existing is in procedures on on solution in continuous climb operations. Fuel burn is expected to be greater due to tactical ATC intervention and period of level flight in the departure and approach parties. Furthermore, in the case of the modal path of the existing LTAM/AUGBO SIDs, the tack length 39-96w (21.59NM) and 39.14km (21.13NM) respectively.	arcraft would not be required to level off during departure, reducing the overall amount of fuel burnt. There is no requirement within	g arcraft would not be required to level off during departure, reducing the overall amount of fuel burnt. There is no requirement within	g aircraft would not be required to level off during departure, reducing the overall amount of fuel burnt. There is no requirement within	g that aircraft would not be required to level off during departure, reducing the overall amount of fuel burnt. There is no	arrerart would not be required to level off during departure, reducing the overall amount of fuel burnt. There is no requirement within	aircraft would not be required to level off during departure, reducing the overall amount of fuel burnt. There is no requirement within	aircraft would not be required to level off during departure, reducing the overall amount of fuel burnt. There is no requirement within	
			of level flight in the departure and approach phase.	Stage 2 of the CAP1616 process to quantify fuel burn, this will be	Stage 2 of the CAP1616 process to quantify fuel burn, this will be	Stage 2 of the CAP1616 process to quantify fuel burn, this will be	requirement within Stage 2 of the CAP1616 process to quantify	Stage 2 of the CAP1616 process to quantify fuel burn, this will be	Stage 2 of the CAP1616 process to quantify fuel burn, this will be	Stage 2 of the CAP1616 process to quantify fuel burn, this will be	
			Furthermore, in the case of the modal path of the existing UTAVA/NUGBO SIDs, the track length 39.986m	conducted in Stage 3. Therefore, to enable a comparison, the logic applied is that the shorter the track length, the less fuel is burnt.	conducted in Stage 3. Therefore, to enable a comparison, the logic applied is that the shorter the track length, the less fuel is burnt.	conducted in Stage 3. Therefore, to enable a comparison, the logic applied is that the shorter the track length, the less fuel is burnt.	fuel burn, this will be conducted in Stage 3. Therefore, to enable a comparison, the logic applied is that the shorter the track	conducted in Stage 3. Therefore, to enable a comparison, the logic applied is that the shorter the track length, the less fuel is burnt.	conducted in Stage 3. Therefore, to enable a comparison, the logic applied is that the shorter the track length, the less fuel is burnt.	conducted in Stage 3. Therefore, to enable a comparison, the logic applied is that the shorter the track length, the less fuel is burnt.	
			(21.59NM) and 39.14km (21.13NM) respectively.	With regards to this option, it is 39.09km (21.11NM) long. When	With regards to this option, it is 38.28km (20.67NM) long. When	With regards to this option, it is 37.26km (20.12NM) long. When	length, the less fuel is burnt. With regards to this option, it is	With regards to this option, it is 40.07km (21.64NM) long. When	With regards to this option, it is 39.72km (21.45NM) long. When	With regards to this option, it is 34.99km (18.89NM) long. When	
				stage it assumed will require a smaller amount of fuel burn,	option field does support commissions drimb operations, meaning that a six archit would not be receipted to level of dring departure, reducing the overall amount of field bount. There is no requirement within sizing 2 of the CaPPall process to quartify the bount, this will be read to the control of the size of the capPall process to quartify the bount, this will be signified is that the shorter the track length, the less that it is bount within a process of the size of the commission of the bound of the size of the commission of the bound of the size o	Option 3. After support continuous cells deposition, moneing that would not be supported to level of diseing deposition, relación the corestal amount of the bunnt. There is no requirement within the corestal amount of the bunnt. There is no requirement within least of the CPURPS processive quality of them, then sits will be supported to the contract of the corest of the corest of the core supported bunnt of the core support, their loss final is burnt or the core of the core of the core support. The core final is burnt compared to the burnt of the core of the core of the core compared to the burnt of the core of the core of the core core of the core of the core of the core of the core deposition of the core of the core of the core deposition of the core of the core of the core deposition of the core of the core of the core deposition of the core of the core of the core deposition of the core of the core of the core deposition of the core of the core of the core deposition of the core of the core of the core of the core deposition of the core	option to divide support commons, other questions, meaning with an azoral would not be enquised to level of land genatures, reducing the overall amount of help bornt. There is no market to the control of the position of the control of the position of the control of the position of the control of the contr	aisrant a would not be required to level off during departure, reducing the overall amount of risk bound. There is no requirement, which Stage 2 of the CAPISES process to quantify fine boun, this will be conducted in Stage 1. Therefore, to enable so, the low, this will be conducted in Stage 1. Therefore, to enable so, the loss that is to burse. With required to the professor, in a 600/Post (12449M) long, When compared to the basiliers accessing, option 2.01 is longer and or this stage) at assumed with greative a process around for four burse, that gother and with the processor, this quickly and confirm in command for the burse. When the property that greates of the confirm in command the four burse, the option and out in Stage 2 to confirm.	stage it assumed will require a greater amount of fuel burn,	the overall amount of face burn. There is no requirement within Sage 2 of the CAPISE process to quantify that burn, this will be conducted in Sage 3. Therefore, to enable a comparison, the logic burn of the control of the control of the control of the control of the burn of the control of the control of the control of the burn of sage in assumed will require a runtifer amount of face burn, therefore, this option is beneficial in terms of face burn. Mene in- depth market will be carried out in Stage 1 to confere.	
				therefore, this option is beneficial in terms of fuel burn. More in- depth analysis will be carried out in State 3 to confirm.	therefore, this option is beneficial in terms of fuel burn. More in- depth analysis will be carried out in Stage 3 to confirm.	therefore, this option is beneficial in terms of fuel burn. More in- depth analysis will be carried out in State 3 to confirm.	require a smaller amount of fuel burn, therefore, this option is beneficial in terms of fuel burn. More in-depth analysis will be	therefore, this option is of dis-benefit in terms of fuel burn. More in- depth analysis will be carried out in Stage 3 to confirm.	therefore, this option is of dis-benefit in terms of fuel burn. More in- depth analysis will be carried out in State 3 to confirm.	therefore, this option is beneficial in terms of fuel burn. More in- depth analysis will be carried out in State 3 to confirm.	
							carried out in Stage 3 to confirm.				
								<u> </u>			
Commercial airlines	Training costs	Initial Options Appraisal:	No additional training predicted.	It is expected that no extra Pilot/Crew training will be required to enable pilots to fly the new PBN procedures. PBN is a common standard of navigation throughout the world. It is not proportionate	It is expected that no extra Pliot/Crew training will be required to enable plots to fly the new PBN procedures. PBN is a common standard of navigation throughout the world. It is not proportionate for London Stansted Amport to assess on-poing competency for individual commercial altime for the the intelligent variables.	It is expected that no extra Pilot/Crew training will be required to enable pilots to fly the new PBN procedures. PBN is a common	It is expected that no extra Pilot/Crew training will be required to enable pilots to fly the new PBN procedures. PBN is a corresco standard of navigation throughout the world. It is not proportionate for London Stansted Airport to assess on-going	It is expected that no extra PHot/Crew training will be required to enable pilots to fly the new PBN procedures. PBN is a common standard of navigation throughout the world. It is not proportionate for London Standard Arriport to assess on-pelog competency for individual commercial artifuse due to the significant variables.	It is expected that no extra Plot/Crew training will be required to enable pilots to fly the new PBN procedures. PBN is a common standard of mulpsion throughout the world. It is not proportionate for London Standard Alprot to assess on-going competency for individual commercial airlines due to the significant variables.	It is expected that no extra Pilot/Craw training will be required to enable pilots to fly the new PBN procedures. PBN is a common	
		A. C.		standard of navigation throughout the world. It is not proportionate	standard of ravigation throughout the world. It is not proportionate	standard of navigation throughout the world. It is not proportionate	standard of navigation throughout the world. It is not	standard of navigation throughout the world. It is not proportionate	standard of navigation throughout the world. It is not proportionate	enable pilots to fly the new PBN procedures. PBN is a common standard of navigation throughout the world. It is not proportionate for London Stansted Airport to assess on-going competency for	
				for London Stansted Airport to assess on-going competency for individual commercial airlines due to the significant variables.	for London Stansted Airport to assess on-going competency for individual commercial airlines due to the significant variables	enable pilots to fly the new PBN procedures. PBN is a common standard of navigation throughout the world. It is not proporcionate for London Stantated Alipsort to assess on-going competency for individual commercial airlines due to the significant variables		for London Stansted Airport to assess on-going competency for individual commercial airlines due to the significant variables	tor London Stansted Airport to assess on-going competency for individual commercial airlines due to the significant variables.	for London Stansted Airport to assess on-going competency for individual commercial airlines due to the significant variables	
				involved e.g. number of pilots, airline policies on training (simulator versus live flight training), fleet types, and variations in on-board	individual commercial airlines due to the significant variables involved e.g. number of pilots, airline policies on training (simulator versus live flight training), fleet types, and variations in on-board	involved e.g. number of pilots, airline policies on training (simulator versus live flight training), fleet types, and variations in on-board	significant variables involved e.g. number of pilots, airline	involved e.g. number of pilots, airline policies on training (simulator versus live flight training), fleet types, and variations in on-board	involved e.g. number of pilots, airline policies on training (simulator versus live flight training), fleet types, and variations in on-board	involved e.g. number of pilots, airline policies on training (simulator versus live flight training), fleet types, and variations in on-board	
				versus live flight training), fleet types, and variations in on-board equipment etc.	versus are night training, neet types, and variations in on-board equipment etc.	versus live flight training), fleet types, and variations in on-board equipment etc.	policies on training (simulator versus live flight training), fleet types, and variations in on-board equipment etc.	versus live flight training), fleet types, and variations in on-board equipment etc.	versus live flight training), fleet types, and variations in on-board equipment etc.	versus live flight training), fleet types, and variations in on-board equipment etc.	
Commercial airlines	Other costs	Initial Options Appraisal:	It is not proportionate for STN to assess potential	Other costs to commercial airlines may include updates to Flight	Other costs to commercial airlines may include updates to Flight	Other costs to commercial airlines may include updates to Flight	Other costs to commercial airlines may include updates to Flight	Other costs to commercial sirlines may include updates to Flight	Other costs to commercial airlines may include updates to Flight	Other costs to commercial airlines may include updates to Flight	
		Qualitative	It is not proportionate for STN to assess potential other costs for commercial airlines - there may be	Management Systems (FMS), navigation databases and operating	Management Systems (FMS), navigation databases and operating	Management Systems (FMS), navigation databases and operating procedures, increased pilot hire costs versus training etc. It is not	Management Systems (FMS), navigation databases and operating	Management Systems (FMS), navigation databases and operating	Management Systems (FMS), navigation databases and operating	Management Systems (FMS), navigation databases and operating	
			costs associated with maintaining legacy systems to	procedures, increased pilot hire costs versus training etc. It is not proportionate for STN to assess the 'other costs' to commercial	procedures, increased pilot hire costs versus training etc. It is not proportionate for STN to assess the 'other costs' to commercial	proportionate for STN to assess the 'other costs' to commercial	procedures, increased pilot hire costs versus training etc. It is not proportionate for STN to assess the 'other costs' to commercial	procedures, increased pilot hire costs versus training etc. It is not proportionate for STN to assess the 'other costs' to commercial	procedures, increased pilot hire costs versus training etc. It is not proportionate for STN to assess the 'other costs' to commercial	procedures, increased pilot hire costs versus training etc. It is not proportionate for STN to assess the 'other costs' to commercial	
			continue flying conventional navigation but there are too many variables (e.g., aircraft types, on-board contem condulity atc.) to consider there affectively	airlines of flying PBN procedures due to significant variables; some airlines may already be 'PBN ready' whereas others may not.	airlines of flying PBN procedures due to significant variables; some airlines may aiready be 'PBN ready' whereas others may not.	airlines of flying PBN procedures due to significant variables; some airlines may already be 'PBN ready' whereas others may not.	airlines of flying PBN procedures due to significant variables; some airlines may already be 'PBN ready' whereas others may	airlines of flying PBN procedures due to significant variables; some airlines may already be 'PBN ready' whereas others may not.	airlines of flying PBN procedures due to significant variables; some airlines may already be 'PBN ready' whereas others may not.	airlines of flying PBN procedures due to significant variables; some airlines may aiready be 'PBN ready' whereas others may not.	
			against capability etc.; to consider these effectively.	arranes may arready be 'Perviready' whereas others may not.	annies may arready be man ready' whereas others may not.	arranes may arready be insin ready" whereas others may not.	some animes may aready be 'PBN ready' whereas others may not.	annes may arready be rean ready whereas others may not.	arrives may arready be 'Pen ready' whereas others may not.	annes may already be rean ready, whereas others may not.	
					1	1	1	L1			

Group	Impact	Level of Analysis	DO NOTHING BASELINE'	omou u	OPTION 6A	annau M	OPTION 94	OPTION 28	OWNERS OF THE PROPERTY OF THE	OPTION 118
Airport / Air navigation service provider		initial Options Appraisal: Qualitative	No additional infrastructure is required at \$1N to maintain certant conventional procedures however maintaining access to ground based equipment (currently operated by NERC) may be prohibitively expensive, should this commercial option be implemented.	All options relate to the implementation of FBN and no additional informations in registed. The introduction of FBN reduces the informations in required. The introduction of FBN reduces the production in construction, in particular ground assist displays are no integer reaction. The introduction of FBN is FRAVE very actival marking and departing London Standard Airport using the approposal RNAV/PBP procedures will do so based on their parformance-based navigation capability.	All options relate to the implementation of PBN and no additional infrastructure is required. The introduction of PBN reduces the reliance on infrastructure, in particular ground-based navigation aids are no longer needed. The foundation for PBN is RNAV or RNP;	all options relate to the implementation of PRN and no additional inflationess in signature. The introduction of PRN requires in- inflationess in signature. The introduction of PRN requires in- tered to inflationations, in particular ground based analysis of the see no integer needs. The consistion of PRN is PRNV or PRN is accord analysis of the production of PRN is PRNV or PRN is accord analysis of the production of the PRN is PRNV or PRN is accord analysis of the production of the PRN is PRNV or PRN is particular to the production of the loss of the production of the produc	All options relate to the implementation of PBN and no additional infrastructure is required. The introduction of PBN	A option reduce to the implementation of FBI and no additional Additional PBI and no additional inflationates is required. The introduction of FBI reduces the inflationation is required. The introduction of FBI reduces the inflationation and interest the inflation and interest the interest interest the interest inter	All options relate to the implementation of PRA and no additional infeaturation is required. The introduction of PRA reduction in Production is required. The introduction of PRA reduction is required. The introduction of PRA reduction infeaturation, in aericular ground selected insequence are no imprementation. The introduction of PRA is PRAVA in PRAVA in a reduction of the production of the PRAVA in PRAV	At options reduce to the implementation of PBI and no additional all options reduce to the implementation of PBI and no additional enforcementation represents the implementation of PBI reduced in produced in the implementation of PBI reduced in produced in the implementation of PBI reduced in produced in the implementation of PBI reduced in produced PBI reduced in the implementation of PBI reduced in purformance—based novigotion capability.
Airport / Air navigation service provider	Operational costs	Initial Options Appraisal: Qualitative	No change to operational costs is attributable to maintaining the extant procedures.	AN Traffic Control at London Stated Airport is contracted out to an inflicion pro-quantistian. This costing commercial contract better to be considered to be funded Stated Airport and their chosen ARSP is considered to be an organic cost. LOCO describle Improved Operational Efficiency is a branifal delivered by the interduction of PBM. In general, London Standard Airport practics that operational efficiency will represe use that there may be potential for a net reduction in operational costs.	Stansted Airport predicts that operational efficiency will improve and	third-party organisation. This oxisting commercial contract between London Stansted Airport and their chosen ANSP is considered to be an organing cost. ICAO describe "Improved Operational Efficiency" as a barrelf delivered by the introduction of PBN. In general, London Saranted Airport predicts that Operational efficiency will improve an	to a third-party organisation. This existing commercial contract between London Stantated Airport and their chosen AMSP is considered to be an one-giving cost. ICXO discribes Treproved Operational Efficiency as a barrelf adelivered by the introduction of PML in general, London Stantate Airport predicts that	Air Tall's Costeol at London Stansted Airport is contracted out to a hird-party organization. This existing commercial contract between London Stansted Airport and their chosen AVEP is considered to be an organize cost. LONG describs "Improved Operational Efficiency as benefit delivered by the introduction of PRIL in general, London Stansted Airport predicts that operational efficiency will improve distanted Airport predicts that operational efficiency will improve that there may be potential for a net reduction in operational costs.		AF Taffic Centrol at Londons Stanted Amport is contracted out to be with opany organisation. This existing commercial contract between London Stanted Airport and their chosen ANSP is considered to be an ongeing cost. LON describle Trepress of Operational Rifficiency a benefit delivered by the introduction of PRIL in general, London Stanted Airport predicts that operational efficiency will import date that the contract of the Contract of Contract of Contract of that there may be potential for a net reduction in operational costs
Airport / Air navigation service provider		Initial Options Appraisal: Qualitative	No Deployment costs applicable to existing procedures.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an orgoing cost.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an orgoing cost.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an organing cost.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an orgoing cost.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.
Safety Assessment		iinitei Options Apprehal: Gual totive	STN are safe including use of the extant conventional procedures. Following the removal of ground-based	Source provides conflows with London Lates have the severe section of London 2000 the london 2000 the London 2000 the London 2000 the London 2000 the london 2000 the London 2000 the London 2000 the London 2000 the london 2000 the London 2000		Sound possible or entires with school cubes not reflect were interface with certain to be common to the school common to the 2000s, and one 2000s which would be could be the 2000s of the 2000s. As the could be		Several grounds conflicts with conduct Linton mells were steemfold, in the several steemfold, in the several steemfold conflicts and the several steem of 2000, for other 2000 for other 2	Social possible conflicts with London Later hardles were identified to be conflicted in the London Later hardles with Later 2000 High control 100 High conflicts 100	Second possible conflicts with Confloid Lose traffic were steerflied in Second possible conflicts with Conflict Lose traffic were steerflied to the Conflict Lose traffic and the Conflict English the Conflict Lose of the Conflict Lose traffic Lose traff
		Sommary of Analysis	a video oppon set does not provide a sustainable voulstein intermo d'ampoi unidenvisitation and si survisitation intermo d'ampoi unidenvisitation and si survisitation intermo d'ampoi unidenvisitation and si survisitation and si video de la video de la video de la support continuos circhi operationo, salchi hallo si support continuos circhi operationo, salchi hallo si potent video de la dissu, messione, and choi se al lower lovels. In termo of Trampalife, Brodiventry, de consideration de la continuo del la continuo del la continuo del la continuo del la continuo del la continuo del la potentia del la continuo del la potentia del la continuo del la potentia del potentia del potentia potentia del potentia pote	Name compared to the baseline accessors, Open LA appellmen on Manne of questioning and service and self-up the not better in It is service of great from the order to the country, The committee, of their and dement to the of equal baseline questions, The country, The committee, of their and dement to the of equal baseline values and their country and produced to the country and their coun	When compared to the loadnies controls, Cylline for plue forms were treated by the control of th	In terms of general coace goe envisions and fault burn but better in terms of noise immers, transpaller, praeps/prisitions and economic impact of capacity. The remaining cristal are desemed to be of equal benefit because their is no charge when compared to today's operation. Hundre said that, at this imm, it is not possible to fully determine the salvey impactions of this specific potion. The charge sponsor has identified possible conflict with is serie realers operated sponsor has identified possible conflict with some makes operated sponsor has identified possible conflict with some makes operated sponsor has identified possible conflict with some makes operated sponsor has included and the conflict of the confli	When compared to the baseline scenario, Option 9A performs worse in terms of greenhouse gas emissions and fuel burn but better in terms of greenhouse gas emissions and fuel burn but better in terms of noise impact, transquiller, capacity/resiliance and economic impact of capacity. The remaining criteria are compared to today operation. Nating said that, at this time, it is not possible to highly determine the salest implications of the specific greens have destined possible conflicts with some mosts operated by their metal y support.	When compared to the laustime controls, Cytich 29 go forms were the term of generobies are entiresed and clark than the better in terms of generobies are entired to be of equal baseful respective. The medicing criteria are desired to be of equal baseful respective to the control of the cont	in more of generations gas emissions and the last has the better in continuous and continuous particular (prosphire) particular (prosphir	When compared to the baseline accession, Cyclers 118 profitmes service in brinned of noise part, genetions age ancients and faul of capacity. The tremaring circles are already to the compared to compare the compared to the compared to the compared to the compared because them is no exhibit profit in the compared to the compared southern the compared to the compared to the compared southern profit in the compared to the compared to the compared southern profit in the compared to the compared to the compared to the Cep 1555 process to white the compared to the compared to the compared to compared to the compared to the compared to the compared to compared to the compared to the compared to the compared to compared to the compared to the compared to the compared to compared to the compared to the compared to the compared to compared to the compared to the compared to the compared to compared to the compared to the compared to the compared to compared to the compared to the compared to the compared to compared to the compared to the compared to the compared to the compared to the compa

Colour Key	Description
Preferred Option(s)	When compared to the baseline, there is a clear and obvious benefit. This option is viewed as more favourable than the other within the design envelope and as such is the preferred option within the design envelope.
Favourable	When compared to the baseline, there is a clear and obvious benefit.
Acceptable	When compared to the baseline, there is an equal benefit.
Rejected	When compared to the baseline, there is a clear and obvious dis-benefit. As such, these options are rejected.
Baseline/Previously Rejected	Option included for completeness but, in the case of previously rejected options, not subject to IOA.

Departure Envelope: SID RWY 22 EAST

Departure Env	rture Envelope: SID RWY 22 EAST									
Group	Impact	Level of Analysis	DO NOTHING BASELINE'	OPTION 0	OPTION 1	OPTION 2	OPTION 3			
Communities	Noise impact on health and quality of life	Initial Options Appraisal: Cualitative	Interms of today's operation, the EAST design evendepoe is entirely based around the existing CLN IE SIO. To provide the most representative use of the baselines exernant, be everified an analysic conducted on this SIO was based on the model tracks in 2019 as opposed to the literal track published not the UK AIP. Furthermore, to provide an authentic comparison, the modelling was carried out based on a SK climb gradient rather than 3.5% as per the published SIO. This provides a more realistic comparison when the provides are not realistic comparison when the provides are considered to the story of the provides are considered to the story of the st	Option 0 is a RNP1 reproduction of the current CLN LE SID which incorporates a 60 climb gradient. Based on the change sponsors analysis, Option 0 overfiles 4,608 people and a total of 2,025 residential buildings. When compared to the baseline scenario, in terms of population and residential buildings overflown, Option 0 performs worse and as such is deemed to be of a dis-benefit.	Option 1 is a RMP1 reproduction of the current CM1 ES D0 which incorporates a R6 celling adalent. This represents a higher climb gradient than the baseline scenario, meaning aircraft are able to climb higher, redding their noise impact on local communities. Based on the change sponsor analysis, Option 1 overfiles 2,317 people and a total of 10AV residential buildings. When compared to the baseline scenario, in terms of population and residential buildings overflow, Option 1 performs worse and as such is deemed to be of a dis-benefit.	Option 2 is an RNPT route which is based around the current CNLP also Which incorporates a NS climin gradient. This represents a higher climb gradient than the baseline scenario, meaning aircraft are able climb lighter, reducing their noise impact on local communities. Based on the change sponsors analysis, Option 2 overHies 2,505 people and a total of 1,458 residential buildings. When compared to the baseline scenario, in terms of population and residential buildings overhimmed to the properties of the propert	SID which incorporates a 8% climb gradient. This represents a higher			
Communities	Air Quality	Initial Options Appraisal: Qualitative	With regards to air quality, the existing CLN 15 SD does not directly overly any AQMs. Given the 6% climb gradient included within the Do Nothing scenario, the impact of aircraft below 1,000ft with regards to local fird quality is limited to areas within the immediate area surrounding the airport.	As per the baseline scenario, Option 0 does not directly overthy any AQMAM. Furthermore, a per CAP 1516 gana 1874, due to mixing and dispersion, the impact on air quality above 1,000f is likely to be insignificant. There are areas within the immediate area surrounding the airport that will be overflown below 1,000f, however, for safety reasons, this is unavoidable. Therefore, overall, when compared to the baseline scenario, this option is deemed to be of equal benefit.	As per the baseline scenario, Option 1 does not directly overfly any AGMAs. Furtherence, as per CAP 1516 gana 2791, due to mixing and dispersion, the impact on air quality above 1,000ft is likely to be injegificant. There are areas within the immediate area surrounding the airport that will be overflown below 1,000ft, however, for safety reasons, this is unavoidable. Therefore, overall, when compared to the baseline scenario, this option is deemed to be of equal benefit.	dispersion, the impact on air quality above 1,000ft is likely to be	As por the baseline scenario, Option 3 does not directly overthy any AQMAE. Furthermore, as per CAP 1016 jana 873, due to mining and dispersion, the impact on air quality above 1,000ft is likely to be inspligitiont. There are areas within the immediate area surrounding the airport that will be overfrom below 1,000ft, however, for safety reasons, this is unavoidable. Therefore, overall, when compared to the baseline scenario, this option is deemed to be of equal benefit.			
Wider Society	Greenhouse Gas impact	Initial Options Appraisal: Qualitative	current routes din not support continuous climb operations. It must be noted that the exact track length flown by aircraft may say slightly due to the nature of radar vection, although aircraft do all follow the extant procedures in a broader sense. Exactant procedures do not support optimal aircraft performance and therefore are predicted to have a greater environmental impact companied to proposed options. Within Stage 2 of the CAP 1816 process, there is no requirement for a change apposer to conduct quantitative fuel bour or emissions analysis. This will be covered in Stage 3. In order to make a comparison, track milage is used based on the theory that the shorter the track millage, the less greenhouse gases are emitted. In the case of the existing 18 SD, the model track length is 38.50km (20.79MM).	option D has been designed to support conflineuse climb operations, however, an element of radar vectoring may be required to manage aircraft separation distances. The track millage of Option 0 is 3-95 Sellon (12-95MM), Based on this, when compared to the baseline scenario, Option 0 is shorter and is therefore expected to earlie last greenbuse gases. As such this seen as beneficial. More in-depth analysis at Stage 3 is required to confirm the exact amounts of greenhouse gases released.	option 1. has been designed to support continuous climb operations, however, an element of radar vectoring may be required to manage aircraft separation distances. The track mileage of Option 1 is 36 Solkm (12.96NM), Based on this, when compared to the baseline scenario, Option 1 is 15 shorter and is therefore expected to emit less greenbuse gases. As such this is seen as beneficial. More in-depth analysis at Stage 3 is required to confirm the exact amounts of greenhouse gases released.	Option 2 has been designed to support continuous climb operations however, an element of radar vectoring may be required to manage aircraft separation distances. The track mileage of Option 2 is 37.3 km (20.05NM), Based on this, when compared to the baseline scenario, Option 2 is shorter and is therefore expected to emit less generous gases. As such it is seen as beneficial. More in-depth analysis at Stage 3 is required to confirm the exact amounts of greenhouse gases released.				
Wider Society	Capacity and resilience	Initial Options Appraisal: Qualitative	Maintaining extant procedures would maintain current capacity however, due to the reliance on ground-based navigational aids, resilience would be significantly affected, following their removal in December 2022.	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which subsequently leads to more predictable flight paths and fewer dealsy floth in air or on the ground). The reduction of the reliance on outdated ground based anyagatonal also will significantly increase operational resilience for airlines and operators.	The introduction of PBM routes is expected to deliver benefits by increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delays (both in air or on the ground). The reduction of the reliance on outdated ground based may applications of the properties of the properties of airlines and operators.	The introduction of PBM routes is expected to deliver benefits by increasing airspace capacity which subsequently leads to more predictable flight paths and fewer design both in air or on the ground. The reduction of the reliance on outdated ground based anaygational aids will significantly increase operational resilience for airlines and operators.	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delays both in air or on the ground). The reduction of the reliance on outdated ground based anyagational aid swill significantly increase operational resilience for airlines and operators.			
Wider Society	Tranquillity	initial Options Appraisal: Qualifative	As per CAP 1516. Aspendix B, Pare B 76, Change sponors are required to consider Transguillity with specific reference to ACM8s and National Paris only, unless other areas have been identified through community engagement. Although no specific areas were identified by community engagement, the change sponor has decided to include SSSs and Country Paris within the ICA analysis for maintain consistency with other Stage 2 documentation. The existing CAI B 150 does not overfly an ACM8s, National Paris or SSIs but it does overfly 1 Country Paris.	Option I does not overfly any ADNBs or National Parks. However, the has been identified that this option overfles. I Country Park will be that Seen identified that this option overfles. I Country Park will be 1 SSS. Overflight of these areas is expected to occur at a higher stitude, minimising the impact of aircraft noise and emissions on these areas. When compared to the baseline scenario, Option 0 is equal in that it does not overfly any ADNBs or National Parks. However, this option does overfly an equal number of country parks and more SSSis when compared to the baseline scenario.	Option 1 does not overfly any AONBN, National Parks or SSSN. However, It has been indefficed that this option overfles I Country Park. Overflight of these areas is expected to occur at a higher attitude, minimissing the impact of aircraft noise and emissions on these areas. When compared to the baseline scenario, Option 1 is equal in that it does not overfly any AONBN, National Parks or SSS. This option does overfly an equal number of country parks when compared to the baseline scenario.	option 2 does not overly an AONis or National Paris. However, it has been identified that this option overlies 1. Country Park and the 15550. Overflight of these areas is expected to occur a 1 higher attude, minimising the impact of aircraft noise and emissions on these areas. When compared to the baseline scenario, Option 2 is equal in that 1 does not overly any AONiso r National Paris. However, this option does overfly an equal number of country parks and morre SSSIs when compared to the baseline scenario.	option 3 does not overfly an AONBA, National Parks or SSSs. However, It has been indefficed that this option overflete is Country Park. Overflight of these areas is expected to occur at a higher attitude, minimising the impact of aircraft noise and emissions on these areas. When compared to the baseline scenario, Option 3 is equal in that it does not overfly any AONBA, National Parks of SSSS. This option does overfly an equal number of country parks when compared to the baseline scenario.			
Wider Society	Biodiversity	Initial Options Appraisal: Qualitative	Analysis conducted by the change sponsor shows that we existing operations at \$170 world'p of Wywithin the valcinity of designated sites in terms of Biodiversity operation, already are flying above 1,000ft when operation, already are flying above 1,000ft when operation, already see flying above 1,000ft when operating when the site. Our to the effects of mining and dispersion, there is a limited impact, in terms of the air quality applied to those sites. Shi when we have a simple site of the sites of the sit	The change sponsor has conducted work to understand where the designated size are around STA. At this stage, there is expected to be no change likely to affect blodiversity at these sizes, From an air cuality praspective, these sizes will be conflown at althrates with 2,000°T, App CAP 1516 Appendix B, Para 1874, because of desporsion and milliang, there is unsillely to be an impact to local air usuality from aircraft above 1,000°T, forthermore, AP 1516, Appendix B, Para 800 attacts that in general, aircraft active groups of the conflowership at they do not consider that the conflowership at they do not convolve ground-based infestanctor. The third sign 13 of the APC process by Subject Matter Saperts.	The change sponsor has conducted work to understand where the designated dist are around STA. At this stage, there is expected to be no change likely to affect bodivershy at these sites, From an audity prespective, these sites will be conformed at altrated above 1,000ft. As per CAP 1616 Appendix B, Para BTA, because of despersion and mixing, there is unlikely to be an impact on local air unality from aircraft above 1,000ft. Furthermore, CAP 1616, Appendix B, Para BDO states that in general, airspace change proposal will not have an impact on biodiversity as they do not understand the confidence of t	The change sponsor has conducted work to understand where the eliginated sites are around STA. At This stage, there is expected to be no change likely to affect blodivershy at these sites. From an audity perspective, these sites will be enrothern at altitudes above 1,000ft. As per CAP 1516 Appendix R. Para 87A, because of dispersion and mixing, there is unlikely to be an impact on local air suality from aircraft above 1,000ft. Furthermore, CAP 1516, Appendix R. Para 85D attacts that in general, airspace change proposal will not have an impact on biodiversity as they do not reviole grounds based infrastructure. The stadis, STM authorities that any potential impact to the designated sites around STM will be assessed in Stage 3 of the ACP process by Subject Matter Experts.	The change sponsor has conducted work to understand where the eiginated sites are around STA. At This sign, there is expected to be no change likely to affect blodiversity at these sites. From an air vaulity perspective, these sites will be conformed at altitude so 1,000°f. As per CAP 1516 Appendix B. Pare 1874, because of signersin and maining, there is unlikely to be an impact no local air vaulity from aircraft above 1,000°f. Furthermore, CAP 1516, Appendix B. Pare 3800 states that in general aircraft exhange proposal will not have an impact on biodiversity as they do not revolve ground based inforsatroctor. Part said, STA alknowledges that any potential impact to the designated sites around STN will be assessed in Stage 3 of the ACP process by Sobject Matter Experts.			
General Aviation	Access	Initial Options Appraisal: Qualitative	No change to existing airspace arrangements. GA users of STN will maintain their current level of access under extant operational arrangements.	No change to the existing airspace arrangements (within the baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement pertaining to GA access are reviewed prior to implementation to ensure their continued validity.	No change to the existing airspace arrangements (within the baseline scenario) are expected as a consequence of this ACP. However, it, is recommended that all VRPs and existing Letters of Agreement pertaining to GA access are reviewed prior to implementation to ensure their continued validity.	No change to the existing airspace arrangements (within the baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement pertaining to GA access are reviewed prior to mplementation to ensure their continued validity.	No change to the existing airspace arrangements (within the baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement pertaining to GA access are reviewed prior to mplementation to ensure their continued validity.			
General Aviation / commercial airlines	Economic impact from increased effective capacity	Initial Options Appraisal: Qualitative	No increase to effective approximation and property continued use of extending the continued use of extending the continued use of extending the continued to t	The introduction PBN is oppeted to deliver benefits by increasing airspace capacity which in turn will lead to more predictable flight paths and fewer delays (both in the air or on the ground). This is expected to facilitate consonic benefit to airlines by increasing the frequency of air transport movements, increasing passenger numbers and increasing cargo tomage carried. It is not proportionate for London Sansted Airport to predict the precise economic benefit to commercial airlines using the new procedures as any increase in individual airline capacity will depend on private commercial business characteristics. It is not proportionate for London Sansted Airport to assess the economic benefit to the Cardonnumly however they are expected to benefit from incention the Cardonnumly however they are expected to benefit thom incention the cardonnumly however they are expected to benefit thom include all or reduced on-ground and in-air delays for all users.	The introduction PIDN is expected to deliver benefits by increasing arrapace capacity which in turn will lead to more predictable flight paths and fewer delays (both in the air or on the ground). This is expected to facilities to comornic benefit to airlines by increasing the frequency of air transport movements, increasing spasenger numbers and increasing crays to nange carried. It is not proportionate for London Stanted Airport to predict the precise economic benefit to commercial airlines using the new procedures as any increase in individual airline capacity will depend on private commercial business characteristics. It is not proportionate for London Stanted Airport to assess the economic benefit to the Community however they are expected to benefit from increase predictability of commercial airline movements which is expected to lead to reduced on ground and in air delays for all users.	The introduction PBN is expected to deliver benefits by increasing the airspace capacity which in turn will lead to more predictable paths and fewer delays (both in the air or on the ground). This is expected to facilities comonic benefit to airlines by increasing the frequency of air transport movements, increasing passenger numbers and increasing crays to nange carried. It is not proportionate for London Stanted Airport to predict the precise economic benefit to commercial airlines using the new procedures as any increase in individual airline capacity will depend on private commercial business characteristics. It is not proportionate for London Stanted Airport to assess the economic benefit to for London Stanted Airport to assess the economic benefit to fine for London Stanted Airport to assess the economic benefit to the Community however the are expected to benefit to the Community however the are expected to benefit to reduce of the community of the commu	The introduction PIBN is expected to deliver benefits by increasing largace capacity which in turn will lead to more predictable flight paths and fewer delays (both in the air or on the ground). This is expected to facilities to comonic benefit to affines by increasing the frequency of air transport movements, increasing spasenger numbers and increasing crays to ronage carried. It is not proportionate for London Stansted Airport to predict the precise economic benefit to commercial airlines using the new procedures as any increase in individual airline capacity will depend on private commercial business brandactifistics. It is not proportionate for London Stansted Airport to assess the economic benefit to the Community however they are expected to benefit from increase or predictability of commercial airline movements which is expected to lead to reduced on-ground and in-air delays for all users.			

Group	Impact	Level of Analysis	DO NOTHING BASELINE'	ORTION O	OPTION 1	OPTION 2	OPTION 3
General Aviation /	Fuel burn	Initial Options Appraisal:	The existing STN procedures do not support	Option 0 does support continuous climb operations, meaning that	Option 1 does support continuous climb operations, meaning that	Option 2 does support continuous climb operations, meaning that	Option 3 does support continuous climb operations, meaning that
commercial airlines		Qualitative	continuous climb operations. Fuel burn is expected to	aircraft would not be required to level off during departure,	aircraft would not be required to level off during departure,	aircraft would not be required to level off during departure,	aircraft would not be required to level off during departure,
			be greater due to tactical ATC intervention and	reducing the overall amount of fuel burnt. There is no requirement	reducing the overall amount of fuel burnt. There is no requirement	reducing the overall amount of fuel burnt. There is no requirement	reducing the overall amount of fuel burnt. There is no requirement
			periods of level flight in the departure and approach	within Stage 2 of the CAP1616 process to quantify fuel burn, this will	within Stage 2 of the CAP1616 process to quantify fuel burn, this will	within Stage 2 of the CAP1616 process to quantify fuel burn, this will	within Stage 2 of the CAP1616 process to quantify fuel burn, this will
			phase. Furthermore, in the case of the modal path of the existing CLN 1E SID, the track length is 38.50km	be conducted in Stage 3. Therefore, to enable a comparison, the logic applied is that the shorter the track length, the less fuel is	be conducted in Stage 3. Therefore, to enable a comparison, the logic applied is that the shorter the track length, the less fuel is	be conducted in Stage 3. Therefore, to enable a comparison, the logic applied is that the shorter the track length, the less fuel is	be conducted in Stage 3. Therefore, to enable a comparison, the logic applied is that the shorter the track length, the less fuel is
			(20.79NM).	burnt, With regards to this option, it is 36,96km (19,96NM) long.	burnt. With regards to this option, it is 36.96km (19.96NM) long.	burnt. With regards to this option, it is 37.14km (20.05NM) long.	burnt, With regards to this option, it is 37.03km (20.00NM) long.
				When compared to the baseline scenario, Option 0 is shorter and at	When compared to the baseline scenario, Option 1 is shorter and at	When compared to the baseline scenario, Option 2 is shorter and at	When compared to the baseline scenario, Option 3 is shorter and at
				this stage it assumed will require a smaller amount of fuel burn,	this stage it assumed will require a smaller amount of fuel burn,	this stage it assumed will require a smaller amount of fuel burn,	this stage it assumed will require a smaller amount of fuel burn,
				therefore, this option beneficial in terms of fuel burn. More in-depth analysis will be carried out in Stage 3 to confirm.	therefore, this option beneficial in terms of fuel burn. More in-depth analysis will be carried out in Stage 3 to confirm.	therefore, this option beneficial in terms of fuel burn. More in-depth analysis will be carried out in Stage 3 to confirm.	therefore, this option beneficial in terms of fuel burn. More in-depth analysis will be carried out in Stage 3 to confirm.
				analysis will be carried but in stage 5 to commit.	analysis will be carried out in stage 5 to commin.	analysis will be carried out in stage 5 to commin.	analysis will be carried out in stage 5 to commin.
Commercial airlines	Training costs	Initial Options Appraisal:	No additional training predicted.	It is expected that no extra Pilot/Crew training will be required to	It is expected that no extra Pilot/Crew training will be required to	It is expected that no extra Pilot/Crew training will be required to	It is expected that no extra Pilot/Crew training will be required to
		Qualitative		enable pilots to fly the new PBN procedures. PBN is a common standard of navigation throughout the world. It is not proportionate	enable pilots to fly the new PBN procedures. PBN is a common standard of navigation throughout the world. It is not proportionate	enable pilots to fly the new PBN procedures. PBN is a common standard of navigation throughout the world. It is not proportionate	enable pilots to fly the new PBN procedures. PBN is a common standard of navigation throughout the world. It is not proportionate
				for London Stansted Airport to assess on going competency for	for London Stansted Airport to assess on-going competency for	for London Stansted Airport to assess on-going competency for	for London Stansted Airport to assess on going competency for
				individual commercial airlines due to the significant variables	individual commercial airlines due to the significant variables	individual commercial airlines due to the significant variables	individual commercial airlines due to the significant variables
				involved e.g. number of pilots, airline policies on training (simulator	involved e.g. number of pilots, airline policies on training (simulator	involved e.g. number of pilots, airline policies on training (simulator	involved e.g. number of pilots, airline policies on training (simulator
				versus live flight training), fleet types, and variations in on-board equipment etc.	versus live flight training), fleet types, and variations in on-board equipment etc.	versus live flight training), fleet types, and variations in on-board equipment etc.	versus live flight training), fleet types, and variations in on-board equipment etc.
				T. D. P. C.	- a - F		- dark
Commercial airlines	Other costs	Initial Options Appraisal: Qualitative	It is not proportionate for STN to assess potential other costs for commercial airlines - there may be	Other costs to commercial airlines may include updates to Flight Management Systems (FMS), navigation databases and operating	Other costs to commercial airlines may include updates to Flight Management Systems (FMS), navigation databases and operating	Other costs to commercial airlines may include updates to Flight Management Systems (FMS), navigation databases and operating	Other costs to commercial airlines may include updates to Flight Management Systems (FMS), navigation databases and operating
			costs associated with maintaining legacy systems to	procedures, increased pilot hire costs versus training etc. It is not	procedures, increased pilot hire costs versus training etc. It is not	procedures, increased pilot hire costs versus training etc. It is not	procedures, increased pilot hire costs versus training etc. It is not
			continue flying conventional navigation but there are	proportionate for STN to assess the 'other costs' to commercial	proportionate for STN to assess the 'other costs' to commercial	proportionate for STN to assess the 'other costs' to commercial	proportionate for STN to assess the 'other costs' to commercial
			too many variables (e.g., aircraft types, on-board system capability etc.) to consider these effectively.	airlines of flying PBN procedures due to significant variables; some airlines may already be 'PBN ready' whereas others may not.	airlines of flying PBN procedures due to significant variables; some airlines may already be 'PBN ready' whereas others may not.	airlines of flying PBN procedures due to significant variables; some airlines may already be 'PBN ready' whereas others may not.	airlines of flying PBN procedures due to significant variables; some airlines may already be 'PBN ready' whereas others may not.
					· · · · · · · · · · · · · · · · · · ·		
Airport / Air navigation service	Infrastructure costs	Initial Options Appraisal: Qualitative	No additional infrastructure is required at STN to maintain extant conventional procedures however	All options relate to the implementation of PBN and no additional infrastructure is required. The introduction of PBN reduces the	All options relate to the implementation of PBN and no additional infrastructure is required. The introduction of PBN reduces the	All options relate to the implementation of PBN and no additional infrastructure is required. The introduction of PBN reduces the	All options relate to the implementation of PBN and no additional infrastructure is required. The introduction of PBN reduces the
provider			maintaining access to ground-based equipment	reliance on infrastructure, in particular ground-based navigation aids	reliance on infrastructure, in particular ground-based navigation aids		reliance on infrastructure, in particular ground-based navigation aids
			(currently operated by NERL) may be prohibitively	are no longer needed. The foundation for PBN is RNAV or RNP;	are no longer needed. The foundation for PBN is RNAV or RNP;	are no longer needed. The foundation for PBN is RNAV or RNP;	are no longer needed. The foundation for PBN is RNAV or RNP;
			expensive, should this commercial option be implemented.	aircraft arriving and departing London Stansted Airport using the proposed RNAV/RNP procedures will do so based on their	aircraft arriving and departing London Stansted Airport using the proposed RNAV/RNP procedures will do so based on their	aircraft arriving and departing London Stansted Airport using the proposed RNAV/RNP procedures will do so based on their	aircraft arriving and departing London Stansted Airport using the proposed RNAV/RNP procedures will do so based on their
			The state of the s	performance-based navigation capability.	performance-based navigation capability.	performance-based navigation capability.	performance-based navigation capability.
Airport / Air	Operational costs	Initial Options Appraisal:	No change to operational costs is attributable to	Air Traffic Control at STN is contracted out to a third-party	Air Traffic Control at STN is contracted out to a third-party	Air Traffic Control at STN is contracted out to a third-party	Air Traffic Control at STN is contracted out to a third-party
navigation service		Qualitative	maintaining the extant procedures.	organisation. This existing commercial contract between STN and	organisation. This existing commercial contract between STN and	organisation. This existing commercial contract between STN and	organisation. This existing commercial contract between STN and
provider				their chosen ANSP is considered to be an ongoing cost. ICAO describe 'Improved Operational Efficiency' as a benefit delivered by	their chosen ANSP is considered to be an ongoing cost. ICAO describe 'improved Operational Efficiency' as a benefit delivered by	their chosen ANSP is considered to be an ongoing cost. ICAO describe 'Improved Operational Efficiency' as a benefit delivered by	their chosen ANSP is considered to be an ongoing cost. ICAO describe 'Improved Operational Efficiency' as a benefit delivered by
							the introduction of PBN. In general, London Stansted Airport predict
				that operational efficiency will improve and that there may be	that operational efficiency will improve and that there may be	that operational efficiency will improve and that there may be	that operational efficiency will improve and that there may be
				potential for a net reduction in operational costs.	potential for a net reduction in operational costs.	potential for a net reduction in operational costs.	potential for a net reduction in operational costs.
Airport / Air navigation service	Deployment costs	Initial Options Appraisal: Qualitative	No Deployment costs applicable to extant procedures.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and
provider				their chosen ANSP is considered to be an ongoing cost.	their chosen ANSP is considered to be an ongoing cost.	their chosen ANSP is considered to be an ongoing cost.	their chosen ANSP is considered to be an ongoing cost.
Safety Assessment	Safety Assessment	Initial Options Appraisal:	The baseline assumption is that current operations at	Possible conflict with London Luton, London City, London Southend	Possible conflict with London Luton, London City, London Southend	Possible conflict with London Luton, London City, London Southend	Possible conflict with London Luton, London City, London Southend
Surety Added Sinene	Surety Posessinent	Qualitative	STN are safe including use of the extant conventional	and Heathrow traffic was identified. Procedure design and ATC	and Heathrow traffic was identified. Procedure design and ATC	and Heathrow traffic was identified. Procedure design and ATC	and Heathrow traffic was identified. Procedure design and ATC
			procedures. Following the removal of ground-based	tactical intervention could act as mitigations in these instances but	tactical intervention could act as mitigations in these instances but	tactical intervention could act as mitigations in these instances but	tactical intervention could act as mitigations in these instances but
			navigational aids supporting the existing SIDs, aircraft departing STN would continuously require radar	could increase complexity, leading to a possible increase in ATCO workload. Leading on from this, possible unknown interaction with	could increase complexity, leading to a possible increase in ATCO workload. Leading on from this, possible unknown interaction with	could increase complexity, leading to a possible increase in ATCO workload. Leading on from this, possible unknown interaction with	could increase complexity, leading to a possible increase in ATCO workload. Leading on from this, possible unknown interaction with
			vectoring (should CAP1781 not be implemented),	the wider enroute network is acknowledged, but at this time, this	the wider enroute network is acknowledged, but at this time, this	the wider enroute network is acknowledged, but at this time, this	the wider enroute network is acknowledged, but at this time, this
			resulting in a possible increase in ATCO workload.	cannot be determined.	cannot be determined.	cannot be determined.	cannot be determined.
				In addition, it was identified that due to the dispersion of traffic departing STN, a degree of tactical intervention may be required to	In addition, it was identified that due to the dispersion of traffic departing STN, a degree of tactical intervention may be required to	In addition, it was identified that due to the dispersion of traffic departing STN, a degree of tactical intervention may be required to	In addition, it was identified that due to the dispersion of traffic departing STN, a degree of tactical intervention may be required to
				maintain safe separations standards. The design process may also	maintain safe separations standards. The design process may also	maintain safe separations standards. The design process may also	maintain safe separations standards. The design process may also
				help to mitigate this hazard to 'as low as reasonably practicable'. This	help to mitigate this hazard to 'as low as reasonably practicable'. This	help to mitigate this hazard to 'as low as reasonably practicable'. This	help to mitigate this hazard to 'as low as reasonably practicable'. This
				is very specific to exact aircraft routing combinations.	is very specific to exact aircraft routing combinations.	is very specific to exact aircraft routing combinations.	is very specific to exact aircraft routing combinations.
		Summary of Analysis	The 'Do Nothing' scenario in relation to this &CD is not	When compared to the 'Do Nothing baseline' scenario. Option 0 is	When compared to the 'Do Nothing baseline' scenario. Ontion 1 is	When compared to the 'Do Nothing baseline' scenario. Ontion 7 is	When compared to the 'Do Nothing baseline' scenario Ontion 3 is
		Summary of Allalysis	a viable option as it does not provide a sustainable	worse in terms of noise impact and tranquillity but provides benefits	worse in terms of noise impact but provides benefits in relation to	worse in terms of noise impact and tranquillity but provides benefits	worse in terms of noise impact but provides benefits in relation to
			solution in terms of airspace modernisation and is	in relation to greenhouse gas emissions, fuel burn,	greenhouse gas emissions, fuel burn, capacity/resilience and the	in relation to capacity/resilience and the economic impact of	capacity/resilience and the economic impact of effective capacity.
			unviable following the removal of the VOR beacons in December 2022, which would have a significant	capacity/resilience and the economic impact of effective capacity. It must be noted that this option includes a 6% climb gradient, which is	economic impact of effective capacity. All other criteria have been	effective capacity. It must be noted that this option includes a 8% climb gradient, which is greater than the baseline scenario, resulting	All other criteria have been assessed as providing equal benefit othe than noise impact, emissions and fuel burn due to the larger track
			impact on capacity and resilience. The existing SIDs do	equal to the baseline scenario, but lower than the remaining options		in fewer people/residential buildings overflown compared to a 6%	length when compared to the existing CLN 1E SID. It is not possible
			not support continuous climb operations, which leads	within this design envelope. This option performs worse than the	compared to the existing CLN 1E SID. It is not possible to fully	option (Option 0), equal to the baseline scenario, but lower than the	to fully determine the safety implications of this specific option. The
			to a greater volume of fuel burn, emissions and noise	baseline scenario with regards to noise impact, emissions,	determine the safety implications of this specific option. The change	remaining options within this design envelope. This option performs	change sponsor has identified possible conflicts with some routes
			at lower levels. In terms of Tranquillity, Biodiversity, GA Access and economic impact, the 'Do Nothing	tranquillity and fuel burn but provides an equal benefit on the remainder of the criteria assessed. Having said that, at this time, it is	sponsor has identified possible conflicts with some routes operated by other nearby airports, but the exact nature of these conflicts is	worse than the baseline scenario with regards to noise impact, emissions, tranquillity and fuel burn but provides an equal benefit or	operated by other nearby airports, but the exact nature of these conflicts is unclear at this stage. Further analysis and engagement is
			baseline' provides minimal/no change to today's		unclear at this stage. Further analysis and engagement is required in	the remainder of the criteria assessed. Having said that, at this time,	required in Stage 3/4 of the CAP 1616 process to determine this.
			operations. Furthermore, there are very limited costs	option. The change sponsor has identified possible conflicts with	Stage 3/4 of the CAP 1616 process to determine this. Furthermore,	it is not possible to fully determine the safety implications of this	Furthermore, this option has been assessed as a stand-alone option
			incurred as a result of this scenario. From a safety	some routes operated by other nearby airports, but the exact nature		specific option. The change sponsor has identified possible conflicts	rather than as a set of design options as part of a wider system.
			perspective, it is assumed that current STN operations are safe. Following the removal of the VORs, it is	of these conflicts is unclear at this stage. Further analysis and	a set of design options as part of a wider system. Additional analysis is required in Stage 3 to determine the cumulative impact of this	with some routes operated by other nearby airports, but the exact nature of these conflicts is unclear at this stage. Further analysis and	Additional analysis is required in Stage 3 to determine the cumulative impact of this option when compared to all the other
			acknowledged that ATCO workload may increase due	determine this. Furthermore, this option has been assessed as a	option when compared to all the other options.	engagement is required in Stage 3/4 of the CAP 1616 process to	options.
			to the enduring requirement for radar vectoring.	stand-alone option rather than as a set of design options as part of a	Based on performance in the IOA, Option 1 is selected as the	determine this. Furthermore, this option has been assessed as a	Based on performance in the IOA, Option 3 is assessed as Acceptable
				wider system. Additional analysis is required in Stage 3 to determine	Preferred Option within the RW 22 EAST design envelope. When	stand-alone option rather than as a set of design options as part of a	as it overflies more people and residential buildings than Options 1
				the cumulative impact of this option when compared to all the other	compared to the other options, Option 1 overflies the least number of people and residential buildings.	wider system. Additional analysis is required in Stage 3 to determine the cumulative impact of this option when compared to all the other	and 2 but less than Option 0.
				Based on performance within the IOA, this option has been rejected	- page and addition durings.	options.	
				as it overflies the greatest number of people and residential		Based on performance within the IOA, this option is assessed as	
				buildings when compared to all the other options within this envelope.		Favourable as it overflies less people and residential buildings than Option 1 but more than the remaining options.	
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	IOA	Criteria	Evaluation	
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Colour Key	Description
Preferred Option(s)	When compared to the baseline, there is a clear and
	obvious benefit. This option is viewed as more
	favourable than the other within the design envelope
	and as such is the preferred option within the design
	envelope.
Favourable	When compared to the baseline, there is a clear and
	obvious benefit.
Acceptable	When compared to the baseline, there is an equal
· ·	benefit.
	When compared to the baseline, there is a clear and
Rejected	obvious dis-benefit. As such, these options are
	rejected.

Group	Impact	Level of Analysis	DO NOTHING BASELINE'	OPTION 0	OPTION 1	OPTION 2	OPTION 3
		Baseline/Previously Rejected	Option included for completeness but, in the case of				

۰	Envelone:	SID	D\A/V	22	SOL	ITH	FAST

Departure Env	ture Envelope: SID RWY 22 SOUTH EAST										
Group	Impact	Level of Analysis	DO NOTHING BASELINE	OPTION 0	OPTION 1	OPTION 2	OPTION 3	OPTION 4	OPTION 5		
Communities	Noise impact on health and quality of life	Initial Options Appraisal:	In terms of today's operation, the SOUTH EAST design	Option 0 is an RNAV replication of the current DET1R SID which incorporates a 6% climb gradient. Based on the change sponsors	Option 1 is an RNAV replication of the current DET1R SID which	Option 2 is an RNP1 replication of the current DET1R SID which	Option 3 is an RNP1 route which incorporates a 8% climb gradient. This represents a higher climb gradient than the baseline scenario,	Option 4 is an RNP1 route which incorporates a 8% climb gradient.	Option 5 is an RNP1 route which incorporates a 8% climb gradient.		
	quanty of file	quantative	SID. To provide the most representative use of the	analysis, Option 0 overflies 29,878 people and a total of 13,198	incorporates a 8% climb gradient. This represents a higher climb gradient than the baseline scenario, meaning aircraft are able to	incorporates a 8% climb gradient. This represents a higher climb gradient than the baseline scenario, meaning aircraft are able to	meaning aircraft are able to climb higher, reducing their noise impact	This represents a higher climb gradient than the baseline scenario, meaning aircraft are able to climb higher, reducing their noise impact	This represents a higher climb gradient than the baseline scenario, meaning aircraft are able to climb higher, reducing their noise impact		
			baseline scenario, the overflight analysis conducted on	residential buildings. When compared to the baseline scenario, in terms of population and residential buildings overflown, Option 0	climb higher, reducing their noise impact on local communities. Based on the change sponsors analysis. Option 1 overflies 10.542	climb higher, reducing their noise impact on local communities. Based on the change sponsors analysis, Option 2 overflies 10,224	on local communities. Based on the change sponsors analysis, Option 3 overflies 3,275 people and a total of 1,502 residential buildings.	on local communities. Based on the change sponsors analysis, Option 4 overfiles 12,061 people and a total of 5,534 residential buildings.	on local communities. Based on the change sponsors analysis, Option 5 overfiles 3.968 people and a total of 1.759 residential buildings.		
			this SID was based on the modal tracks in 2019 as opposed to the lateral track published on the UK AIP.	performs worse and as such is deemed as a dis-benefit.	people and a total of 4,500 residential buildings. When compared to the baseline scenario, in terms of population and residential building	people and a total of 4,300 residential buildings. When compared to s the baseline scenario, in terms of population and residential buildings	Sovernies 5,275 people and a total of 1,502 residential buildings. When compared to the baseline scenario, in terms of population and residential buildings overflown, Option 3 performs better and as such	4 overnies 12,061 people and a total of 3,534 residential buildings. When compared to the baseline scenario, in terms of population and residential buildings overflown, Option 4 performs worse and as such	Sovernies 3,568 people and a total of 1,759 residential buildings. When compared to the baseline scenario, in terms of population and residential buildings overflown, Option 5 performs better and as such		
			Furthermore, to provide an authentic comparison, the		the baseline scenario, in terms of population and residential building	s the baseline scenario, in terms of population and residential buildings	residential buildings overflown, Option 3 performs better and as such	residential buildings overflown, Option 4 performs worse and as such	residential buildings overflown, Option 5 performs better and as such		
			modelling was carried out based on a 6% climb gradient rather than 3.3% as per the published SID.		overflown, Option 1 performs worse and as such is deemed as a dis- benefit.	overflown, Option 2 performs better and as such is beneficial.	is beneficial.	is deemed as a dis-benefit.	is beneficial.		
			This provides a more realistic comparison when								
			compared to today's operation. It must also be acknowledged that an element of radar vectoring is								
			required to maintain safe separation distances. Based on the above, it has been determined that the existing DET SID overflies a 10,515 people and a total of 4,443 residential buildings.								
			Based on the above, it has been determined that the								
			of 4,443 residential buildings.								
Communities	Air Quality	Initial Options Appraisal:	With regards to air quality, the existing DET 1R SID does not directly overfly any ADMAs. Given the 6%	As per the baseline scenario, Option 0 does not directly overfly any	As per the baseline scenario, Option 1 does not directly overfly any AQMAs. Furthermore, as per CAP 1616 (para B74), due to mixing an	As per the baseline scenario, Option 2 does not directly overfly any	As per the baseline scenario, Option 3 does not directly overfly any	As per the baseline scenario, Option 4 does not directly overfly any	As per the baseline scenario, Option 5 does not directly overfly any AQMAs. Furthermore, as per CAP 1616 (para 874), due to mixing and		
		Qualitative		AQMAs. Furthermore, as per CAP 1616 (para 874), due to mixing and dispersion, the impact on air quality above 1,000ft is likely to be	AQMAs. Furthermore, as per CAP 1616 (para B74), due to mixing an dispersion, the impact on air quality above 1,000ft is likely to be	d AQMAs. Furthermore, as per CAP 1616 (para 874), due to mining and dispersion, the impact on air quality above 1,000ft is likely to be insignificant. There are areas within the immediate area surrounding	AQMAs. Furthermore, as per CAP 1616 (para 874), due to mixing and dispersion, the impact on air quality above 1,000ft is likely to be	AQMAs. Furthermore, as per CAP 1616 (para 874), due to mixing and dispersion, the impact on air quality above 1,000ft is likely to be insignificant. There are areas within the immediate area surrounding	AQMAs. Furthermore, as per CAP 1616 (para 874), due to mixing and dispersion, the impact on air quality above 1,000ft is likely to be		
			scenario, the impact of aircraft below 1,000ft with	insignificant. There are areas within the immediate area surrounding	insignificant. There are areas within the immediate area surrounding	insignificant. There are areas within the immediate area surrounding	insignificant. There are areas within the immediate area surrounding	insignificant. There are areas within the immediate area surrounding	dispersion, the impact on air quality above 1,000ft is likely to be insignificant. There are areas within the immediate area surrounding		
			regards to local air quality is limited to areas within the immediate area surrounding the airport.	the airport that will be overflown below 1,000ft, however, for safety reasons, this is unavoidable. Therefore, overall, when compared to	reasons, this is unavoidable, but given the increased climb gradient	the airport that will be overflown below 1,000ft, however, for safety reasons, this is unavoidable, but given the increased climb gradient	the airport that will be overflown below 1,000ft, however, for safety reasons, this is unavoidable, but given the increased climb gradient	rearons, this is unaunidable, but along the increased climb gradient	the airport that will be overflown below 1,000ft, however, for safety reasons, this is unavoidable, but given the increased climb gradient		
				the baseline scenario, this option is deemed to be of equal benefit.	associated with this option, overflight below 1,000ft is mitigated further. Therefore, overall, when compared to the baseline scenario,	associated with this option, overflight below 1,000ft is mitigated further. Therefore, overall, when compared to the baseline scenario,	associated with this option, overflight below 1,000ft is mitigated further. Therefore, overall, when compared to the baseline scenario,	associated with this option, overflight below 1,000ft is mitigated further. Therefore, overall, when compared to the baseline scenario,	associated with this option, overflight below 1,000ft is mitigated further. Therefore, overall, when compared to the baseline scenario,		
					this option is deemed to be of equal benefit.	this option is deemed to be of equal benefit.	this option is deemed to be of equal benefit.	this option is deemed to be of equal benefit.	this option is deemed to be of equal benefit.		
Wider Society	Greenhouse Gas impact	Initial Options Appraisal:	Current routes do not support continuous climb	Option 0 has been designed to support continuous climb operations, however, an element of radar vectoring may still be required to	Option 1 has been designed to support continuous climb operations, however, an element of radar vectoring may still be required to	Option 2 has been designed to support continuous climb operations, however, an element of radar vectoring may be required to manage	Option 3 has been designed to support continuous climb operations, however, an element of radar vectoring may be required to manage	Option 4 has been designed to support continuous climb operations, however, an element of radar vectoring may be required to manage	Option 5 has been designed to support continuous climb operations, however, an element of radar vectoring may be required to manage		
		Qualitative	operations. It must be noted that the exact track length flown by aircraft may vary slightly due to the nature of	however, an element of radar vectoring may still be required to manage aircraft separation distances.	however, an element of radar vectoring may still be required to manage aircraft separation distances.	however, an element of radar vectoring may be required to manage aircraft separation distances.	however, an element of radar vectoring may be required to manage aircraft separation distances.	however, an element of radar vectoring may be required to manage aircraft separation distances.	however, an element of radar vectoring may be required to manage aircraft separation distances.		
			radar vectoring, although aircraft do all follow the	The track mileage of Option 0 is 29.84km (16.11NM). Based on this,	The track mileage of Option 1 is 29.84km (16.11NM). Based on this,	The track mileage of Option 2 is 29.88km (16.13NM). Based on this,	The track mileage of Option 3 is 30.65km (16.55NM). Based on this,	The track mileage of Option 4 is 30.36km (16.39NM). Based on this,	The track mileage of Option 5 is 30.39km (16.41NM). Based on this,		
			extant procedures in a broader sense. Extant	when compared to the baseline scenario, Option 0 is shorter and is	when compared to the baseline scenario, Option 1 is shorter and is	when compared to the baseline scenario, Option 2 is shorter and is	when compared to the baseline scenario, Option 3 is shorter and is	when compared to the baseline scenario, Option 4 is shorter and is	when compared to the baseline scenario, Option 5 is shorter and is		
			procedures do not support optimal aircraft performance and therefore are predicted to have a	therefore expected to emit less greenhouse gases. As such, this is seen as beneficial. More in-depth analysis at Stage 3 is required to	therefore expected to emit less greenhouse gases. As such, this is seen as beneficial. More in-depth analysis at Stage 3 is required to	therefore expected to emit less greenhouse gases. As such, this is seen as beneficial. More in-depth analysis at Stage 3 is required to	therefore expected to emit less greenhouse gases. As such, this is seen as beneficial. More in-depth analysis at Stage 3 is required to	therefore expected to emit less greenhouse gases. As such, this is seen as a beneficial. More in-depth analysis at Stage 3 is required to	therefore expected to emit less greenhouse gases. As such, this is seen as a beneficial. More in-depth analysis at Stage 3 is required to		
			greater environmental impact compared to proposed	confirm the exact volumes of greenhouse gases released.	confirm the exact volumes of greenhouse gases released.	confirm the exact volumes of greenhouse gases released.	confirm the exact volumes of greenhouse gases released.	confirm the exact volumes of greenhouse gases released.	confirm the exact volumes of greenhouse gases released.		
			Within Stage 2 of the CAP 1616 process, there is no								
			requirement for a change sponsor to conduct								
			quantitative fuel burn or emissions analysis. This will be covered in Stage 3. In order to make a comparison,								
			track milage is used based on the theory that the								
			shorter the track mileage, the less greenhouse gases are emitted. In the case of the existing DET IR SID, the modal track length is 31.34km (16.92NM).								
			modal track length is 31.34km (16.92NM).								
Wider Society	Capacity and resilience	Initial Options Appraisal:	Maintaining extant procedures would maintain current capacity however, due to the reliance on ground-based	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which subsequently leads to more	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which subsequently leads to more	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which subsequently leads to more	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which subsequently leads to more	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which subsequently leads to more	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which subsequently leads to more		
		Quantative	navigational aids, resilience would be significantly affected, following their removal in December 2022.	predictable flight paths and fewer delays (both in air or on the	predictable flight paths and fewer delays (both in air or on the	predictable flight paths and fewer delays (both in air or on the	predictable flight paths and fewer delays (both in air or on the	predictable flight paths and fewer delays (both in air or on the	predictable flight paths and fewer delays (both in air or on the		
			affected, following their removal in December 2022.	ground). The reduction of the reliance on outdated ground based navigational aids will significantly increase operational resilience for	ground). The reduction of the reliance on outdated ground based	ground). The reduction of the reliance on outdated ground based navigational aids will significantly increase operational resilience for	ground). The reduction of the reliance on outdated ground based	ground). The reduction of the reliance on outdated ground based navigational aids will significantly increase operational resilience for	ground). The reduction of the reliance on outdated ground based navigational aids will significantly increase operational resilience for		
				airlines and operators.	navigational aids will significantly increase operational resilience for airlines and operators.	airlines and operators.	navigational aids will significantly increase operational resilience for airlines and operators.	airlines and operators.	airlines and operators.		
Wider Society	Tranquillity	Initial Options Appraisal:	As per CAP 1616, Appendix B, Para B76, change sponsors are required to consider Tranquility with	Option 0 does not overfly any AONBs or National Parks. However, it	Option 1 does not overfly any AONBs. National Parks or SSSIs.	Option 2 does not overfly any AONBs. National Parks or SSSIs.	Option 3 does not overfly any AONBs. National Parks or SSSIs.	Option 4 does not overfly any ADNBs or National Parks. However, it	Option 5 does not overfly any AONBs. National Parks or SSSIs.		
Wider Society	Tranquinty	Qualitative	sponsors are required to consider Tranquillity with	hand have the self-self-self-self-self-self-self-self-	Harrison to have been identified that this entire according to Paragraph	Commence to be a facility of the state of th	Common to have been determined about the contract and the A. Common.	have been defended and about their continuous annualities of Comments Bank annual the A	Commence to be a base before the settle of the settle settle and the A. Commence		
			sponsors are required to consider Tranquillity with specific reference to ADNBs and National Parks only, unless other areas have been identified through	1 SSSI. Overflight of these areas is expected to occur at a higher altitude, minimising the impact of aircraft noise and emissions on	Park. Overflight of these areas is expected to occur at a higher altitude, minimising the impact of aircraft noise and emissions on	Park. Overflight of these areas is expected to occur at a higher altitude, minimising the impact of aircraft noise and emissions on	Park. Overflight of these areas is expected to occur at a higher altitude, minimising the impact of aircraft noise and emissions on	SSSI. Overflight of these areas is expected to occur at a higher altitude, minimising the impact of aircraft noise and emissions on	Park. Overflight of these areas is expected to occur at a higher altitude, minimising the impact of aircraft noise and emissions on		
			community engagement. Although no specific areas	these areas. When compared to the baseline scenario, Option 0 is	these areas. When compared to the baseline scenario, Option 1 is	these areas. When compared to the baseline scenario, Option 3 is	these areas. When compared to the baseline scenario, Option 3 is	these areas. When compared to the baseline scenario, Option 4 is	these areas. When compared to the baseline scenario, Option 5 is		
			were identified by community engagement, the change	equal in that it does not overfly any AONBs or National Parks. However, this option does overfly amore country parks and more	equal in that it does not overfly any AONBs, National Parks or SSSIs. This option does overfly an equal number of country parks when	equal in that it does not overfly any AONBs, National Parks or SSSIs. This option does overfly an equal number of country parks when	equal in that it does not overfly any AONBs, National Parks or SSSIs. This option does overfly an equal number of country parks when	equal in that it does not overfly any AONBs or National Parks.	equal in that it does not overfly any AONBs, National Parks or SSSIs. This option does overfly an equal number of country parks when		
			community engagement. Although no specific areas were identified by community engagement, the change sponsor has decided to include SSSIs and Country Parks within the IOA analysis to maintain consistency with	SSSIs when compared to the baseline scenario.	ompared to the baseline scenario.	ompared to the baseline scenario.	ompared to the baseline scenario.	However, this option does overfly an equal number of country parks and more SSSIs when compared to the baseline scenario.	compared to the baseline scenario.		
			other Stage 2 documentation. The existing DET 1R SID does not overfly any AONBs.								
			National Parks or SSSIs but it does overfly X Country								
			Park.								
Wider Society	Biodiversity	Initial Options Appraisal:	Analysis conducted by the change sponsor shows that the existing operations at STN overfly or fly within the	The change sponsor has conducted work to understand where the	The change sponsor has conducted work to understand where the	The change sponsor has conducted work to understand where the	The change sponsor has conducted work to understand where the	The change sporsor has conducted work to understand where the	The change sponsor has conducted work to understand where the		
		Qualitative	the existing operations at STN overfly or fly within the vicinity of designated sites in terms of Biodiversity such	designated sites are around STN. At this stage, there is expected to be no change likely to affect biodiversity at these sites. From an air	designated sites are around STN. At this stage, there is expected to b no change likely to affect biodiversity at these sites. From an air	e designated sites are around STN. At this stage, there is expected to be no change likely to affect biodiversity at these sites. From an air	designated sites are around STN. At this stage, there is expected to be no change likely to affect biodiversity at these sites. From an air	designated sites are around STN. At this stage, there is expected to be no change likely to affect biodiversity at these sites. From an air	designated sites are around STN. At this stage, there is expected to be no change likely to affect biodiversity at these sites. From an air		
			vicinity of designated sites in terms of Biodiversity such as SPAs, SACs, RAMSAR Sites and SSSIs. In today's	quality perspective, these sites will be overflown at altitudes above	quality perspective, these sites will be overflown at altitudes above	quality perspective, these sites will be overflown at altitudes above	quality perspective, these sites will be overflown at altitudes above	quality perspective, these sites will be overflown at altitudes above	quality perspective, these sites will be overflown at altitudes above 1,000ft. As per CAP 1616 Appendix B, Para B74, because of dispersion		
			operation, aircraft are flying above 1,000ft when passing over these sites. Due to the effects of mixing	1,000ft. As per CAP 1616 Appendix B, Para B74, because of dispersion and mixing, there is unlikely to be an impact on local air quality from	1,000ft. As per CAP 1616 Appendix B, Para B74, because of dispersion and mixing, there is unlikely to be an impact on local air quality from	1,000ft. As per CAP 1616 Appendix B, Para B74, because of dispersion and mixing, there is unlikely to be an impact on local air quality from	1,000ft. As per CAP 1616 Appendix B, Para B74, because of dispersion and mixing, there is unlikely to be an impact on local air quality from	1,000ft. As per CAP 1616 Appendix B, Para 874, because of dispersion and mixing, there is unlikely to be an impact on local air quality from	1,000ft. As per CAP 1616 Appendix B, Para B74, because of dispersion and mixing, there is unlikely to be an impact on local air quality from		
			and dispersion, there is a limited impact, in terms of the air quality specific to these sites. STN	piccraft above 1 000ft Eurthermore CAR 1616 Appendix 8 Pacs 890	aircraft about 1 000ft Eurthermore CAR 1616 Appendix R Para RR	aircraft above 1 000ft Eurthermore CAR 1616 Appendix B. Para BRO	signaft above 1 000ft Eurthermore CAR 1616 Appendix R Para 880	aircraft about 1 000ft Eurthermore CAR 1616 Anneydiy B. Bara RRO	aircraft above 1 000ft Eurthermore CAR 1616 Acceptly B. Para 880		
			the air quality specific to these sites. STN acknowledges that there are sites within the vicinity of	states that in general, airspace change proposal will not have an impact on biodiversity as they do not involve ground-based infrastructure. That said, STN acknowledges that any potential	states that in general, airspace change proposal will not have an impact on biodiversity as they do not involve ground-based infrastructure. That said, STN acknowledges that any potential	states that in general, alrispace change proposal will not have an impact on blodiversity as they do not involve ground-based infrastructure. That said, STN acknowledges that any potential	states that in general, airspace change proposal will not have an impact on biodiversity as they do not involve ground-based infrastructure. That said, STN acknowledges that any potential	states that in general, airspace change proposal will not have an impact on biodiversity as they do not involve ground-based infrastructure. That said, STN acknowledges that any potential	states that in general, airspace change proposal will not have an impact on biodiversity as they do not involve ground-based infrastructure. That said, STN acknowledges that any potential		
			the airport; any potential impact will be assessed by	infrastructure. That said, STN acknowledges that any potential	infrastructure. That said, STN acknowledges that any potential	infrastructure. That said, STN acknowledges that any potential	infrastructure. That said, STN acknowledges that any potential	infrastructure. That said, STN acknowledges that any potential	infrastructure. That said, STN acknowledges that any potential		
			further analysis in Stage 3 of the ACP process by Subject Matter Experts.	impact to the designated sites around STN will be assessed in Stage 3 of the ACP process by Subject Matter Experts.	impact to the designated sites around STN will be assessed in Stage : of the ACP process by Subject Matter Experts.	impact to the designated sites around STN will be assessed in Stage 3 of the ACP process by Subject Matter Experts.	impact to the designated sites around STN will be assessed in Stage 3 of the ACP process by Subject Matter Experts.	impact to the designated sites around STN will be assessed in Stage 3 of the ACP process by Subject Matter Experts.	impact to the designated sites around STN will be assessed in Stage 3 of the ACP process by Subject Matter Experts.		
General Aviation	Access	Initial Options Appraisal:	No change to existing airspace arrangements. GA users of STN will maintain their current level of access under	No change to the existing airspace arrangements (within the baseline scenario) are expected as a consequence of this ACP. However, it is	No change to the existing airspace arrangements (within the baselin scenario) are expected as a consequence of this ACP. However, it is	No change to the existing airspace arrangements (within the baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement	No change to the existing airspace arrangements (within the baseline scenario) are expected as a consequence of this ACP. However, it is	No change to the existing airspace arrangements (within the baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement	No change to the existing airspace arrangements (within the baseline scenario) are expected as a consequence of this ACP. However, it is		
		Qualitative	of STN will maintain their current level of access under extant operational arrangements.	scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement	scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement	scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement	scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement	scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement	scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement		
				pertaining to GA access are reviewed prior to implementation to ensure their continued validity.	pertaining to GA access are reviewed prior to implementation to ensure their continued validity.	pertaining to GA access are reviewed prior to implementation to ensure their continued validity.	pertaining to GA access are reviewed prior to implementation to ensure their continued validity.	pertaining to GA access are reviewed prior to implementation to ensure their continued validity.	pertaining to GA access are reviewed prior to implementation to ensure their continued validity.		
				ensure their continued validity.	ensure their continued validity.	ensure their continued validity.	ensure their continued validity.	ensure their continued validity.	ensure their continued validity.		
General Aviation /	Economic impact from	Initial Options Appraisal:	No increase to effective capacity anticipated for	The introduction of PBN routes is expected to deliver benefits by	The introduction of PBN routes is expected to deliver benefits by	The introduction PBN is expected to deliver benefits by increasing	The introduction PBN is expected to deliver benefits by increasing	The introduction PBN is expected to deliver benefits by increasing	The introduction PBN is expected to deliver benefits by increasing		
commercial airlines	increased effective capacity	Qualitative	No increase to effective capacity anticipated for continued use of extant procedures, therefore no	increasing airspace capacity which in turn will lead to more	increasing airspace capacity which in turn will lead to more	airspace capacity which in turn will lead to more predictable flight	airspace capacity which in turn will lead to more predictable flight	airspace capacity which in turn will lead to more predictable flight	airspace capacity which in turn will lead to more predictable flight		
			economic benefit for GA/airlines.	predictable flight paths and fewer delays (both in the air or on the ground). This is expected to facilitate economic benefit to airlines by	predictable flight paths and fewer delays (both in the air or on the ground). This is expected to facilitate economic benefit to airlines by	paths and fewer delays (both in the air or on the ground). This is expected to facilitate economic benefit to airlines by increasing the	paths and fewer delays (both in the air or on the ground). This is expected to facilitate economic benefit to airlines by increasing the	paths and fewer delays (both in the air or on the ground). This is expected to facilitate economic benefit to airlines by increasing the	paths and fewer delays (both in the air or on the ground). This is expected to facilitate economic benefit to airlines by increasing the		
				increasing the frequency of air transport movements, increasing passenger numbers and increasing cargo tonnage carried. It is not	increasing the frequency of air transport movements, increasing passenger numbers and increasing cargo tonnage carried. It is not	frequency of air transport movements, increasing passenger numbers and increasing cargo tonnage carried. It is not	frequency of air transport movements, increasing passenger numbers and increasing cargo tonnage carried. It is not	frequency of air transport movements, increasing passenger numbers and increasing cargo tonnage carried. It is not	frequency of air transport movements, increasing passenger numbers and increasing cargo tonnage carried. It is not		
				passenger numbers and increasing cargo torninge carries, it is not proportionate for London Stansted Airport to predict the precise economic benefit to commercial airlines using the new procedures as	proportionate for London Stansted Airport to predict the precise	proportionate for London Stansted Airport to predict the precise seconomic benefit to commercial airlines using the new procedures as	proportionate for London Stansted Airport to predict the precise	proportionate for London Stansted Airport to predict the precise	proportionate for London Stansted Airport to predict the precise		
				economic benefit to commercial airlines using the new procedures as any increase in individual airline capacity will depend on private	proportionate for London Stansted Airport to predict the precise economic benefit to commercial airlines using the new procedures a any increase in individual airline capacity will depend on private	s economic benefit to commercial airlines using the new procedures as any increase in individual airline capacity will depend on private	proportionate for London Stansted Airport to predict the precise economic benefit to commercial airlines using the new procedures as any increase in individual airline capacity will depend on private	proportionate for London Stansted Airport to predict the precise economic benefit to commercial airlines using the new procedures as any increase in individual airline capacity will depend on private	proportionate for London Stansted Airport to predict the precise economic benefit to commercial airlines using the new procedures as any increase in individual airline capacity will depend on private		
				commercial business characteristics. It is not proportionate for	commercial business characteristics. It is not proportionate for	commercial business characteristics. It is not proportionate for	commercial business characteristics. It is not proportionate for	commercial business characteristics. It is not proportionate for	commercial business characteristics. It is not proportionate for		
				London Stansted Airport to assess the economic benefit to the GA community however they are expected to benefit from increased	London Stansted Airport to assess the economic benefit to the GA community however they are expected to benefit from increased	London Stansted Airport to assess the economic benefit to the GA community however they are expected to benefit from increased	London Stansted Airport to assess the economic benefit to the GA community however they are expected to benefit from increased	London Stansted Airport to assess the economic benefit to the GA community however they are expected to benefit from increased	London Stansted Airport to assess the economic benefit to the GA community however they are expected to benefit from increased		
				predictability of commercial airline movements which is expected to	predictability of commercial airline movements which is expected to	predictability of commercial airline movements which is expected to	predictability of commercial airline movements which is expected to	predictability of commercial airline movements which is expected to	predictability of commercial airline movements which is expected to		
				lead to reduced on-ground and in-air delays for all users.	lead to reduced on-ground and in-air delays for all users.	lead to reduced on-ground and in-air delays for all users.	lead to reduced on-ground and in-air delays for all users.	lead to reduced on-ground and in-air delays for all users.	lead to reduced on-ground and in-air delays for all users.		
General Aviation / commercial airlines	Fuel burn	Initial Options Appraisal: Qualitative	The existing STN procedures do not support continuous climb operations. Fuel burn is expected to be greater due to tactical ATC intervention and periods of level	Option 0 does support continuous climb operations, meaning that aircraft would not be required to level off during departure, reducing the overall amount of fuel burnt. There is no requirement within	Option 1 does support continuous climb operations, meaning that aircraft would not be required to level off during departure, reducing	Option 2 does support continuous climb operations, meaning that aircraft would not be required to level off during departure, reducing	Option 3 does support continuous climb operations, meaning that aircraft would not be required to level off during departure, reducing the overall amount of fuel burnt. There is no requirement within	Option 4 does support continuous climb operations, meaning that aircraft would not be required to level off during departure, reducing the overall amount of fuel burnt. There is no requirement within	Option 5 does support continuous climb operations, meaning that aircraft would not be required to level off during departure, reducing		
- Indicate and the s			due to tactical ATC intervention and periods of level	the overall amount of fuel burnt. There is no requirement within	the overall amount of fuel burnt. There is no requirement within	the overall amount of fuel burnt. There is no requirement within	the overall amount of fuel burnt. There is no requirement within	the overall amount of fuel burnt. There is no requirement within	the overall amount of fuel burnt. There is no requirement within		
			flight in the departure and approach phase.	Stage 2 of the CAP1616 process to quantify fuel burn, this will be	Stage 2 of the CAP1616 process to quantify fuel burn, this will be conducted in Stage 3. Therefore, to enable a comparison, the logic	Stage 2 of the CAP1616 process to quantify fuel burn, this will be	Stage 2 of the CAP1616 process to quantity fuel burn, this will be	Stage 2 of the CAP1616 process to quantify fuel burn, this will be	Stage 2 of the CAP1616 process to quantify fuel burn, this will be		
			flight in the departure and approach phase. Furthermore, in the case of the modal path of the existing DET 1R SID, the track length is 31.34km	conducted in Stage 3. Therefore, to enable a comparison, the logic applied is that the shorter the track length, the less fuel is burnt. With regards to this option, it is 29,84km (16.11NM) long. When compared	conducted in Stage 3. Therefore, to enable a comparison, the logic applied is that the shorter the track length, the less fuel is burnt. Wit regards to this option, it is 29.84km (16.11NM) long. When compare	stage 2 to the CATIONS process to quality to a billion to the same of the conducted in Stage 3. Therefore, to enable a comparison, the logic happlied is that the shorter the track length, the less fuel is burnt. With d regards to this option, it is 29.88km [16.13NM] long. When compared	conducted in Stage 3. Therefore, to enable a comparison, the logic applied is that the shorter the track length, the less fuel is burnt. With regards to this option, it is 30.65km (16.55NM) long. When compared	conducted in Stage 3. Therefore, to enable a comparison, the logic applied is that the shorter the track length, the less fuel is burnt. With regards to this option, it is 30.36km (16.39NM) long. When compared	conducted in Stage 3. Therefore, to enable a comparison, the logic applied is that the shorter the track length, the less fuel is burnt. With regards to this option, it is 30.39km [16.41NM] long. When compared		
			(16.92NM).	regards to this option, it is 29.84km (16.11NM) long. When compared to the baseline scenario, Option 0 is shorter and at this stage it	regards to this option, it is 29.84km (16.11NM) long. When compare to the baseline scenario, Option 1 is shorter and at this stage it	d regards to this option, it is 29.88km (16.13NM) long. When compared to the baseline scenario, Option 2 is shorter and at this stage it	regards to this option, it is 30.65km (16.55NM) long. When compared to the baseline scenario, Option 3 is shorter and at this stage it	regards to this option, it is 30.36km (16.39NM) long. When compared to the baseline scenario, Option 4 is shorter and at this stage it	regards to this option, it is 30.39km (16.41NM) long. When compared to the baseline scenario, Option 5 is shorter and at this stage it		
				assumed will require a smaller amount of fuel burn, therefore, this	assumed will require a smaller amount of fuel burn, therefore, this	account will conside a smaller amount of feel bear threefore this	assumed will require a smaller amount of fuel burn, therefore, this	assumed will require a smaller amount of fuel burn, therefore, this	assumed will require a smaller amount of fuel burn, therefore, this		
				option is beneficial in terms of fuel burn. More in-depth analysis will be carried out in Stage 3 to confirm.	option is beneficial in terms of fuel burn. More in-depth analysis will be carried out in Stage 3 to confirm.	option is beneficial in terms of fuel burn. More in-depth analysis will be carried out in Stage 3 to confirm.	option is beneficial in terms of fuel burn. More in-depth analysis will be carried out in Stage 3 to confirm.	option is beneficial in terms of fuel burn. More in-depth analysis will be carried out in Stage 3 to confirm.	option is beneficial in terms of fuel burn. More in-depth analysis will be carried out in Stage 3 to confirm.		
				or can rea out in stage 3 to connirm.	we corned out in Stage 3 to commit.	we can red out in stage a to connrm.	or can rea out in Stage 3 to connirm.	se corries out in Stage 5 to commit.	see carried out in stage a to connem.		
Commercial airlines	Training costs	Initial Options Appraisal:	No additional training predicted.	It is expected that no extra Pilot/Crew training will be required to	It is expected that no extra Pilot/Crew training will be required to	It is expected that no extra Pilot/Crew training will be required to	It is expected that no extra Pilot/Crew training will be required to	It is expected that no extra Pilot/Crew training will be required to	It is expected that no extra Pilot/Crew training will be required to		
sommer Chall all liftles		Qualitative		anable pilots to fly the new RRN procedures. RRN is a common	anable pilots to fly the new BBN procedures. BBN is a common	anable pilots to fly the new PRN procedures. RRN is a common	enable pilots to flu the new RRN procedures. RRN is a common	anable pilots to fluthe new SSN procedures. SSN is a common	enable pilots to fly the new PRN procedures. PRN is a common		
				standard of navigation throughout the world. It is not proportionate for London Stansted Airport to assess on-going competency for	standard of navigation throughout the world. It is not proportionate for London Stansted Airport to assess on-going competency for	standard of navigation throughout the world. It is not proportionate for London Stansted Airport to assess on-going competency for	standard of navigation throughout the world. It is not proportionate for London Stansted Airport to assess on-going competency for	standard of navigation throughout the world. It is not proportionate for London Stansted Airport to assess on-going competency for	standard of navigation throughout the world. It is not proportionate for London Stansted Airport to assess on-going competency for		
				individual commercial airlines due to the significant variables	Individual commercial airlines due to the significant variables	individual commercial airlines due to the significant variables	individual commercial airlines due to the significant variables	individual commercial airlines due to the significant variables	individual commercial airlines due to the significant variables		
				involved e.g. number of pilots, airline policies on training (simulator versus live flight training), fleet types, and variations in on-board	involved e.g. number of pilots, airline policies on training (simulator versus live flight training), fleet types, and variations in on-board	involved e.g. number of pilots, airline policies on training (simulator versus live flight training), fleet types, and variations in on-board	involved e.g. number of pilots, airline policies on training (simulator versus live flight training), fleet types, and variations in on-board	involved e.g. number of pilots, airline policies on training (simulator versus live flight training), fleet types, and variations in on-board	involved e.g. number of pilots, airline policies on training (simulator versus live flight training), fleet types, and variations in on-board		
				versus live flight training), fleet types, and variations in on-board equipment etc.	versus live flight training), fleet types, and variations in on-board equipment etc.	versus live flight training), fleet types, and variations in on-board equipment etc.	versus live flight training), fleet types, and variations in on-board equipment etc.	versus live flight training), fleet types, and variations in on-board equipment etc.	versus live flight training), fleet types, and variations in on-board equipment etc.		
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Group	Impact	Level of Analysis	DO NOTHING BASELINE	ORTIONA	ORTION 1	OPTION 2	ORTHOW 2	ORTION 4	OPTION 5
Commercial airlines		initial Options Appraisal: Qualitative	It is not proportionate for STM to assess potential other costs for commercial airlines - there may be costs associated with maintaining legacy systems to continue flying conventional navigation but there are too many variables (e.g., aircraft types, on-board system capability etc.) to consider these effectively.	Management Systems (FMS), navigation databases and operating procedures, increased pilot hire costs versus training etc. It is not proportionate for STM to assess the "other costs' to commercial air lines of flying PBN procedures due to significant variables; some air lines may aiready be "PBN ready" whereas others may not.	Other costs to commercial airlines may include updates to Flight Management Systems (FMS), navigation databases and operating procedures, lineraead pilot hire costs versus training etc. It is not proportionate for STM to assess the 'other costs' to commercial airlines of flying PMD procedures due to significant variables; some airlines of flying PMD procedures due to significant variables; some airlines may already be 'PBM ready' whereas others may not.	Other costs to commercial airlines may lockade updates to Flight Management Systems (FMS), avaigation databases and operating procedures, increased pilot hire costs versus training etc. it is not proportionate for STN to assess the 'other costs' to commercial airlines of flight pRP procedures due to significant vialibates; some airlines may already be "PBN ready" whereas others may not.	Other costs to commercial airlines may include updates to Flight Management Systems (FMS), navigation databases and operating procedures, increased pilot hire costs versus training etc. It is not proportionate for STN to assess the 'other costs' to commercial airlines of flying PSM procedures due to significant visibles; some airlines of flying PSM procedures due to significant visibles; some airlines may aiready be 'PBM ready' whereas others may not.	Other costs to commercial airlines may include updates to Flight Management Systems (FMS), navigation databases and operating procedures, increased plot hire costs versus training etc. It is not proportionate for STN to assess the Vother costs to commercial airlines of Ships (PRI) procedures due to significant variables; some airlines of Ships (PRI) procedures due to significant variables; some airlines may already be "PRIN resdy" whereas others may not.	Other costs to commercial arrines may include updates to Flight Management Systems (FMS), navigation databases and operating procedures, increased pilot hire costs venus training etc. it is not proportionate for STM casses the "other costs" to commercial arrines of fling PBN procedures due to significant variables; some airlines of fling PBN procedures due to significant variables; some airlines may already be "PBN ready" whereas others may not.
Airport / Air navigation service provider	Infrastructure costs	initial Options Appraisal: Qualitative	No additional infrastructure is required at STN to maintain extra conventional procedures however maintaining access to ground-based equipment currently operated by MERI, may be prohibitively expensive, should this commercial option be implemented.	All options relate to the implementation of PBM and no additional infrastructure is equired. The infraction of PBM requires the relation on infrastructure, in particular ground-based navigation aids are no longer needed. The foundation of PBM is RBMV pPM aircraft arriving and departing London Stanted Airport using the proposed RBMV/RMP procedures will do so based on their performance-based navigation capability.	All opcions relate to the implementation of PBM and no additional intratructure is required. The introduction of PBM reduces the reliance on infrastructure, in particular ground based mangation aids are no longer needed. The foundation for PBM RRMAV pills aircraft arriving and departing London Standed Alirport using the proposed RRAV/RNM procedures will do so based on their performance-based navigation capability.	All options relate to the implementation of PBNs and no additional infrastructure is required. The introduction of PBN relocates the reliance on infrastructure, in particular ground-based navigation aids are no longer needed. The foundation for PBN is RBNV per aircraft arriving and departing London Stansted Air port using the proposed RNAV/RNP procedures will do so based on their performance based navigation capability.	All options relate to the implementation of PBM and no additional infrastructure is required. The introduction of PBM reduces the relation on Infrastructure, in particular ground-based navigation aids are no longen readed. The foundation for PBM is RMAV per aircraft arriving and departing London Stansted Airport using the proposed RMAV/RMP procedures will do so based on their performance-based navigation capability.	All options relate to the implementation of PRM and no additional infrastructure is required. The introduction of PBM reduces the reliance on infrastructure, in particular ground based mangation aids are no longer needed. The foundation for PBM RRMAV PPM, aircraft arriving and departing Lendon Stanceted Airport using the proposed RNAV/RNP procedures will do so based on their performance-based navigation capability.	All options relate to the implementation of PRNA and no additional infrastructure is required. The introduction of PRN reduces the relative on infrastructure, in particular ground-based navigation aids are no langer needed. The foundation for PRN is RRNA vol. per late of the production of the production of the production of the performance based navigation capability.
Airport / Air navigation service provider	Operational costs	initial Options Appraisal: Qualitative	No change to operational costs is attributable to maintaining the extant procedures.	Air Taffic Centrel at STNI is contracted out to a Brit-party organisation. This conting commercial control between STN and their channel MSP is considered to be an organise cont. IAGO describe Targroved Operational Efficiency as a benefit delivered by the introduction of PRNI. In general, London Stancted Aliport predicts that operational efficiency will improve and that there may be potential for a net reduction in operational cooks.	Air Traffic Control at STN is contracted out to a third-party organisation. This estiting commercial control televiers PTN and their choice ANSP is considered to be an engoing cost. IAGO describe improved Operational (difficulty as a benefit delivered by the introduction of PRN. in general, london Stanteck Alpropt predicts that operational efficiency will improve and that there may be potential for a net reduction in operational costs.	Air Toffic Central at STN is constructed ont to a third-party organisation. This outsign commercial contact between STN and their chosen AMSP is considered to be an outping cost. IAOX describe Improved Operational Efficiency as a benefit delivered by the introduction of PBN. In general, London Stansted Alpropt predicts that operational efficiency will improve and that there may be potential for a net reduction in operational costs.	Air Taffic Central at STN is contracted out to a birty-dury organisation. This exoling commercial contract between STN and their channel AIVE is considered to be an oupsing cost. IXAO describe "Improved Oppositional Efficiency" as benefit delivered by the introduction of PRN. In general, London Stander Allymort predicts that operational efficiency will improve and that there may be potential for a net reduction in operational costs.	Air Traffic Control at STN is constructed out to a third-party organisation. This suiting commercial contract between STN and their choren MSP is considered to be an inapping cost. IAOI describe Improved Operational Efficiency as a benefit delivered by the introduction of PBIA in general, london Stansted Myront predicts that operational efficiency will improve and that there may be potential for a net reduction in operational casts.	As Toffic Control at STN is contrasted out to a thick party organisation. This existing commercial contrast between STN and their chosen ANSP is considered to be an engaing cost. IAON describe improved Densetian (Efficiency is a benefit delivered by the introduction of PRN. in general, London Stanted Airport predicts that operationel efficiency will improve and that there may be potential for a net reduction in operational costs.
Airport / Air navigation service provider	Deployment costs	Initial Options Appraisal: Qualitative	No Deployment costs applicable to extant procedures.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an orgoing cost.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an orgoing cost.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.
Safety Assessment	Safety Assessment	Initial Options Appraisal: Qualifative	The basiles assumption is that current operations of 35 M as and including use of the charts conventional procedure. Following the removal of ground based procedure. Following the removal of ground based objects the chart of ground based objects the chart of ground based objects of the chart of ground based objects of ground based objects of ground based objects of ground based on the chart of ground based on the ground based on the chart of groun	Ansate control with control union, control City, union Southerds, between and Mid Annator uniform as interesting controlled edges metabors and Mid Annator uniform as interesting controlled edges restance but controlled to the control of the co	this time, this cannot be determined. In addition, it was identified that due to the dispersion of traffic departing STN, a degree of tactical intervention may be required to maintain safe separations standards. The design process may also	Ansales confict with Landon Latinus, Condin Chyl, London's Southers, Landon's and MM Annal Confict was interfered increased redign relations and MM Annal Confict with a self-self-self-self-self-self-self-self-	Focusive confirst with London Laters, souther Chip. London's Chip.	Prosition confirst with scribed Laders, schools City, Lader Schodersch, Laderschward Mit Principal Laderschward Laderschw	Procede confict with London Latent, London City, London Southernd, London Latent Late
Summar			The 'De Nothing' countries in estation to this ACF is not a valid opcious as fore on provides sustained to the third of the countries of the provided sustained to the third of the countries and the countries and the countries are as the countries and the countries are as the countries and the countries are as the countries and residence. The existing 50% donor the countries are as the	terms of note impact but better in term of greenhouse gas emissions, the lawn, post-physilisettes and occurring impact of custom. The remaining criteria are deemed to be of requal benefit accounts. The remaining criteria are deemed to be of requal benefit accounts of the remaining criteria are deemed to be of requal benefit accounts of the remaining criteria accounts of the remaining criteria accounts of the remaining criteria accounts of the specific operation. The change sposme has been described possible conflicted possible possible possible possible conflicted possible p	unclear at this stage. Further analysis and engagement is required in Stage 3/4 of the CAP 1616 process to determine this. Furthermore,	or equal benefit in terms of noise injects, six quality, greenhouse gas- sitions, feel but manifolding companies of sections and ordinate feet present and present and present and present and present and feet present and present and pulsaria grouped to the existing option (RNI) is advantageous in it means the arround can achieve a copion (RNI) is advantageous in it means the arround can achieve a resistance of the present and achieve and achieve a resistance of the equal benefit thesease there in no change when compared to body, a companies of the present and achieve and achieve and achieve and present and achieve and achieve and achieve and achieve and present and achieve and achieve and achieve and achieve and present and achieve and achieve and achieve and achieve and present achieve and achieve and achieve and achieve and achieve and present achieve and achieve and achieve and achieve and achieve and present achieve and achieve achieve and achieve and achieve and present achieve achieve and achieve achieve and achieve and present achieve achieve achieve and achieve and achieve achieve achieve and present achieve achieve achieve and achieve achieve achieve achieve and present achieve and present achieve achie	When compared to the baselines contents, Coption 3 provides a benefit or compared to the time and once impact, in early preventions generations, invariable, the barn, capacity and relinence and contents of the coption of the contents of the coption of the contents of the coption of the contents buildings compared to the excitage model tracks of the COT at 500. The higher climb gradient of the coption of the		when compared to the baselines scenarios, Option 1 provides a bound's orange blamelist intered most inequal and applications are emotions. In the burn, transquility, causality and resistence and most one of the burn, transquility, causality and resistence and the providence of the compared to the compared to the control providence of the compared to the control of the contr

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Departure Envelope: SID RWY 22 SOUTH WEST

Group	Impact	Level of Analysis	DO NOTHING BASELINE'	OPTION 1	OPTION 3	OPTION 4	OPTION 5	OPTION 6
Communities	Rose impact on health and quality of life	Instial Options Appraisal: Qualitative	Interms of today's operation, the SOUTH WEST ordering revelope is been do reparture the heading directly south west following the intelligence of the control was a format of the control was a simple of the simple ordering	Option 1 in an RNAVI roote which incorporates a 8% climb gradeent Based on the change provisor analysis, Option 1 overfiles 56,771 people and a total of 55,982 recidented buildings. When compared buildings overflower, Option 1 performs worse than the existing NUGBO StD.	Option 3 is an RNAVI route which incorporate a 8% citing paradent. Based on the charge sporous analysis, logical on swelfers 20.504 people and stock of 12.239 residents buildings. When compared substitutions are supported to the compared substitution of the compared subs	Option 4 is an RNAVI route which incorporates a 9% climb gradent. Based on the change governor analysis, Option 4 or overlies 6,213 people and a total of \$3,135 residential buildings. When compared buildings with a total of \$3,135 residential buildings. When compared buildings overflows, Option 4 performs worse than the existing NUGBO SIO.	Option 5 is an RNAVI route which incorporates a 98' climb gradient. Based on the change spound analysis, policy on Severille 3,433 people and a total of 15,704 residential buildings. When compared buildings with a total of 15,704 residential buildings. When compared buildings overflower, Option 5 performs worse than the existing NUCRO SID.	Option 6 is an RNAVI route which incorporates a 8% climb gradent. Blacked in the change promons analysis, Diotion Gertiller 31,339 people and a total of 14,0464 residential buildings. When compared to the besteller scenario, in terms of populations and residential buildings. When compared to the besteller scenario is terms of population and residential buildings. When compared to the besteller scenario is the service of the scenario operation of the scenario operations of the scenario operations of the service of the scenario operations operations of the scenario operations operati
	Air Quality	Initial Options Appraisal: Qualitative	With regards to air quality, the existing NUGBO SIO does not directly ownerly any AQMA. Given the 6%; climb gradient included within the Do Nothing scenario, the impact of aircraft below 1,000t with regards to local air quality is limited to areas within the immediate area surrounding the airport.	Unlike the baseline scenario, Option 1 directly overfile 3 ACMAs. Furthermore, as pec CAP 1816 (para 780), due to minioga and dispersion, the impact on air quality above 1,000ft is likely to be imaginglicant. These are areas within the immediate area surrounding the airport that will be overflown below 1,000ft, surrounding the airport that will be overflown below 1,000ft, when compacted to the baseline scenario, this option is deemed to be a dis-benefit in terms of air quality.	As por the baseline scenario, Option 3 does not directly overfly any AQMAR. Furthermore, a per CAP 1616 para 8174), due to mining and dispersion, the impact on air quality above 1,000ft is likely be insignificant. There are rares within the immediate see surrounding the airport that will be overflown below 1,000ft, when compared to the baseline scenario, this option is deemed to be of equal benefit.	As per the baseline scenario, Option 4 does not directly overfly any ADMA. Furthermore, a per CAP 1616 (page 1824), due to mining and dispersion, the impact on air quality above 1,000ft is likely to be insignificant. There are areas within the immediate area surrounding the airport that will be overflow below 1,000ft, which is the control of the dispersion of the control of the dispersion of the control of the dispersion of equal benefit.	Unlike the baseline scenario, Option 5 directly overfilles 1 ADMA furthermore, as pec AP 1816 (para 1814), due to mining and dispersion, the impact on air quality above 1,000ft is likely to be insignificant. There are areas within the immediate area surrounding the airport that well be overflown below 1,200ft, surrounding the airport that well be overflown below 1,200ft, which will be overflown below 1,200ft, which will be overflown below 1,200ft, which is the second of the	Unlike the baseline scenario, Option 6 directly overfilles 1 AOMA Furthermore, as per AOT 1816 (para 1874), due to mixing and dispersion, the impact on air quality above 1,000ft is likely to be insignificant. There are areas with the time immediate area surrounding the airport that will be overflown below 1,200ft, however, for self-ye reasons, this is unavoidable. Therefore, overall, now the control of the self-year of the self
Wider Society	Greenhouse Gas impact	initial Options Appraisal: Cualitative	Current routes do not support continuous cimio programation. It must be noted that the exact track length flow the plant of the program of th	Oution 1 has been designed to support continuous climb operation, however, and entered of radar vectoring may still be required to manage aircraft separation distances. The track mileage of the point is 20 ABM rel (118M). Based on this, when compared to the baseline scenario, Option 1 is obtained to the service of the point of	Option 3 has been designed to support continuous climb operation, however, an element of riads extenting may still be required to manage aircraft separation distances. The track milege of profession 3 p.28 shall (131M), Based on this, when compared to the baseline exercisis (Option 3 is observed to the selection exercisis (Option 3 is observed and in which compared to the baseline exercisis (Option 3 is observed and in the selection of the sel	Option in his been designed to support continuous climb operations, however, an element of radar vectoring may still be required to manage aircraft separation distances. The track malage of globul is 3 July 20m (1944)(M) based on this, when compared to the baseline scenario, Option 4 is shorter and 6 is when compared to the baseline scenario, Option 4 is shorter and 6 is when compared to the baseline scenario, Option 4 is shorter and 6 is seen demend to be innected. All when designed analysis at Stage 3 is required to confirm the exact volumes of greenhouse gases released.	Option 5 has been designed to support continuous climb operations, however, an element of radar vectoring may still be required to manage aircraft separation distances. He text initiage of deposition 5 in 33.29 mil (1973) mil), based on this, when compared to the baseline scenario, Option 5 is shorter and is seen compared to the baseline scenario, Option 5 is shorter and in the control option 5 in	Option in his been designed to support continuous climb opporations, however, an element of radar vectoring may still be required to manage aircraft separation distances. He text initiage of globon is 8.03 37m list (30/ml), Steed on this, when compared to the baseline cereatives, Option is a longer and is, when compared to the baseline cereatives, Option is a longer and is, when compared to the baseline cereatives, Option is a longer and in sent cereatives. The continue of the sent vector is a discount for the in-depth analysis at Stage 3 is required to confirm the exact volumes of greenhouse gases released.
Wider Society	Capacity and resilience	Initial Options Appraisal: Qualitative	Maintaining extant procedures would maintain current capacity however, due to the rellance on ground-based navigational aids, resilience would be significantly affected, following their removal in December 2022.	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delegals ploth in air or on the ground). The reduction of the reliance on outdated ground based mayagational aids will significantly increase operational resilience fo airlines and operators.	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which subsequently leads to move predictable flight paths and fewer delegals (both in air or on the ground). The reduction of the reliance on outdated ground based analygational aids will significantly increase operational resilience for airlines and operators.	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delay (both in air or on the ground). The reduction of the reliance on outdated ground based analystational also will significantly increase operational resilience for airlines and operators.	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delays (both in air on on the ground). The reduction of the reliance on outdated ground based mayagitational aids will significantly increase operational resilience for airlines and operators.	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacits which subsequently leads to more predictable flight paths and fewer delays (both in air on the ground). The reduction of the reliance on outdated ground based may applicate the properties of the properties of the airspace of the properties of the properties of the airlines and operators.
Wider Society	Tranquillity	Initial Options Appraisal: Qualitative	As per CAS 1516. Appendix 8, Para PSr., change common are required to conider Transpullity with specific reference to ACM8s and National Parks or just the common per common per common per community engagement. Although no specific area were identified by common yet engagement, the change soponir has decided to include \$50s and consistency with these \$50s and consistency with these \$50s and consistency with these \$50s and consistency with these \$50s and consistency with these \$50s and \$50s and \$50s does not overly any ACM8s or National Parks but it does overfy 1 Country Park and 7.550s.	Option 1 Goles not overfly any ADMS or National Parks. However, In- has been identified but this option overflier 2 country Parks and the 8 SSSs. Dwriftight of these areas is expected to occur at a higher altitude, minimising the impact of artistra? hose and emissions on these areas. When compared to the baseline scenario (Option 1 is equal in that does not overfly any ADMS or hallound Parks. However, this ciption is deemed to provide a 46-benefit as it wowlflers have Country Parks and 553s compared to the baseline scenario.	Option 3 date not overfix any ADVISs or National Parks. However, if has been destribled that this option overfiles. Country Parks and the 11 SSSIs. With regards to Country Parks, this is equal to the baselines cernian. Overfill not these areas is expected to cours at higher attitude, minimising the impact of aircraft noise and higher attitude, minimising the impact of aircraft noise and Country of the Countr	Option 4 does not overfly any ADNBs or National Parks. However, it has been definited best this option overflies Country Parks and the 7 SSSS. With regards to SSSs, this is equal to the baseline scenario. Overflight of those areas is expected to occur at a higher altitude, minimising the impact of aircraft note and emissions on these areas. When compared to the baseline scenario, Option 3 st equal in that it does not overfly any ADNBs or National Parks and security and the second of the scenario. Option 3 st equal in that it does not overfly any ADNBs or National Parks and second of the second of the second of the scenario.	Option 5 does not overly any ADNIs or National Parks. However, it has been definited but this option overlies 2 Country Parks and the 95SS5. Overlight of these areas is expected to occur at a higher attitude, minimising the impact of aircular toxice and emissions on these areas. When compared to the baseline scenario, Options 1 see qual in that does not overly any ADNIs or National Parks. However, this option is deemed to provide a dio benefit as it overlies over the country Parks and 550s compared to the baseline scenario.	Option 4 does not overfly any ADMs or National Parish. Noweek, it has been destinified that this option overflies Country Paris and the 12 SSSs. With regards to Country Paris, this is equal to the baseline scannin. Overflight has the option overflies to Country and Parish of the Country and Parish district, minimising the impact of aircraft noise and emissions on these areas. When companied to the baseline tearns. Option 3 sits equal to that it does not overflie any ADMs or National Parish and dead benefit as it overflies more SSSs companed to the baseline scenario.
Wider Society	Biodiversity	initial Options Appraisal: Qualitative	Leady is conducted by the change spormer shows the country operation at 37% coverfly or fly within the vicinity of designated sites in term of Biodiversity at 59%, 52%, 62%, 63% 53% 53% 53%, 63% 53% 53% 53% 53% 53% 53% 53% 53% 53% 5	The charge sponsor has conducted work to understand where the designated sites are roand STA. At this take, there is expected to be no change likely to affect biodiversity at these sites. From an air quality generactive, these sites will be confirmed at allitude shows 1,000th. At per CAP 1016 Appendix is, Para BTA, bocause of 1,000th. As per CAP 1016 Appendix is, Para BTA, bocause of 1,000th. As on a migract on sold united. The sites of 1,000th and 1,000th a	The Charge pomor has conducted work to understand where the designated sites are roand STR. At this task, there is respected to be no change likely to affect bodywestly at these sites. From an air quality perspective, these sites will be conform at altitudes above 1,000°C, h. per CAP 1516 Appendix B, Para B74, because of 1,000°C, h. per CAP 1516 Appendix B, Para B74, because of languestion and mixing. Here is unlikely to be an impact on local air Appendix B, Para B80, task that in a princed, airtispace change proposal will not have an impact on lookerings airtispace change proposal will not have an impact on lookerings as they are considered to the companies of the control	The charge sponsor has conducted work to understand where the designated sites are yound SN. At this test, where is expected to be no charge likely to affect biotherwishy at these sites, from a nair quality generactive, these sites will be conflowed at alloudes above 1,000°H. At per CAP 1014 Appendix 8, Para BPA, because of 1,000°H. As per CAP 1014 Appendix 8, Para BPA, because of local air despendix and mining, there is unlikely to be an imaged to no local variable of the para BPA tested to the spendix and the para BPA tested to the designation to the designation that are youther limit parts to the designation that are youther limits are youther limits to the designation that are youther limits are youther limits to the designation that are youther limits and the youther limits are youther limits are youther limits and youther limits are youther limits are youther limits are youther limits and youther limits are youther limits are youther limits are youther limits and youther limits are youther limi	The changes possion has conducted work to understand where the designated sites are around STA. At this start, here is expected to be no change likely to affect biodiversity at these sites. From an air quality perspective, these airs will be confirmed at alludes above 1,000°L. As per CAP 10.16 Appendix B, Para BTA, because of 1,000°L. As per CAP 10.16 Appendix B, Para BTA, because for sold person and morning there is unlikely to be an inspect on food air dependix B, Para BBO states that in general, aircases change proposal will not have an impact on biodiversity as they do not involve ground-based infrastructure. That said, STN acknowledges that any potential injunct to the designated sea zound STA will be assessed in Stage 3 of the ACP process by Subject Matter Experts.	The change sporsor has conducted work to understand where the designated risks are smooth STA. At this safe, here is expected to be no change likely to affect biodiversity at these sites. From an air quality perspective, these takes will be everified as a finite size of 1,000°C. As I per CAP 1016 Appendix 6, Para 17%, because of 1,000°C. As I per CAP 1016 Appendix 6, Para 1870, because of dispersion and mining, there is utilisticy to be an inegat on food air Appendix 6, Para 1800 tattes that in general, surpose change proposal will not have an impact on to dividently as they do not involve ground-based infrastructure. That said, 5TN admonwedges that any potential impact to the designated rise around STN will be assessed in Stage 3 of the ACP process by Sulpect Marter Experts.
General Aviation	Access	Initial Options Appraisal: Qualitative	No change to existing airspace arrangements. GA users of STN will maintain their current level of access under extant operational arrangements.	No change to the existing airspace arrangements (within the baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement pertaining to GA access are reviewed prior to implementation to ensure their continued validity.	No change to the existing airspace arrangements (within the baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement pertaining to GA access are reviewed prior to molementation to ensure their continued validity.	No change to the existing airspace arrangements (within the baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement pertaining to GA access are reviewed prior to implementation to ensure their continued validity.	No change to the existing airspace arrangements (within the baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement pertaining to GA access are reviewed prior to implementation to ensure their continued validity.	No change to the existing airspace arrangements (within the baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement pertaining to GA access are reviewed prior to implementation to ensure their continued validity.
General Aviation / commercial airlines	Economic impact from increased effective capacity	Instital Options Appraisal: Qualitative	No increase to effective capacity articipated for continued use of early procedures, herefore no economic benefit for GA/airlines.	The introduction of PIN coules is expected to deliver benefits by microsing intrapact capacity which in turn will lead to more predictable light paths and fewer delays (both in the air or on the ground). This is expected to facilitate economic benefit to airlines by increasing the frequency of air transport movements, increasing passenger murbers and excessing capa to long carried. It is not economic benefit to commercial airlines using the new procedures as any increase in individual airline support will depend on private commercial business characteristics. It is not proportionate for London Stanisted Pariot to assets the economic benefit to the chordon Stanisted Pariot to assets the economic benefit to the commercial business characteristics. It is not proportionate for London Stanisted Pariot to assets the economic benefit to the commercial business commercial airline movements which is expected to lead to reduced on ground and in air delays for all users.	he irroduction of PIN route is expected to delive benefits by increasing airpace capitor which in turn will end to more predictable flight paths and fewer delays (both in the air or on the ground). This is expected to facilitate economic benefit to airline to increasing the frequency of air transport movements, increasing passed prevailed and increasing caps to long carried. It is not exonomic benefit to commercial airlines using the new procedures as any increase in individual airline support will depend on private commercial business characteristics. It is not proportionate for London Stansied Aprico to assess the economic benefit to the Accumularly however they are expected to benefit from increased predictability of commercial airline movements with its expected to lead to reduced on ground and in air delays for all sience.	The introduction of this coules is expected to deliver benefits by mereasing impact caught which in turn till lead to more predictable flight paths and fewer delays (both in the air or or the ground). This is expected to felicitate control benefit to arising the properties of predictable flight paths and fewer delays (post in the properties by increasing the frequency of air transport rowwenests, increasing subsequent numbers of discussing carrieds. It is not excome the benefit to commercial airlines suring the new procedures as any increase in individual airline capacity will depend on private commercial business characteristics. It is not proportionate for London Stanland Aprict to assets the economic benefit to the Accommunity however they are expected to benefit from increased productability of commercial airline movements which is expected to bed to reduced on ground and in air distips for all users.	The introduction of Pfish coules is expected to deliver benefits by increasing singuace cauged which in turn will lead to more predictable flight paths and fewer delays (both in the air or on the ground). This is expected to facilitate economic hereitht a airlines by increasing the frequency of air transport movements, increasing parameters must be an increasing capp to long expected produces any acceptance to a microsing capp to long expected produces any increase in individual airline capatity will depend on privace commercial business characteristics. It is not proportionate for (condon Statisted Pariot to assess the economic benefit to the Accommunity however they are expected to benefit from increased productably of the privace of a singuistic produced and the capacity sinks in supercised to be del to reduced on ground and in-verificating for all users.	The introduction of PRN cautes is sequenced to deliver benefits by increasing singues capacity which in turn all lead to more predictable flight paths and fewer delays (both in the air or on the goowd). This is operated to facilitate control benefit to arising young). This is operated to facilitate control benefit to arising the frequency of air transport movements, processing parameters and microsaling capacities of the control of the processing parameters and in the control of the processing that the processing the processi

Group	Impact	Level of Analysis	DO NOTHING BASELINE'	OPTION 1	OPTION 2	OPTION 4	OPTION 5	OPTION 6
General Aviation /	Fuel burn	Initial Options Appraisal:	The existing STN procedures do not support	Option 1 does support continuous climb operations, meaning that	Option 3 does support continuous climb operations, meaning that	Option 4 does support continuous climb operations, meaning that	Option 5 does support continuous climb operations, meaning that	Option 6 does support continuous climb operations, meaning that
commercial airlines		Qualitative	continuous climb operations. Fuel burn is expected to	aircraft would not be required to level off during departure,	aircraft would not be required to level off during departure,	aircraft would not be required to level off during departure,	aircraft would not be required to level off during departure,	aircraft would not be required to level off during departure,
			be greater due to tactical ATC intervention and	reducing the overall amount of fuel burnt. There is no requirement	reducing the overall amount of fuel burnt. There is no requirement	reducing the overall amount of fuel burnt. There is no requirement	reducing the overall amount of fuel burnt. There is no requirement	reducing the overall amount of fuel burnt. There is no requirement
			periods of level flight in the departure and approach	within Stage 2 of the CAP1616 process to quantify fuel burn, this	within Stage 2 of the CAP1616 process to quantify fuel burn, this	within Stage 2 of the CAP1616 process to quantify fuel burn, this	within Stage 2 of the CAP1616 process to quantify fuel burn, this	within Stage 2 of the CAP1616 process to quantify fuel burn, this
			phase. Furthermore, in the case of the modal path of	will be conducted in Stage 3. Therefore, to enable a comparison, the logic applied is that the shorter the track length, the less fuel is	will be conducted in Stage 3. Therefore, to enable a comparison, the logic applied is that the shorter the track length, the less fuel is	will be conducted in Stage 3. Therefore, to enable a comparison, the logic applied is that the shorter the track length, the less fuel is	will be conducted in Stage 3. Therefore, to enable a comparison, the logic applied is that the shorter the track length, the less fuel is	will be conducted in Stage 3. Therefore, to enable a comparison, the logic applied is that the shorter the track length, the less fuel is
			(21.13NM).	burnt. With regards to this notion, it is 29.84km (16.11NM) long.	the logic applied is that the shorter the track length, the less fuel is burnt. With regards to this option, it is 29.84km (16.11NM) long.	the logic applied is that the shorter the track length, the less fuel is burnt. With regards to this option, it is 30.42km (16.43NM) long.	burnt. With regards to this option, it is 30.32km (16.37NM) long.	burnt. With regards to this option, it is 30.37km (16.40NM) long.
			(21.15)4441/.	When compared to the baseline scenario. Option 1 is shorter and at	When compared to the baseline scenario. Option 3 is shorter and at	When compared to the baseline scenario. Option 4 is shorter and a	When compared to the baseline scenario. Option 5 is shorter and at	When compared to the baseline scenario. Option 6 is shorter and at
				this stage it assumed will require a smaller amount of fuel burn,	this stage it assumed will require a smaller amount of fuel burn,	this stage it assumed will require a smaller amount of fuel burn,	this stage it assumed will require a smaller amount of fuel burn,	this stage it assumed will require a smaller amount of fuel burn,
				therefore, this option is beneficial in terms of fuel burn. More in-	therefore, this option is beneficial in terms of fuel burn. More in-	therefore, this option is beneficial in terms of fuel burn. More in-	therefore, this option is beneficial in terms of fuel burn. More in-	therefore, this option is beneficial in terms of fuel burn. More in-
				depth analysis will be carried out in Stage 3 to confirm.	depth analysis will be carried out in Stage 3 to confirm.	depth analysis will be carried out in Stage 3 to confirm.	depth analysis will be carried out in Stage 3 to confirm.	depth analysis will be carried out in Stage 3 to confirm.
Commercial airlines	Training costs	Initial Options Appraisal:	No additional training predicted.	It is expected that no extra Pilot/Crew training will be required to	It is expected that no extra Pilot/Crew training will be required to	It is expected that no extra Pilot/Crew training will be required to	It is expected that no extra Pilot/Crew training will be required to	It is expected that no extra Pilot/Crew training will be required to
		Qualitative	**	enable pilots to fly the new PBN procedures. PBN is a common	enable pilots to fly the new PBN procedures. PBN is a common	enable pilots to fly the new PBN procedures. PBN is a common	enable pilots to fly the new PBN procedures. PBN is a common	enable pilots to fly the new PBN procedures. PBN is a common
				standard of navigation throughout the world. It is not proportionate	standard of navigation throughout the world. It is not proportionate	standard of navigation throughout the world. It is not proportionate	standard of navigation throughout the world. It is not proportionate	standard of navigation throughout the world. It is not proportionate
				for London Stansted Airport to assess on-going competency for	for London Stansted Airport to assess on-going competency for	for London Stansted Airport to assess on-going competency for	for London Stansted Airport to assess on-going competency for	for London Stansted Airport to assess on-going competency for
				individual commercial airlines due to the significant variables involved e.g. number of pilots, airline policies on training (simulator	individual commercial airlines due to the significant variables involved e.g. number of pilots, airline policies on training (simulator	individual commercial airlines due to the significant variables involved e.g. number of pilots, airline policies on training (simulato)	individual commercial airlines due to the significant variables involved e.g. number of pilots, airline policies on training (simulator	individual commercial airlines due to the significant variables involved e.g. number of pilots, airline policies on training (simulator
				versus live flight training), fleet types, and variations in on-board	versus live flight training), fleet types, and variations in on-board	versus live flight training), fleet types, and variations in on-board	versus live flight training), fleet types, and variations in on-board	versus live flight training), fleet types, and variations in on-board
				equipment etc.	equipment etc.	equipment etc.	equipment etc.	equipment etc.
Commercial airlines	Other costs	Initial Options Appraisal: Qualitative	It is not proportionate for STN to assess potential other costs for commercial airlines - there may be	Other costs to commercial airlines may include updates to Flight Management Systems (FMS), navigation databases and operating	Other costs to commercial airlines may include updates to Flight Management Systems (FMS), navigation databases and operating	Other costs to commercial airlines may include updates to Flight Management Systems (FMS), navigation databases and operating	Other costs to commercial airlines may include updates to Flight Management Systems (FMS), navigation databases and operating	Other costs to commercial airlines may include updates to Flight Management Systems (FMS), navigation databases and operating
		Qualitative	costs associated with maintaining legacy systems to	procedures, increased pilot hire costs versus training etc. It is not	procedures, increased pilot hire costs versus training etc. It is not	procedures, increased pilot hire costs versus training etc. It is not	procedures, increased pilot hire costs versus training etc. It is not	procedures, increased pilot hire costs versus training etc. It is not
			continue flying conventional navigation but there are	proportionate for STN to assess the 'other costs' to commercial	proportionate for STN to assess the 'other costs' to commercial	proportionate for STN to assess the 'other costs' to commercial	proportionate for STN to assess the 'other costs' to commercial	proportionate for STN to assess the 'other costs' to commercial
			too many variables (e.g., aircraft types, on-board	airlines of flying PBN procedures due to significant variables; some	airlines of flying PBN procedures due to significant variables; some	airlines of flying PBN procedures due to significant variables; some	airlines of flying PBN procedures due to significant variables; some	airlines of flying PBN procedures due to significant variables; some
			system capability etc.) to consider these effectively.	airlines may already be 'PBN ready' whereas others may not.	airlines may already be 'PBN ready' whereas others may not.	airlines may already be 'PBN ready' whereas others may not.	airlines may already be 'PBN ready' whereas others may not.	airlines may already be 'PBN ready' whereas others may not.
Airport / Air	Infrastructure costs	Initial Options Appraisal:	No additional infrastructure is required at STN to	All options relate to the implementation of PBN and no additional	All options relate to the implementation of PBN and no additional	All options relate to the implementation of PBN and no additional	All options relate to the implementation of PBN and no additional	All options relate to the implementation of PBN and no additional
navigation service		Qualitative	maintain extant conventional procedures however	infrastructure is required. The introduction of PBN reduces the	infrastructure is required. The introduction of PBN reduces the	infrastructure is required. The introduction of PBN reduces the	infrastructure is required. The introduction of PBN reduces the	infrastructure is required. The introduction of PBN reduces the
provider			maintaining access to ground-based equipment	reliance on infrastructure, in particular ground-based navigation	reliance on infrastructure, in particular ground-based navigation	reliance on infrastructure, in particular ground-based navigation	reliance on infrastructure, in particular ground-based navigation	reliance on infrastructure, in particular ground-based navigation
			(currently operated by NERL) may be prohibitively	aids are no longer needed. The foundation for PBN is RNAV or RNP;		aids are no longer needed. The foundation for PBN is RNAV or RNP,	aids are no longer needed. The foundation for PBN is RNAV or RNP;	aids are no longer needed. The foundation for PBN is RNAV or RNP;
			expensive, should this commercial option be	aircraft arriving and departing London Stansted Airport using the proposed RNAV/RNP procedures will do so based on their	aircraft arriving and departing London Stansted Airport using the proposed RNAV/RNP procedures will do so based on their	aircraft arriving and departing London Stansted Airport using the proposed RNAV/RNP procedures will do so based on their	aircraft arriving and departing London Stansted Airport using the proposed RNAV/RNP procedures will do so based on their	aircraft arriving and departing London Stansted Airport using the proposed RNAV/RNP procedures will do so based on their
			imprementeu.	performance-based navigation capability.	performance-based navigation capability.	performance-based navigation capability.	performance-based navigation capability.	performance-based navigation capability.
						,	,	
Airport / Air	Operational costs	Initial Options Appraisal: Qualitative	No change to operational costs is attributable to	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and
navigation service provider		Qualitative	maintaining the extant procedures.	their chosen ANSP is considered to be an ongoing cost, ICAO	their chosen ANSP is considered to be an ongoing cost, ICAO	their chosen ANSP is considered to be an ongoing cost, ICAO	their chosen ANSP is considered to be an ongoing cost, ICAO	their chosen ANSP is considered to be an ongoing cost, ICAO
provider				describe 'Improved Operational Efficiency' as a benefit delivered by	describe 'Improved Operational Efficiency' as a benefit delivered by	describe 'Improved Operational Efficiency' as a benefit delivered by	describe 'Improved Operational Efficiency' as a benefit delivered by	describe 'Improved Operational Efficiency' as a benefit delivered by
				the introduction of PBN. In general, London Stansted Airport	the introduction of PBN. In general, London Stansted Airport	the introduction of PBN. In general, London Stansted Airport	the introduction of PBN. In general, London Stansted Airport	the introduction of PBN. In general, London Stansted Airport
				predicts that operational efficiency will improve and that there may	predicts that operational efficiency will improve and that there may	predicts that operational efficiency will improve and that there may	predicts that operational efficiency will improve and that there may	
				be potential for a net reduction in operational costs.	be potential for a net reduction in operational costs.	be potential for a net reduction in operational costs.	be potential for a net reduction in operational costs.	be potential for a net reduction in operational costs.
Airport / Air	Deployment costs	Initial Options Appraisal:	No Deployment costs applicable to extant	Air Traffic Control at STN is contracted out to a third-party	Air Traffic Control at STN is contracted out to a third-party	Air Traffic Control at STN is contracted out to a third-party	Air Traffic Control at STN is contracted out to a third-party	Air Traffic Control at STN is contracted out to a third-party
navigation service		Qualitative	procedures.	organisation. This existing commercial contract between STN and	organisation. This existing commercial contract between STN and	organisation. This existing commercial contract between STN and	organisation. This existing commercial contract between STN and	organisation. This existing commercial contract between STN and
provider				their chosen ANSP is considered to be an ongoing cost.	their chosen ANSP is considered to be an ongoing cost.	their chosen ANSP is considered to be an ongoing cost.	their chosen ANSP is considered to be an ongoing cost.	their chosen ANSP is considered to be an ongoing cost.
Safety Assessment	Safety Assessment	Initial Options Appraisal:	The baseline assumption is that current operations at	Possible conflict with London Luton, London City, Heathrow.	Possible conflict with London Luton, London City, Heathrow.	Possible conflict with London Luton, London City, Heathrow,	Possible conflict with London Luton, London City, Heathrow,	Possible conflict with London Luton, London City, Heathrow,
,	,	Qualitative	STN are safe including use of the extant conventional	London Biggin Hill and RAF Northolt traffic was identified.	London Biggin Hill and RAF Northolt traffic was identified.	London Biggin Hill and RAF Northolt traffic was identified.	London Biggin Hill and RAF Northolt traffic was identified.	London Biggin Hill and RAF Northolt traffic was identified.
			procedures. Following the removal of ground-based	Procedure design and ATC tactical intervention could act as	Procedure design and ATC tactical intervention could act as	Procedure design and ATC tactical intervention could act as	Procedure design and ATC tactical intervention could act as	Procedure design and ATC tactical intervention could act as
			navigational aids supporting the existing SIDs, aircraft	mitigations in these instances but could increase complexity,	mitigations in these instances but could increase complexity,	mitigations in these instances but could increase complexity,	mitigations in these instances but could increase complexity,	mitigations in these instances but could increase complexity,
			departing STN would continuously require radar vectoring (should CAP1781 not be implemented).	leading to a possible increase in ATCO workload. Leading on from this, possible unknown interaction with the wider enroute network	leading to a possible increase in ATCO workload. Leading on from this, possible unknown interaction with the wider enroute network	leading to a possible increase in ATCO workload. Leading on from this, possible unknown interaction with the wider enroute network	leading to a possible increase in ATCO workload. Leading on from this, possible unknown interaction with the wider enroute network	leading to a possible increase in ATCO workload. Leading on from this, possible unknown interaction with the wider enroute network
			resulting in an increase in ATCO workload.	is acknowledged, but at this time, this cannot be determined.	is acknowledged, but at this time, this cannot be determined.	is acknowledged, but at this time, this cannot be determined.	is acknowledged, but at this time, this cannot be determined.	is acknowledged, but at this time, this cannot be determined.
			resulting in an increase in the a mornious	Some of the design options within this envelope consist of an 8%	Some of the design options within this envelope consist of an 8%	Some of the design options within this envelope consist of an 8%	Some of the design options within this envelope consist of an 8%	Some of the design options within this envelope consist of an 8%
				climb gradient. This may not be achievable by some aircraft that	climb gradient. This may not be achievable by some aircraft that	climb gradient. This may not be achievable by some aircraft that	climb gradient. This may not be achievable by some aircraft that	climb gradient. This may not be achievable by some aircraft that
				operate at STN, resulting in potential conflicts with other aircraft.	operate at STN, resulting in potential conflicts with other aircraft.	operate at STN, resulting in potential conflicts with other aircraft.	operate at STN, resulting in potential conflicts with other aircraft.	operate at STN, resulting in potential conflicts with other aircraft.
				To mitigate this, climb gradient requirements could be published. In addition, it was identified that due to the dispersion of traffic	To mitigate this, climb gradient requirements could be published. In addition, it was identified that due to the dispersion of traffic	To mitigate this, climb gradient requirements could be published. In addition, it was identified that due to the dispersion of traffic	To mitigate this, climb gradient requirements could be published. In addition, it was identified that due to the dispersion of traffic	To mitigate this, climb gradient requirements could be published. In addition, it was identified that due to the dispersion of traffic
				departing STN, a degree of tactical intervention may be required to	departing STN, a degree of tactical intervention may be required to	departing STN, a degree of tactical intervention may be required to	departing STN, a degree of tactical intervention may be required to	departing STN, a degree of tactical intervention may be required to
				maintain safe separations standards. The design process may also	maintain safe separations standards. The design process may also	maintain safe separations standards. The design process may also	maintain safe separations standards. The design process may also	maintain safe separations standards. The design process may also
				help to mitigate this hazard to 'as low as is reasonably practicable'.	help to mitigate this hazard to 'as low as is reasonably practicable'.	help to mitigate this hazard to 'as low as is reasonably practicable'.	help to mitigate this hazard to 'as low as is reasonably practicable'.	help to mitigate this hazard to 'as low as is reasonably practicable'.
				This is very specific to exact aircraft routing combinations.	This is very specific to exact aircraft routing combinations.	This is very specific to exact aircraft routing combinations.	This is very specific to exact aircraft routing combinations.	This is very specific to exact aircraft routing combinations.
							<u> </u>	
		Summary of Analy	sis The 'Do Nothing' scenario in relation to this ACP is	When compared to the baseline scenario, Option 1 performs worse		When compared to the baseline scenario, Option 4 performs worse	When compared to the baseline scenario, Option 5 performs worse	When compared to the baseline scenario, Option 6 performs worse
			not a viable option as it does not provide a sustainable solution in terms of airspace	in terms of noise impact and air quality but better in terms of greenhouse gas emmisions, fuel burn, capacity/resilience and	in terms of noise impact and tranquillity but better in terms of greenhouse gas emmsions, fuel burn, capacity/resilience and	in terms of noise impact and tranquillity but better in terms of greenhouse gas emmsions, fuel burn, capacity/resilience and	in terms of noise impact, air quality and tranquillity but better in terms of greenhouse gas emissions, fuel burn, capacity/resilience	In terms of noise impact and air quality but better in terms of greenhouse gas emmisions, fuel burn, capacity/resilience and
1			sustainable solution in terms of airspace modernisation and is unviable following the removal	greenhouse gas emmisions, fuel burn, capacity/resilience and economic impact of capacity. The remaining criteria are deemed to	greenhouse gas emmsions, fuel burn, capacity/resilience and economic impact of capacity. The remaining criteria are deemed to	greenhouse gas emmsions, fuel burn, capacity/resilience and economic impact of capacity. The remaining criteria are deemed to	and economic impact of capacity. The remaining criteria are	greenhouse gas emmisions, fuel burn, capacity/resilience and economic impact of capacity. The remaining criteria are deemed to
			of the VOR beacons in December 2022, which would		be of equal benefit because there is no change when compared to	be of equal benefit because there is no change when compared to	deemed to be of equal benefit because there is no change when	be of equal benefit because there is no change when compared to
			have a significant impact on capacity and resilience.		today's operation. Having said that, at this time, it is not possible to		compared to today's operation. Having said that, at this time, it is	today's operation. Having said that, at this time, it is not possible to
			The existing SIDs do not support continuous climb	fully determine the safety implications of this specific option. The	fully determine the safety implications of this specific option. The	fully determine the safety implications of this specific option. The	not possible to fully determine the safety implications of this	fully determine the safety implications of this specific option. The
			operations, which leads to a greater volume of fuel burn, emissions and noise at lower levels. In terms of	change sponsor has identified possible conflicts with some routes operated by other nearby airports, but the exact nature of these	change sponsor has identified possible conflicts with some routes operated by other nearby airports, but the exact nature of these	change sponsor has identified possible conflicts with some routes operated by other nearby airports, but the exact nature of these	specific option. The change sponsor has identified possible conflicts with some routes operated by other nearby airports, but the exact	change sponsor has identified possible conflicts with some routes operated by other nearby airports, but the exact nature of these
			Tranquillity. Biodiversity. GA Access and economic	conflicts is unclear at this stage. Further analysis and engagement is	conflicts is unclear at this stage. Further analysis and engagement is	conflicts is unclear at this stage. Further analysis and engagement is	mature of these conflicts is unclear at this stage. Further analysis	operated by other nearby airports, but the exact nature of these conflicts is unclear at this stage. Further analysis and engagement is
			impact, the 'Do Nothing baseline' provides	required in Stage 3/4 of the CAP 1616 process to determine this.	required in Stage 3/4 of the CAP 1616 process to determine this.	required in Stage 3/4 of the CAP 1616 process to determine this.	and engagement is required in Stage 3/4 of the CAP 1616 process to	
			minimal/no change to today's operations.	Furthermore, this option has been assessed as a stand-alone option	Furthermore, this option has been assessed as a stand-alone option	Furthermore, this option has been assessed as a stand-alone option	determine this. Furthermore, this option has been assessed as a	Furthermore, this option has been assessed as a stand-alone option
			Furthermore, there are very limited costs incurred as	rather than as a set of design options as part of a wider system.	rather than as a set of design options as part of a wider system.	rather than as a set of design options as part of a wider system.	stand-alone option rather than as a set of design options as part of	rather than as a set of design options as part of a wider system.
			a result of this scenario. From a safety perspective, it	Additional analysis is required in Stage 3 to determine the	Additional analysis is required in Stage 3 to determine the	Additional analysis is required in Stage 3 to determine the	a wider system. Additional analysis is required in Stage 3 to	Additional analysis is required in Stage 3 to determine the
			is assumed that current STN operations are safe. Following the removal of the VORs, it is	cumulative impact of this option when compared to all the other	cumulative impact of this option when compared to all the other	cumulative impact of this option when compared to all the other	determine the cumulative impact of this option when compared to all the other options.	cumulative impact of this option when compared to all the other
			acknowledged that ATCO workload may increase due	Based on performance in the IOA, Option 1 has been rejected as it	Based on performance in the IOA, Option 3 is selected as the	Based on performance in the IOA, Option 4 is rejected as it provide:	Based on performance in the IOA, Option 5 is assessed as	Based on performance in the IOA, Option 6 is assessed as
			to the enduring requirement for radar vectoring.	provides a dis-benefit in terms of number of people and residential	Preferred Option. This is because it overflies fewer people and	a dis-benefit in terms of people and residential properties	Acceptable as it overflies more people and residential buildings	Favourable. Whilst it is not the shortest in terms of track length, it
				properties overflown. Furthermore, it performs poorly in terms of	residential buildings than all options within this design envelope.	overflown. This option overflies more people than any other option	than Options 1 and 4 but less than Options 3 and 6.	is the second best performing option in terms of people and
				air quality, which some of the other options within this design		within this envelope.		residential properties overflown.
				envelope do not.				
				1				

Colour Key	Description
Preferred Option(s)	When compared to the baseline, there is a clear and obvious benefit. This option is viewed as more favourable than the other within the design envelope and as such is the preferred option within the design envelope.
Favourable	When compared to the baseline, there is a clear and obvious benefit.
Acceptable	When compared to the baseline, there is an equal benefit.
Rejected	When compared to the baseline, there is a clear and obvious dis-benefit. As such, these options are rejected.
Baseline/Previously Rejected	Option included for completeness but, in the case of previously rejected options, not subject to IOA.

Departure En	velope: SID RWY 22 SC									
Group Communities	Makes impact on health and quality of ife	Severe of Annual Agencies Agencies and Countries Continues Agencies and Countries Countries and Countries Countries and Co	the term of loads's severation, the NOTH's design of the NOTH's design of the NOTH's design of NOTH's NOTH's design of the NOTH's design of NOTH's NOTH's design of the NoTH's severation of the bender of the NOTH's design of the NOTH's NOTH's design of the NoTH's noth's noth's noth's noth's noth's noth's noth's noth's the bender that published on the U. Mar. I was been don't not not the bender that published on the U. Mar. I was been don't not not the bender that published on the U. Mar. I was been don't not not the bender that the NOTH's not not not the NOTH's not bender that the NOTH's not the NOTH's not not published the NOTH's not the NOTH's not published and the published that the NOTH's not published and the notal data absolutely that are alterned of and the notal published the NOTH's notal that the NOTH's notal bender the NOTH's notal that the NOTH's notal that the Seast of the Alone, this level designed that the Last of the Alone, this level design of the NOTH's notal Last of the Alone, this level design of the NOTH's notal that the Last of the Alone, this level design of the NOTH's notal that the Last of the Alone, this level design of the NOTH's notal that the Last of the Alone, this level design of the NOTH's notal that the Last of the Alone, this level design of the NOTH's notal that the Last of the Alone, this level design of the NOTH's notal that the Last of the NOTH's notal that the NOTH's notal that the NOTH's notal Last of the NOTH's notal that the NOTH's	Difference of the control of the con	Common 1. And Add American of the energy (AMS SD which Charles 1 and American 1. And American	OFFIDIS 2 Discuss 2 has 1987 implication of the entiring LWM 500 which Discuss 2 has 1987 implication of the entiring LWM 500 which Discuss 2 has 2 h	OFFICES 3 and SEMALT name based on the energing AMM 50 which from 13 and 50 which the control of	Difference is a market on the entire (AMI dis which Counts is a market on the entire (AMI dis which Counts is a market of the entire in terms of population and redement building in which we counts in terms of population and redement building in which, provide determed as a dis-devent.	Common S. and REFT lames based on the examing LAM 50 when Common S. and REFT lames based on the examing LAM 50 when Common S. and LAM 50 when LAM 50 when LAM 50 when which is Common Serverlies 10.248 appears and state of 47.33 common serverlies 10.248 appears and state of 47.33 remaind plaquisition and residential buildings when common server of pages and the serverlies of the serverlies of the serverlies of terms of pages and the serverlies of the serverlies of terms of an advantage LAM 50 in a sen's the opposite deemed as a dis-boretti.	Common A and PTT most based on the solitory (AMOS in etc.) Common As a set of least of the solitory (AMOS in etc.) Common As a set of least of le
Communities	Air Quality	Initial Options Appraisal: Qualitative	With regards to air quality, the existing LAM 310 does not discretly owing any AQAMS. Cress the 6% clini gradient included within the Do Nothing scenario, the impact of aircraft below 1,00% with regards to local are quality is limited to areas within the immediate area surrounding the airport.	Unlike the baselie scenario, Option O directly ownline 2 ADMA. Furthermora, a part CP 3 456 (para 2 A), due to meinig and disparsion, the impact on air quality above 1,000th is listly to be integrificant. There are areas within the immediate area surrounding the airport that will be ownlinous below 1,000th, sowewer, for safety execution, the impact that will be ownlinous below 2,000th, sowewer, for safety execution, the companied to the control of the	As part the baseline scennind, Option 1 does not directly ownly any AQMAL. Furthermore, ap prof 24 Tick Jegan 8791, due to miking and dispersion, the impact on air quality above 1,000 it is lably to be regarding. The rare are areas within the immediate area surrounding the airport that will be conflicted before 3,000 it, however, for airlying measure, this is unaccolable. Therefore, voral, when compared to the baseline scenario, this option is deemed to be of equal baselet.	disparsion, the impact on air quality above 1,000 to likely to be insignificant. There are areas within the immediate area surrounding the airport that will be overflown below 1,000th, however, for safety reasons, this is unsverdable. Therefore, overall, when compared to the baseline scenario, this option is deemed to be of equal benefit.	reasons, this is unavoidable. Therefore, overall, when compared to the baseline scenario, this option is deemed to be of equal benefit.	As per the baseline scenninio, Option 4 does not disrectly overfly any ADMAN. Furthermore, as per LOP 156 legon 2781, due to mining an disparsion, the impact on air quality above 1,0001 is likely to be legstifficate. There are areas within the immediate area surrounding the airport that will be confliction below 1,0001, however, for safely associate, this is unreadable. Therefore, overall, when compared for the baseline scenario, this option is deemed to be of equal berriffi.	dispersion, the impact on air quality above 1,000th is liasly to be insignificant. There are areas within the immediate area surrounding the airport that will be over-flowed below 1,000th, however, for safety reasons, this is unavoidable. Therefore, overall, when compared to the baseline scenario, this option is deemed to be of equal benefit.	As par the baseline scenning, Option 6 does not directly owelly as AGMAN. Furthermore, as pre LAP 5 lide par \$214, due to or mining and disparsion, the impact on air quality above 3,000 its likely to be legispificant. There are areas within the immediate area surrounding the airport that will be conflicted below 5,000 its lowers, for an exact, this is undersidable. Therefore, overall, when compared to the baseline scenario, this option is deemed to be of equal barrelin.
Wider Society	Greenhouse Gas impact	ontail Options Appraisal: Qualitative	Guern to race & our is super commons sinh opportunit. The sinh self with the seast that single flow by arrell for a very light of an of the flow of the sinh self way to be self to the sinh sinh self way to be self to the sinh self- fore the seath production in the source of self- fore the seath production in Self-self-self-self-self- self-self-self-self-self-self-self-self-	Queen De la beser designed la support certificación del insegrator de l'acceptación de la companya de la companya de la mengrator de l'acceptación del la companya de la companya de l'acceptación del la companya de la delición del companya de la delición por companya del por companya de la delición por companya del por companya del por delición del companya delición del companya del por companya del confirmido del por companya del por companya del por companya del confirmido del por companya del por companya del por companya del por del por companya del por companya del por companya del por del por companya del por companya del por companya del por del por companya del por companya del por companya del por del por companya del por companya del por companya del por del por companya del por companya del por del por companya del por companya del por companya del por del por companya del por companya del por companya del por del por companya del por compan	Obtact 13 has been designed to support or extremose shift agreement was seen as seen a	Option 2 Table Asserted insuperior to support or continuous cells in speciments was continuous cells in speciment to superior cells or resigned for the required for the company of the book of the cells of the cell	Otto 13 has been degreed to support entremous files agreed to the receiver of the support of the receiver of the support of the receiver of the support of the support of the receiver of the support of the support of the support of the receiver of the support of support of the support of support of suppor	Option 1 Nature designed for support enrichments cells expensed in support enrichments of the register of the support of the register of the register of the first enrichment of the register of the register of the first enrichment of the register of the register of the first enrichment of the register of the register of the register of the first enrichment of the register of the register of the first enrichment of the register of the register of the first enrichment of the register of the first enrichment of the register of the confirm the exact values of greenhouse gares released.	Outes 1 has been dringered to support entermous chine generates when every entermous chine generate when every entermous proper site in recognition of the support of the s	Option 1 She have designed for support continuous cells registered to support continuous cells registered contention, Quintel soll Sougher and in therefore expected to sent money general-loss games, As such such as confirmed to the contention of green of the contention
Wider Society	Capacity and resilience	Initial Options Appraisal: Qualitative	Maintaining cotant procedures would maintain current capacity however, due to the reliance on ground- based makyational aids, realisence would be significantly affected, following their removal in December 2022.	The introduction of PBN routes is expected to deliver benefits by increasing airpace capacity which subsequently leads to more predictable flight paths and fewer delays (both in air or on the ground). The reduction of the relaxons on outdated ground based managational aid will ageditionally increase operational resilience for airlines and operators.	The introduction of PBN routes is expected to deliver benefits by increasing airpace capacity which subsequently leads to more predictable flight paths and fewer delays (both in air or on the ground). The reduction of the relance on outdated ground based morphotomial skill significantly increase operational resilience for airlines and operators.	This introduction of PBN routies is expected to deliver brandits by increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delays (both in air or on the ground). The reduction of the relance on outdated ground based ransglational adds will significantly increase operational resilience for sinines and operators.	The introduction of PBN routes is expected to deliver benefits by increasing air space capacity which subsequently leads to more predictable flight paths and fewer delays (both in air or on the ground). The reduction of the relance on outdated ground based movigational alks will significantly increase operational resilience for airlines and operators.	The introduction of PBN course is expected to deliver benefits by increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delays (both in air or on the ground). The reduction of the reliance on outduded ground based rangistional aids will significantly increase operational resilience for airlines and operators.	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delays (both in air or on the ground). The reduction of the relarace on outdated ground based movigational aids with significantly increase operational resilence for airlines and operators.	The introduction of PBN course is expected to deliver benefits by increasing airpace capacity which subsequently leads to more predictable flight paths and fewer delays (both in air or on the ground). The reduction of the reliance on outdieted ground based navigational adds will significantly increase operational resilience for airlines and operators.
Wider Society	Tranquility	initial Options Appraisal: Qualitotive	As per CAP 1016, Agenetia N. Para 176, change species are required to consider Transpully with specific reference to ADMRs and Notional Parks only, unless other sees have been Sentified through community engagement. Although no specific areas were selectived by community engagement, the change sooncor has decided to niculae SSSs and Country Parks with the 100. Analysis to marinia consideracy with orbits Sage 2 documentation. The acesting Labb 500 does not overly any ADMS, National Parks or SSSs but it does overfly 1 Country Park.	Option Sides not earthy any AOMs or Missional Prink, Nesservi. 1.505. Overlight of these areas is expected to social as higher and the option overfiles. Sides of emissions on a stranger and the option overfiles. A social as the option of emission on the option of emissions on the option of emissions or emissions on the option of emissions or emissions. A social emission of emissions of emiss	option 1 dece not overthy any ACMIN, National Park to SSSIs. The option does overful, Frouris Park, Invallage from 6 cours Georgia, Courting Park, Park and per control course of the decelor secretion. Overfillight of these series is expected to occur to the bacteries secretion. Overfillight of these series is expected to occur of the series and a larger activate intermiting the temporal of series of those series is expected to occur of the series of the series is expected in that it does not overfly any ACMIN, National Ariak in SSSIs in the deserved for the Series series and as such, this operan is determed to be of expected from the series series and as such, this operan is determed to be of expected from the series series and as such, this operan is determed to be of expected from the series series and as such, this operan is determed to be of expected from the series series and as such, this operan is determed to be of expected from the series series and as such, this operan is determed to be of expected from the series and the series se	option 2 date not exemply any ADMIN, Instead Plan And State St. Six 1. Before the complete Country Plan, Analysis great Country Result and great these series is expected to society the series of the series is expected to society and a higher attitude, making the respect of anythin roles and country any ADMIN and anythin and a series of the series of	option I decis not exercity any ACMIN or Material Princh. This option does exercity L County, making it required with the baseline screens. I Deserver, this option does overilly 3555s, more than the productive screens, Ownering of other screen soldered boscors at a domestic screens, Ownering of the screen soldered boscors at on these assets. When compared to the baseline screens, Option all on the does area. When compared to the baseline screens, Option all or screens are soldered to screens and the screens of the screens of the screens of screens are screen and the screens of the screens of screens are screens of the screens of the screens of screens are screens of the screens of screens of the screens of the screens of the screens of the screens of the screens of the screens of the screens of the screens of the screens of the screens of the screens of the screens of the screens of the screens of the screens of the screens of screens of scre	equal in that it does not overfly any ADNBs, National Parks and an equal number of Country Parks. However, this option is deemed to be of dis-benefit because it overflies more SSSs.	option if each not exercity any ACMIN in Visional Parks. The option does evenly 1 County, Am Analysis equal with the baseline increases. Believes, this option does own! 4 3555s, more than the productive search, Ownering of these zeros to perceive for soors or a consideration of the county of the county of the county of the on these areas. When compared to the baseline screening option of county of the county of the county of the county of the county of the county of the county of the county of the county of the county of the county of the county of the county of the or of the county of the county of the county of the county of the county of the county of the county of the county of the original county of the county of the county of the county of the original county of the county of the county of the county of the original county of the county of the county of the county of the original county of the county of the county of the county of the original county of the county of the county of the county of the original county of the county of the county of the county of the original county of the county of the county of the county of the original county of the county of the county of the county of the original county of the county of the county of the county of the original county of the county of the county of the county of the original county of the county of the county of the county of the original county of the county of the county of the county of the original county of the county of the county of the county of the original county of the county of the county of the county of the original county of the county of the county of the county of the original county of the county of the county of the county of the original county of the county of the county of the county of the original county of the county of the county of the county of the county of the original county of the county of the county of the county of the county of the county of the coun	is l'ajère attitude, minimising the limpact of aircraft noise and emissio so on these areas. When compared to the bushlen scensiving, Option4 equal in that it does not overfity any ADMBs, National Parks and an equal number of country Parks. However, this option is deemed to be of dis-benefit because it overflies more SSSIs.
Wider Society	Biodiversity	initial Options Appraisal: Qualitative	Analysis conducted by the change systems those but the outsing operations 23Th conflight of hy within the outsing operations 23Th conflight of hy within the vicinity of dissignated size in term of Boothwestyle operation, varcell x and lying above 2,000 when you have a 25th, 55th, 5	The fragge general has conformed and its indirection allows his designated below a second SFA ARD in stage, his in operation to be no change takely to affect to believely at these lates. From a rail- ce and properties, the exist well be servicina and admission above and making his procession. He was the will be suffered as admission and and making his his suitable to be an impact on head are quality for and making his his suitable to be an impact on head are quality for and making his suitable to be an impact on head are quality extend above 3.000 fr. The histories of the SFA and the suitable general for his compact on histories are histories of the suitable general based of the suitable suitable suitable suitable suitable suitable suitable invest to the designation them so under 35% will be assessed in Stage of the ACP symposis Design Matter Square.	the change genomer has conducted early to understand where the designated cisis are word STA. 4th this case, how a spectrated in her to share of the spectrate in her to change it have to effect belowhereby at these state. From a set, the conduction of the change of the change of the change of and mixing. (More in, while key before the present of supposed and mixing. (More in, whilekey to be an impact as fould air quality from and mixing. (More in, whilekey to be an impact as fould air quality from and mixing. (More in, whilekey to be an impact as fould air quality from dark and the change of the change of the specific and mixing. (More in, whilekey to be support to below the proper of the change of the professional regions to the disciplinate does are most 35% will be suspead in Sugar state of the CPU process.) Supplying More State of the specific of the company of the change of the change of the specific of specific of specifi	aron mastig, tranta is unisolarly to our air impact on local and quality of aftertrial abover. 2000.Ft. Furthermore, CAP 10514, Appendix B, Para BBI states that in general, airquare change proposal will not have an impact on blodynemity as they do not travalve ground-based infrastructure. That said, 51% advancedages that any potential injurant to the designated size around 351% will be assessed in Stage of the ACP process by Subject Matter Diperis.	The change generate has conducted early to understand where the designated circum annual TML 41th issing April on a special tool has no through linky to selfect biodevolvers) of those lates, from an air below the conduction of the conduction of the conduction of the selfect of the conduction of the conduction of the conduction of and mining, there is untillay to be an impact on local air quality form and mining, there is untillay to be an impact on local air quality from and mining, there is untillay to the conduction of the conduction of and mining, there is untillay to the conduction of the conduction of and mining the conduction of the conduction of the conduction of and mining the conduction of the conduction of self-uniformity. The self-uniformity of the conduction of self-uniformity and the conduction of the conduction of self-uniformity and self-uniformity self-uniformity and self-uniformity self-uniformity and self-uniformity self-unifo	The change opposed has conditional own for a conditional own for the opposed side or several SN. At this stage, there is opposed to the or condition of the con	The Change operand has conducted and the conductation deven the disciplated disea and conductation of the Min testing and conductation of the Min testing and Change of the Min testing and Mi	The Things opposite his confunction with 10 and/oration dismost being special selection and STA. Alth things of their inspectation has no sharp flash for a disfirst blood/oration) at these sibles. From an and could preserved the select the selection of the sele
General Aviation General Aviation /	Access Economic impact from	initial Options Appraisal: Gualitative Initial Options Appraisal:	No change to existing airspace arrangements. GA users of STN will institute their current level of access under extant operational arrangements. No increase to effective capacity anticipated for	No change to the existing airspace arrangements (within the baselin scenario) are expected as a consequence of this AZP. However, it is recommended that old VRPs and estimate (exiting a Magnement pertaining to GA access are reviewed prior to implementation to essure their continued voldity. The introduction PRM is expected to deliver benefits by increasing	No charge to the existing airspace arrangements (within the baselin scenario) are expected as a consequence of this ACP. However, it is recommended that all MPS and dosting letters of Agreement pertaining to GA access are reviewed prior to implementation to ensure their continued validity. The introduction PRM is expected to deliver benefits by increasing	le Na change to the existing airspace arrangements (within the baselin scenario) are espected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement pertaining to GA access are reviewed prior to implementation to ensure their continued validity. The introduction PRM is exepceted to deliver benefits by increasing	e No charge to the existing airspace arrangements (within the baselin scenario) are expected as a consequence of this ACP. However, it is recommended that al WPs and existing letters of Agreement, pertaining to GA access are reviewed prior to implementation to ensure their continued validity. The introduction PRM is expected to deliver benefits by increasing	No change to the existing sin pace arrangements (within the baselin secratio) are expected as a consequence of this ACP. However, It is recommended that all VPPs and existing Letters of Agreement pertaining to GA access are reviewed prior to implementation to ensure their continued visiting.	e No change to the existing airspace arrangements (within the baselin scenario) are expected as a consequence of this ACP. However, it is recommended that al VMPs and existing letters of Agreement, pertaining to GA access are reviewed prior to implementation to ensure their continued validity. The introduction RPM is expected to deliver benefits by increasing	No change to the existing airspace arrangements (within the basel scenario) are expected as a consequence of this ACP. Howeve, it is recommended that all VBPs and estimate letters of Agreement pertaining to GA access are reviewed prior to implementation to ensure their continued vialitity. The introduction PBNI is expected to deliver benefits by increasing
commercial airlines	increased effective capacity	Qualitative	continued us of estant procedures, therefore no economic benefit for GALysifines.	anguez coupoir which is turn will led to more predictable figure accepted by failure accepted for failure accepted	arranges cognitive which in nor will not for more predictable figure secretary in the property of the propert	angues cognity which is to me till not for more predictable field, and the property of the pr	arranges capital which in our will not be more predictable figure secretary to the property of the property o	angeocogody which is turn all to do one predictable fight according to the control of the contro	arranges capital which in som will not be more predictable figure support of the control of the	simpour cognitive shirts in sum will seld on one productable figure special sp
General Aviation / commercial airlines	Foel burn	Initial Options Appraisal: Qualitative	The seating STN procedures do not support continuous critical programms. Fail but is expected to be greated due to Laticial ATC intervention and particle of investifight in the departure and approach phase. Furthermore, in the case of the model path of the existing LAM SIGN, the track length is 13.72 Main (7.444AM). As previously described, for the purposes of the IGN condition and January in LAM SIGN has been measured up to 4,000Hz.	Option 2 Sides support continuous Side Sportation, meaning that it macroir would not be required to level off deep departure, relation has overall amount of leaf bears. There is no requirement vollets are supported to the second second second second second second conducted in Sagar I Performed, to reside a comparison, the legic applied is that the observed that second second second with regards to the outport, in 3.2 deline 12 25569 large, before the second second second second second second second second second second second second stage its second self require a general removar of held brain, second se	Option 2 flow support continuous table operations, meaning that it would want be not separate to level of during of separate, individual to see a many separate to level of during of separate, meaning the count interest of the fourth. There is no requirement authority of the count of the continuous table of the contin	Option 2 Sides support combinates faith operations, meaning that it cannot want to the resident of the cold faith operations, melanting that cannot did not breath. These serial misses over all misses of the law that the six is no requirement within the cannot be considered in places. The preference is excelled scoresion, the legisl supplied is but the observed to excelled scoresion, the legisl supplied is but the observed to excelled scoresion, the legisl supplied is but the observed to the score in \$2.20 learn 1.20 sold legisla store in Score in Score in Score in \$2.20 learn 1.20 sold legisla store in Score in \$2.20 learn 1.20 sold legisla store in Score in	Option 3 flow support continuous table operations, meaning that it would want be relief and the soft of the generation of being of the special properties, moisture that owned in more of first flow through the sort of the s	Option 4 flow support continuous clinic operations, meaning that year forward would not be required to level of diseing departure, relacting section and immost of lead beam. There is no requirement within the certification of the certificat	Option 5 flow support continuous table operations, meaning that it would would not be required to level of disory disperature, release that continuous and interest of level flowers are not requirement asking the continuous and interest of level flowers. There are no requirement asking the level flowers are required to the level flowers are required to the level flowers are released to the level flowers are rele	Option 6 feets support continuous faith operations, meaning that carried valued on the requirement for level of interpretation for a time overall reasons of level fourth. There is no requirement within time overall reasons of level fourth. There is no requirement within conductated in large 1 rehardors, in cerebia comparison, the legicl applied in that the charter the text keepit, the less faired lawards with regardo to the operation, in a 300cline 12 story of law grade with regardors the regions, in a 300cline 12 story of law grade stage its amounted with require a general removal of first born, meteros, this opport on of the desertion removed of first born, preferros, the opport of the desertion removal of the fairn. More I depth analysis will be carried out in Stage 1 to continue.
Commercial airlines	Training costs	initial Options Appraisal: Qualitative	No additional training predicted.	It is opecated that no extra Pilit/Crow training will be required to enable plotts to the new PRM procedures. PM is a common standard of nasigition throughout the world. It is not proportionate for London Standed Payon to assess on going competency for introduction Standed Payon to assess on going competency for introduction commercial withing due to the significant variables involved a g. number of pilots, affine poticios on staining limitation variables with the processing the pr	It is expected that no notar PRINT/Covertaining will be required to reside plots to the new PRIP procedure. PNA is a common standard of orwigation throughout the world. It is not proportional for London Stantard Airport to assess on going competency for individual commercial airlines due to the spifficant variables who while the procedure of piots, siring policies on training limitation variable for the straining, flowth types, and variations in on-board equipment etc.	It is expected that no extra PRO/Crew training will be required to make plotted by the new PRO procedures. PRIVE a common transferd of neighbors throughout the world. It is not proportionate to London Stanzed Airport to assess ongoing competency for inhibition. Stanzed Airport to assess ongoing competency for inhibition and the procedure of prices, affine publics on training limitation works the Tight Testinglia, fleet types, and variables in on-board equipment etc.	It is opecated that no extra PRINC/Cover training will be required to resulted plots on the new PRIN procedure. PNA is a common character of evaluation throughout the world. It is not proportionate for London Statusted Alprior to assess on going competency for molecular commercial airlines due to the spifficant variables who while the procedure of pions, sinking policies on training (simulation variable for the straining flower types, and variations in on-board equipment etc.	It is expected that no exto RINC/Cove training will be required to make plotts to the new PRP procedure. PRM is a common standard of analyzino throughout the world. It is not proportional for London Stantack Aryzon to assess ongoing competency for inhibition. Stantack Aryzon to assess ongoing competency for inhibition and the procedure of picts, affine publics on training (simulation was also thigh straining). River types, and variations in se-board equipment etc.	It is opecated that no entar PRINC/Town training will be required to reciple (plots to f) here in PRIN procedure. PNA is a common standard of excipation throughout the world. It is not proportionate for London Stantard Alprinc to assess on going competency for individual commercial airlines due to the spifficant variables involved a p, number of jobs, sirling policies on training (simulator variance letting filt entaining, filest types, and variations in on-board equipment etc.	It is expected that no ento RRIV/Tive training will be required to make plaints to the new RRIV procedure. RRIV is a common standard of an expected to the common standard of an expectation throughout the world. It is not proportional for London Stantack Airport to assess on equire competency for included commercial affinise due to the significant variables included ag, mumber of pilots, affine policies on training limitation was larter light stanting. Breat types, and variations in on-board equipment etc.
Commercial airlines	Other costs	initial Options Appraisal: Qualitative	It is not proportionate for STN to assets potential other costs for commercial address - these may be costs associated with makinashing legacy systems to continue Sing conventional navigation but there are soo many variables (e.g., aircraft types, on-board system capability etc.) to consider these effectively.	Other costs to commercial airlines may include updates to Flight Amangement System (FMS), analygined national endoperating procedures. Increased piloc hire costs versus training etc. It is not proportionate for SNTs to assess the other costs' to commercial artifless of Privile PRM procedures due to significant variables; some airlines may already be "PRM ready" whereas others may not.	Other costs to commercial artitises may include updates to Fight Avanagement Pythorn (HASI), invaligation discharces and operating sociodiums, increased pilot hist costs versus training etc. It is not reoperationate for PSTN to assess the titler costs' to commercial artitises of Byting PSN procedures due to significant variables; some utritines may already be PSN ready' whereas others may noc.	Other costs to commercial sitners may include upodates to Flight Management System (FMS), longified not situates and operating procedures, increased pilot her costs versus training etc. It is not apportionate to 75 No assess the history costs for commercial sixtimes of Plying RRM procedures due to algorithmat variables; some airlines may already be "PSM ready" whereas others may not.	Other costs to commercial artities may include updates to Flight Avanagement System (MASS), insulgation disabases and operating socrediums, increased pilot hier costs versus training etc. It is not reoperationate for PSTN to assess the other costs for commercial artities of flying PBN procedures due to significant variables; some virtines may already be PBN ready' whereas others may not.	Other costs to commercial skines may include updates So Figlish Management System (FMS), longinging skines depending, procedures, increased pilot hire costs ventus training etc. It is not organismosate for SN to assess the Finer costs to commercial skines of Fiying RBI procedures due to significant variables; some skines may already be "PBN ready" whereas others may not.	Other coots to commercial artities may include updates to Flight Avanagement Sydem (MAS), invasigned databases and operating socredness, increased pilot hier cods versus training etc. It is not reportionate for STM to assess the other costs' to commercial artities of flying PRM procedures due to significant variables; some virtiless may already be PBM ready' whereas others may not.	Other costs to commercial skines may include updates to Fight Management System (FMS), hospiton distalases and operating, procedures, increased pilot hir costs ventus training etc. It is not oppositionate for SNI to assess the Fine+ costs's commercial skines of Flying PBN gorcedures due to significant variables; some skines may already be 'PBN ready' whereas others may not.

Group	frances.	Level of Analysis	DO NOTHING PASSING							
Airport / Air navigation service provider	Infrastructure costs	initial Options Appraisal: Qualitative	No additional infrastructure is required at STN to maintain extent conventional procedures however maintaining access to ground based equipment (currently operated by KERL) may be prohibitively expensive, should this commercial option be implamented.	infrastructure is required. The introduction of PBN reduces the	All options relate to the implementation of PRN and no additional inflastructure is required. The introduction of PRN reduces the entrance on infrastructure, in particular ground based revergation add are no longer needed. The foundation for PRN in RNN or RNN, are no longer needed. The foundation for PRN in RNN or RNN, recopional PRNN/PRN procedures will be a be about on their performance-based navigation capability.	OFFIDN 2 All options relate to the implementation of PBN and no additional infrastructure is required. The introduction of PBN reduces the relative on infrastructure, in particular ground based neighbor also are no longer needed. The foundation for PBN is SMAV or NM; are not longer needed. The foundation for PBN is SMAV or NM; are not longer needed. The foundation for PBN is SMAV or NM; are not particularly on the particular that the procedure is NMAV perioduction with one to based on their particular that the particular	GPTION 3 All options relate to the implementation of PBN and no additional infrastructure is required. The introduction of PBN reduces the relation on the introduction of PBN reduces the relations on infrastructure, in particular ground bloaded overlaption and are no binger needed. The foundation for PBN is RMW or PBN are required to the relation of PBN is RMW or PBN reduced to the relation of PBN is RMW or PBN reduced to the relation of PBN is RMW or PBN reduced to the reduced to	All options relate to the implementation of PBN and no additional infrastructure is required. The introduction of PBN reduces the relation of PBN reduces the resistance of relations of relations of relations of relations of services on infrastructure, in particular pound obside disadjation add are no longer needed. The foundation for PBN is SMAV or RBP, are required to the resistance of reduces the resistance of the reduces register of the reduces of the reduces of the reduces performance-based navigation capability.	All oppose relate to the implementation of PBN and no additional inflastructure is required. The introduction of PBN end no additional inflastructure is required. The introduction of PBN reduces the retrievance in instructure, in particular ignored decade supportion add are no larger needed. The foundation for PBN is RMAV or RMV, are not required to the reduces of PBN in RMAV or RMV in the respect and the reduced reduced to the procedure in the based on their performance-based navigation capability.	All opinions relate to the Implementation of PBN and no additional infrastructure is required. The introduction of PBN reduces the relativence on infrastructure, in particular ground based navigation adds are no longer needed. The tronsdoor his PBN is SMU/or NRVP programmed to the properties of the tronsdoor his PBN is SMU/or NRVP programmed NRVM/SMP procedures will do to absed on their performance-based navigation capability.
Airport / Air navigation service provider		initial Options Appraisal: Gualitative	No change to operational costs is attributable to maintaining the estant procedures.	All Traffic Centrel at STN is contracted out to a hirth-purity organisation. This obsiding commercial contract between STN and their chosen MXPP is considered to be an ongoing cost LCAO describle "Improved Operational Efficiency" as benefit debeured by the interduction of PRIN. In general, London Stanstack Alipsot predict that operationed efficiency will improve and that there may be potential for a net reduction in operational costs.	Air Traffic Control at STN is contracted out to a hitherigarty organisation. This soliting commercial contract between STM and their chosen AMSP is considered to be an ongoing cost. KAD describle Improved Operational Efficiency in a benefit delivered by the introduction of PRM. In general, London Sasnets Airport predict that operational efficiency will improve and that there may be potential for a net reduction in operational costs.	All Traffic Control at STN is contracted out to a fathy-purty organization. This estimption commercial control between STM and their chosen MASP is considered to be an ongoing cost. ICAO describe "Improved Operational Efficacy", as benefit delivered by the introduction of PBM. In general, London Stansdark Airport predict that operational efficiency will improve and that there may be potential for a net reduction in operational costs.		Air Traffic Coated at STN is contracted out to a third-party organisation. This soling commercial contract between STM and their chosen AMEP is considered to be an organize cost. ICAO describe "Improved Operational Efficiency" as a benefit delivered by the introduction of PRM. In general, London Standard Airport predict that operational efficiency will improve out that there may be potential for a net reduction in operational costs.	Air Traffic Control at STN is constructed out to a hither journy cognisistion. This ostinity commercial contrast between STN and their chosen AMSP is considered to be an ongoing cost. ICAD describle "Improved Operational Tifficacy" as a benefit deletered by the introduction of FRNs in general, London Stanstok Airport predicts that operational efficiency will improve and that there may be potential for a net reduction in operational costs.	Ar Traffic Control at STN is controlled out to a third party organisation. This exhibition commercial control between STN and their chosen AMO® is considered to be an onspile; one LFXO describe improved operational efficiency "as breefle delivered by the introduction of PRIA in general, London Stanzede Alipropt predicts that operational efficiency will improve and that there may be potential for a net reduction in operational costs.
Airport / Air navigation service provider	Deployment costs	Initial Options Appraisal: Qualitative	No Deployment costs applicable to extant procedures.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an engoing cost.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen AMSP is considered to be an ongoing cost.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	Air Traffic Control at STN is contracted out to a third party organisation. This existing commercial contract between STN and their chosen AMSP is considered to be an ongoing cost.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.
Sufety Assessment	Safety Assessment	Initial Cutions Appraisal: Qualitative	STN are safe including use of the extant conventional procedures. Following the removal of ground-based	Passable coefficient for confident control conduction, therefore and AM Recentate tradition selected field. Proceedings step and ATC and AM Recentate tradition selected field. Proceedings selected from the control	Preside conflict with London Linkin, London Southern, Testimbre and AD Almohath Lattice, and Sentillate. Proceeding and ATC and AD Almohath Lattice, and Sentillate. Proceding and ATC would increase complexity, Jesting to a possible increase in ATC considerable. Landing on them, possible subnoval increases in ATC conflicts. Landing on them, possible subnoval interaction with the solder common enterior's in activatelysis. And in this result in the solder common enterior's in activation of the conflict of the solder common enterior's in activation of the conflict of the solder conflict of the conflict	Possible conflict with Lordon Linose, Luminos Southment, Membrook and Add Membrook Linose, and effective. Proceedings with several PCI and the Membrook Linose selectrified. Proceedings with several PCI and another threat Conflict and Linose	Proside conflict with London Losins, confirm Studenter, Teachines and All All Monthal Lotters and Studenter Studenter, Studenter Studenter, and M. Schmidt Lotters and M. Consider Consecution Conference Complexity, Justing to a possible leverage in ACC or world increase complexity, Justing to a possible leverage in ACC or world in Consecution Conference Conferen	Pacish conflict with Lordon Lions, London Soddmen, Manchews and Marchael Lordon Lions, London Soddmen, Manchews and Marchael Lordon Lions and Lions	Passalls conflict with London Linkins, London London, Residence and All Monthal Latification will residence and residence and a Monthal Latification will be supported to the Latification of the Latification and	Prostible confide with Lembo Laters. Landow Southernsk finantives and Michael Southernsk and Southernsk Lembo Laters and Michael Southernsk Lembo Latersk Latersk Latersk Latersk Laters
		Summary of Analysis	a stable option as it does not provide a sustainable substition in term of airrapen modernation and is survivable following the removal of the VCD becomes it arranged following the removal of the VCD becomes an expert year resistance. The existing SDs do not proport continuous citimb operations, which leads to a greater volume of falle Sum, emissions and notice at lower levels. In terms of Tranquisting, Soldwestery, GA Access and economic impact, the 'Do Nothing baseline' provides minimally no charge to today's operations. Furthermore, there are very limited costs: increased as a resist to this scenario. Form a safety	Internal or Joseph Internal Control International Control Interna		In terms of probe inspired, preventours gas emissions unit fairs burn better in terms of aposity/resultiesce and economic impact of capacity. The remaining orders are deemed to be of equal benefit because there in no change when compared to todary's operation, leaving said their, at this time, it is not possible to fally determine the stately implications of this sportic option. The change sporosor has identified possible conflicts with some routes operated by other sometry alignority, but the east nature of these conflicts is undear at	In term of noise impact, transpalling, prevenbours gas emissions and fase burn but better in terms of apprachyprolaron and economic impact of opacity. The remaining criteria are deemed to be of equal benealth because them is no change when compared to lody? so operation. In large part of the contraction of the compared to the contraction of the compared to the contraction of the compared to the contraction of	hal burn but better in terms of capacity/mail/arcs and excorner; impact of capacity. The remaining catalism are determed to be of equal benefit facessare there is no charge when compared to today's capacition. Hasting said that, at this time, is not possible to fully determine the sofety implications of this specific option. The charge by other nearly approx, but the exist name of these conflicts unclear of this stage, fruither analysis and engagement is required in \$282,814 of the CPL Bis process to determine this fruithermore,	Interms of noise impact, transpilling, green beause gas emissions and days low how but better interms of capacity-filters are also consists impact of opacity. The remaining clinicia are deemed to be of equal heavily because the consists of the consists o	by other nearby airports, but the exact nature of these conflicts is unclear at this stage. Further analysis and engagement is required in Stage 3/4 of the CAP 1616 process to determine this. Furthermore, this option has been assessed as a stand-alone option rather than as

Colour Key	Description
Preferred Option(s)	When compared to the baseline, there is a clear an obvious benefit. This option is viewed as more favourable than the other within the design envelop and as such is the preferred option within the design envelope.
Favourable	When compared to the baseline, there is a clear and obvious benefit.
Acceptable	When compared to the baseline, there is an equal benefit.
Rejected	When compared to the baseline, there is a clear and obvious dis-benefit. As such, these options are rejected.
Baseline/Previously Rejected	Option included for completeness but, in the case of previously rejected options, not subject to IOA.

Departure Envelope: SID RWY 22 NORTH

Departure Env	Cioperoid itter EE it							
Group	Impact	Level of Analysis	DO NOTHING BASELINE'	OPTION 0	OPTION 1	OPTION 5	OPTION 7	OPTION 8
Communities	Noise impact on health and	Initial Options Appraisal:	In terms of today's operation, the NORTH design	Option 0 is a PBN replication of the existing BKY SID which	Option 1 is a RNAV1 replication of the existing BKY SID which	Option 5 is a RNAV1 route based on the existing BKY SID which	Option 7 is a RNP1 route based on the existing BKY SID which	Option 8 is a RNP1 route based on the existing BKY SID which
	quality of life	Qualitative	envelope is entirely based around the existing BKY	incorporates a 6% climb gradient. Based on the change sponsors	incorporates a 8% climb gradient. Based on the change sponsors	incorporates a 8% climb gradient. Based on the change sponsors	incorporates a 8% climb gradient. Based on the change sponsors	incorporates a 8% climb gradient. Based on the change sponsors
			SID. The BKY SID is mainly utilised by aircraft	analysis, Option 0 overflies 3,732 people and a total of 1,606	analysis, Option 1 overflies 3,232 people and a total of 1,343	analysis, Option 5 overflies 2,320 people and a total of 1,014	analysis, Option 7 overflies 2,823 people and a total of 1,201	analysis, Option 8 overflies 2,010 people and a total of 871
			departing STN heading to nearby London airports. To	residential buildings. When compared to the baseline scenario, in	residential buildings. When compared to the baseline scenario, in	residential buildings. When compared to the baseline scenario, in	residential buildings. When compared to the baseline scenario, in	residential buildings. When compared to the baseline scenario, in
			provide the most representative use of the baseline	terms of population and residential buildings overflown, Option 0	terms of population and residential buildings overflown, Option 1	terms of population and residential buildings overflown, Option S	terms of population and residential buildings overflown, Option 7	terms of population and residential buildings overflown, Option 8
			scenario, the overflight analysis conducted on this SID	performs worse than the existing BKY SID, as such this option is	performs worse than the existing BKY SID, as such this option is	performs worse than the existing BKY SID, as such this option is	performs worse than the existing BKY SID, as such this option is	performs worse than the existing BKY SID, as such this option is
			was based on the modal tracks in 2019 as opposed to	deemed as a dis-benefit.	deemed as a dis-benefit.	deemed as a dis-benefit.	deemed as a dis-benefit.	deemed as a dis-benefit.
			the lateral track published on the UK AIP.					
			Furthermore, to provide an authentic comparison, the	•				
			modelling was carried out based on a 6% climb gradient rather than 3.3% as per the published SID. In					
			gradient rather than 3.3% as per the published SID. In addition, as aircraft utilising the BKY SID are heading					
			to nearby aircorts, they do not typically reach 7,000ft.					
			For the purposes of the IOA, overflight has been					
			assessed up to 4,000ft. This provides a more realistic					
			comparison when compared to today's operation. It					
			must also be acknowledged that an element of radar					
			vectoring is required to maintain safe separation					
			distances.					
			Based on the above, it has been determined that the					
			existing BKY SID overflies 1,186 people and a total of					
			509 residential buildings.					
Communities	Air Quality	Initial Options Appraisal:	With regards to air quality, the existing BKY SID does	As per the baseline scenario, Option 0 does not directly overfly any	As per the baseline scenario, Option 1 does not directly overfly any	As per the baseline scenario, Option 5 does not directly overfly any	As per the baseline scenario, Option 7 does not directly overfly any	As per the baseline scenario, Option 8 does not directly overfly an
	·	Qualitative	not directly overfly any AQMAs. Given the 6% climb	AQMAs. Furthermore, as per CAP 1616 (para B74), due to mixing	AQMAs. Furthermore, as per CAP 1616 (para B74), due to mixing	AQMAs. Furthermore, as per CAP 1616 (para B74), due to mixing	AQMAs. Furthermore, as per CAP 1616 (para B74), due to mixing	AQMAs. Furthermore, as per CAP 1616 (para B74), due to mixing
			gradient included within the Do Nothing scenario, the	and dispersion, the impact on air quality above 1,000ft is likely to	and dispersion, the impact on air quality above 1,000ft is likely to	and dispersion, the impact on air quality above 1,000ft is likely to	and dispersion, the impact on air quality above 1,000ft is likely to	and dispersion, the impact on air quality above 1,000ft is likely to
			impact of aircraft below 1,000ft with regards to local	be insignificant. There are areas within the immediate area	be insignificant. There are areas within the immediate area	be insignificant. There are areas within the immediate area	be insignificant. There are areas within the immediate area	be insignificant. There are areas within the immediate area
			air quality is limited to areas within the immediate area surrounding the airport.	surrounding the airport that will be overflown below 1,000ft, however, for safety reasons, this is unavoidable. Therefore, overall,	surrounding the airport that will be overflown below 1,000ft, however, for safety reasons, this is unavoidable. Therefore, overall,	surrounding the airport that will be overflown below 1,000ft, however, for safety reasons, this is unavoidable. Therefore, overall,	surrounding the airport that will be overflown below 1,000ft, however, for safety reasons, this is unavoidable. Therefore, overall,	surrounding the airport that will be overflown below 1,000ft, however, for safety reasons, this is unavoidable. Therefore, overall
			area surrounding the airport.	when compared to the baseline scenario, this option is deemed to	when compared to the baseline scenario, this option is deemed to	when compared to the baseline scenario, this option is deemed to	when compared to the baseline scenario, this option is deemed to	when compared to the baseline scenario, this option is deemed to
				be of equal benefit.	be of equal benefit.	be of equal benefit.	be of equal benefit.	be of equal benefit.
Wider Society	Greenhouse Gas impact	Initial Options Appraisal:	Current routes do not support continuous climb	Option 0 has been designed to support continuous climb	Option 1 has been designed to support continuous climb	Option 5 has been designed to support continuous climb	Option 7 has been designed to support continuous climb	Option 8 has been designed to support continuous climb
		Qualitative	operations. It must be noted that the exact track	operations, however, an element of radar vectoring may still be	operations, however, an element of radar vectoring may still be	operations, however, an element of radar vectoring may still be	operations, however, an element of radar vectoring may still be	operations, however, an element of radar vectoring may still be
			length flown by aircraft may vary slightly due to the	required to manage aircraft separation distances.	required to manage aircraft separation distances.	required to manage aircraft separation distances.	required to manage aircraft separation distances.	required to manage aircraft separation distances.
			nature of radar vectoring, although aircraft do all	The track mileage of Option 0 is 43.21km (23.33NM). Based on this,	The track mileage of Option 1 is 43.21km (23.33NM). Based on this	The track mileage of Option 5 is 44.02km (23.77NM). Based on this,	The track mileage of Option 7 is 42.66km (23.04NM). Based on this,	The track mileage of Option 8 is 42.57km (22.98NM). Based on this
			follow the extant procedures in a broader sense. Extant procedures do not support optimal aircraft	when compared to the baseline scenario, Option 0 is longer and is therefore expected to emit more greenhouse gases. As such, this is	when compared to the baseline scenario, Option 1 is longer and is therefore expected to emit more greenhouse gases. As such, this is	when compared to the baseline scenario, Option 5 is longer and is therefore expected to emit more greenhouse gases. As such, this is	when compared to the baseline scenario, Option 7 is longer and is therefore expected to emit more greenhouse gases. As such, this is	when compared to the baseline scenario, Option 8 is longer and is therefore expected to emit more greenhouse gases. As such, this is
			performance and therefore are predicted to have a	seen as a dis-benefit. More in-depth analysis at Stage 3 is required	seen as a dis-benefit. More in-depth analysis at Stage 3 is required	seen as a dis-benefit. More in-depth analysis at Stage 3 is required	seen as a dis-benefit. More in-depth analysis at Stage 3 is required	seen as a dis-benefit. More in-depth analysis at Stage 3 is required
			greater environmental impact compared to proposed	to confirm the exact volumes of greenhouse gases released.	to confirm the exact volumes of greenhouse gases released.	to confirm the exact volumes of greenhouse gases released.	to confirm the exact volumes of greenhouse gases released.	to confirm the exact volumes of greenhouse gases released.
			options.					
			Within Stage 2 of the CAP 1616 process, there is no					
			requirement for a change sponsor to conduct					
			quantitative fuel burn or emissions analysis. This will					
			be covered in Stage 3. In order to make a comparison,					
			track milage is used based on the theory that the					
			shorter the track mileage, the less greenhouse gases are emitted. In the case of the existing BKY SID, the					
			modal track length is 15.35km (8.29NM). As					
			previously described this has been measured to					
			4,000ft.					
Wider Society	Capacity and resilience	Initial Options Appraisal: Qualitative	Maintaining extant procedures would maintain	The introduction of PBN routes is expected to deliver benefits by	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which subsequently leads to more	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which subsequently leads to more	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which subsequently leads to more	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which subsequently leads to more
		Qualitative	ground-based navigational aids, resilience would be	predictable flight paths and fewer delays (both in air or on the	increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delays (both in air or on the	increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delays (both in air or on the	increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delays (both in air or on the	increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delays (both in air or on the
			significantly affected, following their removal in	ground). The reduction of the reliance on outdated ground based	ground). The reduction of the reliance on outdated ground based	ground). The reduction of the reliance on outdated ground based	ground). The reduction of the reliance on outdated ground based	ground). The reduction of the reliance on outdated ground based
			December 2022	navigational aids will significantly increase operational resilience for	navigational aids will significantly increase operational resilience fo		navigational aids will significantly increase operational resilience fo	navigational aids will significantly increase operational resilience for
				airlines and operators.	airlines and operators.	airlines and operators.	airlines and operators.	airlines and operators.
Wider Society	Tranquillity	Initial Options Appraisal: Qualitative	As per CAP 1616, Appendix B, Para B76, change sponsors are required to consider Tranquillity with			t Option 5 does not overfly any AONBs or National Parks. However, it has been identified that this option overflies 1 Country Park and the		Option 8 does not overfly any AONBs or National Parks. However, has been identified that this option overflies 1 Country Park and the
		Guantative	specific reference to AONBs and National Parks only,	6 SSSI. Overflight of these areas is expected to occur at a higher	6 SSSIs. Overflight of these areas is expected to occur at a higher	2 SSSIs. Overflight of these areas is expected to occur at a higher	5 SSSIs. Overflight of these areas is expected to occur at a higher	2 SSSIs. Overflight of these areas is expected to occur at a higher
			unless other areas have been identified through	altitude, minimising the impact of aircraft noise and emissions on	altitude, minimising the impact of aircraft noise and emissions on	altitude, minimising the impact of aircraft noise and emissions on	altitude, minimising the impact of aircraft noise and emissions on	altitude, minimising the impact of aircraft noise and emissions on
			community engagement. Although no specific areas	these areas. When compared to the baseline scenario, Option 0 is	these areas. When compared to the baseline scenario, Option 1 is	these areas. When compared to the baseline scenario, Option 5 is	these areas. When compared to the baseline scenario, Option 7 is	these areas. When compared to the baseline scenario, Option 8 is
			were identified by community engagement, the	equal in that it does not overfly any AONBs or National Parks and	equal in that it does not overfly any AONBs or National Parks and	equal in that it does not overfly any AONBs or National Parks and	equal in that it does not overfly any AONBs or National Parks and	equal in that it does not overfly any AONBs or National Parks and
			change sponsor has decided to include SSSIs and	an equal number of Country Parks. However, this option is deemed	an equal number of Country Parks. However, this option is deemed		an equal number of Country Parks. However, this option is deemed	an equal number of both Country Parks and SSSIs. As such, this
			Country Parks within the IOA analysis to maintain	to provide a dis-benefit as it overflies more SSSIs compared to the	to provide a dis-benefit as it overflies more SSSIs compared to the	option is seen as being of equal benefit when compared to the	to provide a dis-benefit as it overflies more SSSIs compared to the	option is seen as being of equal benefit when compared to the
			consistency with other Stage 2 documentation.	baseline scenario.	baseline scenario.	baseline scenario.	baseline scenario.	baseline scenario.
			The existing BKY SID does not overfly any AONBs or National Parks but it does overfly 1 Country Park and					
			2 SSSIc					
			2 33373					
Wider Society	Biodiversity	Initial Options Appraisal:	Analysis conducted by the change sponsor shows that	The change sponsor has conducted work to understand where the	The change sponsor has conducted work to understand where the	The change sponsor has conducted work to understand where the	The change sponsor has conducted work to understand where the	The change sponsor has conducted work to understand where the
		Qualitative	the existing operations at STN overfly or fly within the	designated sites are around STN. At this stage, there is expected to	designated sites are around STN. At this stage, there is expected to	designated sites are around STN. At this stage, there is expected to		designated sites are around STN. At this stage, there is expected to
			vicinity of designated sites in terms of Biodiversity	be no change likely to affect biodiversity at these sites. From an air	be no change likely to affect biodiversity at these sites. From an air	be no change likely to affect biodiversity at these sites. From an air	be no change likely to affect biodiversity at these sites. From an air	be no change likely to affect biodiversity at these sites. From an air
			such as SPAs, SACs, RAMSAR Sites and SSSIs. In today's operation, aircraft are flying above 1,000ft	quality perspective, these sites will be overflown at altitudes above 1.000ft. As per CAP 1616 Appendix B. Para B74, because of	quality perspective, these sites will be overflown at altitudes above 1.000ft. As per CAP 1616 Appendix B. Para B74, because of	quality perspective, these sites will be overflown at altitudes above 1.000ft. As per CAP 1616 Appendix B. Para B74, because of	quality perspective, these sites will be overflown at altitudes above 1.000ft. As per CAP 1616 Appendix B. Para B74, because of	quality perspective, these sites will be overflown at altitudes above 1.000ft. As per CAP 1616 Appendix B. Para B74, because of
			today's operation, aircraft are flying above 1,000ft when passing over these sites. Due to the effects of	1,000ft. As per CAP 1616 Appendix B, Para B74, because of dispersion and mixing, there is unlikely to be an impact on local air	1,000ft. As per CAP 1616 Appendix B, Para B74, because of dispersion and mixing, there is unlikely to be an impact on local air	1,000ft. As per CAP 1616 Appendix B, Para B74, because of dispersion and mixing, there is unlikely to be an impact on local air	1,000ft. As per CAP 1616 Appendix B, Para B74, because of dispersion and mixing, there is unlikely to be an impact on local air	1,000ft. As per CAP 1616 Appendix B, Para B74, because of dispersion and mixing, there is unlikely to be an impact on local air
			mixing and dispersion, there is a limited impact, in	quality from aircraft above 1,000ft. Furthermore, CAP 1616,	quality from aircraft above 1,000ft. Furthermore, CAP 1616,	quality from aircraft above 1,000ft. Furthermore, CAP 1616,	quality from aircraft above 1,000ft. Furthermore, CAP 1616,	quality from aircraft above 1,000ft. Furthermore, CAP 1616,
			terms of the air quality specific to these sites. STN	Appendix B, Para B80 states that in general, airspace change	Appendix B, Para B80 states that in general, airspace change	Appendix B, Para B80 states that in general, airspace change	Appendix B, Para B80 states that in general, airspace change	Appendix B, Para B80 states that in general, airspace change
			acknowledges that there are sites within the vicinity	proposal will not have an impact on biodiversity as they do not	proposal will not have an impact on biodiversity as they do not	proposal will not have an impact on biodiversity as they do not	proposal will not have an impact on biodiversity as they do not	proposal will not have an impact on biodiversity as they do not
			of the airport; any potential impact will be assessed	involve ground-based infrastructure. That said, STN acknowledges	involve ground-based infrastructure. That said, STN acknowledges	involve ground-based infrastructure. That said, STN acknowledges	involve ground-based infrastructure. That said, STN acknowledges	involve ground-based infrastructure. That said, STN acknowledges
			by further analysis in Stage 3 of the ACP process by	that any potential impact to the designated sites around STN will be	that any potential impact to the designated sites around STN will b		that any potential impact to the designated sites around STN will be	that any potential impact to the designated sites around STN will b
			Subject Matter Experts.	assessed in Stage 3 of the ACP process by Subject Matter Experts.	assessed in Stage 3 of the ACP process by Subject Matter Experts.	assessed in Stage 3 of the ACP process by Subject Matter Experts.	assessed in Stage 3 of the ACP process by Subject Matter Experts.	assessed in Stage 3 of the ACP process by Subject Matter Experts.
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General Aviation	Access	Initial Options Appraisal:	No change to existing airspace arrangements. GA	No change to the existing airspace arrangements (within the	No change to the existing airspace arrangements (within the	No change to the existing airspace arrangements (within the	No change to the existing airspace arrangements (within the	No change to the existing airspace arrangements (within the
		Qualitative	users of STN will maintain their current level of access	baseline scenario) are expected as a consequence of this ACP.	baseline scenario) are expected as a consequence of this ACP.	baseline scenario) are expected as a consequence of this ACP.	baseline scenario) are expected as a consequence of this ACP.	baseline scenario) are expected as a consequence of this ACP.
			under extant operational arrangements.	However, it is recommended that all VRPs and existing Letters of	However, it is recommended that all VRPs and existing Letters of	However, it is recommended that all VRPs and existing Letters of	However, it is recommended that all VRPs and existing Letters of	However, it is recommended that all VRPs and existing Letters of
				Agreement pertaining to GA access are reviewed prior to	Agreement pertaining to GA access are reviewed prior to	Agreement pertaining to GA access are reviewed prior to	Agreement pertaining to GA access are reviewed prior to	Agreement pertaining to GA access are reviewed prior to
General Aviation /	Economic impact from	Initial Options Appraisal:	No increase to effective capacity anticipated for	implementation to ensure their continued validity. The introduction PBN is expected to deliver benefits by increasing	implementation to ensure their continued validity. The introduction PBN is expected to deliver benefits by increasing	implementation to ensure their continued validity. The introduction PBN is expected to deliver benefits by increasing	implementation to ensure their continued validity. The introduction PBN is expected to deliver benefits by increasing	implementation to ensure their continued validity. The introduction PBN is expected to deliver benefits by increasing
commercial airlines	increased effective capacity	Initial Options Appraisal: Qualitative	No increase to effective capacity anticipated for continued use of extant procedures, therefore no	The introduction PBN is expected to deliver benefits by increasing airspace capacity which in turn will lead to more predictable flight	airspace capacity which in turn will lead to more predictable flight	airspace capacity which in turn will lead to more predictable flight	airspace capacity which in turn will lead to more predictable flight	airspace capacity which in turn will lead to more predictable flight
	criceive capacity		economic benefit for GA/airlines.	paths and fewer delays (both in the air or on the ground). This is	paths and fewer delays (both in the air or on the ground). This is	paths and fewer delays (both in the air or on the ground). This is	paths and fewer delays (both in the air or on the ground). This is	paths and fewer delays (both in the air or on the ground). This is
				expected to facilitate economic benefit to airlines by increasing the	expected to facilitate economic benefit to airlines by increasing the	expected to facilitate economic benefit to airlines by increasing the	expected to facilitate economic benefit to airlines by increasing the	expected to facilitate economic benefit to airlines by increasing the
				frequency of air transport movements, increasing passenger	frequency of air transport movements, increasing passenger	frequency of air transport movements, increasing passenger	frequency of air transport movements, increasing passenger	frequency of air transport movements, increasing passenger
				numbers and increasing cargo tonnage carried. It is not	numbers and increasing cargo tonnage carried. It is not	numbers and increasing cargo tonnage carried. It is not	numbers and increasing cargo tonnage carried. It is not	numbers and increasing cargo tonnage carried. It is not
				proportionate for London Stansted Airport to predict the precise	proportionate for London Stansted Airport to predict the precise	proportionate for London Stansted Airport to predict the precise	proportionate for London Stansted Airport to predict the precise	proportionate for London Stansted Airport to predict the precise
				economic benefit to commercial airlines using the new procedures	economic benefit to commercial airlines using the new procedures	economic benefit to commercial airlines using the new procedures	economic benefit to commercial airlines using the new procedures	economic benefit to commercial airlines using the new procedures
				as any increase in individual airline capacity will depend on private	as any increase in individual airline capacity will depend on private	as any increase in individual airline capacity will depend on private	as any increase in individual airline capacity will depend on private	as any increase in individual airline capacity will depend on private
				commercial business characteristics. It is not proportionate for London Stansted Airport to assess the economic benefit to the GA	commercial business characteristics. It is not proportionate for London Stansted Airport to assess the economic benefit to the GA	commercial business characteristics. It is not proportionate for London Stansted Airport to assess the economic benefit to the GA	commercial business characteristics. It is not proportionate for London Stansted Airport to assess the economic benefit to the GA	commercial business characteristics. It is not proportionate for London Stansted Airport to assess the economic benefit to the GA
				London Stansted Airport to assess the economic benefit to the GA community however they are expected to benefit from increased	London Stansted Airport to assess the economic benefit to the GA community however they are expected to benefit from increased	London Stansted Airport to assess the economic benefit to the GA community however they are expected to benefit from increased	London Stansted Airport to assess the economic benefit to the GA community however they are expected to benefit from increased	London Stansted Airport to assess the economic benefit to the GA community however they are expected to benefit from increased
				predictability of commercial airline movements which is expected	predictability of commercial airline movements which is expected	predictability of commercial airline movements which is expected	predictability of commercial airline movements which is expected	predictability of commercial airline movements which is expected
				to lead to reduced on-ground and in-air delays for all users.	to lead to reduced on-ground and in-air delays for all users.	to lead to reduced on-ground and in-air delays for all users.	to lead to reduced on-ground and in-air delays for all users.	to lead to reduced on-ground and in-air delays for all users.
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Group	Impact	Level of Analysis	DO NOTHING BASELINE'	OPTION 0	OPTION 1	OPTION 5	OPTION 7	OPTION 8
General Aviation / commercial airlines	Fuel burn	initial Options Appraisal: Qualitative	The existing STN procedures do not support continuous cirino operations. Final born is expected to be greated that to letter of the support of the procedure of the control of the procedure of the control of the procedure of the control of the procedure of the procedure of the procedure of the procedure of the Control of the procedure of the Control of th	Office in does support continuous climb operations, meaning that arrant would not be required to level off during departure, reducing the worsal passor of fise labors. There is no requirement excluding the worsal passor of fise labors. There is no requirement will be conducted in Stage 3. Therefore, to enable a compartion, the logic applied in that the observate the stake length, the less faul is bunnt. With regards to this option, it is 40.2 Libra (12.3 39Ms) long. When compared to the beasilies exertine, Option 16 longer and at this stage is assumed will require a greater amount of fise burn, therefore, this option is of dis-berefit in terms of fisel burn. More in depth analysis will be carried out in Stage 3 to confirm.	Ordino 1 does support continuous climb operations, meaning that arrant would not be required to level off during departure, excluding the worsal passored fined burnt from \$1 no requirement where the continuous continuous continuous continuous will be conducted in Stage 3. Therefore, for enable a competition, the logic applied in that the observite the stake length, the less faul is burnt. With regards to this option, fil. 54 3.2 late (12.3 38/3M) long. When compared to the beasilies exertain, Cybotion 1 is lorger and at this stage it assumed will require a greater amount of fall burn, therefore, this option is off-berefit in terms of falls burn, therefore, this option is off-berefit in terms of falls burn, therefore, this option is off-berefit in terms of falls burn, therefore, this option is off-berefit in terms of falls burn, therefore, this option is off-berefit in terms of falls burn, therefore, this option is off-berefit in terms of falls burn, therefore, this option is off-berefit in terms of falls burn, therefore, this option is off-berefit in terms of falls burn, therefore, this option is off-berefit in terms of falls burn, therefore, this option is off-berefit in terms of falls burn, therefore, this option is off-berefit in terms of falls burn, therefore, this option is off-berefit in terms of falls burn, therefore, the option is off-berefit in terms of falls burn, the continuous continu	OPTIONS 2 OCHORS 2 Support continuous climb operations, meaning that arrant would not be required to level off during departure. Another than the control of the latter time is no requirement excluding the overall agreement of their latter time is no requirement will be conducted in Stage 3. Therefore, to enable a compartion, the logic applied in bit the observite the stake length the less tall to launt. With regards to this option, it is 40.20m (32.77MM) long. When compared to the beasines sceame, of political is longer and at this stage it assumed will require a greater amount of falle burn. Hereforch, this joint is off beareful in error of farel burn. More in depth analysis will be carried out in Stage 3 to confirm.	OPTION 7 OCHES support continuous climb operations, meaning that arrant would not be required to level off during departure. Oches 7 deep support continuous climb long the continuous continuous deciding the overall appoint of farel hours from them is no requirement, excluding the overall produce of the continuous will be conducted in Stage 3. Therefore, to enable a compantion, the logic appoint in this the observate the stake length, the less fast los bunnt. With regards to this option, it is 42,65km (23,048km) long. When compared to the beasines sceame, of politon 7 is longer and this stage it assumed will require a greater amount of falle burn, therefore, this option is off-bear-fift in error of farel burn. More in depth analysis will be carried out in Stage 3 to confirm.	Option 8 does support continuous climb operations, meaning that arrant would not be required to level off during departure, excluding the several journed for fails burnt filter for no requirement excluding the several journed for fails burnt filter for no requirement several production of the production of the several will be conducted in Stage 3. Therefore, to enable a compartion, the logic applied in 8th the obsorrist the stake flexing the last fails burnt. With regards to this option, 1st 9.2. 57th (22.98MM) long, When compared to the bearlies exercine, Option 8 is longer and at this stage is assumed will require a greater amount of fail burn, therefore, this option is of dis-benefit in errors of fails burn, More in depth analysis will be carried out in Stage 3 to confirm.
Commercial airlines	Training costs	Initial Options Appraisal: Qualitative	No additional training predicted.	It is expected that no exter RoUC/Tenv training will be required to enable pilots to the tene PNB in scorduce. PNB is a common standard of navigation throughout the world. It is not proportionable for London Standard Alpyort to assess no-going competency for individual commercial administration due to the significant variables involved age, runder of pilots, aimline policies on training intimulator vietual line flight training), freet types, and variations in on-board respipement ext.	is is expected that no extra Polic/Crew training will be required to enable pilots to the time Polity Porcedure. PNB is a common standard of navigation throughout the world. It is not proportionable for London Standard Alpyort to assess no-going competency for individual commercial administration due to the significant variables univoked age, runder of pilots, aimline policies on training intimulator versus lare flight training. Refet types, and variations in on-board mapipment extr.	is a spected that no extra Polo/Crew training will be required to enable pilots to five here PNB y racedware. PNB is a common standard of navigation throughout the world. It is not proportionable for London Standard Alpropt to assess no-going competency for individual commercial administration due to the significant variables involved as g. market of pilots, aimin spolices on training (simulator versus) here flight training), freet types, and variations in on-board mapipment ext.	is a spected that no extra Polo/Crew training will be required to enable pilots to five here PNB y racedware. PNB is a common standard of navigation throughout the world. It is not proportionate for London Standard Alpropt to assess no-going competency for individual commercial administration due to the significant variables involved as g. market of pilots, aimin spolices on training (simulator versus) here flight training), freet types, and variations in on-board mapipment ext.	is a spected that no exter RIOL/Crew training will be required to enable pilots to the leven RPIN pracedure. PNIN is a common standard of navigation throughout the world. It is not proportionate for London Standard Airport to assess no-going competency for individual commercial administration due to the significant variables univoked age, number of pilots, airline policies on training intensitation where the fight training, fleet types, and variations in on-board mappinent exc.
Commercial airlines		Initial Options Appraisal: Qualitative	It is not proportionate for STN to assess potential other costs for commercial affirms - there may be costs associated with maintaining legacy systems to continue flying conventional navigation but there are too many variables (e.g., aircraft types, on-board system capability etc.) to consider these effectively.	Other costs to commercial airlines may include updates to Flight Management System [FMS], navigation databases and operating procedures, increased pilot hiere costs versus training etc. It is not proportionate for STN assess the 'other costs' to commercial airlines of flying PBM procedures due to significant variables; some airlines may already be 'PBM ready' whereas others may not.	Other costs to commercial airlines may include updates to Flight Management System [FMS], navigation databases and operating procedures, increased pilot hire costs versus training etc. It is not proportionate for STN assess the 'other costs' to commercial airlines of flying PBM procedures due to significant variables; some airlines may already be 'PBM ready' whereas others may not.	Other costs to commercial airlines may include updates to Flight Management Systems [FMS], naugition databases and operating procedures, increased pillot hire costs versus training etc. It is not proportionate for STN to assess the 'other costs' to commercial airlines of flying PBM procedures due to significant variables; some airlines may already be 'PBM ready' whereas others may not.	Other costs to commercial airlines may include updates to Flight Management Systems [FMS], naugition databases and operating procedures, increased pilot hire costs versus training etc. It is not proportionate for STN to assess the 'other costs' to commercial airlines of lying BBM procedures due to significant vanishes; some airlines may already be 'PBM ready' whereas others may not.	Other costs to commercial airlines may include updates to Flight Management System (FMS), navigation databases and operating procedures, increased pilot hire costs versus training etc. It is not proportionate for London Stansted Airport to assess the 'other costs' to commercial airlines of fling PBN procedures due to significant variables; some airlines may already be 'PBN ready' whereas others may not.
Airport / Air navigation service provider	Infrastructure costs	Initial Options Appraisal: Qualitative	No additional infrastructure is required at STN to maintain extan conventional procedures however maintaining access to ground-based equipment (currently operated by NERI) may be prohibitively expensive, should this commercial option be implemented.	All options relate to the implementation of PBNs and no additional infrastructure is required. The introduction of PBN reduces the relarace on infrastructure, in particular ground-based navigation adds are no longen needed. The foundation for PBN is RNAV or RNP_aircraft arriving and departing london Stansted Alprort using the proposed RNAV/PBN procedures will be so based on their performance-based navigation capability.	All options relate to the implementation of PBNs and no additional infrastructure is required. The introduction of PBN reduces the Infrastructure, in aparticular ground-based navigation and as are no longen needed. The foundation for PBN is RNAV or RNP_aircraft arriving and departing London Stansted Alprort using the proposed RNAV/PBN procedures will do so based on their performance-based navigation capability.	All options relate to the implementation of PBHs and no additional infrastructure is required. The introduction of PBN reduces the reliance on infrastructure, in particular ground-based navigation did as are no longer needed. The foundation for PBH is RNAW or RNAP aircraft arriving and departing London Stanted Alproft using the proposed RNAW/PBN procedures will do so based on their performance-based navigation capability.	All options relate to the implementation of PBHs and no additional infrastructure is required. The introduction of PBN reduces the reliance on infrastructure, in particular ground-based navigation did as are no longer needed. The foundation for PBH is RNAW or RNAP-aircraft arriving and departing London Stanted Aliport using the proposed RNAW/PBN procedures will do so based on their performance-based navigation capability.	All options relate to the implementation of PBN and no additional infrastructure is required. The introduction of PBN reduces the infrastructure, in particular ground-based navigation and as are no longen needed. The foundation for PBN is RNAV or RNP_aircraft arriving and departing London Stanted Alprort using the proposed RNAV/PBN procedures will be so based on their performance-based navigation capability.
Airport / Air navigation service provider	Operational costs	Initial Options Appraisal: Qualitative	No change to operational costs is attributable to maintaining the extant procedures.	Air Traffic Control at STN is contracted out to a third-party organisation. This outing commercial contract between STM and their chosen AMSP is considered to be an ongoing cost. ICAD describe Improved Operational Efficiency also benefit delivered by the introduction of PBM. In general, London Stansted Airport predicts that operational efficiency will improve and that there may be potential for a net reduction in operational costs.	Air Traffic Control at STN is contracted out to a third-party organisation. This outing commercial contract between STN and their chosen AMSP is considered to be an ongoing cost. ICAO describe "improved Operational Efficiency also benefit delivered by the introduction of PBN. in general, London Stansted Airport predicts that operational efficiency will improve and that there may be potential for a net reduction in operational costs.	Air Traffic Control at STN is contracted out to a third party organisation. This outing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost. ICAD describe "Improved Operational Efficiency will be describe disproved operational Efficiency will prove and that there may be potential for a net reduction in operational costs.	Air Traffic Control at STN is contracted out to a third party organisation. This outing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost. ICAD describe "Improved Operational Efficiency also benefit delivered by the introduction of PBN. In general, London Stansted Airport predicts that operational efficiency will improve and that there may be potential for a net reduction in operational costs.	Air Traffic Control at STN is contracted out to a third-party organisation. This osting commercial contract between STM and their chosen AMSP is considered to be an ongoing cost. ICAD describe ("improved Operational Efficiency also benefit delivered by the introduction of PBM. In general, London Stansted Airport predicts that operational efficiency will improve and that there may be potential for a net reduction in operational costs.
Airport / Air navigation service provider	Deployment costs	Initial Options Appraisal: Qualitative	No Deployment costs applicable to extant procedures.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.
Safety Assessment	Safety Assessment	initial Options Appraisal: Qualitative	The baseline assuration is that current operations at ST was seed including use of the estant containable procedure. Sellowing the removal of ground baseline and sellowing sellow and sellowing sel	Assilte conflict with Lundon Lunon and Cambridge traffic was desembled (although the conflict with Cambridge traffic was desembled (although the conflict with Cambridge traffic was desembled to be outside controlled airquase). Procedure design and ATC staction intervention could see an imitgation in these instances but could increase complicity, leading to a possible increase in ATCO workload. Leading on from this, possible unknown interaction with country of the company of the company of the conflict of	Assilte conflict with London Linou and Cambridge traffic was desembled (although the conflict with Cambridge traffic was desembled (although the conflict with Cambridge traffic was desembled to be outside controlled airpase). Procedure design and ATC uncluded intervention of the conflict with cambridge to a possible increase in Interventional Cambridge (although the Cambridge). But alth bits of the conflict with the Cambridge (although the Cambridge) and the Cambridge (although the Cambridge). But alth bits of the Cambridge (although the Cambridge) and the Cambridge (although the Cambridge). But alth bits of the Cambridge (although the Cambridge) and the Cambridge (although the Cambridge) and the Cambridge (although the Cambridge). But alth bits of the Cambridge (although the Cambridge) and the Cambridge (although the Cambridge) and the Cambridge (although the Cambridge). But although the Cambridge (although the Cambridge) and and additional thand the people to this delign envelope is contained within Controlled Airspace, some delegal new Monten contained within Controlled Airspace, s	Assilta conflict with London Lono and Cambridge ratific was desembled (although the conflict with Cambridge tratific was demanded to conflict conflict with the Cambridge tratific was demanded to conflict with the Cambridge tratification of the	Assilta conflict with London Lono and Cambridge ratific was desembled (although the conflict with Cambridge tratific was demanded to conflict conflict with the Cambridge tratific was demanded to conflict with the Cambridge tratification of the	Assilhe confict with London Linco and Cambridge traffic was described (although the conflict with Cambridge traffic was described (although the conflict with Cambridge traffic was described to be outside controlled airgrape). Procedure design and ATC stacted intervention could et as mitigations in these instances that could increase complexity, leading to a possible increase in ATCO workload. Leading on from this, possible unbrown interaction with control to determined. In addition, it was determined that due to the dispersion of traffic departing STM, a degree of attaction intervention may be required to maintain safe separation standards. The design process may also help to mitigate this hazard to as low as in reasonably practical. This away specific to each air workload control configuration standards. The design process may also help to mitigate this hazard to so low as reasonably practical. This is were specific to each carried rounding controls in the control of the control of the controls of the control
		ournmary of Analysis	The Do Nothing's censor in relation to this ACP and a value of their Act does not provide a value official or does not provide a value official of a does not provide a value official or interns of anyspice memory of the VDR bascon to December 2023, which would have a significant impact on capatrity and estillence, the estilising 60th on to apport continuous climb operations, which leads to a greater ordune of facility memory of the provided of the VDR. It is more official ordinary of the VDR. It is more official ordinary of the VDR. It is assumed that current 51% operations are safe. Tolking official ordinary in the value of the VDR. It is authorisedged that ATCO workload may increase due to the enduring requirement for radar vectoring.	When compared to the baseline scenario. Option 0 performs were in externed from learning-transpulling representations are sensitively and the sensitive of the sensitive sensiti			When compared to the baseline scenario. Option 7 performs worse in a terms of footie impact, transpulling, presently, and the state of	When compared to the baseline scenario, Option 8 performs worse in artern of noise invest, prevalence age missions and feel abund he better in terms of apacity/feelineer and economic impact of baseline in terms of apacity/feelineer and economic impact of baseline in terms of apacity/feelineer and economic impact of baseline in terms of apacity feelings and apacity feeling in the series in the second term is not apacity when compared to today's operation, thaving said that, at this time, it is not possible to fully determine the select primition of this specific option. The changes sponsor has identified possible conflicts with some routes operated by other makes yill aproximation of this specific option. The changes sponsor has identified possible conflicts with some routes operated by other makes yill aproximation in the second transfer of the conflicts in indicate the first second to the conflict second to the second to the conflict second to the co

Colour Key	Description
Preferred Option(s)	When compared to the baseline, there is a clear and obvious benefit. This option is viewed as more favourable than the other within the design envelope and as such is the preferred option within the design envelope.
Favourable	When compared to the baseline, there is a clear and obvious benefit.
Acceptable	When compared to the baseline, there is an equal benefit.
Rejected	When compared to the baseline, there is a clear and obvious dis-benefit. As such, these options are rejected.
Baseline/Previously Rejected	Option included for completeness but, in the case of previously rejected options, not subject to IOA.

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Departure Envelope: SID RWY 22 NORTH EAST

Group	velope: SID RWY 22 No		DO NOTHING BASELINE'		
	Impact	Level of Analysis		OPTION 3	OPTION 4
Communities	Noise impact on health and quality of life	Initial Options Appraisal: Qualitative	In terms of today's operation, the NORTH EAST design envelope is entirely based around the existing CLN 1E SID. To provide the most representative use of the baseline scenario, the overflight analysis conducted or this SID was based on the modal tracks in 2019 as opposed to the lateral track published on the UK AIP. Furthermore, to provide an authentic comparison, the modelling was carried out based on a 6% climbing radient rather than 3.3% as per the published SID. This provides a more realistic comparison when compared to today's operation. It must also be acknowledged that an element of radar vectoring is required to maintain safe separation distances. Based on the above, it has been determined that the existing CLN 1E SID overfiles a 2,095 people and a tota of 926 residential buildings.	scenario, in terms of population and residential buildings overflown, Option 3 performs worse and as such is deemed to be of a dis-	Option 4 is a RNP1 route in a new design envelope, compared to CLN IE SID which incorporates a 6% climb gradient. Based on the change sponsors analysis, Option 4 overflies 7,740 people and a total of 3,176 residential buildings. When compared to the baseline scenario, in terms of population and residential buildings overflown, Option 4 performs worse and as such is deemed to be of a disbenefit.
Communities	Air Quality	Initial Options Appraisal: Qualitative	With regards to air quality, the existing CLN 1E SID does not directly overfly any AQMAs. Given the 6% climb gradient included within the Do Nothing scenario, the impact of aircraft below 1,000ft with regards to local air quality is limited to areas within the immediate area surrounding the airport.	As per the baseline scenario, Option 3 does not directly overfly any AQMAs. Furthermore, as per CAP 1616 (para B74), due to mixing and dispersion, the impact on air quality above 1,000ft is likely to be insignificant. There are areas within the immediate area surrounding the airport that will be overflown below 1,000ft, however, for safety reasons, this is unavoidable. Therefore, overall, when compared to the baseline scenario, this option is deemed to be of equal benefit.	As per the baseline scenario, Option 4 does not directly overfly any AQMAs. Furthermore, as per CAP 1616 (para B74), due to mixing and dispersion, the impact on air quality above 1,000ft is likely to be insignificant. There are areas within the immediate area surrounding the airport that will be overflown below 1,000ft, however, for safety reasons, this is unavoidable. Therefore, overall, when compared to the baseline scenario, this option is deemed to be of equal benefit.
Wider Society	Greenhouse Gas impact	Initial Options Appraisal: Qualitative	Current routes do not support continuous climb operations. It must be noted that the exact track length flown by aircraft may vary slightly due to the nature of radar vectoring, although aircraft do all follow the extant procedures in a broader sense. Extant procedures do not support optimal aircraft performance and therefore are predicted to have a greater environmental impact compared to proposed options. Within Stage 2 of the CAP 1616 process, there is no requirement for a change sponsor to conduct quantitative fuel burn or emissions analysis. This will be covered in Stage 3. In order to make a comparison, track milage is used based on the theory that the shorter the track mileage, the less greenhouse gases are emitted. In the case of the existing CLN 1E SID, the modal track length is 38.50km (20.79NM).	Option 3 has been designed to support continuous climb operations, however, an element of radar vectoring may be required to manage aircraft separation distances. The track mileage of Option 3 is 51.40km (27.45NM). Based on this, when compared to the baseline scenario, Option 3 is longer and is therefore expected to emit slightly more greenhouse gases. As such, this is seen as a dis-benefit. More in-depth analysis at Stage 3 is required to confirm the exact amounts of greenhouse gases released.	Option 4 has been designed to support continuous climb operations, however, an element of radar vectoring may be required to manage aircraft separation distances. The track mileage of Option 4 is 54.09km (29.20NM). Based on this, when compared to the baseline scenario, Option 4 is longer and is therefore expected to emit slightly more greenhouse gases. As such, this is seen as a dis-benefit. More in-depth analysis at Stage 3 is required to confirm the exact amounts of greenhouse gases released.
Wider Society	Capacity and resilience	Initial Options Appraisal: Qualitative	Maintaining extant procedures would maintain current capacity however, due to the reliance on ground-based navigational aids, resilience would be significantly affected, following their removal in December 2022.	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delays (both in air or on the ground). The reduction of the reliance on outdated ground based navigational aids will significantly increase operational resilience for airlines and operators.	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delays (both in air or on the ground). The reduction of the reliance on outdated ground based navigational aids will significantly increase operational resilience for airlines and operators.
Wider Society	Tranquillity	Initial Options Appraisal: Qualitative	As per CAP 1616, Appendix B, Para B76, change sponsors are required to consider Tranquillity with specific reference to AONBs and National Parks only, unless other areas have been identified through community engagement. Although no specific areas were identified by community engagement be change sponsor has decided to include SSSIs and Country Parks within the IOA analysis to maintain consistency with other Stage 2 documentation. The existing CLN 1E SID does not overfly any AONBs, National Parks or SSSIs but it does overfly 1 Country Park.	Option 3 does not overfly any AONBs, National Parks or SSSIs. However, it has been identified that this option overflies 2 Country Parks, which is the same as the baseline scenario. Overflight of these areas is expected to occur at a higher altitude, minimising the impact of aircraft noise and emissions on these areas. When compared to the baseline scenario, Option 3 is equal in that it does not overfly any AONBs, National Parks or SSSIs. This option does overfly an equal number of SSSIs, but does overfly more Country Parks. As such, this option is seen as a dis-benefit in terms of Tranquillity.	Option 4 does not overfly any AONBs or National Parks. However, it has been identified that this option overflies 1 Country Park and 1 SSSI. Overflight of these areas is expected to occur at a higher altitude, minimising the impact of aircraft noise and emissions on these areas. When compared to the baseline scenario, Option 4 is equal in that it does not overfly any AONBs or National Parks. This option does overfly an equal number of Country Parks, but does overfly more SSSIs. As such, this option is seen as a dis-benefit in terms of Tranquillity.

Group	Impact	Level of Analysis	DO NOTHING BASELINE'	OPTION 3	OPTION 4
Wider Society	Biodiversity	Initial Options Appraisal: Qualitative	Analysis conducted by the change sponsor shows that the existing operations at STN overfly or fly within the vicinity of designated sites in terms of Biodiversity such as SPAs, SACs, RAMSAR Sites and SSSIs. In today's operation, aircraft are flying above 1,000ft when passing over these sites. Due to the effects of mixing and dispersion, there is a limited impact, in terms of the air quality specific to these sites. STN acknowledges that there are sites within the vicinity of the airport; any potential impact will be assessed by further analysis in Stage 3 of the ACP process by Subject Matter Experts.	The change sponsor has conducted work to understand where the designated sites are around STM. At this stage, there is expected to be no change likely to affect blodiversity at these sites. From an air quality perspective, these sites will be overflown at altitudes above 1,000ft. As per CAP 1616 Appendix B, Para B74, because of dispersion and mixing, there is unlikely to be an impact on local air quality from aircraft above 1,000ft. Furthermore, CAP 1616, Appendix B, Para B80 states that in general, airspace change proposal will not have an impact on biodiversity as they do not involve ground-based infrastructure. That said, STN acknowledges that any potential impact to the designated sites around STN will be assessed in Stage 3 of the ACP process by Subject Matter Experts.	The change sponsor has conducted work to understand where the designated sites are around STN. At this stage, there is expected to be no change likely to affect biodiversity at these sites. From an air quality perspective, these sites will be overflown at altitudes above 1,000ft. As per CAP 1616 Appendix B, Para B74, because of dispersion and mixing, there is unlikely to be an impact on local air quality from aircraft above 1,000ft. Furthermore, CAP 1616, Appendix B, Para B80 states that in general, airspace change proposal will not have an impact on biodiversity as they do not involve ground-based infrastructure. That said, STN acknowledges that any potential impact to the designated sites around STN will be assessed in Stage 3 of the ACP process by Subject Matter Experts.
General Aviation	Access	Initial Options Appraisal: Qualitative	No change to existing airspace arrangements. GA users of STN will maintain their current level of access under extant operational arrangements.	No change to the existing airspace arrangements (within the baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement pertaining to GA access are reviewed prior to implementation to ensure their continued validity.	No change to the existing airspace arrangements (within the baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement pertaining to GA access are reviewed prior to implementation to ensure their continued validity.
General Aviation / commercial airlines	Economic impact from increased effective capacity	initial Options Appraisal: Qualitative	No increase to effective capacity anticipated for continued use of extant procedures, therefore no economic benefit for GA/airlines.	The introduction PBN is expected to deliver benefits by increasing airspace capacity which in turn will lead to more predictable flight paths and fewer delays (both in the air or on the ground). This is expected to facilitate economic benefit to airlines by increasing the frequency of air transport movements, increasing passenger numbers and increasing cargo tonnage carried. It is not proportionate for London Stansted Airport to predict the precise economic benefit to commercial airlines using the new procedures as any increase in individual airline capacity will depend on private commercial business characteristics. It is not proportionate for London Stansted Airport to assess the economic benefit to the GA community however they are expected to benefit from increased predictability of commercial airline movements which is expected to lead to reduced on-ground and in-air delays for all users.	The introduction PBN is expected to deliver benefits by increasing airspace capacity which in turn will lead to more predictable flight paths and fewer delays (both in the air or on the ground). This is expected to facilitate economic benefit to airlines by increasing the frequency of air transport movements, increasing passenger numbers and increasing cargo tonnage carried. It is not proportionate for London Stansted Airport to predict the precise economic benefit to commercial airlines using the new procedures as any increase in individual airline capacity will depend on private commercial business characteristics. It is not proportionate for London Stansted Airport to assess the economic benefit to the GA community however they are expected to benefit from increased predictability of commercial airline movements which is expected to lead to reduced on-ground and in-air delays for all users.
General Aviation / commercial airlines	Fuel burn	Initial Options Appraisal: Qualitative	The existing STN procedures do not support continuous climb operations. Fuel burn is expected to be greater due to tactical ATC intervention and periods of level flight in the departure and approach phase. Furthermore, in the case of the modal path of the existing CLN 1E SID, the track length is 38.50km (20.79NM).	Option 3 does support continuous climb operations, meaning that aircraft would not be required to level off during departure, reducing the overall amount of fuel burnt. There is no requirement within Stage 2 of the CAP1616 process to quantify fuel burn, this will be conducted in Stage 3. Therefore, to enable a comparison, the logic applied is that the shorter the track length, the less fuel is burnt. With regards to this option, it is 51.40km (27.75NM) long. When compared to the baseline scenario, Option 3 is longer and at this stage it assumed will require a greater amount of fuel burn, therefore, this option is of dis-benefit in terms of fuel burn. More indepth analysis will be carried out in Stage 3 to confirm.	Option 4 does support continuous climb operations, meaning that aircraft would not be required to level off during departure, reducing the overall amount of fuel burnt. There is no requirement within Stage 2 of the CAP1616 process to quantify fuel burn, this will be conducted in Stage 3. Therefore, to enable a comparison, the logic applied is that the shorter the track length, the less fuel is burnt. With regards to this option, it is \$4.09km (29.20NM) long. When compared to the baseline scenario, Option 4 is longer and at this stage it assumed will require a greater amount of fuel burn, therefore, this option is of dis-benefit in terms of fuel burn. More indepth analysis will be carried out in Stage 3 to confirm.
Commercial airlines	Training costs	Initial Options Appraisal: Qualitative	No additional training predicted.	It is expected that no extra Pilot/Crew training will be required to enable pilots to fly the new PBN procedures. PBN is a common standard of navigation throughout the world. It is not proportionate for London Stansted Airport to assess on-going competency for individual commercial airlines due to the significant variables involved e.g. number of pilots, airline policies on training (simulator versus live flight training), fleet types, and variations in on-board equipment etc.	It is expected that no extra Pilot/Crew training will be required to enable pilots to fly the new PBN procedures. PBN is a common standard of navigation throughout the world. It is not proportionate for London Stansted Airport to assess on-going competency for individual commercial airlines due to the significant variables involved e.g. number of pilots, airline policies on training (simulator versus live flight training), fleet types, and variations in on-board equipment etc.
Commercial airlines	Other costs	Initial Options Appraisal: Qualitative	It is not proportionate for STN to assess potential other costs for commercial airlines - there may be costs associated with maintaining legacy systems to continue fifying conventional navigation but there are too many variables (e.g., aircraft types, on-board system capability etc.) to consider these effectively.	Other costs to commercial airlines may include updates to Flight Management Systems (FMS), navigation databases and operating procedures, increased pilot hire costs versus training etc. It is not proportionate for STM to assess the 'other costs' to commercial airlines of flying PBN procedures due to significant variables; some airlines may already be 'PBN ready' whereas others may not.	Other costs to commercial airlines may include updates to Flight Management Systems (FMS), navigation databases and operating procedures, increased pilot hire costs versus training etc. It is not proportionate for STN to assess the 'other costs' to commercial airlines of flying PBN procedures due to significant variables; some airlines may already be 'PBN ready' whereas others may not.
Airport / Air navigation service provider	Infrastructure costs	Initial Options Appraisal: Qualitative	No additional infrastructure is required at STN to maintain extant conventional procedures however maintaining access to ground-based equipment (currently operated by NERL) may be prohibitively expensive, should this commercial option be implemented.	All options relate to the implementation of PBN and no additional infrastructure is required. The introduction of PBN reduces the reliance on infrastructure, in particular ground-based navigation aids are no longer needed. The foundation for PBN is RNAV or RNP; aircraft arriving and departing London Stansted Airport using the proposed RNAV/RNP procedures will do so based on their performance-based navigation capability.	All options relate to the implementation of PBN and no additional infrastructure is required. The introduction of PBN reduces the reliance on infrastructure, in particular ground-based navigation aids are no longer needed. The foundation for PBN is RNAV or RNP; aircraft arriving and departing London Stansted Airport using the proposed RNAV/RNP procedures will do so based on their performance-based navigation capability.

Group	Impact	Level of Analysis	DO NOTHING BASELINE'	OPTION 3	OPTION 4
Airport / Air navigation service provider	Operational costs	Initial Options Appraisal: Qualitative	No change to operational costs is attributable to maintaining the extant procedures.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost. ICAO describe 'Improved Operational Efficiency' as a benefit delivered by the introduction of PBN. In general, London Stansted Airport predicts that operational efficiency will improve and that there may be potential for a net reduction in operational costs.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost. ICAO describe 'Improved Operational Efficiency' as a benefit delivered by the introduction of PBN. In general, London Stansted Airport predicts that operational efficiency will improve and that there may be potential for a net reduction in operational costs.
Airport / Air navigation service provider	Deployment costs	Initial Options Appraisal: Qualitative	No Deployment costs applicable to extant procedures.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.
Safety Assessment	Safety Assessment	Initial Options Appraisal: Qualitative	The baseline assumption is that current operations at STN are safe including use of the extant conventional procedures. Following the removal of ground-based navigational aids supporting the existing SIDs, aircraft departing STN would continuously require radar vectoring (should CAPT81 not be implemented), resulting in a possible increase in ATCO workload.	Possible conflict with London Luton, London Southend and Cambridge traffic was identified. Procedure design and ATC tactical intervention could act as mitigations in these instances but could increase complexity, leading to a possible increase in ATCO workload. Leading on from this, possible unknown interaction with the wider enroute network is acknowledged, but at this time, this cannot be determined. In addition, it was identified that due to the dispersion of traffic departing STN, a degree of tactical intervention may be required to maintain safe separations standards. The design process may also help to mitigate this hazard to 'as low as reasonably practicable'. This is very specific to exact aircraft routing combinations. Furthermore, possible interaction with the existing STN ABBOT hold was identified; therefore, ATC tactical intervention may be required to maintain safe separation between departing and arriving aircraft. Procedure design constraints act as an additional mitigation in this instance.	Possible conflict with London Luton, London Southend and Cambridge traffic was identified. Procedure design and ATC tactical intervention could act as mitigations in these instances but could increase complexity, leading to a possible increase in ATCO workload. Leading on from this, possible unknown interaction with the wider enroute network is acknowledged, but at this time, this cannot be determined. In addition, it was identified that due to the dispersion of traffic departing STN, a degree of tactical intervention may be required to maintain safe separations standards. The design process may also help to mitigate this hazard to 'as low as reasonably practicable'. This is very specific to exact aircraft routing combinations. Furthermore, possible interaction with the existing STN ABBOT hold was identified; therefore, ATC tactical intervention may be required to maintain safe separation between departing and arriving aircraft. Procedure design constraints act as an additional mitigation in this instance.
		Summary of Analysis	The "Do Nothing" scenario in relation to this ACP is not a viable option as it does not provide a sustainable solution in terms of airspace modernisation and is unviable following the removal of the VOR beacons in December 2022, which would have a significant impact on capacity and resilience. The existing SIDs do not support continuous climb operations, which leads to a greater volume of fuel burn, emissions and noise at lower levels. In terms of Tranquillity, Biodiversity, GA Access and economic impact, the "Do Nothing baseline" provides minimal/no change to today's operations. Furthermore, there are very limited costs incurred as a result of this scenario. From a safety perspective, it is assumed that current STN operations are safe. Following the removal of the VORs, it is acknowledged that ATCO workload may increase due to the enduring requirement for radar vectoring.	When compared to the baseline scenario, Option 3 performs worse in terms of noise impact, tranquillity, greenhouse gas emissions and fuel burn but better in terms of capacity/resilience and economic impact of capacity. The remaining criteria are deemed to be of equal benefit because there is no change when compared to today's operation. Having said that, at this time, it is not possible to fully determine the safety implications of this specific option. The change sponsor has identified possible conflicts with some routes operated by other nearby airports, but the exact nature of these conflicts is unclear at this stage. Further analysis and engagement is required in Stage 3/4 of the CAP 1616 process to determine this. Furthermore, this option has been assessed as a stand-alone option rather than as a set of design options as part of a wider system. Additional analysis is required in Stage 3 to determine the cumulative impact of this option when compared to all the other options. Based on performance in the IOA, Option 3 has been deemed as Favourable. When compared to the other option in this envelope, it overflies more people and residential buildings than any other option within this envelope, hence why it has been deemed as Favourable rather than Preferred.	When compared to the baseline scenario, Option 4 performs worse in terms of noise impact, tranquillity, greenhouse gas emissions and fuel burn but better in terms of capacity/resilience and economic impact of capacity. The remaining criteria are deemed to be of equal benefit because there is no change when compared to today's operation. Having said that, at this time, it is not possible to fully determine the safety implications of this specific option. The change sonosor has identified possible conflicts with some routes operated by other nearby airports, but the exact nature of these conflicts is unclear at this stage. Further analysis and engagement is required in Stage 3/4 of the CAP 13616 process to determine this. Furthermore, this option has been assessed as a stand-alone option rather than as a set of design options as part of a wider system. Additional analysis is required in Stage 3 to determine the cumulative impact of this option when compared to all the other options. Based on performance in the IOA, Option 4 is selected as the Preferred Option. This option overfiles fewer people and residential buildings than the other option within this envelope.

IOA Criteria Evaluation

Colour Key	Description
Preferred Option(s)	When compared to the baseline, there is a clear and
	obvious benefit. This option is viewed as more
	favourable than the other within the design envelope
	and as such is the preferred option within the design
	envelope.
Favourable	When compared to the baseline, there is a clear and
	obvious benefit.
Acceptable	When compared to the baseline, there is an equal
	benefit.
	When compared to the baseline, there is a clear and
Rejected	obvious dis-benefit. As such, these options are
	rejected.
Baseline/Previously Rejected	Option included for completeness but, in the case of
	previously rejected options, not subject to IOA.

Departure Env	velope: SID RWY 04 S	DUTH								
Group Communities	Impact Interest translation to health and quality of life.	tenet of Anny English (Tened Spread) Guardia Options Agentual Guardianose	The term of bodies in presence, the NOSTH design, the term of bodies in presence, the NOSTH design, the NOSTH design of the	Committee of the Committee of the existing LAM SIG shallon Committee of the Committee of t	Common I am TRAIN registration of the existing LAMS SIG shaloh strains of the Common I am I a	Common 1. on MIRT implantation of the entiring (AMA SIG which). Common 2 are MIRT implantation of the entiring (AMA SIG which). Interest of the entire of the entiring of the entire of the entiring (AMA SIG, as such this option is determed as a dis-boxeds.	COTOMS 1 as 76/00/11 cases based on the existing LMM 550 shalos Deforms 1 as 76/00/11 cases based on the existing LMM 550 shalos cases and the control of the control of the control of the control cases and the control of the control of the control of the control cases and the control of the control of the control of the control cases and the control of the control of the control of the control of the control of the control of the c	Common II. as TRANT mode based on the entiring LAM SID which where the common III. and the entire LAM SID which washing, Children Common LASS register and stord of LSM endered the LAMES parties of Lames III. and LAM SID washing Children Common LAM SID washing Children Common LAM SID washing Children LAM SID was short this option is determed as a dis-boundary.	OFFICES 2. Offices in an IMPATI, most board on the existing LAM 550 alkshib. Offices in an IMPATI and the AMPATI and the AMPATI and	Commiss is an SMAY make haved on the entirity (AM SID unbit Southern 6 as the SMAY make have on the entire (and SID unbit entire). Southern 6 commission of the size of a size of a size of a size of a size of a entire). Southern 6 commission of the size of a size of a size of a size of a size of a size of a profession shading. When the size of a profession source than the centing (AM SID, as such this option is demend as a dis-benefit.
Communities	Air Guelity	initial Options Appraisal: Qualitative	With regards to air quality, the existing LVM SID does not directly overfit any ADMA. Gives the 8% climb gardent included within the Do Nobel's gersard, the impact of aircraft below I,000th with regards to local air quality is limet do areas within the immediate area surrounding the airport.	As per the baseline scenario, Distino d'oses not directly vereth yeur ANDMA. Furthermore, as per CAP Folia (pass REA), dues to minisa pad dispersion, the impact on air quality above 1,000th. Is likely to be religification. There are areas within the immediate area surrounding the airport that will be overflown below 1,000th, however, for safety excessors, this is unmodate. Therefore, vereal when compands to the bisedness common, this option is deemed to be of equal benefit.	As por the baseline scensino, Option 1 does not directly overthy away. ADMAs, Furthernoe, aper CAP 18 (agrae 1974), but on mixing an dispersion, the impact on air quality above LD000 is likely to be significant. There are areas within the immediate area surroundin the airport that will be overtione below 1,000 in, however, for safely reasons, this is unanociable. Therefore, voral, when compared to the baseline scenario, this option is deemed to be of equal benefit.	As per the baseline scenerio, Dation 2 does not discretly overfly way. ADMAE, Furthermore, as proc LP 3016 (signs \$14%), due to mixing an dispersion, the impact on air quality above 1,000th is likely to be legisplictus. There are areas within the immediate area surrounding the sipport that will be overflown below 1,000th, lowever, for self-self- sepachs, this is unwordable. Therefore, overall, when compared to the baseline scenario, this option is deemed to be of equal bondin.	As por the baseline scennisk, option 3 does not directly overthy away. ADMAs. Furthernoe, as per CAP 18 ligars 1874, due to miking and dispersion, the impact on air quality above 1,000th is likely to be lingsigificant. There are areas within the immediate area surrounding the airport that will be overflown below 1,000th, however, for safety reasons, this is unanocidable. Therefore, overall when compared to the baseline scenario, altri option is deemed to be of equal barnets.	As per the baseline scenario, Distion 4 does not discrety overfly any ad- AdMA. Furthermore, as per CAP Bild (pages 874), due to orining an dispersion, the impact on air quality above 1,000th is likely to be regisplictus. There are areas within the immediate area surrounding the airport that will be overflown below 1,000th, however, for safety reasons, this is unwendable. Therefore, versal, when conspired to the bisodrine scenario, this option is deemed to be of equal brinffi.	As por the baseline scensins, Ogision 5 does not directly overthy any. AUMAG. Furthernoe, a per CAP 15 light part \$14, due to mixing an dispersion, the impact on air quality above 1,000th is likely to be imaginificant. There are alses within the immediate area surrounding the airport that will be overtions below 1,000th, belower, for cafety reasons, this is unavoidable. Therefore, overall when compared to the bisidine scenario, this option is deemed to be of equal burnets.	As per the baseline scenario. Option is does not directly overlity. ADMAN, Furthermore, as per CAP 106 (some 3914), due to mixing dispersion, the impact on air quality above 1,000H is likely to be skigstifficant. There are areas within the immediate area surroum the airport that will be overflown below 1,000H, however, for a capacion, this is unwaddate. Therefore, versal, when compared the baseline scenario, this option is deemed to be of equal bring the control of the compared to t
Wider Society	Greenhouse Gas Impact	with Options appraisal: Qualifative	Current roads do der Laugsoff comfinitions strible quantities and der der der der der der programment in der der der der der der der programment in der der der der der der der der entstand in der der schaffe, affectige har der der der der schaffe, affectige har der der der der der der der der der der der der	Octon Da Nem designed to appet certification of the program where a melliner of the crucind raw self in the required to have an amount of the crucind raw self in the required to the sea and image of Option O & 4.8 Alb m 2 CPAMML Seasor of mile The sea and image of Option O & 4.8 Alb m 2 CPAMML Seasor of mile the companied the basic excess. Option O & Seasor and Season the companied the basic excess. Option O & Season Season the confirm of the season of the confirm of the season of the confirm of the season of the season of the confirm the season of the season of the season of the season of the confirm the season of the season of the season of the confirm of the season of the season of the season of the confirm of confirm of confi	Ottos 11% believed integrated to support controls collect personal con- lections to the security of any set the sequent of the security of the sequent of th	Ooston Tall bear designed to support continuous clinic spectrum. A service as a clinical relative strategies ago yell for lengthed to have been designed of Spectra 2 to 4.2 EZERO (EZEROM). Based enti- flex trust integral of Spectra 2 to 4.2 EZERO (EZEROM). Based enti- flex trust integral of Spectra 2 to 4.2 EZERO (EZEROM). Based enti- form compared to the based outcomes, Option 2 sets of the spectra of a localization and produced as a set of the spectra of the spectrum of the spectra of the spectrum of the spe	Otto: 1 has been frigered to support commons of the general wave considered in the required for support of unsuper such contrast parts with the required to insular parts of the support o	Octon List Demonstration to support continuous color appetition. John Stein S	Como Ta Na bene designed to apport common of the agreement of the specified management	Option his home designed in support continuous cities dependent on the continuous cities designed to support continuous cities designed from the continuous and continuous cities designed and continuous cities designed and continuous cities designed and continuous cities designed cities
Wider Society	Capacity and resilience	initial Options Appraisal: Qualitative	Mointaining extant procedures would maintain curren capacity however, due to the relance on ground- based navigational ads, resilience would be significantly affected, following their removal in December 2022.	The introduction of PBN routes is expected to deliver benefits by increasing alsopace capacity which subsequently leads to more predictable fielight paths and fewer desky (both in all roo on the ground). The reduction of the relatince on outdated ground based analysational side will significantly increase operational resilience for airlines and operators.	The introduction of PBPI routes is expected to deliver benefits by increasing airspace capacity which subsequently leads to more predictable fight pasts and fewer destyp both in an or on the ground). The reduction of the relance on outdated ground based awaygational able with significantly increase operational resilience for airlines and operators.	The introduction of PBN routes is expected to deliver benefits by increasing alreptor capacity which subsequently leads to more predictable flight paths and fewer delays footh in air or on the ground. The reduction of the reliance on outdated ground based analysismal aid will significantly increase operational resilience for airlines and operators.	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which subsequently leads to more predictable fight paths and fewer deskyp both in an or on the ground). The reduction of the relance on outdated ground based mayaptional able with significantly increase operational resilience for airlines and operators.	The introduction of PBN routes is expected to deliver benefits by increasing alreptic expectly which subsequently leads to more predictable flight paths and fewer delays (both is all or on the ground). The reduction of the relatince on outdated ground based anxiquational aids will significantly increase operational resilience for airfines and operators.	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which subsequently issues to more predictable flight paths and fewer design both in air or on the ground). The reduction of the relance on outdated ground based novigorional also will significantly increase operational resilience for airlines and operators.	The introduction of PBN routes is expected to deliver benefits in increasing airspace capacity which subsequently leads to more predictable flight paths and feets delays (both in air or on the ground). The reduction of the relaince on outdated ground base an airspational airs will significantly increase operational resilience airlines and operators.
Wider Society	Transpullity	initial Options Appraisal: Qualitative	age of CM TASK. Approach 8, Pac DS, Contage proposes are required to consider Transpully with apartic reference to AONBs and Mascoral Parts unity provides other areas has been intended through community engagement. Although no specific area were identified by community engagement, amo were identified by community engagement and contractive price with the LOS analysis to invariant consistency with other Stage 2 documentation. The existing LAM SOR born soft works and AONBs or factors IPAris, but does overfly 1 Country Park and 2 505s.	Option Discose for certify any ADMs of his full scale finals, heavest, if the Spin certificate of his option certificate of his point ownerfies of Lordon primary and and the 1355. Don't final	Option 5 does not overfly any ACMNs or **Tuttoral Parks, Instease.** 1 355. Overflijk of these areas is expected in occur as a higher hand to be installed from the spon overflist. Since Parks and the 1355 overflijk of these areas is expected in occur as a higher hand to be installed to the spon of the spon overflijk of the spon overflijk overf	Option 2 Gods and ownerly any ADMIN or Missional Plank, Neurose. 1 1355: Ownerlight of these areas is expected to occur at a higher studies, where they are less of excepted to occur at a higher studies, where they are less of excepted to occur at a higher studies, where the present of except and extreme seen expected to the studies of excepted to occur and a support of expected to the studies of excepted to occur and a support of expected to the studies of excepted to occur and a support occur. In expect to that it does not exercise you. ADMIN or festional Plank and of the particular occurs of excepted to the studies of the studies of the particular occurs of the studies of the studies of the studies of the studies of the studies of the studies of the studies of the studies of the studies of the studies of the studies of the studies of	option 1 sees not exertly any AOMan or Missional Praiss, Researce, 1 2 SSSL, Aorthight of those aware is expected to occur at a higher 2 SSSL Aorthight of those aware is expected to occur at a higher state, in mining and a second of the second and a second and a second of the second of the second of the second of the second of the regular into at disease and coverily any AOMS or Missional Praiss and any particular and a second of the second of the second of the second of the second on the second of the second of the second of the second of the second based in an or certifier are required on marker of 55% where compared to the handless seconds.	Option 4 Gase not overfile your Ordinary Fresh National Planks. Network of this bear identificated this option overfiles 2 Clother Plank and the 2 2500. Overfilth of these areas is expected to occur air a higher control of the planks. The planks are the planks are the planks of the planks are the planks are the planks are the planks are the sequal that she discounted to this kardinar sheeting of planks are the planks are the planks are the planks are the planks are the planks are the planks are the planks are the sequal that the discounted to the planks are the planks are the planks are the planks are the the planks are the planks are the planks are the planks are the planks are the planks are the planks are the planks are the planks areas planks are the planks are the planks are the planks are th	Option 5 does not cereitly any ADMs in "statistical frais, Neseaux, 1975. 2555. Overlight of those areas is expected to occur at a higher 12555. Overlight of those areas is expected to occur at a higher 12555. Overlight of those areas is expected to occur at a higher 12555. Overlight of the same in the control of the same in the s	Option 6 date and evently any ADMIC or haterous Prist. Teams to be seen death with the options eventler is country bris and 25500, Developed for those areas is expected to occur at a high and a second of the option eventler is expected for the second of the option option of the option option of the option opt
Wider Society	diadiversity	ential Options Appraisal: Casalitative	Academy conducted by the change passiver already in the excepting personal or STT country for the White the activity greated as STT country for the White the activity of designated as the internet of Brookwests by the STT country as Plant S, GAR S, AMERICAN SER and SSTS LEVEL DOTON when a second the or highing above LDDON when a second present passive country and disposition, there is a limited impact, in hermor passing query these lists. Due to the effects of mining and disposition, there is a limited impact, in the most passive passintered passive passive passive passive passive passive passive pa	the fraggraphics has conducted and his submitted above the designated states are admitted. As 40 his stage, then registrated has her colored part layer and MSL 40 his stage, then registrate to his no charge participate. Here is not the servitine and admitted above and marker, there is suitable, to be an impact as local or qualify and marker, there is suitable, to be an impact as local or qualify and and marker themselves to be an impact as local or qualify and and marker themselves to the suitable and the suitable and and marker themselves to the suitable and the suitable and and marker themselves the suitable and the suitable and and an admitted and an admitted and an admitted and impact on Southernity as they do not movine ground based distantancies. The ratio of 37 his schowindege for the upported of the ACP process by holgest Matter Equery.	The change patrons has tradicated and his analysis and surplined selection and surplined selection and 2013. At the testing has the expected for lies no sharing links to affect basichemist, at these sites. From a salt consider paragraphic miss on the link eventure analysis associated paragraphic fine time on the other sections associated paragraphic miss of the selection of the APP process by subject values fine paragraphic selection of the APP process by subject values fine paragraphic selection of the APP process by subject values fine paragraphic selection of the APP process by subject values fine paragraphic selections.	The Alberg agreement has conducted and its understand alberts the discontinuous discon	The change parament has conducted and the annihilation of them the image of the change	The change general bits conducted and its architectural direct that disciplinate share a mound ITA. All this region for the second real base on change takey is reflect toolkerwise; at these sites. From an architect general properties, the sets well be enrodened and architectural general properties. The sets well be serviced and architectural general properties. The second properties of the se	The disappearance has conducted and to indicate of elements of the in- dicate of the conductive of the	The charge spossor has conducted work to understand where designated these we reward 51% At this stage. Here in expected charge special charge are special 51% At this stage. Here in one proceeding of the charge special special special charge special spec
General Aviation	Access	Initial Options Appraisal: Qualitative	No change to existing airspace arrangements. GA users of STN will maintain their current level of access under extant operational arrangements.	No change to the existing airspace arrangements (within the baselini scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement pertaining to CA access are reviewed prior to implementation to secure that continued validities.	No change to the existing airspace arrangements (within the baselin scenario) are expected as a consequence of this ACP. However, it is recommended that all V89s and existing Letters of Agreement pertaining to GA access are reviewed prior to implementation to answer belief continued validities.	el No change to the existing airspace arrangements (within the baselin scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement pertaining to GA access are reviewed prior to implementation to ensure their continued violating.	e No change to the existing airspace arrangements (within the baselin scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement pertaining to GA access are reviewed prior to implementation to arrange their continuous validities.	No change to the existing airspace airrangements (within the baselin scenario) are expected as a consequence of this AD*. However, it is recommended that all VPR's and existing Letters of Agreement pertaining to GA access are reviewed prior to implementation to excess that in continued validity.	No change to the existing airspace arrangements (within the baselin scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing laters of Agreement pertaining to GA access are reviewed prior to implementation to arrange their continued valadity.	e No change to the existing airspace airrangements (within the basenario) are expected as a consequence of this ACP. However, recommended that all VRPs and existing Letters of Agreement partaining to Galacies are reviewed prior to implementation to ensure that in retrinsial visibility.
General Aviation / commercial airlines	Economic impact from increased effective capacity	Institut Options Appraisal: Qualitative	the increase to effective capacity settingsteed for controlled and effective capacity settingsteed for controlled used entert procedures, therefore no executions, benefit for 6A/sertess.	many the continued offilini. In residualize PRIV supported table to be realized by residuality in residual to the residuality and	come their contensed solds. In a modulation PRS was settled to delay for leaving by increasing the modulation of their solds. By increasing their solds are for their solds of their solds or for their solds of their	name their continued unlink. In includation PP 144, supported that the resultable per resultable per leave that the per supported that the resultable per leave the per leave that the resultable per leave the resultable per leave that the per leave that the resultable per leave that the per leave that the resultable per leave that the per leave that the resultable per leave that the per leave that the resultable per leave that the per leave that the resultable per leave that the per leave that the resultable per leave the resultable per leave the resultable per leave the resultable per leave that the resultable per leave the resultable per leave that the resultable per leave th	seem their continued rather, In a structured to PRA was a structured to their seems by rowang in the structured to PRA was a structured to their seems of the structured to their seems of their seems o	ment after contented deliber. The extended to deliver benefits by intrasting the translation of the translation of the translation of the translation of the properties of the facility content feet to get a feet of the properties of the facility content feet to get a feet of the properties of the facility content of principle content for the properties of the facility content of principle content for the properties of the facility content of principle contents for the properties of the facility content of principle contents. It is not proposed contents to the content of principle contents for the facility contents of principle contents for the facility contents of principle contents for the properties for the principle contents for the	come that continued sable. In a monature first the continued to delive benefits by reversing the form that the first the continued to delive benefits by reversing sable and fewer afterly plan in the are on the ground. This required in facilitate content benefit to definitely content plan content to the content of the c	concert the continued worlds, respectively. The continued worlds is a continued to the con
General Aviation / commercial airlines	Fuel burn	Initial Options Appraisal: Qualitative	The esting STN procedures do not support continuous crime poperation. Full burn is expected to be practed due to accical ATC intervention and period freelf light in the deporture and approach phase. Furthermore, in the case of the modal path of the estiding LAM SOL be teach kegint in 250 periods (3 SCRMA). As previously described, for the purpose of the LOA overlight auxilyst, the LAM SID has been measured up to 4,000th.	Option to Sees support continuous cities the operations, meaning that warms would not be revised to where of should produce the country and expensive relocation of the country and the country would be continued to the country of th	Option 1 Gots support continuous ratio dependence, meaning that versific valued to set present to be level of design department, enclosive section where the result on being design department, enclosive tagge of the CaPFaSE process to quantify face burn, this wait be conducted in Stage 2 and Permitten, to estable a companion, the bugic applied in but the development of the CaPFaSE process to quantify face burn, this wait be with regards to the primedro, to estable a companion, the bugic specified in that the development is a 42-defail or Extent stage is assumed with regards as parties are mount of fast burn, therefore, this option of all a burnful in terms of old burn. More in dispth sensity will be carried out in Stage 3 to confirm.	Option 2 God on support continuous cells operations, meaning that it would not be required to level of disingle operature, relocation continued to the cells of	Option 3 Good support continuous carbon operations, meaning table, second would not be required to be left of dainy departure, relocked second to second s	Option 4 does support continuous clim deportment, meaning hasts according on the continuous climates and the continuous climates are continuous climates and continuous climates and continuous climates are continuous climates a	Option 5 does support continuous time operations, meaning table, work may be supported to where of design department, reduced support of the care of	Option is feen support continuous chinal operations, mensing its surrich would not be equivaled to level off similar operation, red the overall minoral off siles bount. There is no requirement within the overall minoral off siles bount. There is no requirement within concluded in figura, in Tendroffor, to evalue a comparison, the loss applied is that the shortest the texts family, the less family is within agoing to select particle, this 4.52 Fees (E. 2000), the SIAT of
Commercial airlines	Training costs	initial Options Appraisal: Qualitative	No additional training predicted.	It is expected that no extra PdoQ/Eveu training will be required to exable piots to fly the new PBS pockedures. PBS is a common standard of naskploth broughpout the weak it. It not proportional for London Standard Aipont to assess on griding competency for individual commercial artinos due to the synifactur variables involved or, number of piots, wifine policies on training (simulator waves) five flight training), fleet types, and variations in on-board qualiformet etc.	It is espected that no nota *Niot/Dew training will be required to enable plots to the the new YBN percondens. FBN is a common standard of neighbor throughout the wash. It is not prognotioned for Landard Stanted Aipport to assess on-ping competency for individual commercial arises due to the significant variables modesd as a standard airins due to the significant variables modesd as _number of plots, within policies on training (simulation was the fight standard programme of the plots of the plots of the plots of quipiement etc.	It is expected that no extra Plot/Crew training will be required to enable pilots to Py the new PSR poscedures. PPR is a common standard of naughbor horosphose the evolt is not proportional for London Exanded Airport to assess on-going competency for individual commercial arilends as to the significant visuables involved ac, number of pilots, afrine piloties no training (simulator waves like High training). Beet types, and variations in on-board quipiment etc.	It is expected that no extra *Plot/Crew training will be required to enable plots to the the new YBN percedures. FBN is a common standard of newploth broughout the work it is not proportioned for London Standard Alport to assess on-ping competency for notividual commercial airlines due to the spiritchat variables microlated or pind airlines due to the spiritchat variables microlated or pind airlines due to the spiritchat variables microlated or pind airlines airlines of the spiritchat variables microlated or pind airlines airlines of the microlated or pind airlines or pind airlines or microlated or pind airlines airlines airlines microlated or pind airlines microlated micro	It is expected that no extra Plot(Crew training will be required to enable piots to by the new PBR posedures. PBR is a common standard of nasignation throughout the world. It is not propprinting for London Standard Airport to assess on geting competency for individual commencial willings due to the significant ventables involved as Q. number of pilots, string policies on training (simulator waves) fire flight training), fleet types, and variations in or-broard quipment etc.	It is expected that no extra Plot/Crew training will be required to enable pilots only the new PRN percedures. PRN is a common tandard of newploth broughout the weak. It is not proportiously tandard of newploth broughout the weak. It is not proportiously for London Standard Alprot to assess on-ging competency for individual communical aidmen due to the spiritional vanishes transheed e.g. number of pilots, elifine policies on training formulator varies be fight training, fleet types, and variations in on-board equipment etc.	It is espected that no extra Prior/Crew training will be required enable pilots to fly the new PSP procedures. PSP is a common standard of insulgation throughout the wood. It is not proporting for London Assated Argort to assess on-going competency for flowfuldual commencial califores due to the spirificant variables involved a g, number of pilots, withe policies on training (simul worsout law flight training). Reet types, and variations in on-boom quipiment etc.
Commercial airlines	Other costs	Initial Options Appraisal: Gualitative	It is not proportionate for STN to assess potential other costs for commercial artines - there may be costs associated with maintaining legacy systems to continue flying conventional navigation but there are too many variables (e.g., aircraft types, on-board system capability etc.) to consider these effectively.	Other costs to commercial sinfnes may include updates to Flight Management Systems (FRAS), navigation distalses and operation procedures, Increased plack hire costs versus training etc. It is not proportionate for STN to assess the other costs to commercial artifices of Hypa FRA procedures due to significant variables; some artifines of Hypa FRA procedured such to significant variables; some artifines may already be 'PBN ready' whereas others may not.	Other costs to commercial diffices may include updates to Flight Management Systems (FMS), navigation distalsses and operating recordures, increased plifs his roots versus trassing etc. It is not proportionate for STN to assess the "other costs" to commercial authors of flight gPRA procedured size to significant variabities; ome airlines of flight gPRA procedured size to significant variabities; one airlines may already be "PBN ready" whereas others may not.	Other costs to commercial airlines may include updates to Flight Management Systems (FMS), novigotion databases and operating procedures, increased plack hir costs ventus training etc. it is not proportionate for STN to assess the "other costs" to commercial airlines of PMps (PRS) procedured use to applificant vanishbes some airlines of PMps (PRS) procedured use to applificant vanishbes some airlines may aircody be "PRN ready" whereas others may not.	Other costs to commercial artines may include updates to Flight Management Systems (FMS), navigation databases and operating rococcluses, increaded plot libre costs versus training etc. In proportionate for STM to assess the other costs' to commercial artines of flight gRM procedures due to significant variables; some artines on flight gRM procedures due to significant variables; some artines may already be "BM ready" whereas others may not.	Other costs to commercial airlines may include updates to Flight Management Systems (FMS), analogation databases and operating procedures, Increased plack hire costs vensus training etc. It is not proportionate for STN to assess the "other costs" to commercial airlines of FMps PRA procedured such to significant variables some airlines of FMps PRA procedured such to significant variables some airlines may already be "PBN ready" whereas others may not.	Other costs to commercial airlines may include updates to Flight Management Systems (FMS), navigation distalases and operating procedures, increased plate his cost seriest straining lee. It is not proportionate for STN to assess the 'other costs' to commercial airlines of flight PRAI procedures due to significant vastisties; some airlines of flight PRAI procedures due to significant vastisties; some airlines may already be 'PBN ready' whereas others may not.	Other costs to commercial airlines may include updates to Flight Management Systems (FMA), nedgotion databases and operation procedures, increased plats hire cost versus training etc. It is n proportionate for STM to assess the "other costs" to occumenced airlines of flying PRB procedures due to significant variables, so airlines of flying PRB procedured such to significant variables, so airlines may already be "FRM residy" whereas others may not.
Airport / Air navigation service provider	Infrastructure costs	initial Options Appraisal: Qualitative	No additional infrastructure is required at STN to maintain extant conventional procedures however maintaining access to ground beared equipment (currently operated by NER() may be prohibitively expensive, should this commercial option be implemented.	All options relate to the imphementation of PRN and no additional infrastructure in required. The introduction of PRN reduces the relationation of PRN reduces to relationation of PRN reduced newspace are no longer needed. The foundation of PRN is PRN or PRN or are no longer needed. The foundation of PRN is PRN or PRN or proposed PRN PRN procedures will do no based on their performance-based navigation capability.	all options relate to the implementation of PRPI and no additional interacturation is origined. The interactions of PRPI reduces the relation on infrastructure, in particular ground based no/agation aid are no longer needed. The foundation of PRPI is RNAV or PRPI is invested a relating and departing london Stansted Airgord using the responsed PRIV/PRPI procedure will follow booked on their performance-based no/agation capability.	All options relate to the implementation of FBH and for additional infrastructure is required. The immodition of FBH reduction and FBH reduction of FBH reducti	All options relate to the implementation of PRAI and not additional infrastructure is required. The introduction of PRAI reduces the relation on infrastructure, is particular ground based navigation aid are no longer needed. The foundation of PRAI is RNAIV or PRAI is RNAIV or PRAI is RNAIV or PRAI is RNAIV or RNAIV in relating to root on present prairies and departing london Stanted Airport using the responsed PRAIV/PRAIP procedure will like be based on their performance-based needgation capability.	All options relate to the implementation of PBN and no additional infrastructure is equived. The introduction of PBN reduces be related to the particular production of PBN reduces the related to the related to the reduced to the related to the related to the reduced to the related to the reduced to the reduced to the reduced to the reduced to proposed RBN/SPN proceduces will do so based on their performance-based navigation capability.	all agains relate to the implementation of PRA and not additional instructurate in equivalent. The introduction of PRA reduces the relation on infrastructure, in particular ground-based navigation all are no larger needs. The foundation of PRA reduced navigation all are no larger needs. The foundation of PRA is PRAV or PRAV in PRAV or PRAV is PRAV or PRAV	All options relate to the insperimentation of PBM and no addition infrazincturar is required. The introduction of PBM reduces related on infrazincture, in particular ground based margations are no longer needed. The foundation for PBM is PBM or particular aircraft arriving and departing London Stanzede Airport using the proposed PBM-VIMPS procedures will do so based on their performance-based navigation capability.

Group	Impact	Level of Analysis	DO NOTHING BASELINE"	OPTION 0	OPTION 1	OPTION 2	OPTION 3	OPTION 4	OPTION 5	OPTION 6
Airport / Air navigation service provider	Operational costs	Initial Options Appraisal: Qualitative	maintaining the extant procedures.	the introduction of PBN. In general, London Stansted Airport predicts that operational efficiency will improve and that there may be potential for a net reduction in operational costs.	that operational efficiency will improve and that there may be potential for a net reduction in operational costs.	organization. This existing commercial contract between STN and their chosen ANSP is considered to be an orgoing cost. ICAO discribe Improved Operational Efficiency is a benefit delivered by the introduction of PBN. In general, London Stamsted Airport predicts that operational difficiency will improve and that there may be potential for a net reduction in operational costs.	Air Tartic Control at STN is connected out to a third-party organisation. This consisting commercial contract between STN and their chosen AMSP is considered to be an enging cost. ICAD describe Improved operational Efficiency as a benefit delivered by the introduction of PRN is general, London Stanstok Airport predict that operational Efficiency will improve and that there may be potential for a net reduction in operational costs.	Air Traffic Control at STN is contracted out to a thrift party organization. This selecting commercial contract between STN and their chosen MASP is considered to be an ongoing cost. ICAD describe "improved Operational Efficiency" as a benefit delivered by the introduction of PBN. In parental, London Stansdard Airport predict that operational efficiency will improve and that there may be potential for a net reduction in operational costs.	Air Traffic Control at STN is contracted out to a third-purity organisation. This dosing commercial control between STN and their chosen AKEP is considered to be an engoing cost. If CAD describe Trapreved Operational Efficiency as a benefit delivered by the introduction of PRN in general, London Stanstack Airport predict that operational efficiency will improve and that there may be potential for a net reduction in operational costs.	Air Taffic Centrel at STN is contracted out to a third party organization. The setting commercial contract between STN and their chosen AMSP is considered to be an ongoing cost. LKU discribe "improved Operational Efficiency" as Ementit delivered by the introduction of PRIs. In gameral, London Stanzada Alprort predicts that operational efficiency will improve and that there may be potential for a not reduction in operational costs.
Airport / Air navigation service provider	Deployment costs	Initial Options Appraisal: Qualitative	No Deployment costs applicable to extant procedures.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen AVSP is considered to be an ongoing cost.	Air Traffic Control at STN is contracted out to a third-party organisation. This soisting commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen AVSP is considered to be an orgoing cost.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen AMSP is considered to be an orgoing cost.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.
Safety Assessment	Safety Assessment	initial Options Appraisal: Qualitative	STN are safe including use of the extant conventional procedures. Following the removal of ground-based	Proceible confict with control Lution, London Southerd, Restributes and ARR Architect Martin seed intellings. Forecast was designed, Forecast week seedings and ATC control and a seed intellings and a seed in the control of the cont	Passible conflict with London Luton, London Southered, Healthrow and MAY Number traffic was destified. Procedure design and ATL London Luton London Southered, Healthrow and MAY Number traffic was destified. Procedure design and ATL London Luton L	Paulable conflict with Lendon Lutins, London Southern, Hearlevow and BMF Excellent traffic saw identifieds. Percedure design and ATC according to the conflict of intervients or intervients intervients conduct on resignation in these instances in ATC conduction and concess completing, beafing to a panellal increase in ATC conduction and the conduction of the Conduction o	Passible conflict with London Luton, London Southered, Healthrow and SAP Knobbot traffic was destribed. Procedure design and AEL conflicted intervention code of an imagingmen in the emistance but coold increase completely, healing to a possible increase in AECL code of the Code of	Pausible conflict with London Ludon, London Southerd, Healthow and Mir Northother Unifice was identified. Procedure design and AC London London London Conflict and Institution in Interest Conflict Conf	Passible conflict with London Luten, London Southerd, Healthow and SAN Northest traffic was destribed. Procedure design and AE London London Southerd Conflict and Experience of London	Passible conflict with Lendon Lution, Landon Southment, Hearlieves and Mor Reschool to critics are identified. Percedure design and ACC accordance for the conflict of merity processor design and ACC accordance completely, Seeling to a possible increase in ACC accordance completely, Seeling to a possible increase in ACC accordance completely, Seeling to a possible increase in ACC accordance in ACC accordan
			a value opinion is it does not provide a sustainable understood in control of control or control control or control c	When compared to the baseline scenes (Special Sperietims were all final from terms of color larger (see the seed) and seed for the seed of color larger (see the seed) and seed for the seed of the se	benefit because there is no change when compared to today's operation. Having said that, at this time, it is not possible to fully	Internet of rollow lineatz, greenhouse gas emissions and fast form but better is trees of charginalle, gazale/publicare and deconnicionatz of capatr. The membrang closic is an element to be of reason to the control of the control o	because there is no change when compared to today's operation. Having said that, at this time, it is not possible to fully determine the	When compared to the baseline courses, Sporker Aprellmen was a found of some layer and course of some of most layers and courses are settled as not settled from the course of some layers and course of the course	When compared to the baseline currents, Opinion's performs warm of their bown, and will be more and not be more and the bown and the bo	When compared to the baselines contexts, Option is performs used to the transition of the time of cold in this regeneration age entitles on what below in terms of cold in this regeneration age entitles of the desired to be of equal baself expands; the remaining criteria are desired to be of equal baself expands and the cold of expands and the context of the cold of expands and expands an

Colour Key	Description				
Preferred Option(s)	When compared to the baseline, there is a clear and obvious benefit. This option is viewed as more favourable than the other within the design envelop and as such is the preferred option within the design envelope.				
Favourable	When compared to the baseline, there is a clear and obvious benefit.				
Acceptable	When compared to the baseline, there is an equal benefit.				
Rejected	When compared to the baseline, there is a clear and obvious dis-benefit. As such, these options are rejected.				
Baseline/Previously Rejected	Option included for completeness but, in the case of previously rejected options, not subject to IOA.				

Departure Envelope: SID RWY 04 SOUTH EAST

Departure Env	arture Envelope: SID RWY 04 SOUTH EAST											
Group	Impact	Level of Analysis	DO NOTHING BASELINE'	OPTION 0	OPTION 1	OPTION 2	OPTION 3	OPTION 4				
Communities	Noise impact on health and quality of life	Initial Options Appraisal: Qualitative	In terms of today's operation, the SOUTH EAST design envelope is entirely based around the existing DET 1D SID. To provide the most representative use of the baseline scenario, the overflight analysis conducted on this SID was based on the modal tracks in 2019 as	Option 0 is a replication of the current DETID SID which incorporates a 6% climb gradient. Based on the change sponsors analysis, Option to overflies 9,058 people and a total of 3,849 residential buildings. When compared to the baseline scenario, in terms of poolution and residential buildings overflown. Option 0	Option 1 is a replication of the current DETID SID which incorporates a 8% climb gradient. Based on the change sponsors analysis, Option 1 overflies 2,048 people and a total of 973 residential buildings. When compared to the baseline scenario, in terms of poolulation and residential buildings overflown. Option 1	Option 2 is a RNP1 route based on the current DETID SID which incorporates a 8% climb gradient. Based on the change sponsors analysis, Option 2 overflies 2,58 people and a total of 1,042 residential buildings. When compared to the baseline scenario, in terms of population and residential buildings overflown, Option 2	Option 3 is a RINP1 route based on the current DETID SID which incorporates a 8% climb gradient. Based on the change sponsors analysis, Option 3 overfiles 2,142 people and a total of 1,027 residential buildings. When compared to the baseline scenario, in terms of population and residential buildings overflown, Option 3	Option 4 is a RNP1 route based on the current DETID SID which incorporates a 8% climb gradient. Based on the change sponsors analysis, Option 4 overflies I,837 people and a total of 946 residential buildings. When compared to the baseline scenario, in terms of poolulation and residential buildings overflown. Ootion 4				
			on the day was been on the model structure, the vite Again furthermore, to provide an authentic comparison, the modeling was carried out based on a 6% climb gradient rather than 3.3% as per the published SID. This provides a more realistic comparison when compared to today operation, it must also the piles compared to today operation, the value of the compared to today operation. The value of required to maintain safe separation distances, Saxed on the above, it has been determined that the existing DET SID overfiles a 2,499 people and a total of 1,219 residential buildings.	territo er populazion del recolenzas autoriga; overtrosivi, putro u performo svene and as such si deemed di sa dis-beteffit.	terms of population and relationstal studings overnown, uption 1 performs senter and as such is deemed as beneficial.	terms or population and relicement attuining townrown, upston 2 performs Sector and as such is deemed as beneficial.	terms or population and reliesement attaining overfrown, upston a perform Sector and as such is deemed as beneficial:	terms of population and religiorists adjusting townsown, upston a performs senter and as such is deemed as beneficial.				
Communities	Air Quality	Initial Options Appraisal:	With regards to air quality, the existing DET 1D SID	As per the baseline scenario, Option 0 does not directly overfly any	As not the baseline seemed. Onting 1 does not directly another and	As not the becaling sequests Option 2 deep and directly awally any	As per the baseline scenario, Option 3 does not directly overfly any	As not the baseline seemed. Online & door and directly another and				
	·	Qualitative	does not directly overfly any AQMAs. Given the 6W climb gradient included within the Do Nothing scenario, the impact of aircraft below J,000t with regards to local air quality is limited to areas within the immediate area surrounding the airport.	ADMAs. Furthermore, as per CAP 1616 (para 87A) due to mixing and dispersion, the impact on air quality above 1,000ft is listed to be insignificant. There are areas within the immediate area surrounding the airport that will be overflown below 1,000ft, however, for safety reasons, this is unavoidable. Therefore, overall, when compared to the baseline scenario, this option is deemed to be of equal benefit.	As per the baseline scenario, Option 1 does not directly overfly any AQMAK. Furthermore, a per CAP 16 (Gap at 87), due to mining and dispersion, the impact on air quality above 1,000th is likely to be insignificant. There are areas within the immediate zero surrounding the airport that well be overflown below 1,000th, which is the compact of the compact of the compact of the second of the compact of the compact of the compact of the second of the compact of the compact of the second of equal benefit.	As por the baseline scenario, Option 2 does not directly overtly may AGMAN. Furthermore, as prc.PA 1616 (pan 819), due to mixing and dispersion, the impact on air quality above 1,000ft is likely to be insignificant. There are areas within the immediate area surrounding the aliport that will be overflown below 1,000ft, or with the compact of the compact of the compact of the compact of the development of the description of the compact of the land of equal benefit.	AQMAs. Furthermore, a per CAP 1616 (para BYA), due to mixing and dispersion, the impact on air quality above 1,000ff is likely to be insignificant. There are areas within the immediate area surrounding the airport that will be overflown below 1,000ff, however, for safety reasons, this is unavoidable. Therefore, overall, when compared to the baseline scenario, this option is deemed to be of equal benefit.	As per the baseline scenario, Option 4 does not directly overfly any AQMAK. Furthermore, aper CAP 516 (apa 824), due to mining and dispersion, the impact on air quality above 1,000ft is likely be miligilificant. There are areas within the immediate area surrounding the airport that will be overflow below 1,200ft, when compacted to expose this surroundidable. Therefore, overall, when compacted to the baseline scenario, this option is deemed to be of equal benefit.				
Wider Society	Greenhouse Gas impact	Initial Options Appraisal: Qualitative	Current routes do not support continuous climb operations. It must be noted that the exact track length flown by aircraft may vary slightly due to the nature of radar vectoring, although aircraft do all follow the extant procedures in a breader sense. Extant procedures in a breader sense. Extant procedures do not support optimal aircraft performance and therefore are predicted to have a greater environmental impact compared to proposed.	Option O has been designed to support continuous climb poerations, however, an element of radar vectoring may still be required to manage aircraft separation distances. The track mileage of Option to is 3.830m (2.0681M). Based on this, when compared to the baseline scenario, Option to is longer and is inserted one percent or own time or generations gases. As such is issens as a dis-benefit. More in-depth analysis at Stage 3 is required to confirm the earst volumes of generations gases released.	Option 1 has been designed to support continuous climb operations, however, an element of radar vectoring may still be required to manage aircraft separation distances. The trask mileage of Option 1 is 38 30m (20, 658 NM), Sased on this, when compared to the baseline scenario, Option 1 is longer and is it herefore expected to emit more greenous gases. As such is seen as a dis-benefit. More in depth analysis at Stage 3 is required to confirm the occur volumes of greenous gases released.	Option 2 has been designed to support continuous climb operations, however, an element of rards vectoring may still be required to manage aircraft separation distances. The track mileage of Option 2 is 3357m (18.34MM), Based on this, when compared to the baseline scenario, Option 2 is shorter and is therefore expected to emit less greenfouse gases. As such its seen as beneficial. More in-depth analysis at Stage 3 is required to confirm the exact volumes of greenfouse gases refeased.	Option 3 has been designed to support continuous climb operations, however, an element of rards vectoring may still be required to manage aircraft separation distances. The track mileage of Option 3 is 3.684m (1.888M/M), 8 seed on this, when compared to the baseline scenario, Option 3 is shorter and is therefore expected to emit less greenfouse gases. As such its seen as beneficial, More in-depth analysis at Stage 3 is required to confirm the exact volumes of greenfouse gases refeased.	Option A has been designed to support continuous climb operations, however, an element of radave rectoring may still be required to manage aircraft sparation distances. The track milege of Option 4 is 3 9 48m (2.123MN), Based on this, when compared to the baseline scenario, Option 4 is 1 ionger and is therefore expected to emit more greenhous gases. As such, this is seen as a dis-benefit. More in depth analysis at Stage 3 is required to confirm the great-volumes of greenhous gases re-lessed.				
			options. Within Stage 2 of the CAP 1616 process, there is no requirement for a change apoints to conduct quantitative faul burn or emissions analysis. This will be covered in Stage 3. In odder to make a comparison, that will be covered in Stage 3. In odder to make a comparison, that will be covered in Stage 3. In odder to make a comparison, that will be considered from the more of the stage o									
Wider Society	Capacity and resilience	Initial Options Appraisal: Qualitative	Maintaining extant procedures would maintain current capacity however, due to the reliance on ground-based navigational aids, resilience would be significantly affected, following their removal in December 2022.	The introduction of PBN routes is expected to deliver benefits by increasing airgance capacity which subsequently leads to more predictable flight paths and fewer delays (both in air or on the ground). The reduction of the reliance on outdated ground based navigational aids will significantly increase operational resilience for airlines and operators.	The introduction of PBN routes is expected to deliver benefits by increasing siracec apacity which subsequently leads to more predictable flight paths and fewer delays (both in air or on the ground). The reduction of the reliance on outdated ground based navigational aids will significantly increase operational resilience for airlines and operators.	The introduction of PBK routes is expected to deliver benefits by increasing singueze capacity which subsequently leads to more predictable flight paths and fewer delays (both in air or on the ground). The reduction of the reliance on outdated ground based navigational aids will significantly increase operational resilience for airlines and operators.	The introduction of PBK routes is expected to deliver benefits by increasing sirspace capacity which subsequently leads to more predictable flight paths and fewer delays (both in air or on the ground). The reduction of the reliance on outdated ground based navigational aids will significantly increase operational resilience for airlines and operators.	The introduction of PBN routes is expected to deliver benefits by increasing airspace papictly which subsequently leads to more predictable flight paths and fewer delays (both in air or on the ground). The reduction of the reliance on outdated ground based navigational aids will significantly increase operational resilience for airlines and operators.				
Wider Society	Tranquillity	Initial Options Appraisal: Qualitative	As per CAP 1816, Appendix B, Para SPG, Change sporsors are required to consider Transullity with specific reference to AOMBs and National Parks only, unless other areas have been identified through community engagement. Although no specific areas were identified by community engagement, the change sporsor has decided to include SSSs and Country Parks within the IOA analysis for maintain consistency with other Stage 2 documentation. The existing DCT 105 does not overly any AOMBs, National Parks but does overfly 1 Country Park and 2 SSSs.	Option O does not overfit any AONBs or National Parks. However, it has been identified but this option overfite. Country Parks and 2 states been identified but this option overfite. Country Parks and 2 stitutus. Interest of the country of the country of the country of the care. It is not to country of the care. If the country of the care was there compared to the baseline searchs, Option of its equal in that it does not overfit any AONBs or National Parks and overfitted are equal mortion of country parks of the country of the	Option I does not overfly any ADMIs or National Parks. However, if has been definited but this option overflier. Country Parks and 2 SSSIs. Overflight of these area is expected to occur at a higher altitude, minimising the impact of aircraft notice and emissions on these areas. When compared to the baseline scenaria, Option 1 is equal in that it does not overfly any ADMIs or National Parks and overflies an equal number of country parks and SSSIs. As such this option is deemed to be of equal benefit with regards to Tranquillity.	Option 2 does not overfly any AONIs or National Parks. However, if has been definited but that opions overflies Lournity refus and 2 has been demanded but that opions overflies. Lournity refus and 2 satisfued, minimising the impact of aircraft notes and emissions on these arreas. When compared to the baseline sceramics, Opion 2 is equal in that it does not overflie yan AONIS or National Parks and overflies are ready innered or country parks and SSS. As such other countries are ready innered or country parks and SSS. As such only applicable of the countries are considered or country parks and SSS. As such only applicable or the countries are considered to be of equal benefit with regards to Yranquilling and the countries are considered to the countries area.	Option 3 does not overlify any AONIs or National Parks. Nonever, if has been definited but that opions overlife Lournity refus and 2 has been demanded but that opions overline Lournity refus and 2 attitude, minimising the impact of aircraft notes and emissions on these arreas. When compared to the baseline sceramic, Opion 3 is equal in that it does not overlife any AONIS or National Parks and overfiles are result marker of country parks and SSS. As such other conference and aircraft of the country of the countr	Option 4 does not overfly any ADMS or National Parks. However, if has been destinified both this option overflier. Country Parks and 2 SSSIs. Overflight of these area is expected to occur at a higher altitude, minimising the impact of aircraft noise and emissions on these areas. When compared to the baseline scenaria, Option 4 is equal in that it does not overfly any ADMS or National Parks and overflies an equal number of country parks and SSSIs. As such this option is deemed to be of equal benefit with regards to Tranquillity.				
Wider Society	Biodiversity	Initial Options Appraisal: Qualitative	Analysis conducted by the change sponsor shows that the existing poperation as \$170 certly off within the vicinity of designated sites in terms of Biocherotry such as \$304, \$ACC, BMAMAR See and \$505, in today's operation, aircraft are fring above £2,001 today's operation, aircraft are fring above £2,001 today's operation, aircraft are fring above £2,001 terms of the air quality specific to these sites. \$170 terms of the air quality specific to these sites. \$170 terms of the air quality specific to the sites air quality specific to	The change jonnor has conducted work to understand where the designated sizes are journed TNA. At this stay, there is expected to be no change likely to affect biodiversity at these steet. From a nair equality perspective, by sees steet will be overflown at attitudes above 12,000°C. As year CAP 1201. Appendix 6, Pras 1875, because of 12,000°C. As year CAP 1201. Appendix 6, Pras 1875, because of 12,000°C. As year CAP 1201. Appendix 6, Pras 1800 states that it general, aircspace change proposal will not have an impact on biodiversity as they do not involve ground-based infrastructure. That said, STN airchowledges that any potential impact to the designated last around STN will be assessed in Stage 3 of the ACP process by Subject Matter Experts.	The change sponsor has conducted work to understand where the designated sites are yound STA. At this state, there is expected to be no change likely to affect biodiversity at these steet. From an air quality perspective, here sets will be overline processed to the process of the process of the process of the processed of the processed by the processed of the processed with the processed with the processed with the processed with one best on impact to biodiversity as they do not involve ground-based infrastructure. That said, STN acknowledge that any potential injust to the designated list around STN will be assessed in Stage 3 of the ACP process by Subject Matter Experts.	The charge pomors has conducted work to undestand where the designated size are sured STA. At this stack, there is expected to be no change likely to affect isobievority at these sizes. From an air quality perspective, the session will be expected, but the control of the cont	The charge pomors has conducted work to undestand where the designated size are sured STA. At this stack, there is expected to be no change likely to affect isobievority at these sizes. From an air quality perspective, these sizes will be overline present the control of the c	The change sponsor has conducted work to understand where the designated sites are yound STA. At this state, there is expected to be no change likely to affect biodiversity at these steet. From an air quality perspective, here sees treat with the overland perspective, the sees treat with the overland at although some control of the sees of				
General Aviation	Access	Initial Options Appraisal: Qualitative	No change to existing airspace arrangements. GA users of STN will maintain their current level of access under extant operational arrangements.	No change to the existing airspace arrangements (within the baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement pertaining to GA access are reviewed prior to implementation to ensure their continued validity.	No change to the existing airspace arrangements (within the baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement pertaining to GA access are reviewed prior to implementation to ensure their continued validity.	No change to the existing airspace arrangements (within the baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement pertaining to GA access are reviewed prior to implementation to ensure their continued validity.	No change to the existing airspace arrangements (within the baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement pertaining to GA access are reviewed prior to implementation to ensure their continued validity.	No change to the existing airspace arrangements (within the baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement pertaining to GA access are reviewed prior to implementation to ensure their continued validity.				
General Aviation / commercial airlines	Economic impact from increased effective capacity	Initial Options Appraisal: Qualitative	No increase to effective capacity articipated for continued use of extra procedures, therefore no economic benefit for GA/airlines.	The introduction PBM is expected to deliver benefits by increasing aimspace capacity which in turn will lead to more predictable flight galls and fewer delays (both in the size or on the ground). This is expected to facilitate economic benefit to allies by increasing the expected of a facilitate economic benefit to attilise by increasing the frequency of air transport movements, increasing passenger ununbers and increasing capacitoning carried of its not predict the production of the productio	The introduction PRN is expected to deliver benefits by increasing aimspace capacity which in turn will lead to more predictable flight paths and fewer delays (both in the air or on the ground). This is sepected to facilitate economic benefit to aimline by increasing benefit or the requested of a failtate economic benefit to aimline by increasing the requested of air transport movements, increasing passeager inventes and increasing register to aimline by increasing passeager and air aimlines and increasing register to a require the register of its not present as a present aimline aimline capacity will depend on principle as any increasin involvability aimlines capacity will depend on principle commercial subsilies scharacteristics, it is not proportionate for London-Stansted Aimport to assess the economic benefit to the Accommunity however they are expected to benefit from increased predictability of commercial aimline novermorth which is expected to lead to reduced on ground and in-air delays for all users.	The introduction PBN is expected to deliver brandits by uncreasing adaptace appach with in turn will lead on time periodicable (light paths and fewer delays (both in the air or on the ground). This is expected to finition excended to finition excended to finition excended to finition excended to finition of the periodic excended to the finite commonly and the control and the periodic excended bearing on grup towage certain of it is not proportionate for Landon Stantack alignor to predict the precision excended bearing to commercial admission subject to every excended to business the activities, it is not proportionate for Landon Stantack part to assess the common beartifs to the Community however they are expected to be benefit from increased periodicability of commercial admission exercises which is expected to lead to reduced on-ground and in air delays for all users.	The introduction PBM is expected to deliver benefits by increasing adaptace appach with in turn will lead to more productable flight paths and fewer delays (both in the air or on the ground). This is expected to finition excended to finition second to the production of air transport movements, increasing passenger introduces and increasing origin towards part of the production of the pro	The introduction PBM is expected to deliver benefits by increasing anappea capacity which in turn will lead to more producible flight paths and fewer delays (both in the air or on the ground). This is expected to facilitate economic benefit to airline by increasing benefit of the produced of air transport movements, increasing passeager introduced air transport movements, increasing passeager controls send in commonst, and increasing or gate towange certificial to it not proportionate for London Statistical Airport to predict the precise exercisine benefit or to movemental airlines involved by the new procedures control benefits to the commonst benefit as the Airport commonst airlines involvement benefit to the Airport constitution of the commonst airlines involvement benefit to the Airport constitution of the common benefit to the Airport constitution of the Airport consti				

Group	Impact	Level of Analysis	DO NOTHING BASELINE'	OPTION O	OPTION 1	ORTION 2	OPTION 3	ORTHONA
General Aviation / commercial airlines	Fuel burn	Initial Options Appraisal: Qualitative	The existing TTN procedures do not support continuous clinic deposition. Sull burn in expected to be greater due to textical ATC intervention and perpendion follewell fillight in the departure and approxich phase. Furthermore, in the case of the modal path of the existing DTT 10 50, the track length is 37.59km (20.30kM).	the logic applied is that the shorter the track length, the less fuel is burnt. With reperfs to this opion, it is \$3.80m. [20.88Mb], the less fuel is burnt. With reperfs to this opion, it is \$3.80m. [20.88Mb], the less fuel in the stage is assumed will require a greater amount of fuel burnt, therefore, this option is of dis-benefit in terms of fuel burn. More in depth analysis will be carried out in Stage 3 to confirm.	Option 1 does support continuous climb operations, menning that aircraft would not be required to level off langed departure, reducing the owned amount of fine laburat. There is no requirement with 1842e 2 of the CPAISS process to pursuity fuel burn, this will be conducted in Stage 3. Therefore, to enable a compartion, the logic applied is that the observable that sleep, the lefts fulled to logic applied is that the observable that sleep, the left schild is burnt. With regards to this option, it is 38 3/30m (20.689M) long, when compared to the besiense search (2000 in a lineary and at this stage is assured will require a greater amount of fair burnt, therefore, this option is of sid-beeff. In enterior of fair burnt, More in despit unally is will be carried out in Stage 3 to confirm.	depth analysis will be carried out in Stage 3 to confirm.	Option 3 does support continuous climb operations, meaning that ancent would not be required to level of langing departure, reducing the overall amount of fael burnt. There is no requirement with 1582e 2 of the CATISG process to quantify feel burnt, his will be conducted in Stage 3. Therefore, to enable a compartion, the logic applied is that the shorrer the track-length, the less fails burnt. With regards to this option, it is 36.84m (13.89MM) long, when compared to the beasiene sceam; Option 18 shorter and this stage it assured with regular a annuller amount of fails burnt. When therefore, this option is shorter and for this stage it assured with regular a smaller amount of fails burn, herefore, this option is shorter and of this stage it is sufficient to term of other burnt, however, and the stage is the stage of the burnt. More indepth analysis will be carried out in 15kg a 3 to confirm.	Option 4 does support continuous climb operations, menning that arrort would not be required to level off lange departure, reducing the overall amount of nel burnt. There is no requirement within 58age 2 of the APISES process to poundly foel burnt, which will be conducted in 58age 3. Therefore, to enable a comparison, the logic applied is that the obtract the text length, the less that is burnt. With regards to this option, it is 39 48hm (21.2704) long. When compared to the beariness causing Colonia 4 is origent and the When compared to the beariness such as Colonia 4 is origent and the text of the control of the colonia is original and the colonia is considered to the colonia in the colonia in the colonia is original to the colonia in the colonia in the colonia is of the colonia in the col
Commercial airlines	·	Initial Options Appraisal: Qualitative	No additional training predicted.	It is expected that no extra Pilo/Crev training will be required to enable pilots to the here PIPI in procedure. PIPI is a common standard of navigation throughout the world. It is not proportionate for London Standard Approt to assess on oping competency for individual commercial admines due to the significant variables univoked sign, number of pilots, affire policies on training infinialization in the pilot of the pilot significant variables are considered to the pilot significant variables. The pilot significant variables are pilot training, fleet types, and variations in on-board equipment ex.	It is expected that no extra Pilo/Crev training will be required to enable pilots to the here PIPI in procedure. PIPI is a common standard of navigation throughout the world. It is not proportionate for London Standard Approt to assess on oping competency for individual commercial admines due to the significant variables univoked sign, number of pilots, affire policies on training infinialization management and pilot control pilots of the pilot control pilots of the pilots	It is opported that no extra Pilot/Crev training will be required to enable pilots to five here Pilot procedure. Pilot is a common standard of anxigation throughout the world. It is not proportional for London Stanted Ariport to assess on going competency for individual commercial aimines due to the significant variables enviroled e.g., mushed of pilots, aimine posicies on training (simulation provided e.g., mushed or pilots, aimine posicies on training (simulation supplement etc.	It is expected that no extra Pilot/Crev training will be required to enable pilots to five here Pilot procedure. Pilot is a common standard of anxigation throughout the world. It is not proportional for London Standard Airport to assess on going competency for individual commercial airlines due to the significant variables enviroled ge, mushed or plotts, airline policies on training (simulation provided ge, mushed or plotts, airline) policies on training (simulation supplement etc.	It is opported that no extra Pilot/Crev training will be required to enable pilots to the here PNB in scorniers. PNB is a common standard of analysis on throughout the world. It is not proportionate for London Standard Airport to assess to oping competency for individual commercial admines due to the significant variables involved e.g., maked or plotts, affire profession or reasoning (immilator necessity of the properties
Commercial airlines	Other costs	Initial Options Appraisal: Qualitative	It is not proportionate for STN to assess potential other costs for commercial airlines - there may be costs associated with maintaining legacy systems to continue flying conventional navigation but there are too many variables (s.g., aircrift types, on-beard system capability etc.) to consider these effectively.	Other costs to commercial airlines may include updates to Flight Management Systems (FMS), navigation databases and operating procedures, increased pilot hire costs versus training etc. It is not proportionate for STN to assess the 'other costs' to commercial airlines of flying PSP procedures due to significant vanisheles; some airlines of flying PSP procedures due to significant vanisheles; some airlines may already be 'PBN ready' whereas others may not.	Other costs to commercial airlines may include updates to Flight Management Systems (FMS), navigation databases and operating procedures, increased pilot hire costs versus training etc. It is not proportionate for STN to assess the 'other costs' to commercial airlines of flying PSN procedures due to significant vanisheles; some airlines of flying PSN procedures due to significant vanisheles; some airlines may already be 'PBN ready' whereas others may not.	Other costs to commercial airlines may include updates to Flight Management Systems (FMS), navigation databases and operating procedures, increased pilot hire costs versus training etc. It is not proportionate for STN to assess the 'other costs' to commercial airlines of flight PSN procedures due to significant variables; some airlines of flight PSN procedures due to significant variables; some airlines may already be 'PBN ready' whereas others may not.	Other costs to commercial airlines may include updates to Flight Management Systems (FMS), navigation databases and operating procedures, increased pilot hire costs versus training etc. It is not proportionate for STN to assess the 'other costs' to commercial airlines of flight PSN procedures due to significant variables; some airlines of flight PSN procedures due to significant variables; some airlines may already be 'PBN ready' whereas others may not.	Other costs to commercial airlines may include updates to Flight Management Systems (FMS), navigation databases and operating procedures, increased pilot hire costs versus training etc. It is not proportionate for STN to assess the other costs to commercial airlines of flying PSN procedures due to significant variables; some airlines of Miyag PSN procedures due to significant variables; some airlines may already be 'PBN ready' whereas others may not.
Airport / Air navigation service provider	Infrastructure costs	initial Options Appraisal: Qualitative	No additional infrastructure is required at STN to maintain extant conventional procedures however maintaining access to ground-based equipment (currently operated by NERI) may be prohibitively expensive, should this commercial option be implemented.	All options relate to the implementation of PBNs and no additional infrastructure is required. The introduction of PBNs reduces the relative on infrastructure, in particular ground-based navigation adds are no longer needed. The foundation for PBNs is NRAW or RNP-aircraft arriving and departing london Stansted Airport using the proposed RNAW/RMP procedures will do so based on their performance-based navigation capability.	All options relate to the implementation of PBNs and no additional infrastructure is required. The introduction of PBNs reduces the relative on infrastructure, in particular ground-based navigation adds are no longer needed. The foundation for PBN is INNAV or RNP-aircraft arriving and departing london Stanted Airport using the proposed RNAV/RNP procedures will do so based on their performance-based navigation capability.	All options relate to the implementation of PBN and no additional infarturcture is required. The introduction of PBN reduces the relative consistency of the particular ground-based neigration and as are no longer needed. The foundation for PBN is RNAW or RNP aircraft arriving and departing London Stansted Airport using the proposed RNAW/PBN procedures will do so based on their performance-based navigation capability.	All options relate to the implementation of PBN and no additional infartneture is required. The introduction of PBN reduces the relative consistency of the particular ground-based neigration and as are no longer needed. The foundation for PBN is RNAW or RNP alrorat striking and departing London Stansted Airport using the proposed RNAW/PBN procedures will do so based on their performance-based navigation capability.	All options relate to the implementation of PRM and no additional infestructure is required. The introduction of PRM reduces the relative on infrastructure, in particular ground-based navigation adds are no longer needed. The foundation for PRM is RNAV or RNP- aircraft arriving and departing London Stanted Airport using the proposed RNAV/RPM procedures will do so based on their performance-based navigation capability.
Airport / Air navigation service provider	Operational costs	Initial Options Appraisal: Qualitative	No change to operational costs is attributable to maintaining the extant procedures.	Air Taffic Cantrol at STN is contracted out to a third-party organisation. This estiting commercial contract between STN and their chosen AMSP is considered to be an ongoing cost. ICAD describe improved Operational Efficiency all the discribed improved Operational Efficiency all the discribed improved predicts that operational efficiency will improve and that there may be potential for a net reduction in operational costs.	Air Taffic Cantrol at STN is contracted out to a third-party organisation. This estiting commercial contract between STN and their chosen AMSP is considered to be an ongoing cost. ICAD describe improved Operational Efficiency all the discribed improved Operational Efficiency will provide the introduction of PBN. In general, London Stansted Airport predicts that operational efficiency will improve and that there may be potential for a net reduction in operational costs.	Air Tarfic Control at STN is contracted out to a third party organisation. This existing commercial contract between STN and their chosen AKSP is considered to be an ongoing cost. (AXO describe "improved Operational Efficiency with a selectific delivered by the introduction of PBN. In general, London Stansted Airport predicts that operational efficiency will improve and that there may be potential for a net reduction in operational costs.	Air Tarfic Control at STN is contracted out to a third party organisation. This existing commercial contract between STN and their chosen AKSP is considered to be an ongoing cost. (AXO describe "improved Operational Efficiency with a selectific delivered by the introduction of PBN. In general, London Stansted Airport predicts that operational efficiency will improve and that there may be potential for a net reduction in operational costs.	Air Traffic Control at STN is contracted out to a third-party organization. This ostiting commercial contract between STN and their chosen AKSP is considered to be an ongoing cost. ICAO describe "improved Operational Efficiency with a strength of the describe "improved Operational Efficiency will conflow as benefit delivered by the introduction of PBN. In general, London Stansted Airport condicts that operational efficiency will improve and that there may be potential for a net reduction in operational costs.
Airport / Air navigation service provider	Deployment costs	Initial Options Appraisal: Qualitative	No Deployment costs applicable to extant procedures.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.
Safety Assessment	Safety Assessment	initial Options Appraisal: Qualitative	The baseline assumption is that current operations for 30 M are said including use of the estate conventional procedure. Following the removal of ground baseline managestorul also supports the existing 950s, aircraft departing 15t would continuously require radar vectoring (blood CS/15t and be implemented), resulting the art screening of the CS/15t and be implemented, resulting the art screening the continuously are some continuously of the continuously and the continuously are some continuously and the continuously are some continuously and the continuously are some continuously and are some continuously and are some continuously and are some continuously and are some continuously are some continuously and are some continuously and are some continuously are some continuously and are some continuously are some continuously and are some continuously are some continuously are some continuously and are some continuously are some continuously are some continuously and are some continuously are some and are some continuously are some and are some and are and are and are some and are some and are some and are some	London City and RAF Northolt traffic was identified. Procedure design and ATC tactical intervention could act as mitigations in these instances but could increase complexity, leading to a possible increase in ATCO workload. Leading on form this, possible unknown	Possible conflict with London Liston, London Southend, Neethrow, London City and AR Fortholt traffic was destribled. Procedure design and ATC actical intervention could act as mitigations in these instances but rould increase completing, leading to a possible increase in ATCO workload. Leading on form this, possible unknown discretation with the wide or mortan enteward is acknowledged, but also indicated to the discretation with the wide or mortan enteward is acknowledged, but as diddings, in was identified that due to the dispersion of staffic departing STM, adepted or actical intervention may be required to maintain safe separations standards. The design process may also help to mitigate this hazard to safe loss are aconsulty practicable. This is very specific to exact aircraft routing combinations.	Possible conflict with London Linoto, London Southend, Healthow, London City and Birk Porticible Life Was entered design and ATC sectical intervention could act as mitigations in these instances but used increase in a RTO workload. Leading no form this, possible unincover in a RTO workload. Leading no form this, possible unincover in a RTO workload. Leading no form this, possible unincover in a RTO workload. Leading no form this, possible unincover in a RTO workload Leading no form this, possible unincover in a RTO workload Leading no form the companion of the dispersion of traffic departing STNs. a depree of sectical intervention may be required to maintain aird separations standards. The design process may also help to mitigate this hazard to sis low as reasonably practicable. This is very specific to exact aircraft routing combinations.	Possible conflict with London Linoto, London Southend, Healthow, London City and Birk Porticible Life Was entered design and ATC sectical intervention could act as mitigations in these instances but used increase in a RTO workload. Leading no form this, possible unincover in a RTO workload. Leading no form this, possible unincover in a RTO workload. Leading no form this, possible unincover in a RTO workload. Leading no form this, possible unincover in a RTO workload. Leading no form this, possible unincover in a RTO workload Leading no form the common form the control workload to a form the control workload to the dispersion of traffic departing STMs. a deprese of sectical intervention may be required to maintain aird separations standards. The design process may also help to mitigate this hazard to sis low a reasonably practicable. This is very specific to exact aircraft routing combinations.	Passible conflict with London Liston, London Southend, Neathbow, London City was file Northort Intellies, with prefiled. Procedure design and ATC sectical intervention could act as mitigations in lethere instances but used increase can english judged to a possible increase in ATCO workload. Leading on form this, possible unknown attention with the wider control network is acknowledge, but an addition, in two identified that due to the dispersion of ratific degrating STAL agreeper of actical intervention may be required to maintain aids separations standards. The design process may also help to mitigate this hazard to sale lows a resourced processing STAL agreement processing the standard of the lows are resourced to the lower than
		Summary of Analysis	The Charleng's exercise in relation to this ACP in ont a viable option and does not provide a viable object in does not provide a viable indices object in terms of prayable exercises. The control of the viable following the removal control of the viable following the removal have a significant impact on capacity and resilience. The existing 60th on to apport control one of the viable of the	When compared to the baseline scenario, Option 0 performs worse in terms of note impract, premisence gas missions and feel burn but better in terms of reapacity-relationes and reconomic impact of capacity-life entitles of the option of the performance of the performance of the capacity free mainling orders are demonst to be of equal benefits of the capacity free mainline of the selection of this selection of the selection of th	In terms of greenhouse gas emissions and fuel burn but better in terms of note impact, capacity/resilience and economic impact of capacity. The remaining criteria are deemed to be of equal benefit because there is no change when compared to today's operation. Having said that, at this time, it is not possible to fully determine that the contract of	the exact nature of these conflicts is unclear at this stage. Further analysis and engagement is required in Stage 3/4 of the CAP 1616	When compared to the baseline scenario, Option 3 performs better in terms of noise impact, greenhous gas nessions, fuel burn, capacity-leillence and economic impact of capacity. The remaining criteria are deemed to be of equal benefit behaves there is no this street, and the control of the specific control of the specific control of the specific control of the con	When compared to the baseline scenario, Option 4 performs worse in terms of noise permisone gas emissions and feel shum but better in rems of noise impact, aposity/reallience and economic impact, aposity/reallience and economic impact, aposity/reallience and economic properties of permisonic pricines in the endemed to be of looky to operation. Having said that, at this time, it is not possible to oday, to operation. Having said that, at this time, it is not possible to the dynamic properties by the entry algorithm, but the specific option. The change sponnor has directly algorithm, but the specific option, and the specific option. The change sponnor has directly algorithm, but the customer routes operated by other newly algorithm, but the specific option and the specific option and the specific option and the specific option and the specific option as a standardione option rather than as a set of design option as a part of a wider system. Additional analysis is required in Stage 34 of the CAP 166 process to determine the cumulative impact of this option when companed to all the other based on performance in the LOA, Option to be been selected at the Preferred Option within this disagn envelope as it overfiles the fewers runnber of people and residential buildings.

Colour Key	Description
Preferred Option(s)	When compared to the baseline, there is a clear and obvious benefit. This option is viewed as more favourable than the other within the design envelope and as such is the preferred option within the design envelope.
Favourable	When compared to the baseline, there is a clear and obvious benefit.
Acceptable	When compared to the baseline, there is an equal benefit.
Rejected	When compared to the baseline, there is a clear and obvious dis-benefit. As such, these options are rejected.
Baseline/Previously Rejected	Option included for completeness but, in the case of previously rejected options, not subject to IOA.

MAG STN ACP - INITIAL OPTIONS APPRAISAL - FULL ANALYSIS TABLE OPTION 3A Option 3A in MPS1 regislation of the ourrent UTAVA 5D which records 18% of this gradient, isseed on the charge goposes analysis, Option 3A overfless, 2883 people and a total of 1,283 residential buildings, Wine compared but business scanning, in terms of population and residential buildings overflewan, Option 3 performs butter fact the editing UTAVA 5D and in therefore considered to be benefit all. PTION 1.4 in BNMV replication of the current UTAVA SID which toroprotes a 5% climb gradient. Based on the charge sponose prophysics, Option 1.6 overfiles 3,144 people and a total of 3,35% sciderful buildings. When compared to the buseline scenario, in term of population and residential buildings overfilms, Option 1 efform building UTAVA SID and is therefore considered to be beneficial. Option 48 is an RNP1 replication of the current NUGBO SID which incorporates a 6% climb gradeet. Based on the charge sponsors analysis, Option 46 overlies 2,388 people and 1 total of 1,074 residential buildings. When compared to the baseline scenario, it terms of population and residential buildings overflown, of the partners and population and residential buildings overflown, of the partners and population and residential buildings overflown, of the considered to be beneficial. Option 48 is an RNP1 route based on the current NUGBO SID with incorporates a 6% climb gradient. Based on the change sponsors analysis, Option 48 overfiles 8,938 people and a total of 4,073 residential buildings. When compared to the baseline scenario, in As on the baseline search, Cytine 3. Keen and develop worth? Assign the baseline search, Cytine 3. Keen and develop worth? Assign the deposition, the insect of our quality shorts (200%) is self-colored, because, as parch 2.00 (\$100 + \$100 As per the baseline scenario, Option 48 does not cirectly overfly any AGMAS. Furthermore, as per CAP 1866 [area 876], due to miding and dispersion, the firecate on all auxily above, 0,000ft is likely to be insignificant. There are areas within the immediate area surrounding the aleport that will be overflown below 1,000ft. however, for safety reasons, this is unavoidable. Therefore, overral As per the baseline scenario, Option 34 does not directly overfly asy AQMAs. Furthermore, as per CAP 1616 (pars 1074), due to making and dispersion, the impact on air quality above 1,0001 is likely to be insignificant. There are areas within the immediate area surrounding the rapport that will be veriflown below 1,0001t, however, for safety reasons, this is unavoidable. Therefore, overall As per the baseline scenario, Option 28 does not directly overfly any AQAAA. Furthermore, as per CAP 1616 (pare 87%), due so mising and dispersion, the impact on air quality above 1,000°C is likely to be insignificant. There are creas within the immediate area screousling the airport that will be overflown below 1,000°C, however, for safety reasons, this is unaveidable. Therefore, overall is per the baseline scenario, Option 1A does not directly overfly year ASIMA's. Extremore, as per CAP DEG (pare DEG), due to traking and dispersion, the impact on air quality solave 1,000ft is sikely to be insignificant. There are areas within the immediate zer aurorounding the alegorit that will be overflown below 1,000ft, nowever, for safety reasons, this is unavoidable. Therefore, overa ption LA has been designed to support continuous climb sections, however, an element of notive vegocing may be spirited to manage about sporation distant, between the total her total windows of the continuous continuous continuous continuous continuous her total windows of the continuous continuo Diption 1A has been designed to support continuous climb operations, flowerer, on desirect of radar vectoring may be required to manage alread insurance of distances. All such on the truck refusege of Option 3A to 37.54 km (20.00 pt 16.00 pt 16.0 Option 5A has been designed to support continuous clarin-spectross, however, on element of rodar vectoring may be required to manage arrord scaparation distances. Management of the state of the state of the state of the thin, when compared to the baseltee scenario, Option 5As is heaten and a therefore supposed to serif less greenthouse gases. As state, this is seen as benefitial, More in-depth analysis at Stage 3 is required to continue the execut amounts of greenthouse gases. Option SiA has been designed to support continuous climb operations, however, an element of rodar vectoring may be required to manage around repaired to manage around repaired diseases. In this relation of the continuous continuou Option 28 has been designed to support continuous climb operations, however, an element of nada vectoring may be required to manage arcraft reparation displanes. The property of the propert Option 48 has been dealgred to support continuous climb speciation, however, an element of radar vectoring may be equired to manage alement separation distances. The track-minispage of Option 48 is 8.13 km; (15.90Mel). Based on in, when compared to the baselines scenario, Option 48 is brear of its therefore separation on mile sur generations genera. A usual in its sendors expected to omit lies up reventional genera. A usual in its sendors expected in our lies up serventions genera. A usual presented to confirm the executar course of generations generation quarter to confirm the executar course of generations generation. Option GB has been designed to support continuous climb operations, however, an element of ratio vectoring may be required to manage alread to specific middle of the continuous Option IIII has been designed to support continuous climb operations, flowers: an element of mafar sectioning may be required to monage alroyal separation distances. This track mininger of Option 36 is 33 ARM [1921]MMI]. Based on this, when corporate to the basisters accurate, Option 56 is larger and a therefore separate for entire flowers of the control of the section of the control option of the control of the control option of the control of the control option option option of the control option option option of the control option option option option option option option of the control option opti The introduction of PBN routes is expected or owners or memory increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delays (both in air or on the ground). The reduction of the relaxes on outdated ground based memorities of the relaxes on outdated ground based memorities of the relaxes on outdated ground based. The irroduction of PBI masks is expected to delive benefits by recovering signates, organization which subsequently which on more predictable fight paths and fower desiry (both in a or con the ground). The reduction of the relation on collecting ground based causes the reduction of the relation on collecting ground based reaggingted all six will significately increase operational realization for facilities and research processor operational realization for suggested all six will significately increase operational realization for suggested all six will significately increase operational realization for suggested all six will significately increase operational realization suggested all six will significately increase operations and suggested all six will significant suggested and suggested all six will significant suggested and suggested all six will significant suggested and suggested The introduction of FBV routes is espected to deliver hearfts by increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delays (both in air or on the ground). The reduction of the relations on outsidated ground based manigational aid will significantly increase operational resilience for olitimes and operators. Solvey to some growers, 4. In ording the century areas or progressive, the contract of the century areas or progressive, the contract of the century areas or progressive, the century areas or progressive and the century areas of the century areas or progressive and the century areas of the c seneral Aviation / Economic impact from The control had not support continuous circle aperations, meaning the control had not support continuous circle aperations, meaning the control had not support continuous circle aperations, meaning the control had not support continuous circle aperation, meaning the control had not support continuous circle aperations, meaning the control had not support continuous circle aperations, meaning the control had not support continuous circle aperations, meaning the control had not support continuous circle aperations, meaning the control had not support continuous circle aperations, meaning the control had not support continuous circle aperations, meaning the control had not support continuous circle aperations, meaning the control had not support continuous circle aperations, meaning the control had not support continuous circle aperations, meaning the control had not support continuous circle aperations, meaning the control had not support continuous circle aperations, meaning the control had not support continuous circle aperations, meaning the control had not support con

Group	Impact	Level of Analysis	DO NOTHINS BASEUNE'	OPTION IA	OPTION SA	OPTION SA	OFTION 2A	OPTION 25	OPTION 48	OPTION 65	OPTION EB
Wirport / Air raw(gation service provider	Operational costs	Intial Options Appraisal: Qualitative	Not change to operational costs is sumbutable to maintaining the estant procedures.	Air Tuffic Control at STM is controlled out to a third-party organisation. This expositing commercial control between STM and their chosen AMPS considered to be an outpers cost. EAX on accorder tremosed Considered Efficiency at level fit delivered by excelled their control of t	Air Tuffic Corred at STM is contrasted out to a shield-perior opposition. This design commercial contract between STM and their chosen AISPE considered to be an outpeling cost. EAO, according to provide outpeling cost and sentent desired by predicts that oppositional efficiency and improve and that there may be potential for a net reduction in operational costs.	Air Taiffe Carterial at SNN is contracted out to a shirted-party organization. The obstitute contraction common common the state of their Chromina SNP is considered to be an engaging cost. 2004 control improved to present out from the control improved operational fill fillings at hereful failered by gredicts that operational efficiency will prepai an that there may be potential for a net reduction in operational costs.	As Traffic Control at STN is contracted out to a shirtly agree operations. The latent converse control to the control of the	organisation. This existing commercial contract between STN and if their chosen AMSP is considered to be an orgoing cost. (CAD Idescribe 1 improved Operational Efficiency: as a benefit delivered by if the introduction of PBPs. In general, London Stanstold Aligort	As Traffic Centrial at STM is consisted out to a thefe-party capitation. The ending commercial contract detection STM and their clinical models of their contract detection STM and their clinical models of the contract of the contract of their con	Air Traffic Control at STM is consisted out to a their party organisation. This exploit genomeroid control between STM and their chosen AMPS considered to be an organization. The depression of their chosen and	As Tarlife Corried at STMs correlated out to a third-party organisation. This educing commercial control between STM and their chosen ASSP is considered to be an outgoing cost. Zool decircle "improved Considered Unificient", as benefit declared by predicts that operational efficiency as benefit declared by predicts that operational efficiency will improve and that there may be potential for a net reduction in operational costs.
Airport / Air navigation service provider	Deployment costs	Initial Options Appraisal: Qualitative	No Deployment costs applicable to estant procedures.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	organisation. This existing commercial contract between STN and	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	Air Traffic Control at STN is contracted out to a third-porty organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.
Safety Assessment	Safety Assessment	Initial Options Appraisal: Qualificative	STN are safe including use of the extant conventional procedures. Following the removal of ground-based	is acknowledged, but at this time, this cannot be determined. In addition, it was identified that due to the dispersion of traffic departing STN, a degree of tactical intervention may be required to maintain self-separations standards. The design process may also	this, possible unknown interaction with the wider enroute network is acknowledged, but at this time, this cannot be determined. In addition, it was identified that due to the dispersion of traffic	is acknowledged, but at this time, this cannot be determined.	Passible conflict with London Limits milité was identified. Procédule régit yaut del Tissophi disservérior du Cardia de Sa- procédule régit yaut del Tissophi disservérior du Cardia de Sa- tissée, su a pacible levance in 1700 werkbod, London çu nome la electronic de la Cardia de Sala de Sala de Sala de Sala de Sala de la adonnaviela de London London London London de Sala de Sala de la adonnaviela de London de Sala de Sala de Sala de Sala de Sala de Sala de London London London London London London de Sala de London	this, possible unknown interaction with the wider enroute network is advicededged, but at this time, this cannot be determined. In addition, it was identified that due to the dispersion of traffic	Passable conflict with London Lution in Infl. was identified. Proceeding - delign and Fix Carcial Intervention and add a raily received - delign and Fix Carcial Intervention and add a raily received to a procede in Control in ACCO and Account and a received to the procede in ACCO and a received and a r	Passible conflict with Lordon Lution point, was identified. Procedure delign and Art Excilcularmentation and an examination of the conflict and an examination of the examination o	Prosible conflict with Leofon Liefon traffic was identified. Decoder design and Extradical Intervention August 2 or 1 or
		Summary of Analysis	available goston mit diese rod provide a ustatrosible vollastion i terme of prospec modernisterion and is variable following the removal of the VOR bescons! Occornibre 2023, which would have a sprinter impact on capacity and resilence. The existing 500 does to support continuous circle operations, which last to a greater volume of the soft may be when the proper volume of the soft may be the soft of the proper volume of the soft of the last to the proper volume of the soft may exist when the proper volume of the soft of the last the proper volume of the soft of the Soft of the soft of the soft of the Soft of the soft of the soft of the volume of the volume of the volume of volume of the volume of volume of v	lody's Operation, Newing and that, at this time, it is not possible to filly determine the indepringuisations of this specific opions. The other genome has identified possible conflicts with some reconstituted by the properties of the state of the other continues of the conflicts in unified at this stage. In utilities also indeed as this stage is utilities a short part of the other conflicts or unified in this stage. In utilities a most of the other independent of the other conflicts of the other independent of the other conflicts and analysis and other conflicts and other conflicts.	terms of noise impact, tranquility, capacity/resilience and economic impact of capacity. The remaining criteria are deemed to be of equal benefit because there is no change when compared to	Others compared in the basel because control, (c) grains Septimizes are set of the septimized of the basel because it is a set of the set of th	Other company and the bushes excess, for joint 5 department and the company of the property of	remaining critical are decreed to be of equal benefit because there is no changes when compared to today's operation. Naring-paid that, at this time, it is not possible to fully determine the safety implications of this specific option. The change sponsor has directfied possible conflict with some crustes operated by other nearby airports, but the exact nature of these conflicts is unclear of his stope. Further analysis and engagement in required in Stage 3/46.	Other compared to the baseline searches, project dispersions, compared to the baseline searches and containing and capatity. The containing control in set of earth of the other baseline searches and the searchest and the searchest searchest and searchest searchest searchest searchest searchest and the searchest	because there is no change when compared to today's operation. Having said that, at this time, it is not possible to fully determine the safety implications of this specific option. The change sperior has identified possible conflicts with some routen operated by other nearby airports, but the exoct nature of these conflicts is unclear at	When compared in the banders warrans, Opinion Educations were considered and the control of the

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Departure Envelope: SID RWY 04 NORTH EAST

Group	Impact	Level of Analysis	DO NOTHING BASELINE'	OPTION 1	OPTION 4	OPTION 7	OPTION 8
Communities	Noise impact on health and quality of life	Initial Options Appraisal: Qualitative	envelope is entirely based around the existing CLN SID. To provide the most representative use of the baseline	Option 1 is a RNAY1 route in a new design envelope, compared to CLN 1 550 which romoprostes a 6% (interpretate) gradient. Based on the change sponsors analysis, option 1 overflies 18,050 people and a total of 10,199 eresidental buildings. When compared to the baseline scenario, in terms of population and residential buildings overflown, Option 1 performs worse and as such is deemed to be of dis-benefit.	Option 4 is a RNAYI route in a new design envelope, compared to CLI N 15 GD which incorporates a 6% imp gradient. Based net than the change sponsor analysis, Option 4 overfiles 18,655 people and a total of 10,167 especiation buildings. When compared to the baseline scenario, in terms of population and residential buildings overflown, Option 4 performs worse and as such is deemed to be of dis-benefit.	Option 7 is a RMAYI route in a new design envelope, compared to CLN 15 ESD which incorporates a 6K integrated. Based not the change sponsors analysis, option 7 overflies 4,833 sceple and a total of 2,018 residential buildings. When compared to the baseline scenario, in terms of population and residential buildings overflown, Option 7 performs better and as such is deemed to be beneficial.	Option 8 is a RNAY1 route in a new design envelope, compared to CLN 1 ES 00 with incomportes a 6% imp addent. Based on the change sponsors analysis, Option 8 overfiles 9,509 people and a total of 5.182 residential buildings. When compared to the baseline scenario, in terms of population and residential buildings overflown, Option 8 performs better and as such is deemed to be beneficial.
Communities	Air Quality	Initial Options Appraisal: Qualitative	With regards to air quality, the existing CLN SID does not directly overfly any AGMAs. Given the 8% climb gradient included within the Do Nothing scerario, the impact of aircraft below 1,000th with regards to local air quality is limited to areas within the immediate area surrounding the airport.	As per the baseline scenario, Option 1 does not directly overfly any ADMAs. Furthermore, as per CdP 1616 (para 87A), due to mining and dispersion, the import on air quality above 1000Hz is filely to be insignificant. There are are as within the immediate area surrounding the airport that will be overflown below 1,000H; however, for safety reasons, this is unavoidable. Therefore, overall, when compared to the baseline scenario, this option is deemed to be of equal benefit.	As per the baseline scenario, Option 4 does not directly overfly any ACMAs. Furthermore, as per CD 1616 [para 874], due to mixing an dispersion, the impact on air quality above 100fth is likely be indispersion. The interact on air quality above 100fth is likely be indispersion, the interaction are are are sufficient. There are are are swithin the immediate area surrounding the airport that will be overflown below 1,000ft, however, for safety reasons, this is unavoidable. Therefore, overall, when compared to the baseline scenario, this option is deemed to be of equal benefit.	As per the baseline scenario, Option 7 does not directly overfly any ADMAs. Furthermore, as per CdP 1616 (para 87A), due to mixing and dispersion, the impact on air quality above 1000Ht is likely to be insignificant. There are areas within the immediate area surrounding the airport that will be overflown below 1,000Ht, however, for safety reasons, this is unavoidable. Therefore, overall, when compared to the baseline scenario, this option is deemed to be of equal benefit.	As per the baseline scenario, Option 7 does not directly overfly any ADMAs. Furthermore, as per CdP 1616 (para 87A), due to mixing and dispersion, the impact on air quality above 1,000H is 18ley to be insignificant. There are are save within the immediate area surrounding the airport that will be overflown below 1,000H, however, for safety reasons, this is unavoidable. Therefore, overall, when compared to the baseline scenario, this option is deemed to be of equal benefit.
Wider Society	Greenhouse Gas Impact	Instial Options Appraisal: Qualitative	Current routes do not support continuous climb operations. In such se noeth dat the exact track length flown by aircraft may vary slightly due to the nature or sladar vectoring, although aircraft do all follow the extant procedures in a broader sense. Extant procedures do not support optimal aircraft performance and therefore are predicted to have a greater environmental impact compared to proposed options. Within Stage 2 of the CAP 1616 process, there is no requirement for a change sponsor to conduct quantitative lead burn or emissions analysis. This will be covered in Stage 3.1 in order to make a comparison, track milage is used based on the theory that the shorter the track milages, the less greenhouse gases are emitted. In the case of the existing CLV SID, the model track length is 3.1.5.2km (17.02NM).	Option I has been designed to support continuous climb operations, however, an element of radar vectoring may be required to manage aircraft separation distances. The track mileage of Option Is 88.42m (20.74MN), Based on this, when compared to the baseline scenario, Option Is 15 longer and is therefore expected to entil slightly more greenhouse gases. As such, this is seen as a dis-benefit. More in-depth analysis at Stage 3 is required to confirm the exact amounts of greenhouse gases released.	option. A has been designed to support continuous climb operations, however, an element of radar vectoring may be required to manage alroraft separation distances. The track mileage of Option 4 is 381.8m; (20.61MN), Based on this, when compared to the baseline scenario, Option 4 is 381.8m; (20.61MN), Based on this, when compared to the baseline scenario, Option 4 is longer and is therefore expected to emit slightly more greenhouse gases. As such, this is seen as a dis-benefit. More in-depth analysis at Stage 3 is required to confirm the exact amounts of greenhouse gases released.	Option 7 has been designed to support continuous climb operations, however, an element of radar vectoring may be required to manage aircraft separation distances. The track mileage of Option 7 is 83 X4m (20 32MM), Based on this, when compared to the baseline scenario, Option 7 is Stonger and is therefore expected on this lightly more greenhouse gases. As such, this is seen as a dis-benefit. More in-depth analysis at Stage 3 is required to confirm the exact amounts of greenhouse gases released.	Option 8 has been designed to support continuous climb operations, however, an element of radar vectoring may be required to manage ascraft supparation distances. The track mileage of Option 8 is 83 s9km (20.73MM), Based on this, when compared to the baseline scenario, Option 8 is longer and is therefore expected on entil slightly more greenhouse gases. As such, this is seen as a dis-benefit. More in depth analysis at Stage 3 is required to confirm the exact amounts of greenhouse gases released.
Wider Society	Capacity and resilience	Initial Options Appraisal: Qualitative	Maintaining extant procedures would maintain current capacity however, due to the reliance on ground-based mavigational alds, resilience would be significantly affected, following their removal in December 2022.	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delay (both in air on the ground). The reduction of the reliance on outdated ground based mayagational aids will spifficantly increase operational resilience for airlines and operators.	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which subsequently leads to more predictable flight paths and fewer dealsy (both in air or on the ground). The reduction of the reliance on outdated ground based navigational aids will significantly increase operational resilience for airlines and operators.	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which subsequently leads to more prodictable flight paths and fever delay (both in air on the ground). The reduction of the reliance on outdated ground based navigational aids will significantly increase operational resilience for alrilines and operators.	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delay (both in air or on the ground). The reduction of the reliance on outdated ground based navigational aids will significantly increase operational resilience for alriines and operators.
Wider Society	Tranquillity	initial Options Appraisal: Qualitative	As per CAP 1616, Appendix B, Para B76, change sponsors are required to consider Tranquillity with specific reference to AONBs and National Parks only, unless other areas have been identified through community engagement. Although no specific areas were identified by community engagement, the change sponsor has decided to include 555s and Country Parks within the 10A analysis to maintain consistency with other 58ge 2 documentation. The existing CLN SID does not overfly any AONBs or National Parks but it does overfly 2 Country Parks and 1 SSSI.	Option 1 does not overfly any AONBs, National Parks or Country Parks. However, it has been identified that this option overflies 3 SSSS, Overflight of these areas is operated to occur at a higher altitude, minimising the impact of aircraft noise demissions on these areas. When compared to the baseline scenario, Option 1 is equal in that it does not overfly any AONBs, National Parks or Country Parks. Neweyer, this option does overfly more SSSIs. As such this option is of a dis-benefit.	Option 4 does not overfly any AONBs, National Parks or Country Parks. However, it has been identified that this option overflied \$355. Overflight of those areas is expected to occur at a higher altitude, milmining the interest of aircraft noise and emissions on these areas. When compared to the baseline scenario, Option 4 is equal in that it does not overfly any AONBs, National Parks or Country Parks. Newever, this option does overfly more \$\$555. As such this option is of a dis-benefit.	Option 7 does not overfly any AONBs, National Plats or Country Parks: However, it has been identified that this option overflies! SSS, Overflight of these areas is espected to occur at a higher attitude, minimising the impact of alicrat notes and emissions on these areas. When compared to the baseline scenario, Option 7 is equal in that it does not overfly any AONBs, National Parks or Country Parks. This option does overfly an equal number of SSSs and as such as deemed to be of equal benefit when compared to the baseline scenario.	Option 8 does not overfly any AONBs, National Parks or Country Parks. Nowever, it has been identified that this option overflies 5 SSSS. Overflight of these areas is operated to occur at a higher attruct, minimizing the impact of aircraft noise demissions on these areas. When compared to the baseline scenario, Option 8 is equal in that it does not overfly any AONBs, National Parks or Country Parks. Newwer, this option does overfly more SSSIs. As such this option is of a dis-benefit.
Wider Society	Biodiversity	Initial Options Appraisal: Qualitative	Analysis conducted by the change sponsor shows that the existing operations at STN overlap or fly within the vicinity of designated sites in terms of Biodiversity such as SPAs, SACs, RAMSAR Sites and SSSIs. In today's operation, aircraft are flying above 1,000ft when passing over these sites. Due to the effects of mixing and dispersion, there is a limited impact, in terms of the air quality specific to these sites. STN acknowledges that there are sites within the vicinity of the airport, and operated impact with the aeroport, any operational impact with the aeroport and practice of the area of the sites of th	The change sponsor has conducted work to understand where the designated sites are around STN. At this stage, there is expected to be no change likely to affect biodiversity at these sites. From an air quality perspective, these sites will be overflown at altitude obto 1,000ft. As per CAP 1616 Appendix B, Para 1874, because of dispersion and mixing, there is untillely to be an impact on local air quality from aircraft above 1,000ft. Furthermore, CAP 1616, Appendix B, Para 800 states that in general, aircpace change proposal will not have an impact on biodiversity as thiny do not involve ground-based infrastructure. That sids, STA acknowledges that any potential impact to the designated sites around STN will be assessed in Stage 3 of the ACP process by Subject Matter Experts.	The change sponsor has conducted work to understand where the designated sites are around STN. At this stage, there is expected to be no change likely to affects blootiversity at these sites. From an air quality perspective, these sites will be coreflown at altitudes to 1,000ff. As per CAP 1616 Appendix B, Para 1874, because of dispersion and mixing, there is unlikely to be an impact on local air quality from aircraft above 1,000ff. Furthermore, CAP 1616, Appendix B, Para BO dates that in general, aircpace change proposal will not have an impact on biodiversity as they do not involve ground-based infrastructure. The stad, STN advance/edges that any potential impact to the designated sites around STN will be assessed in Stage 3 of the ACP process by Subject Matter Experts.	The change sponsor has conducted work to understand where the designated sites are around STN. At this stage, there is expected to be no change likely to affect biodiversity at these sites. From an air quality perspective, these sites will be overflown at altitude on L000ff. Ap per CAP 1616 Appendix B, Para 874, because of dispersion and mixing, there is untillely to be an impact on local air quality from aircraft above 1,000ff. Furthermore, CAP 1616, Appendix B, Para 800 states that in general, aircpace change proposal will not have an impact on biodiversity as they do not univolve ground-based infestraturit. En 1416, STM acknowledges that any potential impact to the designated sites around STN will be assessed in Stage 3 of the ACP process by Subject Matter Experts.	The change goopsor has conducted work to understand where the designated sites are around STN. At this stage, there is expected to be no change likely to affect bloodwersity at these sites. From an air vaulity perspective, these sites will be overflown at altitude on 1,000ft. Apper CAP 1616 Appendix 8, Para B74, because of dispersion and mixing, there is untillely to be an impact on local air vaulity from aircraft above 1,000ff. Furthermore, CAP 1616. Appendix 8, Para B00 states that in general, aircpace change proposal will not have an impact on biodiversity as they do not involve ground based infrastructure. The stadi, STN acknowledges that amy potential impact to the designated sites around STN will be assessed in Stage 3 of the ACP process by Subject Matter Experts.
General Aviation	Access	Initial Options Appraisal: Qualitative	No change to existing airspace arrangements. GA users of STN will maintain their current level of access under extant operational arrangements.	No change to the existing airspace arrangements (within the baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement pertaining to GA access are reviewed prior to implementation to ensure their continued validity.	No change to the existing airspace arrangements (within the baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement pertaining to GA access are reviewed prior to implementation to ensure their continued validity.	No change to the existing airspace arrangements (within the baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement pertaining to GA access are reviewed prior to implementation to ensure their continued validity.	No change to the existing airspace arrangements (within the baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement pertaining to GA access are reviewed prior to implementation to ensure their continued validity.

Group	Impact	Level of Analysis	DO NOTHING BASELINE'	OPTION 1	OPTION 4	OPTION 7	OPTION 8
General Aviation / commercial airlines	economic benefit for GA/airli eral Aviation / Fuel burn Initial Options Appraisal: The existing STN procedures		No increase to effective capacity anticipated for continued use of extant procedures, therefore no economic benefit for GA/artínes.	he introduction PBM is expected to deliver benefit by increasing aspace acquarty which in turn will east or more predictable types aspace acquarty which in turn will east or more predictable place of the property of air transport movements, increasing passenger before property of air transport movements, increasing passenger members and increasing cognition ground or sufficient to property or property of air transport movements, increasing passenger members and increasing cognition ground to property the property of air transport movements, but the property of the pro	The introduction PBN is expected to deliver benefits by increasing largace capacity which in turn will lead to more predictable flight paths and fewer delays, (both in the air or on the ground). This is expected to facilities to comorn benefit to a trillies by increasing the frequency of air transport movements, increasing passenger produces and the proportionate for London States and Progressing caps to mage cerried. It is not proportionate for London States Airport to predict the precise economic benefit commercial business using the new procedures as any increase in individual airline capacity will depend on private commercial business characteristics. It is not proportionate for London Stanted Airport to assess the economic benefit to the GA community however they are expected to benefit from incredible predictability of commercial airline movements which is expected to lead to reduced on-ground and in -air delays for all users.	The introduction PBN is expected to deliver benefit by increasing various capacity which in turn will lead to more predictable light paths and fewer delays (both in the air or on the ground). This is expected to facilitie economic health calmics by increasing the frequency of air transport movements, increasing passenger sumbers and increasing cargo tomage carried. It is not proportionate for London Stanstel Airport to predict the precise conomic benefit to commercial airlines using the new procedures as any increase in Individual airline capacity will depend on private commercial business characteristics. It is not proportionate for London Stanstel Airport to assess the economic benefit to the Commercial business characteristics. It is not proportionate for London Stanstel Airport to assess the economic benefit to the GA community however they are expected to benefit from incrediblity of commercial airline movements which is expected to lead to reduced on-ground and in-air delays for all users.	The introduction PBN is expected to deliver benefits by increasing entrapea; packing which in turn will lead now pre-preciable flight paths and fewer delays (both in the air or on the ground). This is expected to facilities de comonic benefit to alirines by increasing the frequency of air transport movements, increasing assenger numbers and increasing cargo tomage carried. It is not proportionate for London Stansed Airport to predict the precise comonic benefit commercial airlines using the new procedures as any increase in Individual airline capacity will depend on private commercial business characteristics. It is not proportionate for London Stansed Airport to seases the economic benefit for increase in Individual airline capacity will depend on private commercial business characteristics. It is not proportionate for London Stansed Airport to assess the economic benefit to the GA community however they are expected to benefit from increase and capacity of commercial airline movements which is expected to lead to reduced on-ground and in-air delays for all users.
General Aviation / commercial airlines	Fuel burn		The existing STN procedures do not support continuous climb operations. Fuel burn is expected to be greater due to tactical ATC intervention and periods of level flight in the departure and approach phase. Furthermore, in the case of the modal path of the existing CN SIO, the track length is 31.52km (17.02NM).	Option 1 does support continuous climb operations, meaning that aircraft would not be required to level off during departure, reducing the overall amount of fuel burnt. There is no requirement within Stage 2 of the CAPLIGS process to quantify fuel burn, this will be conducted in Stage 3. Therefore, to enable a comparison, the logic applied is that the shorter the track length, the less fuel is burnt. With regards to this option, it is 38-24m (20.74MM) long. When compared for the baseline scenario, Option 1 is longer and at this stage it assumed will require a greater amount of fuel burn. Herefore, this option is of dis-beeffit in terms of falle burn. More indepth analysis will be carried out in Stage 3 to confirm.	Option 4 does support continuous climb operations, meaning that aircraft would not be required to level off during departure, reducing the overall amount of fuel burnt. There is no requirement within Stage 2 of the CAPILSIG process to quantify fuel burn, this will be conducted in Stage 3. Therefore, to enable a comparison, the logic applied is that the otherethe the callength, the less fuel is burnt. With regards to this option, it is 38.18m (20.61MM) long. When compared for the baseline scenario, Option 4 is longer and at this stage it assumed will require a greater amount of fuel burn, therefore, this option is of dis-benefit in terms off fuel burn. More indepth analysis will be carried out in Stage 3 to confirm.	Option 7 does support continuous climb operations, meaning that aircraft would not be required to level off during departure, reducing the overall amount of fuel burnt. There is no requirement with Stage 2 of the CAPIGS process to quantify fuel burn, this will be conducted in Stage 3. Therefore, to enable a comparison, the logic applied is that the shorter the track length, the less feel is burnt. With regards to this option, it is 38.74m (20.93MM) long. When compared to the baseline scenario, Option 7 is longer and at this stage it assumed will require a greater amount of fuel burn, therefore, this option is of dis-benefit in terms of fuel burn. More indepth analysis will be carried out in Stage 3 to confirm.	Option 8 does support continuous climb operations, meaning that arrards would not be required to level off during departure, reducing the overall amount of fuel burnt. There is no requirement with Stage 2 of the CAP (SEG process to quantify feel burn, this will be conducted in Stage 3. Therefore, to enable a comparison, the logic applied is that eshorter the track freight, the less fuel is burnt. With regards to this option, it is 38.39km (D2.73kM) long. When compared to the baseline scenario, Option 8 is longer and at this stage it assumed will require a greater amount of fael burnt. Merefore, this hostion is of dis-benefit in terms of shall burn. More indepth analysis will be carried out in Stage 3 to confirm.
Commercial airlines	Training costs	Initial Options Appraisal: Qualitative	No additional training predicted.	It is espected that no extra Pilot/Crew training will be required to enable pilots to fly the new PBH procedures. PBH is a common standard of navigation throughout the world. It is not proportionate for London Stansted Airport to assess on going competency for molividual commercial airlines due to the significant variables involved e.g. number of pilots, airline policies on training (simulator versus like flight training), fleet types, and variations in on-board equipment etc.	It is espected that no extra Pilot/Crew training will be required to enable pilots to fly the new PBI procedures. PBI is a common standard of navigation throughout the world. It is not proportionate for London Stansted Airport to assess on going competency for individual commercial airlines due to the significant variables involved e.g. number of pilots, airline policies on training (simulator versus live flight training), fleet types, and variations in on-board equipment etc.	It is expected that no extra Pilot/Crew training will be required to enable pilots to fly the new PBA procedures. PBA is a common standard of navigation throughout the world. It is not proportionate for London Stanted Airport to assess on-going competency for individual commercial airlines due to the significant variables involved e.g. number of pilots, airline policies on training fsimulator versus like flight training), fleet types, and variations in on-board equipment etc.	It is expected that no extra Pilot/Crew training will be required to enable pilots to fly the new P89 procedures. P89 is a common standard of navigation throughout the world. It is not proportionate for London Stanted Airport to assess on-going competency for individual commercial airlines due to the significant variables involved e.g. number of pilots, airline policies on training (simulator versus live flight training), fleet types, and variations in on-board equipment etc.
Commercial airlines	Qualitative other costs for commercial airlines - there may be costs associated with maintaining legacy systems to		other costs for commercial airlines - there may be costs associated with maintaining legacy systems to continue flying conventional navigation but there are too many variables (e.g., aircraft types, on-board	Other costs to commercial airlines may include updates to Flight Management Systems (RMS), navigation databases and operating procedures, increased pilot hire costs versus training etc. It is not proportionate for STN to assess the 'other costs' to commercial airlines of flying PSN procedures due to significant variables; some airlines of flying PSN procedured with cost significant variables; some airlines may already be 'PBN ready' whereas others may not.	Other costs to commercial airlines may include updates to Flight Management Systems (FMS), navigation databases and operating procedures, increased pilot live cost versus training etc. It is not proportionate for STN to assess the 'other costs' to commercial airlines of flying PBN procedures due to significant variables; some airlines of flying PBN procedured who to significant variables; some airlines may already be 'PBN ready' whereas others may not.	Other costs to commercial airlines may include updates to Flight Management Systems (FMS), navigation databases and operating procedures, increase pilot hir cost versus training etc. It is not proportionate for STN to assess the 'other costs' to commercial airlines of flying FBN procedures due to significant variables; some airlines of flying FBN procedured with the significant variables; some airlines may aiready be 'PBN ready' whereas others may not.	Other costs to commercial airlines may include updates to Flight Management Systems (FMS), navigation databases and operating procedures, increase pilot hire cost versus training etc. It is not proportionate for STN to assess the 'other costs' to commercial airlines of flying FMP procedures due to significant variables; some airlines of flying FMP procedures due to significant variables; some airlines may aiready be 'PBN ready' whereas others may not.
Airport / Air navigation service provider	Infrastructure costs	Initial Options Appraisal: Qualitative	No additional infrastructure is required at STN to maintain extant conventional procedures however maintaining access to ground-based equipment (currently operated by NERL) may be prohibitively expensive, should this commercial option be implemented.	All options relate to the implementation of PBN and no additional infarturature is required. The introduction of PBN reduces the relative on infrastructure, in particular ground-based novigation after relative on infrastructure, in particular ground-based novigation after no longer needed. The foundation for PBN is RNAV or OR NP), aircraft straving and departing london Stanted Airport using the proposed RNAV/PMP procedures will do so based on their performance-based navigation capability.	All options relate to the implementation of PBN and no additional infrastructure is required. The introduction of PBN reduces the relation on infrastructure, in particular ground-based navigation adds are no longer needed. The foundation for PBN is RBAV or RPN is RRAV or RPN is increaft arriving and departing london Standard Airport using the proposed RRAV/RPN procedures will do so based on their performance-based navigation capability.	All options relate to the implementation of PBN and no additional inferturture is required. The introduction of PBN reduces the relation on infrastructure, in particular ground-based navigation adds are no longer needed. The foundation for PBN is RBNU or RBN, sizcraft arriving and departing london Stansted Airport using the propoped RBN/RBN procedures will do so based on their performance-based navigation capability.	All options relate to the implementation of PSN and no additional inferranciars is required. The introduction of PSN reduces the relation of PSN reduces the relation on infrastructure, in particular ground-based navigation aids are no longer needed. The foundation of PSN is RNNor or RNN aircraft arriving and departing tondon Stanted Airprort using the proposed RNNX/RNP procedures will do so based on their performance-based navigation capability.
Airport / Air navigation service provider	Operational costs	Initial Options Appraisal: Qualitative	No change to operational costs is attributable to maintaining the extant procedures.	Air Taffic Centrol at STN is contracted out to a third-party organisation. This estimpt commercial contract between STN and their chosen AKSP is considered to be an ongoing cost. ICAO describle "Improved Operational Efficiency" as a benefit delivered by the introduction of PBN. In general, London Stansted Airport predict that operational efficiency will improve and that there may be potential for a net reduction in operational costs.	Air Taffic Centrol at STN is contracted out to a third-party organisation. This essisting commercial contract between STN and their chosen AKSP is considered to be an ongoing cost. ICAO describe "improved Operational Efficiency" as a benefit delivered by the introduction of PRN. In general, London Stanstack Airport predicts that operational efficiency will improve and that there may be potential for a net reduction in operational costs.	Air Traffic Central at STN is contracted out to a third-party organisation. This estimpt commercial contract between STN and their chosen ANSP is considered to be an ongoing cost. ICAO describe Improved Operational Efficiency as a benefit delivered by the introduction of PBN. In general, London Stansted Airport predicts that operational Efficiency will improve and that there may be potential for a net reduction in operational costs.	Air Traffic Control at STN is contracted out to a third party organisation. This existing commercial control between STN and their chosen ANSP is considered to be an ongoing cost. ICAD discretize improved operational Efficiency as benefit delivered by the introduction of PBM. In general, London Stansted Airport predicts that operational efficiency will improve and that there may be potential for a net reduction in operational costs.
Airport / Air navigation service provider	Deployment costs	Initial Options Appraisal: Qualitative	No Deployment costs applicable to extant procedures.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.
Safety Assessment	Safety Assessment	Initial Options Appraisal: Qualitative	The baseline assumption is that current operations at STN are safe including use of the extent conventional procedures. Following the removal of ground-based manipational aids supporting the existing SSOs, increast departing STN would continuously require radar vectoring (should cD4728 in on the implemented), resulting in an increase in ATCO workload.	London Ctx, Cambridge and RAF Northot traffic was identified. Procedure design and ATC tactical intervention could act as mitigations in these instances but could increase complexity, leading to a possible increase in ATCD worksloat, Leading on form this, possible unknown interaction with the wider enrounce network in addition, it was identified that due to the dispersion of traffic placeparting STN, adgree of tactical intervention may be required to maintain asfe separations standards. The design process may also help to mitigate this hazard for is also as reasonably practically. This is very specific to exact aircraft routing combinations. Furthermore, possible interaction with the existing STN ABBOT hold was identified, therefore, ATC tactical intervention may be required to maintain aids expansion between departing and arriving arrival Procedure design constraints act as an additional mitigation in this instance.	possible corflict with London Luten, Lundon Spathend, Healthrow, Lundon Chy, Carbridge and RAF Northic traffic was identified. Procedure design and ATC tactical intervention could act as mitgations in these instances but could increase complexity, leading to a possible increase in ATCD workload. Leading on form this, possible unknown interaction with the wider enrouse network is acknowledged, but at this time, this cannot be determined. In addition, It was described that due to the dispersion of traffic departing STN, a degree of tactical intervention may be required to maintain safe separation standards. The design process may also help to mitigate this hazard to as low as reasonably practicable. This is very specific oxect aircraft routing combinations. Furthermore, possible interaction with the existing STM ABOT had do see identified, therefore, ATC tactical intervention may be required to maintain and separation between diparting and arriving aircraft. Proceedure design constraints act as an additional miligation in this intaken.	Fessible conflict with London Lutron, London Sandhond, Healthrow, London Chy, Cambridge and RAF Northic raffe was identified. Procedure design and ATC tactical intervention could set as mitigations in these instances but could increase complexity, leading to a possible unknown interaction with the wider enrouse network is acknowledged, but at this time, this cannot be determined. In addition, it was destrifted that due to the dispersion of traffic departing STN, a degree of tactical intervention may be required to maintain asks especialors standards. The design process may also help to mitigate this hazard to "as low as reasonably practicable." This sevey specific to exact aircraft rooting combinations. Furthermore, possible interaction with the existing STN ABOT hold to was identified, therefore, ATC tactical intervention may be required to maintain and expansion between departing and arriving aircraft. Proceeding design constraints are a sparation between departing and arriving aircraft. Proceeding design constraints act as an additional mitigation in this instance.	Passible conflict with Lendon Laton, Lendon Southend, Healthrow, Landon City, Carthridge and RAE Particle Artifle was identified. Procedure design and ATC tactical intervention could act at mitigations in these instances but could increase complexity, leading to a possible increase in ATCD workload. Leading on form this, possible uniform interaction with the wider enrouse network is acknowledged, but at this time, this cannot be determined, in addition, it was identified that due to the dispersion of traffic departing STN, a degree of tactical intervention may be required to maintain and separation standards. The design process may also help to mitigate this hazard to a low as reasonably practicable. If this twey specific on each carlot article processing combinations. Furthermore, possible interaction with the existing STN ABBOT hold us destificing, therefore, ATC tactical intervention may be required to maintain and expansion between departing and arriving aircraft. Proceeding design constraints act as an additional mitigation in this instance.
		Summary of Analysis	The 'Do Nothing' scenario in relation to this API is not a valida option as it does not provide a sustainable solution in terms of airspace modernisation and is unvisible following the removal of the VOR beacons in December 2022, which would have a significant impact on capacity and resilience. The esting 50Ds do not support continuous climb operations, which leads on solvent events. In terms of Tranquillity, Ricidentisty, GA. Access and economic impact, the 'Do Nothing' beautiful to the control of the control	When compared to the baseline scenario. Option 1 performs worse terms of transility, greenhouse gas emissions and tell burn but better in terms of population overflown, capacity/resilience and economic impact of capacity. The remaining criteria are deemed to be of equal benefit because there is no change when compared to tody's operation. When gual that, at this time, it is not possible of large deemed to fally determine the safety implications of this specific option. The control operated by other nanely alignors, but the result nature of these conflicts is undear at this stage. Further analysis and engagement is required in Stage 3 of the CAP 156 for posses to determine this. Furthermore, this option has been assessed as a stand-alone option arbot that that is a set of design options a part of a wider system. Additional analysis is required in Stage 3 to determine the cumulative impact of this option when compared to all the other options. Seed on performance in the IOA, Option 1 has been rejected as it severed the present number of people within this design emelope.	When compared to the baseline scenario. Option a performs worse in terms of transility, greenhouse as emissions and fuel burn but better in terms of population overflown, capacity/resilience and economic impact of capacity. The remaining criteria are deemed to be of equal benefit because there is no change when compared to today's operation shawing aud that, at this time, it is not possible of July determine the safety implications of his specific option. The operated by other manely alignors, but the next in fature of these conflicts is unclear at this stage. Further analysis and engagement is equipted in Stage 3 of the CAP 516 process to determine this. Furthermore, this option has been assessed as a stand-alone option rather than as a set of design options a part of a wider system. Additional analysis is required in Stage 3 to determine the cumulative impact of this spoin when compared to all the other options. Season of the performance in the IOA, Option is has been deemed as Acceptable at it overfless more people and residential buildings than Options 2 and 8 but less than Option 1.	When compared to the baseline scenario. Option 2 performs works in terms of prembious gas emissions and fine lum but better in terms of capacity/fesilience and economic impact of capacity. He remaining criteria in a deemed to be of equal benefit because there is no change when compared to today's operation. I-aving said that, att this time, it is not possible to fully determine the safety implications of this specific option. The change soprior has the capacity and the safety and the safety and the sact nature of these conflicts is undear at this stage. Further analysis and engagement is required in Stage 3 to determine the surface of the capacity and the safety an	When compared to the baseline scenario. Option is performs worse in terms of transpillity, greenhouse gas missions and fuel burn but better in terms of capacity/resillence and economic impact of capacity. The remining criteria are deemed to be of equal benefit because there is no change when compared to today's operation. Having said that, at its time, it is not possible to fully determine the safety minipications of this specific option. The classific sprince and compared to the safety properties of the specific option. The classification of this specific option. The classification of this specific option. The classification of the safety properties of the specific option. The classification of the safety properties of the specific option. The classification of the capacity of the capac

Impact	Level of Analysis	DO NOTHING BASELINE'
	IOA Criteria Evaluation	
	Colour Key	Description
	Preferred Option(s)	When compared to the baseline, there is a clear and
		obvious benefit. This option is viewed as more
		favourable than the other within the design envelope
		and as such is the preferred option within the design
		envelope.
	Favourable	When compared to the baseline, there is a clear and
	ravourable	obvious benefit.
	Acceptable	When compared to the baseline, there is an equal
		benefit.
		When compared to the baseline, there is a clear and
	Rejected	obvious dis-benefit. As such, these options are
		rejected.
	Baseline/Previously Rejected	Option included for completeness but, in the case of
	baseline) r reviously Rejected	previously rejected options, not subject to IOA.

Departure Envelope: SID RWY 04 EAST

Departure Env	eparture Envelope: SID RWY 04 EAST										
Group	Impact	Level of Analysis	DO NOTHING BASELINE'	OPTION 0	OPTION 1	OPTION 2	OPTION 4	OPTION 5			
Communities	Noise impact on health and quality of life	letital Options Appraisal: Qualitative	in terms of today's operation, the EAST design emelose is enterly based around the existing CLN 45 emelose is enterly based around the existing CLN 45 subsettler cerentic. The overfilled analysis conducted on the SID was based on the most bracks in 2019 as opposed to the lateral tracks joint 2019 as opposed to the lateral track polithold on the proposed to the lateral track polithold on the proposed to the lateral track polithold with proposed to the lateral track polithold with patient cather than 3.3% as per the published SID compared to loadly sportfolm. It must also acknowledged that an element of radar vectoring is required to maintain set separation distance. Based on the above, it has been determined that the existing CLN 450 loadly set such proposed to the set of the set story of of the story of the set story of story of the set story of the set story of story of st	Option (i) a PBN reproduction of the current CLN 45 SID which incorporates a 80 clmb guident. Based on the change sousces as 60 clmb guident. Based on the change sousces desired the configuration of the change sousces and configuration of the change sousces and configuration of the configuration of the change souscessor, in terms of population and residential buildings overflown, Option 0 performs better and as such is deemed to be beneficial.	OPTION 1 a BNW1 reproduction of the current CUI 4S 510 which incorporates all directly guident Based on the change sozonous residential buildings by the configuration of the change sozonous residentials buildings. When congress of the busiless Section (in terms of population and residentials buildings overflown, Option 1 performs better and as such is deemed to be beneficial.	Officing 2 is a RMP1 routle based on the current CLN 45 SG which incorporates a file climb gouldent. Based on the change sources in a recommendation of the change sources and considerable bullengs. When compared to the business security, in terms of population and residential bullengs overflown, Option 2 performs better and as such is deemed to be beneficial.	OFTION 4. Is ANALY route based on the current CLN 45 510 which incorporate as 8th clini guident Based on the charge protocol incorporate as 8th clini guident Based on the charge protocol incorporate as 8th clini guident Based on the charge protocol incorporate and the control of the control of the besidence Science, including a control of the control of the besidence Science, including the control of the con	Option 5 is a NRT rest issued on the current CLL 4 SSS wheth incerporate a SB climb goadens. Blased with the change sponsors incerporate as a SB climb goadens. Blased with the change sponsors considerability with the compared to the Sabeline Scenario, in terms of population and residential buildings. When compared to the Sabeline Scenario, in terms of population and residential buildings overflown, Option 5 performs better and as such is deemed to be beneficial.			
Communities	Air Quality	initial Options Appraisal: Qualitative	With regards to air quality, the existing CLN 45 SID does not directly overfly any AQMAs. Given the 6% citing gradient included within the Do Nothing scenario, the impact of aircraft below 1,000h with regards to local air quality is limited to areas within the immediate area surrounding the airport.	As per the baseline scenario, Option 0 does not directly overfly any ADMAs. Furthermore, as per CAP 1516 (para 874), due to mining and dispersion, the impact on air quality best 2006 ft listed to be insignificant. There are areas within the immediate area surrounding the air port that will be overflown below 1,000 ft, below the compared to the baseline scenario, this is unavoidable. Therefore, overall, when compared to the baseline scenario, this option is deemed to be of equal benefit.	As per the baseline scenario, Option I does not directly overfly any ADMAs. Furthermore, as per CAR 1516 (para 874), due to mining and dispersion, the impact on air quality best 2000 ft is likely indirect. There are areas within the immediate area usurounding the airport that will be overflow below 1,000 ft, towers, for safety reasons, this is unavoidable. Therefore, overall, when compared to the baseline scenario, this option is deemed to be of equal benefit.	As per the baseline scenario, Option 2 does not directly overify any ADMAs. Furthermore, as per CAR 3 156 (para 874), due to mixing and dispersion, the integration are is quality been 2000 ft likely to be insignificant. There are areas within the immediate area unrounding the airport that will be overflow below 1,000 ft, however, for safety reasons, this is unavoidable. Therefore, overall, when compared to the baseline scenario, this option is deemed to be of equal benefit.	As per the baseline scenario, Option 4 does not directly overfly any ADMA's. Furthermore, as per CAP 1616 (para 874), due to mining and dispersion, the impact on air quality below 2009 ft is likely to be insignificant. There are areas within the immediate area surrounding the air port that will be overflown below 1,000 ft, however, for safety reasons, this is unavoidable. Therefore, overall, when compared to the baseline scenario, this option is deemed to be of equal benefit.	As per the baseline scenario, Option 5 does not directly overfly any ADMAs. Furthermore, as per CAP 1016 (para 874), due to morare designation that the properties of each scenario. He have been always to the site of the scenario of the sc			
Wider Society	Greenhouse Gas impact	Instal Options Appraisal: Qualitative	Current routes do not support continuous climb concentions. It must be noted that the exact track length flow to by aircraft may vary slightly due to the natural or dark verticing, although aircraft do all follow the existing procedures in a broader sense. Circlatar procedure for of support opinional aircraft sense of the control of t	Option that been designed to support continuous climb opportations, however, an element of radar vectoring may be required to manage aircraft separation distances. The track mileage of polion to 32.0 37m. (IdoMH), Blased on this, when compared to the baseline scenario, Option 0.1 st other and is therefore specied to first slightly the specimonage pass. As such, required to confirm the exact amounts of greenhouse gases. As such required to confirm the exact amounts of greenhouse gases.	Option I has been designed to support continuous climb opportation, however, an element of radar excording may be required to manage aircraft separation distances. The track millage of both or 1 as 27.5 Mills (IGMOM), Blased on this, when companed to the baseline scenario, Option 1 is shorter and is therefore expected on emit slightly her generous general. As such required to confirm the exact amounts of greenhouse gases. As such required to confirm the exact amounts of greenhouse gases.	Option 2 has been designed to support continuous climb opportation, however, an eleventer of rade vectoring may be required to manage aircraft separation distances. The track millage of polion 2 is 2.9.B.Im (10,1044), Based on this, when compared to the baseline scenario, Option 2 is shorter and is therefore perpected on est lightly his generational gases, As sud, required to confirm the exact amounts of greenhouse gases. As sud, required to confirm the exact amounts of greenhouse gases.	Option 4 has been designed to support continuous climb opportation, however, an element of radar vectoring may be required to manage aircraft separation distances. The continuous continuo	Option 5 has been designed to support continuous climb opportation, however, an element of fraids revoicing may be required to manage aircraft separation distances. He track millage of growing in Sai 2,35 Min (1747M), Based on this, when compared to the baseline scenario, Option 5 is looper and is therefore expected for mill sight in more generation gases. An extensive continuous c			
Wider Society	Capacity and resilience	Initial Options Appraisal: Qualitative	Maintaining extant procedures would maintain current capacity however, due to the reliance on ground-based mayigational aids, retilience would be significantly affected, following their removal in December 2022.	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which subsequently leads to more predictable flight paths and fewer deslays Both in air or on the ground). The reduction of the reliance on outdated ground based navigational aids will significantly increase operational resilience for airlines and operators.	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delays both in air or on the ground). The reduction of the reliance on outdated ground based navigational aids will significantly increase operational resilience for airlines and operators.	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which subsequently leads to more predictable flight paths and fewer design Both in air or on the ground). The reduction of the reliance on outdated ground based navigational aids will significantly increase operational resilience for airlines and operators.	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delays (both in air or on the ground). The reduction of the reliance on outdated ground based navigational aids will significantly increase operational resilience for airlines and operators.	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delay (both in air on the ground). The reduction of the reliance on outdated ground based navigational aids will significantly increase operational resilience for airlines and operators.			
Wider Society	Tranquillity	Initial Options Appraisal: Qualitative	Laper CAP 1516, Appendix B, Para DN, Charge consorts are equivalent condient Transpullity with superfluid reference to ACMBs and National Paris only used to reference to ACMBs and National Paris only community engagement. Although no specific areas were identified by community engagement, the change sooner has decided to include 550s and Caustrap Paris within the CB analysis to maintain consistency with other Stage 2 documentation. Her existing CLN 450 does not overfly a MCMBs or National Paris built does overfly 2 Country Paris and 1550.	Oction Goles not overfly any ADDIS or National Parks. Sieveew, it has been identified but the open overflied to Country Parks and the 1.555. Overflight of these areas is expected to occur at higher adultuse, minimising its himpact of aircraft one and emissions on these areas. When compared to the baseline scenario, Option O is equal in that it does not overfly any ADDIS or National Parks and overflies an equal number of Country Parks and SSSis. As such, this option is seen as providing equal benefit in terms of Tranquillity.	Option 1 Gate not overfily any ADMIL or National Parts. Sincerey, it was been identified but the option eventile. Country Parks and the 1500 Overfiller of these areas is expected to occur at higher statute, minimisely in lengated all around mise and emissions on these areas. When compared to the baseline scenario, Option 1 is equal in that if does one overfiler year. ADMI or National Parks and overfiles an equal number of Country Parks and SSSs. As such, this option is seen as providing equal benefit in terms of Tranquillity.	Option 2 Gets not overfly any ADMID or Visitonia Parks. Sourcer, it has been identified but the option overflier. Country frake and the 1550 Overflight of these areas is expected to occur at higher statute, minimising the impact of aircraft once and emissions on these areas. When compared to the baseline scenaria, Option 2 is equal in that if does not overfly any ADMS on National Parks and overflies an equal number of Country Parks and SSSIs. As such, this option is seen as providing equal benefit in terms of Tranquillity.	Option 4 does not overfly any ADDNIs or National Parks. Sincerey: It has been identified but the option overflied. Country final and the base load feetified but the option overflied. Country final and the 255Sts. Overflight of these areas is operated to occur at a higher addusted, minimising the impact of aircraft one and emissions on these areas. When compared to the baseline scenario, Option 4 is equal in that it does not overfly any ADDN so. National Parks and overflies more SSSIs than the baseline scenario, Sea such, this option is seen as providing a dis-benefit in terms of Tranquillity.	Option 5 Seas not overlify any ADMIs or National Parks. Nowever, it was been identified but the option overlife. Country Parks and the 2.55%, Overlight of these sens is expected to corur at a higher altrider, immining the impact of servict noise and emissions on these areas. When compared to the basieline constant, Option 5 See qualit hant to does not overlife any ADMIs or National Parks and overfiles an equal number of Country Parks. However, this option overfiles are option 555 than the basieline costant of, such, this option overfiles are one 555 than the basieline costant of, such, this option overfiles are one 555 than the basieline costant of, such, this option overfiles are one 555 than the basieline costant of, such, this option overfiles are of the country of the cou			
Wider Society	Biodiversity	Initial Options Appraisal: Qualitative	skapin conducted by the during spores above this the entating operations at \$1% everify for if within the validity of designated attex in terms of Boddeversity such as \$98, MSC, MSMAS Sites and \$550, totally is operation, aircraft are fifting above 1,000T in totally is operation, aircraft are fifting above 1,000T entering and dispersion, there is a limited ampact, and when passing over these ites, Due to the effects of mixing and dispersion, there is a limited ampact, and dispersion, there is a limited ampact, and dispersion, there is a limited ampact, and the state of t	The charge posture has conducted used to indecisated where the designated sites are around STA. At this start, there is expected to be no charge likely to affect isoliversity at these stees. From an air quality perspective, these sites will be confirmed at allitude above 1,000th. As per CAP 1616 Appendix 8, Para B74, Sectaure of additionation and mixing them is unalities; to be an impact on local requirement of the confirmed posture of the confirmed posture. That said, STN acknowledges that any potential impact to the designated as around STN will be assessed in Stage 3 of the ACP process by Subject Matter Experts.	The charge greation has conducted upon to understand where the designated rises are smooth TRA. At this start, there is expected to be no change likely to affect toolevestly at these steet. From an air quality perspective, these sites will be conflicted to the conductive properties, the sites sites will be conflicted and attitudes above 1,000°R. As per CAP 1506 Appendix B, Para B74, because of adoptions and mixing, there is unality by the a immigrate of the discovery and an immigrate of the other proposal will not have an immach to all other proposal will not have an immach to all other local STN acknowledges that any potential impact to the designated last around STN will be assessed in Stage 3 of the ACP process by Subject Matter Experts.	The charge growton has conducted quest to understand where the designated sites are around STA. At this start, here is expected to be no charge likely to affect toolboresity at these stees, from a nair quality generative, these sites will be ordering at all time above 1,000Th. A part CAP 1616 Appendix 8, Para B74, Sectaure 01,000Th and part of the part	The change posture has conducted used to indentated where the designated sites are around STA. At this start, there is expected to be no change likely to affect isoliversity at these stees. From an air quastly perspective, these sites will be overflown at altitudes above 1,000th. As per CAP 1616 Appendix 8, Para B74, Sectaure of a cliquenion and midnic, there is unalkey to be an impact on local requirement of the control o	The charge powers has conducted work to understand when the designated size as a round STA A. Bit vising them is expected to be not charge likely to affect biodiversity at these sizes. From an air usually perspective, these takes will be overlined at bittless about 1,000Th. A spec size will be verified and a final dependent and mining them to under the property of the special special special property of the special spe			
General Aviation	Access	Initial Options Appraisal: Qualitative	No change to existing airspace arrangements. GA users of STN will maintain their current level of access under extant operational arrangements.	No change to the existing airspace arrangements (within the baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement pertaining to GA access are reviewed prior to innolementation to ensure their continued validity.	No change to the existing airspace arrangements (within the baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement pertaining to GA access are reviewed prior to implementation to ensure their continued validity.	No change to the existing airspace arrangements (within the baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement pertaining to GA access are reviewed prior to implementation to ensure their continued validity.	No change to the existing airspace arrangements (within the baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement pertaining to GA access are reviewed prior to innolementation to ensure their continued validity.	No change to the existing airspace arrangements (within the baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and desisting letters of Agreement pertaining to GA access are reviewed prior to Implementation to ensure their continued validity.			
General Aviation / commercial airlines	Economic Impact from increased effective capacity	Initial Options Appraisal: Qualitative	No increase to effective capacity sufficient of continued use of entire procedure, therefore no economic benefit for GA/attines.	The introduction PRN is expected to deliver benefits by uncreasing ampiece capacity which in turn will lead to more perdictable flight paths and fewer delays (both in the air or on the ground). This is expected to facilitate excommisc benefit an airlines by increasing the expected to facilitate excommisc benefit an airlines by increasing the frequency of air transport movements, increasing passeager agreements of the common transport of the productions of the production of the pro	The introduction PRIs is espected to deliver benefits by increasing adespace appair, which in turn will lead on the predictable flight paths and fewer delivery leach in the air or on the ground). This is expected to facilitate escombic benefit to alimit by increasing the expected to facilitate escombic benefit to alimits by increasing the expected of air transport movements, increasing passeager and air control of the expected production of the expected productions of the expected production of the expected productio	The introduction PRN is expected to deliver benefits by increasing aimspace appoint, which in turn will lead to more periclable flight paths and fewer delays (both in the air or on the ground). This is expected to facilitate economic benefit an aimline by increasing the expected of air trainport movements, increasing passeager proportionate for Indoor Stantack Aprox to predict the procise economic benefit to demonstrated various to predict the procise economic benefit to commercial aimless using the new procedures as ny increase in individual aimline appoint will depend on private any increase in individual aimline appoint will depend on private commercial business characteristics. It is not proportionate for London Stantack Aprox to assess the convenie benefit to facilitate the commercial processor in the control of th	The introduction PRN is expected to deliver benefits by uncreasing ampace capacity which in turn will each or one predictable flight paths and fewer delays (both in the air or on the ground). This is expected to facilitate economic benefit to attilize by increasing the expected to facilitate economic benefit to attilize by increasing the expectage of the expectage of the expectage of the expectage processor and expectage of the expectage processor and expectage of the expectage	The introduction PRM is expected to effert benefits by increasing singuispec capacity which in the will lead to meep exclassible flight paths and fewer delays (both in the air or on the ground). This is expected to facilities control benefit to allow the processor of the expected of a framport movements, increasing passenger the expected of air transport movements, increasing passenger proportionate for Indian Stanted Aupron to predict the precise exconnic benefit to commercial airlines using the new procedures any increase in influidual airlines capacity in dispersion or predict any increase in influidual airlines capacity in dispersion or production and increased to the commercial airlines surgice. It is not proportionate for choronts Stanted airlines capacity in dispersion provides any increase in influidual airlines capacity in Delays (and the proportionate for choronts Stanted Airline) to assess the economic benefit to from increased to lead to reduced on-ground and in air delays for all users.			
General Aviation / commercial airlines	Fuel burn	Initial Options Appraisal: Qualitative	The existing TN procedures do not support continuous climb operations. Full burn is expected to be greater due to Extical ATC intervention and personal formation of the dispature and approach phase. Furthermore, in the case of the modal path of the existing CLN 45 SD, the track length is 33.52m (17.02MM).	Option Obces support continuous climb operations, meaning that arrorth would not be required to level off uniting departure, reducing the overall amount of the burnt. There is no requirement within Sage 2 of the CPAIS 60 process to quantify fee burnt, this will be conducted in Sage 3. Therefore, to enable a compartion, the logic applied in the beforer the text length, the less tall of burnt. With regards to this option, 18, 23 75 lam 116,000 killing, and the sage of the sage of the sage of the sage of the burnt. With regards to this option, 18, 23 75 lam 116,000 killing, the sage is sage of the sage of the sage of the burnt. With regards to this option, 18, 23 75 lam 116,000 killing, the burnt. All the sage of the burnt. All the sage of the burnt. All the b	Option 3 Gees support continuous climb operations, meaning that aircrit would not be required to level off landing departure, reducing the overall amount of fee larm. There is no requirement with Stage 3 The RPAISE for process to quantify fee lab must have long step larm that will be conducted in Stage 3. Therefore, to enable a companion, the long significant with the obtract the text length, the less that is bount. With regards to the option, the 23 25 35m (16,000M) long, and the stage 3 as sender with contract that the contract of the stage 3 as sendered with required select amount of fired burn, therefore, this option is beneficial in terms of fixed burn. More indepth analysis will be carried out in Stage 3 to confirm.	Option 2 does support continuous climb operations, meaning that ancort would not be required to level off landing departure, reducing the overall amount of the burnt. There is no requirement with Stage 2.0 feet PACHS 65 process to quantify feet burnt, this will be conducted in Stage 3. Therefore, to enable a companion, the logic applied is that the oldrore the test delength, the less total is bount. With regards to this option, it is 25 2/2 hart 16.0 (1004) long, and the stage 3. T	Option 4 Goes support continuous climb operations, meaning that arrort would not be required to level off longing departure, reducing the overall amount of the burnt. There is no requirement within Sage 2 of the APIGS for process to quantify fee burnt, this will be conducted in Sage 3. Therefore, to enable a compartion, the logic applied in the elevator the treat length, the less that is burnt. With regards to this option, 18, 32.27 birst 117, 2470H long, which is the stage of the stage of the stage of the stage of the burnt. With regards to this option, 18, 32.27 birst 117, 2470H long, the stage is stagential will require a greater amount of faile burn, therefore, this option is of dis-benefit in terms of faile burn. More in depth analysis will be carried out in Stage 3 to confirm.	Option 5 does support continuous climb operations, mensing that incrit would not be required to level off damp departure, reducing the overall amount of fired burnt. There is no requirement within 5age 2 of the CPAIS figrences to sportly fived burn, this will be conducted in Sage 3. Therefore, to enable a comparison, the logic applied to the obstrar for text of the logic applied to the obstrar of text of the burnt. With regards to this option, in \$2.25m 12.7 APPM long, the stage of the obstrar of text of the control of the burnt. With stage it assumed will require a gradue amount of fired burn. Therefore, this option is of dis benefit in terms of fixed burn. More in- depth analysis will be carried out in Stage 3 to confirm.			

Group	Impact	Level of Analysis	DO NOTHING BASELINE'					
Commercial airlines	Training costs	Initial Options Appraisal:	No additional training predicted.	It is expected that no extra Pilot/Crew training will be required to	OPTION 1 It is expected that no extra Pilot/Crew training will be required to	OPTION 2 It is expected that no extra Pilot/Crew training will be required to	OPTION 4 It is expected that no extra Pilot/Crew training will be required to	OPTION 5 It is expected that no extra Pilot/Crew training will be required to
commercial annues	manning costs	Qualitative	The desirence coming predictes.	enable pilots to fly the new PBN procedures. PBN is a common	enable pilots to fly the new PBN procedures. PBN is a common	enable pilots to fly the new PBN procedures. PBN is a common	enable pilots to fly the new PBN procedures. PBN is a common	enable pilots to fly the new PBN procedures. PBN is a common
				standard of navigation throughout the world. It is not proportionate	standard of navigation throughout the world. It is not proportionate		standard of navigation throughout the world. It is not proportionate	
				for London Stansted Airport to assess on-going competency for individual commercial airlines due to the significant variables	for London Stansted Airport to assess on-going competency for individual commercial airlines due to the significant variables	for London Stansted Airport to assess on-going competency for individual commercial airlines due to the significant variables	for London Stansted Airport to assess on-going competency for individual commercial airlines due to the significant variables	for London Stansted Airport to assess on-going competency for individual commercial airlines due to the significant variables
				involved e.g. number of pilots, airline policies on training (simulator	involved e.g. number of pilots, airline policies on training (simulator	involved e.g. number of pilots, airline policies on training (simulator	involved e.g. number of pilots, airline policies on training (simulator	involved e.g. number of pilots, airline policies on training (simulator
				versus live flight training), fleet types, and variations in on-board	versus live flight training), fleet types, and variations in on-board	versus live flight training), fleet types, and variations in on-board	versus live flight training), fleet types, and variations in on-board	versus live flight training), fleet types, and variations in on-board
				equipment etc.	equipment etc.	equipment etc.	equipment etc.	equipment etc.
Commercial airlines	Other costs	Initial Options Appraisal:	It is not proportionate for STN to assess potential	Other costs to commercial airlines may include updates to Flight	Other costs to commercial airlines may include updates to Flight	Other costs to commercial airlines may include updates to Flight	Other costs to commercial airlines may include updates to Flight	Other costs to commercial airlines may include updates to Flight
		Qualitative	other costs for commercial airlines - there may be	Management Systems (FMS), navigation databases and operating procedures, increased pilot hire costs versus training etc. It is not	Management Systems (FMS), navigation databases and operating procedures, increased pilot hire costs versus training etc. It is not	Management Systems (FMS), navigation databases and operating procedures, increased pilot hire costs versus training etc. It is not	Management Systems (FMS), navigation databases and operating	Management Systems (FMS), navigation databases and operating procedures, increased pilot hire costs versus training etc. It is not
			costs associated with maintaining legacy systems to continue flying conventional navigation but there are	procedures, increased pilot nire costs versus training etc. It is not proportionate for STN to assess the 'other costs' to commercial	procedures, increased pilot hire costs versus training etc. it is not proportionate for STN to assess the 'other costs' to commercial	procedures, increased pilot nire costs versus training etc. It is not proportionate for STN to assess the 'other costs' to commercial	procedures, increased pilot hire costs versus training etc. It is not proportionate for STN to assess the 'other costs' to commercial	procedures, increased pilot nire costs versus training etc. It is not proportionate for STN to assess the 'other costs' to commercial
			too many variables (e.g., aircraft types, on-board	airlines of flying PBN procedures due to significant variables; some	airlines of flying PBN procedures due to significant variables; some	airlines of flying PBN procedures due to significant variables; some	airlines of flying PBN procedures due to significant variables; some	airlines of flying PBN procedures due to significant variables; some
			system capability etc.) to consider these effectively.	airlines may already be 'PBN ready' whereas others may not.	airlines may already be 'PBN ready' whereas others may not.	airlines may already be 'PBN ready' whereas others may not.	airlines may already be 'PBN ready' whereas others may not.	airlines may already be 'PBN ready' whereas others may not.
Airport / Air	Infrastructure costs	Initial Options Appraisal:	No additional infrastructure is required at STN to	All options relate to the implementation of PBN and no additional	All options relate to the implementation of PBN and no additional	All options relate to the implementation of PBN and no additional	All options relate to the implementation of PBN and no additional	All options relate to the implementation of PBN and no additional
navigation service		Qualitative	maintain extant conventional procedures however	infrastructure is required. The introduction of PBN reduces the	infrastructure is required. The introduction of PBN reduces the	infrastructure is required. The introduction of PBN reduces the	infrastructure is required. The introduction of PBN reduces the	infrastructure is required. The introduction of PBN reduces the
provider			maintaining access to ground-based equipment (currently operated by NERL) may be prohibitively	reliance on infrastructure, in particular ground-based navigation	reliance on infrastructure, in particular ground-based navigation	reliance on infrastructure, in particular ground-based navigation aids are no longer needed. The foundation for PBN is RNAV or RNP;	reliance on infrastructure, in particular ground-based navigation	reliance on infrastructure, in particular ground-based navigation
			expensive, should this commercial option be	aircraft arriving and departing London Stansted Airport using the	aircraft arriving and departing London Stansted Airport using the	aircraft arriving and departing London Stansted Airport using the	aircraft arriving and departing London Stansted Airport using the	aircraft arriving and departing London Stansted Airport using the
			implemented.	proposed RNAV/RNP procedures will do so based on their	proposed RNAV/RNP procedures will do so based on their	proposed RNAV/RNP procedures will do so based on their	proposed RNAV/RNP procedures will do so based on their	proposed RNAV/RNP procedures will do so based on their
				performance-based navigation capability.	performance-based navigation capability.	performance-based navigation capability.	performance-based navigation capability.	performance-based navigation capability.
Airport / Air	Operational costs	Initial Options Appraisal:		Air Traffic Control at STN is contracted out to a third-party	Air Traffic Control at STN is contracted out to a third-party	Air Traffic Control at STN is contracted out to a third-party	Air Traffic Control at STN is contracted out to a third-party	Air Traffic Control at STN is contracted out to a third-party
navigation service provider		Qualitative	maintaining the extant procedures.	organisation. This existing commercial contract between STN and	organisation. This existing commercial contract between STN and	organisation. This existing commercial contract between STN and	organisation. This existing commercial contract between STN and	organisation. This existing commercial contract between STN and
provider				their chosen ANSP is considered to be an ongoing cost. ICAO describe Improved Operational Efficiency as a benefit delivered by	their chosen ANSP is considered to be an ongoing cost. ICAO describe 'Improved Operational Efficiency' as a benefit delivered by	their chosen ANSP is considered to be an ongoing cost, ICAO describe Improved Operational Efficiency as a benefit delivered by	their chosen ANSP is considered to be an ongoing cost. ICAO describe Improved Operational Efficiency, as a benefit delivered by	their chosen ANSP is considered to be an ongoing cost. ICAO describe Improved Operational Efficiency' as a benefit delivered by
				the introduction of PBN. In general, London Stansted Airport	the introduction of PBN. In general, London Stansted Airport	the introduction of PBN. In general, London Stansted Airport	the introduction of PBN. In general, London Stansted Airport	the introduction of PBN. In general, London Stansted Airport
				predicts that operational efficiency will improve and that there may	predicts that operational efficiency will improve and that there may	predicts that operational efficiency will improve and that there may	predicts that operational efficiency will improve and that there may	
				be potential for a net reduction in operational costs.	be potential for a net reduction in operational costs.	be potential for a net reduction in operational costs.	be potential for a net reduction in operational costs.	be potential for a net reduction in operational costs.
Airport / Air	Deployment costs	Initial Options Appraisal:	No Deployment costs applicable to extant	Air Traffic Control at STN is contracted out to a third-party	Air Traffic Control at STN is contracted out to a third-party	Air Traffic Control at STN is contracted out to a third-party	Air Traffic Control at STN is contracted out to a third-party	Air Traffic Control at STN is contracted out to a third-party
navigation service provider		Qualitative	procedures.	organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.
provider				their chosen wwsr is considered to be an ongoing cost.	their chosen ANSP is considered to be an ongoing cost.	their chosen ANSP is considered to be an ongoing cost.	their chosen wwsr is considered to be an ongoing cost.	their chosen ANSP is considered to be an ongoing cost.
Safety Assessment	Safety Assessment	Initial Options Appraisal: Qualitative		Possible conflict with London Luton, London Southend, Heathrow, London City traffic was identified. Procedure design and ATC	Possible conflict with London Luton, London Southend, Heathrow,	Possible conflict with London Luton, London Southend, Heathrow,	Possible conflict with London Luton, London Southend, Heathrow,	Possible conflict with London Luton, London Southend, Heathrow,
		Qualitative	STN are safe including use of the extant conventional	London City traffic was identified. Procedure design and ATC tactical intervention could act as mitigations in these instances but	London City traffic was identified. Procedure design and ATC tactical intervention could act as mitigations in these instances but	London City traffic was identified. Procedure design and ATC tactical intervention could act as mitigations in these instances but	London City traffic was identified. Procedure design and ATC tactical intervention could act as mitigations in these instances but	London City traffic was identified. Procedure design and ATC tactical intervention could act as mitigations in these instances but
				could increase complexity, leading to a possible increase in ATCO	could increase complexity, leading to a possible increase in ATCO	could increase complexity, leading to a possible increase in ATCO	could increase complexity, leading to a possible increase in ATCO	could increase complexity, leading to a possible increase in ATCO
			departing STN would continuously require radar	workload. Leading on form this, possible unknown interaction with	workload. Leading on form this, possible unknown interaction with	workload. Leading on form this, possible unknown interaction with	workload. Leading on form this, possible unknown interaction with	workload. Leading on form this, possible unknown interaction with
			vectoring (should CAP1781 not be implemented), resulting in an increase in ATCO workload.	the wider enroute network is acknowledged, but at this time, this cannot be determined.	the wider enroute network is acknowledged, but at this time, this cannot be determined.	the wider enroute network is acknowledged, but at this time, this cannot be determined.	the wider enroute network is acknowledged, but at this time, this cannot be determined.	the wider enroute network is acknowledged, but at this time, this cannot be determined.
			resulting in our necesser in vives workstool	In addition, it was identified that due to the dispersion of traffic	In addition, it was identified that due to the dispersion of traffic	In addition, it was identified that due to the dispersion of traffic	In addition, it was identified that due to the dispersion of traffic	In addition, it was identified that due to the dispersion of traffic
				departing STN, a degree of tactical intervention may be required to	departing STN, a degree of tactical intervention may be required to	departing STN, a degree of tactical intervention may be required to	departing STN, a degree of tactical intervention may be required to	departing STN, a degree of tactical intervention may be required to
				maintain safe separations standards. The design process may also help to mitigate this hazard to 'as low as reasonably practicable'.	maintain safe separations standards. The design process may also help to mitigate this hazard to 'as low as reasonably practicable'.	maintain safe separations standards. The design process may also help to mitigate this hazard to 'as low as reasonably practicable'.	maintain safe separations standards. The design process may also help to mitigate this hazard to 'as low as reasonably practicable'.	maintain safe separations standards. The design process may also help to mitigate this hazard to 'as low as reasonably practicable'.
				This is very specific to exact aircraft routing combinations.	This is very specific to exact aircraft routing combinations.	This is very specific to exact aircraft routing combinations.	This is very specific to exact aircraft routing combinations.	This is very specific to exact aircraft routing combinations.
				Furthermore, possible interaction with the existing STN ABBOT hold		Furthermore, possible interaction with the existing STN ABBOT hold		
				was identified, therefore, ATC tactical intervention may be required to maintain safe separation between departing and arriving aircraft.		was identified, therefore, ATC tactical intervention may be required to maintain safe separation between departing and arriving aircraft.		was identified, therefore, ATC tactical intervention may be required to maintain safe separation between departing and arriving aircraft.
					Procedure design constraints act as an additional mitigation in this		Procedure design constraints act as an additional mitigation in this	
				instance.	instance.	instance.	instance.	instance.
1		Summary of Analysis	The 'Do Nothing' scenario in relation to this ACP is not a viable option as it does not provide a	When compared to the baseline scenario, Option 1 performs better in terms of noise impact, emissions, fuel burn, capacity/resilience	When compared to the baseline scenario, Option 1 performs better in terms of noise impact, emissions, fuel burn, capacity/resilience	When compared to the baseline scenario, Option 1 performs better in terms of noise impact, emissions, fuel burn, capacity/resilience		
			not a viable option as it does not provide a sustainable solution in terms of airspace	and economic impact of capacity. The remaining criteria are	and economic impact of capacity. The remaining criteria are	and economic impact, emissions, fuel burn, capacity/resilience	in terms of tranquillity, greenhouse gas emissions and fuel burn but better in terms of noise impact, capacity/resilience and economic	in terms of tranquillity, greenhouse gas emissions and fuel burn but better in terms of noise impact, capacity/resilience and economic
			modernisation and is unviable following the removal	deemed to be of equal benefit because there is no change when	deemed to be of equal benefit because there is no change when	deemed to be of equal benefit because there is no change when	impact of capacity. The remaining criteria are deemed to be of	impact of capacity. The remaining criteria are deemed to be of
			of the VOR beacons in December 2022, which would have a significant impact on capacity and resilience.	compared to today's operation. Having said that, at this time, it is not possible to fully determine the safety implications of this	compared to today's operation. Having said that, at this time, it is not possible to fully determine the safety implications of this	compared to today's operation. Having said that, at this time, it is not possible to fully determine the safety implications of this	equal benefit because there is no change when compared to today's operation. Having said that, at this time, it is not possible to	equal benefit because there is no change when compared to today's operation. Having said that, at this time, it is not possible to
			The existing SIDs do not support continuous climb	not possible to fully determine the safety implications of this specific option. The change sponsor has identified possible conflicts		not possible to fully determine the safety implications of this specific option. The change sponsor has identified possible conflicts		fully determine the safety implications of this specific option. The
1			operations, which leads to a greater volume of fuel	with some routes operated by other nearby airports, but the exact	with some routes operated by other nearby airports, but the exact	with some routes operated by other nearby airports, but the exact	change sponsor has identified possible conflicts with some routes	change sponsor has identified possible conflicts with some routes
1			burn, emissions and noise at lower levels. In terms of	nature of these conflicts is unclear at this stage. Further analysis	nature of these conflicts is unclear at this stage. Further analysis	nature of these conflicts is unclear at this stage. Further analysis and engagement is required in Stage 3/4 of the CAP 1616 process to	operated by other nearby airports, but the exact nature of these	operated by other nearby airports, but the exact nature of these
1			Iranquillity, Biodiversity, GA Access and economic impact, the 'Do Nothing baseline' provides	and engagement is required in Stage 3/4 of the CAP 1616 process to determine this. Furthermore, this option has been assessed as a	and engagement is required in Stage 3/4 of the CAP 1616 process to determine this. Furthermore, this option has been assessed as a	and engagement is required in Stage 3/4 of the CAP 1616 process to determine this. Furthermore, this option has been assessed as a	conflicts is unclear at this stage. Further analysis and engagement is required in Stage 3/4 of the CAP 1616 process to determine this.	required in Stage 3/4 of the CAP 1616 process to determine this.
1			minimal/no change to today's operations.	stand-alone option rather than as a set of design options as part of	stand-alone option rather than as a set of design options as part of	stand-alone option rather than as a set of design options as part of	Furthermore, this option has been assessed as a stand-alone option	Furthermore, this option has been assessed as a stand-alone option
			Furthermore, there are very limited costs incurred as a result of this scenario. From a safety perspective, it	a wider system. Additional analysis is required in Stage 3 to determine the cumulative impact of this option when compared to	a wider system. Additional analysis is required in Stage 3 to determine the cumulative impact of this potion when compared to	a wider system. Additional analysis is required in Stage 3 to determine the cumulative impact of this ootion when compared to	rather than as a set of design options as part of a wider system. Additional analysis is required in Stage 3 to determine the	rather than as a set of design options as part of a wider system. Additional analysis is required in Stage 3 to determine the
			is assumed that current STN operations are safe.	all the other options.	all the other options.	all the other options.	cumulative impact of this option when compared to all the other	cumulative impact of this option when compared to all the other
1			Following the removal of the VORs, it is	Based on performance in the IOA, Option 0 has been rejected. This	Based on performance in the IOA, Option 1 is deemed to be	Based on performance in the IOA, Option 2 has been rejected as it	options.	options.
1			acknowledged that ATCO workload may increase due	option overflies the most people and residential buildings when	Acceptable as it overflies more people and residential buildings	overflies more people and residential buildings than Options S, 4	Based on performance in the IOA, Option 4 is deemed to be	Based on performance in the IOA, Option 5 selected as the
1			to the enduring requirement for radar vectoring.	compared to all the other options within this design envelope.	than Option 5 and 4 but less than the remaining options within this design envelope.	and 1.	Favourable as it overflies more people and residential buildings than Option 5 but less than the remaining options within this	Preferred Option as it overflies the least number of people and residential buildings when compared to all other options within the
1							design envelope.	EAST envelope.

IOA Criteria Evaluation

Colour Key	Description
Preferred Option(s)	When compared to the baseline, there is a clear and obvious benefit. This option is viewed as more favourable than the other within the design envelop and as such is the preferred option within the design envelope.
Favourable	When compared to the baseline, there is a clear and obvious benefit.
Acceptable	When compared to the baseline, there is an equal benefit.
Rejected	When compared to the baseline, there is a clear and obvious dis-benefit. As such, these options are rejected.
Baseline/Previously Rejected	Option included for completeness but, in the case o previously rejected options, not subject to IOA.

Departure Envelope: SID RWY 04 NORTH

froup Communities	imeach The impact on health and quality of life	Lord of Annual Control Agentals: Control Control Control Control Control	to home a because the term of finishly separation, the NORTH design envelope is entirely based around the existing BEV. 30 the most properties of the properties of the term of the Sevent services of the services of the most representative use of the based base based on the most at track is 2019 as appeared to the learned when properties the services of the based on the most at track is 2019 as appeared to the learned services published on the URF of freedomes, to provide services and the services of the services of the work based on a 6% climit gradient carbon than 3.0 as not based on a 6% climit gradient carbon than 3.0 as not based on a 6% climit gradient carbon than 3.0 as not been considered to the services of the not been serviced to the services of the not been serviced to the services of the not been serviced as a service of most properties of the services of most properties of the services of most properties of the most properties of most pro	Obtation 8 as MMAVI replication of the cesting BNT 500 which incorporates as this clinic parlient. Based on the change opcores and subject, control or selection of the change opcores and subject, opcored or selection 250 period and state of 1,736 his control of the change opcores and the change opcores opcored on the change opco	Common 2 is 39th registration of the entiring BET 500 which incorporates a 9th climb gradient. State of the charge genores analysis, Cotton 2 centre 2.056 people and set and 1.054 to	Control Is an RAW1 must based on the existing RFS SD elevish incorporation as RG clink profess. State of the charge openion analysis, Control or enterior III of the Control of the Control of State of State (State of State of Sta	OFFIDIA: Options 4 to 19/073 must based on the existing BYT 310 which incorporates as Bit clinic parisent. Based on the change openiors and supplies to the change openiors and supplies. Decide overlap 2.77 procedure and sund of 1,210 in the change openior and 1,210 in the change openior and 1,210 in the change openior and residential buildings overflows. Option 4 performs worse the the existing BYT 500, as such this options determed as a dis-benefit.	Ordinos I sa 1892 notes based on the entiting BIT SID which incorporates a 18th office gradeer. Based on the charge genore analysis, Occess o section, 2009 people and seat on the charge genore analysis, Occess o section, 2009 people and seat of 1,000 people and 1	ORDING 8. ORDING 19.1 BMP1 couch bound on the existing BMY 350 which incorporates as 8% cmb gradent. Based on the charge openion analysis, Duptions of certain 1.273 people and south of the property of the property of the company, Duption of property of the company of the com
Communities	Air Quality	Initial Options Appraisal: Qualitative	With regards to air quality, the existing BFY SID does not directly overly any ADMAs. Given the 4% clinic product included within the Do Nothing scenario, the impact of aircraft below 1,000ft with regards to local air quality is limited to areas within the immediate area surrounding the airport.	As por the baseline scenario, Option 0 does not directly overfly any on ADMA. Furthermore, aper CAP 1016 (pan 874), due to mixing and dispersion, the impact on air quality above 1,000 ft is likely to be singuisflicted. There are areas within the immediate area surrounding the airport that will be overfleam below 1,000 ft, however, for safety crossos, this is surrounded. Therefore, overall, when compared to the boseline scenario, this option is deemed to be of equal benefit.	As per the baseline scenario, Option 2 does not directly overfly any AGMAS. Furthernee, as per CAP 1516 (pan 2814), due to mixing and dispersion, the impact on air quality above 1,000ft is fishely to be imagination. There are areas within the immediate area surrounding the air port that will be overflown below 1,000ft, however, for safety reasons, this is unswealable. Therefore, overall, when compared to the buseline scenario, this option is deemed in the of equal benefit.	As por the baseline scenario, Option 3 does not directly everify any off. AGMAE. Furthermore, aper CAP 1016 (sor 1814), due to mining and dispersion, the impact on air quality above 1,0007s is likely to be integrificant. Their are areas within the immediate area surrounding the airport that will be overflown below 1,0007s, however, for safety reasons, this in unamidable. Therefore, useful, when compared to the boseline scenario, this option is deemed to be of equal benefit.	dispersion, the impact on air quality above 1,000 ft is likely to be indignificant. There are areas within the immediate area surrounding the airport that will be overflown below 1,000 ft, however, for safety reasons, this is unavoidable. Therefore, overall, when compared to the baseline scenario, this option is deemed to be of equal benefit.	AGMAS, Furthermore, as per CAP 1616 (para 874), due to mixing and dispersion, the impact on air quality above DIORI to likely to be insignificant. There are are as within the immediate area surrounding the airport that will be overflown below (DOR) to knower, for the airport that will be overflown below (DOR) knower, for expertise processes, this is unavoidable. Therefore, overall, when compared to the baseline scenario, this option is deemed to be of equal benefit.	As per the baseline scenaria, Option 6 does not directly weethy any AGMA. Furthermore, a per CAP 1016 (are 1841), due to mining and dispersion, the impact on air quality above 1,000°ft is likely to be insignificant. There are areas with the immediate area surrounding the airport that will be overfrom below 1,000°ft, however, for safety reason, this jumpidable. Therefore, overall, when compared to the biochies accounting this option is deemed to be of equal benefit.
Wider Society	Greenhouse Gas Impact	Initial Options Appraisal: Qualifative	Current routed do not appear commissions climb operations. It make the routed to the leve and to the leve and read read read was the control of the read of the read read read read read read read rea	Opinin De la bene designed to apport continuou clinio aperationa. Whenever, an element of land exclusion may be require to manage and the continuous person of the continuous and the c	Option 1 his been designed to support continuous climit operations. Option 2 his observation and option of the continuous principación to manage. The track intelligent of Option 2 is 37-58 bits IDS 335MO, Board on this, which compared to the intelligent of the 10 in	Option 1 his been designed to support continuous climb operations, overwhere in climbian of other excitors may be required to manage. The track includes the climbian (LSS) MIM, Black of Institute that the climbian of Control 1 is 14 MIM (LSS) MIM, Black of Institute that the compared to the institute certain (LSS) in long and in the climbian of the climbian o	Option in No been designed to support continuous claim operations. Option which was the continuous present of the continu	Option 3 his been designed to support continuous climit operations. Option 3 his been designed for secondary may be required to manage the row manager of Option 5 in 31.55 km DO 600MO). Board on this, the row manager of Option 5 in 31.55 km DO 600MO). Board on this, there occupied to the leader occupied control option 5 is been and in option 4 to the option 5 in 31.55 km DO 600MO). Board on this, the option of the option 5 in 31.55 km DO 600MO). Board on this, the option of the option 5 in 31.55 km DO 600MO 60	Option The his been designed to support continuous climb operations. Option The Man Service of the Man Serv
Wider Society	Capacity and resilience	leitial Options Appraisal: Qualitative	Maintaining extant procedures would maintain curren capacity however, due to the reliance on ground-base avaigational aids, reillence would be significantly affected, following their removal in December 2022.	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which subsequently leads to more predictable fillight paths and fewer delay (both in air or on the ground). The reduction of the reliance on outstated ground based awaygational aid will significantly increase operational resilience for air lines and operators.	The introduction of PBM routes is expected to deliver benefits by increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delay (both in air or on the ground). The reduction of the reliance on outdated ground based anxigational add will significantly increase operational resilience for airlines and operators.	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which subsequently leads to more productable flight paths and fewer dealsy lobth in air on the ground. The reduction of the relance on outdated ground based navigational aids will significantly increase operational resilience for airlines and operators.	The introduction of PBN routes is expected to deliver benefits by increasing singuace capacity which subsequently leads to more predictable fillight paths and fewer delay (both in air on the ground). The reduction of the reliance on outdated ground based avaignational aids will spifficantly increase operational resilience for air lines and operators.	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delay (both in air or on the ground). The reduction of the reliance on outdated ground based marigational adds will significantly increase operational resilience for altines and operators.	The introduction of PBN routes is expected to deliver benefits by increasing air space capacity which subsequently leads to more predictable flight paths and fewer desky both in air or on the ground). The reduction of the relance on cutdated ground based cavigational aids will significantly increase operational resilience for airlines and operators.
Wider Society	Tranquility	Initial Options Appraisal: Qualifative	Laper CAP 1516. Appendix B, Para STI, change concerns are expended to consider Transpositify with specific reference to ACMBs and National Paris could consider the control of the control paris control areas have been identified for under community engagement, although no specific areas were identified by community engagement, to miscale consistent paris with the 1610 Am 1910 to miscale consistent or miscale control paris with the 1610 Am 1910 to miscale consistent or miscale control paris which the 1610 Am 1910 to miscale consistent or miscale control paris and control paris and control paris but it does overfly 1 SSI.	Option 3 Gene not energin juris ADAIIIs, historial Parts or Country Parts. However, it has been desirabled that they given overlies 2 536s, Develiging of these areas is expected to course at a higher studies on this part of the second of the second of the second of the desirable of the second of the second of the second of the second of the equal that for deep not purple year. Deliver, 100 cm of 10	Option 2 dies set or ownfire yan ADNBs, National Paris or Country Debts, Nationers, in his one inderfield that the option ownfile 2 35%, Ownfiley of these area is expected to occur at a higher state of the option opt	Opcord See set overfly and ADNBs, National Parks or Country APAS. However, it has been identified that the spoon overflex 2 SSb, Openflight of these areas is expected to occur at a higher and the spoon of the spoon of the spoon of the spoon of the spoon and the spoon of the spoon of the spoon of the spoon of the spoon and the spoon of the spoon of the spoon of the spoon of the spoon and in the spoon of the spoon of the spoon of the spoon and the spoon of the spoon of the spoon of the spoon and the spoon of the spoon of the spoon of the spoon and the spoon of the spoon of the spoon of the spoon and the spoon of the spoon of the spoon of the spoon and the spoon of the spoon of the spoon of the spoon and the spoon of the spoon of the spoon of the spoon and the spoon of the spoon of the spoon of the spoon of the spoon and the spoon of the spo	Option 4 does not overfly any ACMIN, bitscend first or County APAIL Solowers, the bose exhelled failth the liquid nor efficies 3 SSIs, Overflag of these areas is separated to count at a higher and the second option of the second option of the second option of the second option and the second option of the second option of the second option equal than the does not everify any ACMIN, full similar Parts or country Parts. Solvers, the option does every three XSIs and as such as deemed to be of dis-benefit when compared to the baseline second.	Opion of See not overfly any ADNIBs, National Price or Country Death, Servere, it has been identified that in Joing con oreflied a 350. Operflip of these area is expected to occur as a higher state of the price of the death of the price of the price of the price of the price of the read in that it does not everify any ADNIBs, National Parks or country Parks. The price does overfly any ADNIBs, National Parks or country Parks. The price of see overfly any ADNIBs, National Parks or country Parks. The price of see overfly any ADNIBs, National Parks or country Parks. The price of see overfly any ADNIBs, National Parks or country Parks. The price of see overfly any ADNIBs, National Parks or country Parks. The price of see overfly any ADNIBs, National Parks or see overfly and the price of the price of the seed of the price of the price of the price of the seed of the price of the price of the seed of the price of the price of the price of the seed of the price of the	Ocons dies ent everflie yan ADNBs, National Parks or Courty Parks, However, in his enderfield that this point onerflied a 35%, Devellijke of these area is expected to occur at a higher and the second of the second occur at a higher and the second occur at a second occur at
Wider Society	Biodiversity	latibi Options Appraisal: Qualitative	studyins conducted by the change gooner shows the three existing personalized and \$15 coverly on fig. within the viction of designated sites in term of Biodiversity sud as \$95,0,500, BioMiss Steer and \$500, in Cold operation, arrantal are flying above \$1,000 when partial govern these lasts, but to the effects of minary states of the state of the state of the state of single government of the state of the state of the air goal state of the state of the air goal state of the state of the state of the state of the state of the state of the state of state of the state of state of state	The change power has conducted with its understand where the disciplated store are pared 3TA. 4th is stage, there is expected to be no fauge filed by a defect botherwise of those store. From an air contract, the pared of the pared of the pared of the pared of the pared of the pared of the pared of the pared of the pared of and move, there is unlikely to be an impact on local or adult from and move, there is unlikely to be an impact on local or adult from the pared of the pared of the pared of the pared of the pared of an impact on localized the pared to the pared of the pared is pared to indicate the pared to the pared based settlements. The state of the pared based settlements are the pared of the pared based settlements. The pared based settlements are present as the pared of the pared based settlements. The pared based settlements are the pared and the ACP process by Subject Matter Experts.	The change passors has conducted work to understand where the designated time are most OM. At this stage, there is expected to his on change likely to affect bodievelow it there size. From an air consideration of the consideration of the consideration of the LOSON, Aspect CAS DisAppendix R. Pare 28 A LOSON of approach as and making, there is without to be an impact on local are quality from and making, there is without to be an impact on local are quality from the consideration of the consideration of the consideration of the and making the consideration of the	The change genome has conducted work to understand where the desciputed tisses are send SIA. At this stage, there is expected to be not being life with a sifest basherwiny. These states from an air with the send of the send of the send of the send of the send of send resident particular send of the send of the send of send resident, because of send of the send of and resident particular send of the send of the send of send resident send of the send of the send of the send of the send of the send of the send of the send of the send of the send of the send of the send of the send of the send of the send of the send of the send of the send of the send of the send of send of sen	The change general has conducted with the understand where the designated since are present off. At this tase, there is expected to be no sharp like this safett buddening in these sizes. From an air consistency of the present of the present of the present of the safety of the present of the present of the present of the and mixes, there is no shirtly to be an impact on local or quality from and mixes, there is no shirtly to be an impact on local or quality from and mixes, the present of the present of the present of the present of and mixes the shirtly mixed to the present of the present of and mixed to the change of the present of the present of mixed on the designation of the present of the present of shirtly and the present of shirtly and the present of the present of shirtly and the present of shirtly and shirtly and s	The change genore has conducted work to understand where the designated these are read With At this stage, there is expected to live on change likely to affect backwards where their is expected to live the property of the stage of the stage of the stage of the property of the stage of the stage of the stage of the and making, there is variety to be on regist on local are quality from and making, there is variety to be on regist on local are quality from the stage of the stage of the stage of the stage of the stage of the stage of the stage of the stage of the impact on localized making of the stage of the impact on localized and the impact on localized and impact on localized and i	The change general has conducted work to understand where the descipulated later an expedit SM. At this stage, form is expected to be no change like his selfect bedown by those sizes if from an air self-wide self-wide self-wide self-wide self-wide self-wide self-wide self-wide self-wide self-wide self-wide self-wide self-wide and making. But the self-wide self-wide self-wide self-wide and making self-wide
General Aviation	Access	Initial Options Appraisal: Qualitative	No change to existing airspace arrangements. GA users of STN will maintain their current level of access under extant operational arrangements.	No change to the existing airspace arrangements (within the baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing tetters of Agreement pertaining to GA access are reviewed prior to implementation to ensure their continued violiding.	No change to the existing airspace arrangements (within the baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement pertaining to GA access are reviewed prior to implementation to ensure their continued wildline.	No change to the existing airspace arrangements (within the baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VIPPs and existing Letters of Agreement pertaining to GA access are reviewed prior to implementation to ensure their continued validities.	No change to the existing airspace arrangements (within the baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement pertaining to GA access are reviewed prior to implementation to ensure their continued validities.	No change to the existing airspace arrangements (within the baseline scenario) are expected as a consequence of this AEP. However, it is recommended that all VBPs and existing tetters of Agreement pertaining to GA access are reviewed prior to implementation to ensure their continued validition.	No change to the esisting airspace arrangements (within the baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VBPs and esisting Letters of Agreement pertaining to GA access are reviewed prior to implementation to ensure their continued validition.
General Aviation / commercial airlines	Economic Impact from increased effective capacity	instal Options Appraisal: Qualifative	No increase to effective capacity surfaces for continuous of continuous conti	The introduction PRM is repreced to direct benefits by increasing representations that the second control of the process of t	The introduction FBM is expected to divide benefits by increasing appears capacity which in the will lead for one production flight appears capacity which is not will lead for one production flight expected for following common to enter the artificial control of the expected of artificial excession consists for the artificial passenger numbers and increasing creat to expect certific it is not appeared numbers and increasing creat to expect certific it is not appeared numbers and increasing create to expect certific it is not appeared numbers and increasing create to expect the certificial and increases in individual artine capacity will depend on princise control abundance and control of the certificial intervention of the certificial control abundance and control of the certificial control abundance and artificial certificial principal control abundance and artificial certificial principal control abundance and artificial certificial artificial productional principal certificial artificial productional principal certificial artificial productional principal certificial principal certificial artificial principal certificial principal	The introduction PRV is expected to dishift benefits by increasing properties of the processing acception with the north will be all on the procedurability flat expected to finditize occurrence benefit to allines by increasing the expected to follottate occurrence benefit to allines by increasing the expected processing processing processing acceptate to allines by increasing the expected processing processing acceptate to allines by increasing the expected processing acceptate to a processing acceptate processing acceptate to a pro	The introduction PRN is expected to deliver benefits by increasing respect acquary which in twell filled in one procedured ling respect acquary which in twell filled into one procedured ling respect of the foliation accounts benefit to artife by increasing the respect of all transport mements, increasing artifes it is not. procedured and introduced prop borsegar corred. It is not, procedured and introduced proposed procedured in the procedured procedured artifes using the procedured as any increase in individual artifes capacity will depend on proute commercial business carbonical sinites using being considered as procedured and procedured artifes using the procedured artifes any increase in individual artifes capacity will depend on proute counterface the procedured artifes are seen considered as procedured and procedured artifes are seen and the procedured and procedured artifes are commented business and procedured artifes are commented business and procedured artifes are commented and procedured and procedured artifes are procedured by the procedured artifes are procedured and procedured artifes are procedured by the procedured artifes are procedured artifes are procedured artifes are procedured artifes are procedured artifes are procedured artifes are procedured artifes are proce	The introduction FBM is expected in deliver benefits by increasing project against part has used listed on one production flight respected to flight the separated for benefits and the separated for benefits and the separated for benefits and increasing complete and promoting, increasing programs and increasing complete and promoting programs and increasing complete and increasing complete and promoting complete and increasing and increasing and the own procedure as any increase in indebtdual artine capacity will depend on princrea commercial business carbinations. It is not proportionate for control and increasing and increasing and increasing an indeption of the control and increasing an indeption of the control and increasing an indeption of the control and increasing an indeption of the complete and in a control and	The introduction PRV is expected to district benefits by increasing private agreement to the row of late for mere production flight respected to floating accept the private p
General Aviation / commercial atriines	Fuel burn	ivitial Options Appraisal: Osal frative	the estimity TIM prescribers of not dispert continued to the operations. From the special continued to be present due to selectical ATC intervention and periods of feeled fact to statical ATC intervention and periods. Present due to statical ATC intervention and approach phase (and periods of feeled fact) and the statical ATC intervention and approach phase (and periods of feeled feel	Option 6 does apport continuous climb operations, meaning that water who wide the travel to level of the unit of the posture, reflexing the overall amount of fine bours. There is no requirement with the conducted in Stage 1. The CePTURE process to assurify fine form, the will be conducted in Stage 1. The CePTURE process to assurify fine form, the will be conducted in Stage 1. The certification of the stage 1. The center of the stage 1 the conducted in Stage 1. The center of the stage 1 the sta	Option 2 Sees support continuous client to perations, meaning that a count would not be regarded to be end off and appealuse, reclanging the overall amount of the burst. There is no requirement within Seaze 2 of the CAPSIS process to quantify find on, the still like conducted in Suga 3. Therefore, on earlies a companion, the logic paying sin state the school ender the count level, the level is born. Will support in state the school ender the count level, the level is born. Will to the baseline countrie, Option 2 in larger and at this strage; it such that the countries of the co	Option 3 diese support continuums diem dependent, meeting batte unter word in deer deel nicht der der deel nicht der der deel nicht deel deel deel deel deel deel deel dee	Option 4 dees support continuous claim discentification, meaning that is contributed in least of fairning discentification control fairning discentification for least fairning discentification of the desired fairning desired fairning discentification of the desired fairning desired fairning discentification of the desired fairning desired fairnin	Special Sees support continuous client in generating, meaning that it is consistent to leave of their generating which one between the control of their generating control of the special powers of the control of their burst. Prior is no requirement within the control of their generating control of their genera	Octors files support continuous clinic discersions, meaning that in control would not be result on love off dainy departure, reducing the ceveral immediated for lovers. There is no requirement within the ceveral immediated for lovers. The reducing the certain conducted for Supp. 1 A referred is certained a compromise the large pagiled in that the observe five race is required, the less find is blown. We considered for superior for the reducing the certain pagiled in the the observe five race is required in the state of the pagiled in the certain certain control of the certain the financial register approximation of five flown, therefore, this open certain certain certain certain and the certain file of the file of the file of the well-dependent and certain certain with the certain file of the file of the file of the well-dependent certain certain certain and the certain file of the file of the file of the and the certain file of the and the and the certain file of the and the certain file of and the certain file of the and the certain file of the

Group	Impact	Level of Analysis	DO NOTHING BASELINE						
Стобр	impacc		DO NOTHING BASELINE	OPTION 0	OPTION 2	OPTION 3	OPTION 4	OPTION 5	OPTION 6
Commercial airlines	Training costs	Initial Options Appraisal: Outsitative	No additional training predicted.	It is expected that no extra Pilot/Crew training will be required to enable pilots to fly the new PBN procedures. PBN is a common	It is expected that no extra Pilot/Crew training will be required to enable pilots to fly the new PBN procedures. PBN is a common	It is expected that no extra Pilot/Crew training will be required to enable pilots to fly the new PBN procedures. PBN is a common	It is expected that no extra Pilot/Crew training will be required to enable pilots to fly the new PBN procedures. PBN is a common	It is expected that no extra Pilot/Crew training will be required to enable pilots to fly the new PBN procedures. PBN is a common	It is expected that no extra Pilot/Crew training will be required to enable pilots to fly the new PBN procedures. PBN is a common
				standard of navigation throughout the world. It is not proportionate	standard of navigation throughout the world. It is not proportionate	standard of navigation throughout the world. It is not proportionate	standard of navigation throughout the world. It is not proportionate	standard of navigation throughout the world. It is not proportionate	standard of navigation throughout the world. It is not proportionate
				for London Stansted Airport to assess on-going competency for	for London Stansted Airport to assess on-going competency for	for London Stansted Airport to assess on-going competency for	for London Stansted Airport to assess on-going competency for	for London Stansted Airport to assess on-going competency for	for London Stansted Airport to assess on-going competency for
				individual commercial airlines due to the significant variables involved e.g. number of pilots, airline policies on training (simulator	individual commercial airlines due to the significant variables involved e.g. number of pilots, airline policies on training (simulator	individual commercial airlines due to the significant variables involved e.g. number of pilots, airline policies on training (simulator	individual commercial airlines due to the significant variables involved e.g. number of pilots, airline policies on training (simulator	individual commercial airlines due to the significant variables involved e.g. number of pilots, airline policies on training (simulator	Individual commercial airlines due to the significant variables involved e.g. number of pilots, airline policies on training (simulator
				versus live flight training), fleet types, and variations in on-board	versus live flight training), fleet types, and variations in on-board	versus live flight training), fleet types, and variations in on-board	versus live flight training), fleet types, and variations in on-board	versus live flight training), fleet types, and variations in on-board	versus live flight training), fleet types, and variations in on-board
				equipment etc.					
Commercial airlines	Other costs	Initial Options Appraisal:	It is not proportionate for STN to assess potential other	Other costs to commercial airlines may include undates to Flight	Other costs to commercial airlines may include undates to Flight	Other costs to commercial airlines may include undates to Flight	Other costs to commercial airlines may include undates to Flight	Other costs to commercial airlines may include updates to Flight	Other costs to commercial airlines may include undates to Flight
		Qualitative	costs for commercial airlines - there may be costs	Management Systems (FMS), navigation databases and operating					
			associated with maintaining legacy systems to continue flying conventional navigation but there are	procedures, increased pilot hire costs versus training etc. It is not proportionate for STN to assess the 'other costs' to commercial	procedures, increased pilot hire costs versus training etc. It is not proportionate for STN to assess the 'other costs' to commercial	procedures, increased pilot hire costs versus training etc. It is not proportionate for STN to assess the 'other costs' to commercial	procedures, increased pilot hire costs versus training etc. It is not proportionate for STN to assess the 'other costs' to commercial	procedures, increased pilot hire costs versus training etc. It is not proportionate for STN to assess the 'other costs' to commercial	procedures, increased pilot hire costs versus training etc. It is not proportionate for STN to assess the 'other costs' to commercial
			too many variables (e.g., aircraft types, on-board	airlines of flying PBN procedures due to significant variables; some	airlines of flying PBN procedures due to significant variables; some	airlines of flying PBN procedures due to significant variables; some	airlines of flying PBN procedures due to significant variables; some	airlines of flying PBN procedures due to significant variables; some	airlines of flying PBN procedures due to significant variables; some
			system capability etc.) to consider these effectively.	airlines may aiready be 'PBN ready' whereas others may not.	airlines may already be 'PBN ready' whereas others may not.	airlines may already be 'PBN ready' whereas others may not.	airlines may already be 'PBN ready' whereas others may not.	airlines may already be 'PBN ready' whereas others may not.	airlines may already be 'PBN ready' whereas others may not.
Airport / Air	Infrastructure costs	Initial Options Appraisal:	No additional infrastructure is required at STN to	All options relate to the implementation of PBN and no additional	All options relate to the implementation of PBN and no additional	All options relate to the implementation of PBN and no additional	All options relate to the implementation of PBN and no additional	All options relate to the implementation of PBN and no additional	All options relate to the implementation of PBN and no additional
navigation service		Qualitative	maintain extant conventional procedures however	infrastructure is required. The introduction of PBN reduces the	infrastructure is required. The introduction of PBN reduces the	infrastructure is required. The introduction of PBN reduces the	infrastructure is required. The introduction of PBN reduces the	infrastructure is required. The introduction of PBN reduces the	infrastructure is required. The introduction of PBN reduces the
provider			maintaining access to ground-based equipment	reliance on infrastructure, in particular ground-based navigation aid:	reliance on infrastructure, in particular ground-based navigation aids	reliance on infrastructure, in particular ground-based navigation aid: are no longer needed. The foundation for PBN is RNAV or RNP:	reliance on infrastructure, in particular ground-based navigation aids	reliance on infrastructure, in particular ground-based navigation aid	reliance on infrastructure, in particular ground-based navigation aids are no longer needed. The foundation for PBN is RNAV or RNP:
			(currently operated by NERL) may be prohibitively expensive, should this commercial option be	are no longer needed. The foundation for PBN is RNAV or RNP; aircraft arriving and departing London Stansted Airport using the	are no longer needed. The foundation for PBN is RNAV or RNP; aircraft arriving and departing London Stansted Airport using the	are no longer needed. The foundation for PBN is RNAV or RNP; aircraft arriving and departing London Stansted Airport using the	are no longer needed. The foundation for PBN is RNAV or RNP; aircraft arriving and departing London Stansted Airport using the	are no longer needed. The foundation for PBN is RNAV or RNP; aircraft arriving and departing London Stansted Airport using the	are no longer needed. The foundation for PBN is RNAV or RNP; aircraft arriving and departing London Stansted Airport using the
			implemented.	proposed RNAV/RNP procedures will do so based on their	proposed RNAV/RNP procedures will do so based on their	proposed RNAV/RNP procedures will do so based on their	proposed RNAV/RNP procedures will do so based on their	proposed RNAV/RNP procedures will do so based on their	proposed RNAV/RNP procedures will do so based on their
				performance-based navigation capability.					
Airport / Air	Operational costs	Initial Options Appraisal:	No change to operational costs is attributable to	Air Traffic Control at STN is contracted out to a third-party	Air Traffic Control at STN is contracted out to a third-party	Air Traffic Control at STN is contracted out to a third-party	Air Traffic Control at STN is contracted out to a third-party	Air Traffic Control at STN is contracted out to a third-party	Air Traffic Control at STN is contracted out to a third-party
navigation service		Qualitative	maintaining the extant procedures.	organisation. This existing commercial contract between STN and	organisation. This existing commercial contract between STN and	organisation. This existing commercial contract between STN and	organisation. This existing commercial contract between STN and	organisation. This existing commercial contract between STN and	organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost. ICAO describe
provider				Itheir chosen ANSP is considered to be an ongoing cost. ICAO describe Improved Operational Efficiency, as a benefit delivered by the	their chosen ANSP is considered to be an ongoing cost. ICAO describe 'Improved Operational Efficiency' as a benefit delivered by the	their chosen ANSP is considered to be an ongoing cost. ICAO describe Improved Operational Efficiency as a benefit delivered by the	their chosen ANSP is considered to be an ongoing cost. ICAO describe 'Improved Operational Efficiency' as a benefit delivered by the	their chosen ANSP is considered to be an ongoing cost. ICAO describ 'Improved Operational Efficiency' as a benefit delivered by the	their chosen ANSP is considered to be an ongoing cost. ICAO describe Improved Operational Efficiency as a benefit delivered by the
				introduction of PBN. In general, London Stansted Airport predicts	introduction of PBN. In general, London Stansted Airport predicts	introduction of PBN. In general, London Stansted Airport predicts	introduction of PBN. In general, London Stansted Airport predicts	introduction of PBN. In general, London Stansted Airport predicts	introduction of PBN. In general, London Stansted Airport predicts
				that operational efficiency will improve and that there may be	that operational efficiency will improve and that there may be	that operational efficiency will improve and that there may be	that operational efficiency will improve and that there may be	that operational efficiency will improve and that there may be	that operational efficiency will improve and that there may be
				potential for a net reduction in operational costs.	potential for a net reduction in operational costs.	potential for a net reduction in operational costs.	potential for a net reduction in operational costs.	potential for a net reduction in operational costs.	potential for a net reduction in operational costs.
Airport / Air	Deployment costs	Initial Options Appraisal:	No Deployment costs applicable to extant procedures.	Air Traffic Control at STN is contracted out to a third-party	Air Traffic Control at STN is contracted out to a third-party	Air Traffic Control at STN is contracted out to a third-party	Air Traffic Control at STN is contracted out to a third-party	Air Traffic Control at STN is contracted out to a third-party	Air Traffic Control at STN is contracted out to a third-party
navigation service provider		Qualitative		organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an oneoine cost.	organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an oneoing cost.	organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an onzoing cost.	organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an oneoing cost.
Safety Assessment	Safety Assessment	Initial Options Appraisal: Qualitative	The baseline assumption is that current operations at STN are safe including use of the extant conventional	Possible conflict with London Luton and Cambridge traffic was identified. Procedure design and ATC tactical intervention could act	Possible conflict with London Luton and Cambridge traffic was identified. Procedure design and ATC tactical intervention could act	Possible conflict with London Luton and Cambridge traffic was identified. Procedure design and ATC tactical intervention could act	Possible conflict with London Luton and Cambridge traffic was identified. Procedure design and ATC tactical intervention could act	Possible conflict with London Luton and Cambridge traffic was identified. Procedure design and ATC tactical intervention could act	Possible conflict with London Luton and Cambridge traffic was identified. Procedure design and ATC tactical intervention could act
		Calainauve	procedures. Following the removal of ground-based	as mitigations in these instances but could increase complexity.	as mitigations in these instances but could increase complexity.	as mitigations in these instances but could increase complexity.	as mitigations in these instances but could increase complexity.	as mitigations in these instances but could increase complexity,	as mitigations in these instances but could increase complexity.
			navigational aids supporting the existing SIDs, aircraft	leading to a possible increase in ATCO workload. Leading on form	leading to a possible increase in ATCO workload. Leading on form	leading to a possible increase in ATCO workload. Leading on form	leading to a possible increase in ATCO workload. Leading on form	leading to a possible increase in ATCO workload. Leading on form	leading to a possible increase in ATCO workload. Leading on form
			departing STN would continuously require radar		this, possible unknown interaction with the wider enroute network is	this, possible unknown interaction with the wider enroute network in		s this, possible unknown interaction with the wider enroute network in	s this, possible unknown interaction with the wider enroute network is
			vectoring (should CAP1781 not be implemented), resulting in an increase in ATCO workload.	acknowledged, but at this time, this cannot be determined. At this time, there is an additional unknown hazard relating to	acknowledged, but at this time, this cannot be determined. At this time, there is an additional unknown hazard relating to	acknowledged, but at this time, this cannot be determined. At this time, there is an additional unknown hazard relating to	acknowledged, but at this time, this cannot be determined. At this time, there is an additional unknown hazard relating to	acknowledged, but at this time, this cannot be determined. At this time, there is an additional unknown hazard relating to	acknowledged, but at this time, this cannot be determined. At this time, there is an additional unknown hazard relating to
			resource management	interactions with military traffic operating in the vicinity of RAF	interactions with military traffic operating in the vicinity of RAF	interactions with military traffic operating in the vicinity of RAF	interactions with military traffic operating in the vicinity of RAF	interactions with military traffic operating in the vicinity of RAF	interactions with military traffic operating in the vicinity of RAF
				Mildenhall/RAF Lakenheath. The design process may also help to	Mildenhall/RAF Lakenheath. The design process may also help to	Mildenhall/RAF Lakenheath. The design process may also help to	Mildenhall/RAF Lakenheath. The design process may also help to	Mildenhall/RAF Lakenheath. The design process may also help to	Mildenhall/RAF Lakenheath. The design process may also help to
				mitigate this hazard to as low 'as reasonably practicable'. This is very specific to exact aircraft routing combinations. ATC tactical	mitigate this hazard to as low 'as reasonably practicable'. This is very specific to exact aircraft routing combinations. ATC tactical	mitigate this hazard to as low 'as reasonably practicable'. This is very specific to exact aircraft routing combinations. ATC tactical	mitigate this hazard to as low 'as reasonably practicable'. This is very specific to exact aircraft routing combinations. ATC tactical	mitigate this hazard to as low 'as reasonably practicable'. This is ver- specific to exact aircraft routing combinations. ATC tactical	mitigate this hazard to as low 'as reasonably practicable'. This is very specific to exact aircraft routing combinations. ATC tactical
				intervention could also be applied.					
					An additional hazard bespoke to this design envelope is containment	An additional hazard bespoke to this design envelope is containment	An additional hazard bespoke to this design envelope is containment	An additional hazard bespoke to this design envelope is containmen	An additional hazard bespoke to this design envelope is containment
				within Controlled Airspace. Although this design envelope is	within Controlled Airspace. Although this design envelope is	within Controlled Airspace. Although this design envelope is	within Controlled Airspace. Although this design envelope is	within Controlled Airspace. Although this design envelope is	within Controlled Airspace. Although this design envelope is
				contained within Controlled Airspace, some design options will soon run outside controlled airspace as they leave the designated	contained within Controlled Airspace, some design options will soon run outside controlled airspace as they leave the designated	contained within Controlled Airspace, some design options will soon run outside controlled airspace as they leave the designated	contained within Controlled Airspace, some design options will soon run outside controlled airspace as they leave the designated	contained within Controlled Airspace, some design options will soor run outside controlled airspace as they leave the designated	contained within Controlled Airspace, some design options will soon run outside controlled airspace as they leave the designated
					procedure. ATC tactical intervention or additional instructions on the	procedure. ATC tactical intervention or additional instructions on the		procedure. ATC tactical intervention or additional instructions on the	procedure. ATC tactical intervention or additional instructions on the
				AIP could act as mitigations for this.					
				In addition, it was identified that due to the dispersion of traffic departing STN, a degree of tactical intervention may be required to	In addition, it was identified that due to the dispersion of traffic departing STN, a degree of tactical intervention may be required to	In addition, it was identified that due to the dispersion of traffic departing STN, a degree of tactical intervention may be required to	In addition, it was identified that due to the dispersion of traffic departing STN, a degree of tactical intervention may be required to	In addition, it was identified that due to the dispersion of traffic departing STN, a degree of tactical intervention may be required to	In addition, it was identified that due to the dispersion of traffic departing STN, a degree of tactical intervention may be required to
				maintain safe separations standards. The design process may also	maintain safe separations standards. The design process may also	maintain safe separations standards. The design process may also	maintain safe separations standards. The design process may also	maintain safe separations standards. The design process may also	maintain safe separations standards. The design process may also
				help to mitigate this hazard to as low as is reasonably practical. This	help to mitigate this hazard to as low as is reasonably practical. This	help to mitigate this hazard to as low as is reasonably practical. This	help to mitigate this hazard to as low as is reasonably practical. This	help to mitigate this hazard to as low as is reasonably practical. This	help to mitigate this hazard to as low as is reasonably practical. This
				is very specific to exact aircraft routing combinations.	is very specific to exact aircraft routing combinations.	is very specific to exact aircraft routing combinations.	is very specific to exact aircraft routing combinations.	is very specific to exact aircraft routing combinations.	is very specific to exact aircraft routing combinations.
		Summary of Analysis	The 'Do Nothing' scenario in relation to this ACP is not a viable option as it does not provide a sustainable	When compared to the baseline scenario, Option 0 performs worse in terms of noise impact, tranquillity, greenhouse gas emissions and	When compared to the baseline scenario, Option 2 performs worse in terms of noise impact, tranquillity, greenhouse gas emissions and	When compared to the baseline scenario, Option 3 performs worse in terms of noise impact, tranquillity, greenhouse gas emissions and	When compared to the baseline scenario, Option 4 performs worse in terms of noise impact, tranquillity, greenhouse gas emissions and	When compared to the baseline scenario, Option 5 performs worse terms of pairs impact, prevenhouse was emissions and fuel burn but	 When compared to the baseline scenario, Option 6 performs worse i terms of noise impact, tranquillity, greenhouse gas emissions and
1			solution in terms of airspace modernisation and is	fuel burn but better in terms of capacity/resilience and economic	fuel burn but better in terms of capacity/resilience and economic	fuel burn but better in terms of capacity/resilience and economic	fuel burn but better in terms of capacity/resilience and economic	better in terms of capacity/resilience and economic impact of	fuel burn but better in terms of capacity/resilience and economic
			unviable following the removal of the VOR beacons in	impact of capacity. The remaining criteria are deemed to be of equal	impact of capacity. The remaining criteria are deemed to be of equal	impact of capacity. The remaining criteria are deemed to be of equal	impact of capacity. The remaining criteria are deemed to be of equal		impact of capacity. The remaining criteria are deemed to be of equal
1			December 2022, which would have a significant impact on capacity and resilience. The existing SIDs do not	benefit because there is no change when compared to today's operation. Having said that, at this time, it is not possible to fully	benefit because there is no change when compared to today's operation. Having said that, at this time, it is not possible to fully	benefit because there is no change when compared to today's operation. Having said that, at this time, it is not possible to fully	benefit because there is no change when compared to today's operation. Having said that, at this time, it is not possible to fully	because there is no change when compared to today's operation. Having said that, at this time, it is not possible to fully determine the	benefit because there is no change when compared to today's operation. Having said that, at this time, it is not possible to fully
			support continuous climb operations, which leads to a	determine the safety implications of this specific option. The change	determine the safety implications of this specific option. The change	determine the safety implications of this specific option. The change	determine the safety implications of this specific option. The change	safety implications of this specific option. The change sponsor has	determine the safety implications of this specific option. The change
			greater volume of fuel burn, emissions and noise at	sponsor has identified possible conflicts with some routes operated	sponsor has identified possible conflicts with some routes operated	sponsor has identified possible conflicts with some routes operated	sponsor has identified possible conflicts with some routes operated	identified possible conflicts with some routes operated by other	sponsor has identified possible conflicts with some routes operated
			lower levels. In terms of Tranquillity, Biodiversity, GA	by other nearby airports, but the exact nature of these conflicts is	by other nearby airports, but the exact nature of these conflicts is	by other nearby airports, but the exact nature of these conflicts is	by other nearby airports, but the exact nature of these conflicts is	nearby airports, but the exact nature of these conflicts is unclear at	by other nearby airports, but the exact nature of these conflicts is
			Access and economic impact, the 'Do Nothing baseline' provides minimal/no change to today's operations.	unclear at this stage. Further analysis and engagement is required in Stage 3/4 of the CAP 1616 process to determine this. Furthermore.	unclear at this stage. Further analysis and engagement is required in Stage 3/4 of the CAP 1616 process to determine this. Furthermore.	unclear at this stage. Further analysis and engagement is required in Stage 3/4 of the CAP 1616 process to determine this. Furthermore.	unclear at this stage. Further analysis and engagement is required in Stage 3/4 of the CAP 1616 process to determine this. Furthermore.	this stage. Further analysis and engagement is required in Stage 3/4 of the CAP 1616 process to determine this. Furthermore, this option	unclear at this stage. Further analysis and engagement is required in Stage 3/4 of the CAP 1616 process to determine this. Furthermore.
			Furthermore, there are very limited costs incurred as a	this option has been assessed as a stand-alone option rather than as	this option has been assessed as a stand-alone option rather than as	this option has been assessed as a stand-alone option rather than as	this option has been assessed as a stand-alone option rather than as	has been assessed as a stand-alone option rather than as a set of	this option has been assessed as a stand-alone option rather than as
			result of this scenario. From a safety perspective, it is		a set of design options as part of a wider system. Additional analysis	a set of design options as part of a wider system. Additional analysis	a set of design options as part of a wider system. Additional analysis	design options as part of a wider system. Additional analysis is	a set of design options as part of a wider system. Additional analysis
			assumed that current STN operations are safe. Following the removal of the VORs, it is acknowledged	is required in Stage 3 to determine the cumulative impact of this option when compared to all the other options.	is required in Stage 3 to determine the cumulative impact of this option when compared to all the other options.	is required in Stage 3 to determine the cumulative impact of this option when compared to all the other options.	is required in Stage 3 to determine the cumulative impact of this option when compared to all the other options.	required in Stage 3 to determine the cumulative impact of this option when compared to all the other options.	is required in Stage 3 to determine the cumulative impact of this option when compared to all the other options.
			Following the removal of the VORs, it is acknowledged that ATCO workload may increase due to the enduring	option when compared to all the other options. Based on performance in the IOA. Option 0 has been rejected as it	option when compared to all the other options. Based on performance in the IOA, Option 2 has been rejected as it	option when compared to all the other options. Based on performance in the IOA. Option 3 has been selected as the	option when compared to all the other options. Based on performance in the IOA. Option 4 has been deemed	when compared to all the other options. Based on performance in the IOA. Option 5 has been rejected as it	option when compared to all the other options. Based on performance in the IDA, Option 6 has been deemed
			requirement for radar vectoring.	overflies the greatest number of people and residential buildings	overflies more people and residential buildings than Options 3, 6 and	Preferred Option as it overflies the least number of people and	Acceptable as it overflies more people and residential buildings than	overflies more people and residential buildings than Options 3, 6 an	Favourable as it overflies more people and residential buildings than
				within this envelope.	4.	residential buildings when compared to the other options in this	Option 3 and 6, but fewer than the remaining options within this	4.	Option 3, but fewer than the remaining options within this envelope.
						envelope.	enverope.		
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Design Area: RWY 04 2,000ft Transitions

Design Area:	RWY 04 2,000ft Transi	tions								
Group	Impact	Level of Analysis	DO NOTHING BASELINE'	OPTION 8 (EAST)	OPTION 22 (EAST)	OPTION 9 (WEST)	OPTION 12 (WEST)	OPTION 14 (WEST)	OPTION 16 (WEST)	OPTION 17 (WEST)
Communities	Noise impact on health and quality of life	Initial Options Appraisal: Qualitative		al Option 8 is a Transition which contains an IAF to the south-east of STN at 7,000ft. This option enables a continuous descent approach a	Option 22 is a Transition which contains an IAF to the east of STN at				Option 16 is a Transition which contains an IAF to the north-west of t STN at 7,000ft. This option enables a continuous descent approach at	Option 17 is a Transition which contains an IAF to the north-west of
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		have been created by the change sponsor to provide	3.8%% (2.2 Degrees). In terms of noise impact, Option 8 overflies	3.5%% (2 Degrees). In terms of noise impact, Option 22 overflies	3.8%% (2.2 Degrees). In terms of noise impact, Option 22 overflies	4.4%% (2.5 Degrees). In terms of noise impact, Option 12 overflies	3.6%% (2.1 Degrees). In terms of noise impact, Option 14 overflies	4.1%% (2.3 Degrees). In terms of noise impact, Option 16 overflies	at 3.5%% (2 Degrees). In terms of noise impact, Option 17 overflies
			an accurate representation of what occurs in today's operation.	23,727 people and 12,651 residential buildings. When compared to the baseline scenario, this option overflies less people and fewer	27,445 people and 14,291 residential buildings. When compared to the baseline scenario, this option overflies less people and fewer	30,921 people and 14,278 residential buildings. When compared to the baseline scenario, this option overflies less people and fewer	35,030 people and 15,963 residential buildings. When compared to the baseline scenario, this option overflies more people and more	29,382 people and 13,374 residential buildings. When compared to the baseline scenario, this option overflies less people and fewer	31,449 people and 14,345 residential buildings. When compared to the baseline scenario, this option overflies less people and fewer	31,621 people and 14,539 residential buildings. When compared to the baseline scenario, this option overflies less people and fewer
			For comparison purposes within the IOA, Easterly and	residential buildings and as such is seen as beneficial.	residential buildings and as such is seen as beneficial.	residential buildings and as such is seen as beneficial.	residential buildings and as such is seen as a dis-benefit.	residential buildings and as such is seen as beneficial.	residential buildings and as such is seen as beneficial.	residential buildings and as such is seen as beneficial.
			Central B options are compared to a defined Easterly							
			Modal Track. The East Modal track overflies 34,093 people and 15,298 residential buildings.							
			Westerly options are compared to a 'Modal Modal'							
			track, which combines two lateral modal tracks from the West and South West. The 'Modal Modal' track							
			overflies 32,158 people and 15,379 residential							
Communities	Air Quality	Initial Options Appraisal:	buildings. No change to air quality is predicted in maintaining	As per the baseline scenario, Option 8 does not overfly any AQMAs.	As per the baseline scenario, Option 22 does not overfly any AQMAs.	In terms of air quality, Option 9 does not overfly any AQMAs.	In terms of air quality, Option 12 does not overfly any AQMAs.	In terms of air quality, Option 14 does not overfly any AQMAs.	In terms of air quality, Option 16 does not overfly any AQMAs.	In terms of air quality, Option 17 does not overfly any AQMAs.
		Qualitative	baseline conditions, the majority of the existing procedures involve overflight above 1,000ft, other		Furthermore, as per CAP 1616 Para B74, due to the effects of mixing and dispersion, emissions from aircraft above 1.000 feet are unlikely		Furthermore, as per CAP 1616 Para B74, due to the effects of mixing and dispersion, emissions from aircraft above 1,000 feet are unlikely	Furthermore, as per CAP 1616 Para B74, due to the effects of mixing and dispersion, emissions from aircraft above 1.000 feet are unlikely	Furthermore, as per CAP 1616 Para B74, due to the effects of mixing and dispersion, emissions from aircraft above 1,000 feet are unlikely	Furthermore, as per CAP 1616 Para B74, due to the effects of mixin and dispersion, emissions from aircraft above 1.000 feet are unlikely
			than the areas in the immediate vicinity of STN. For	to have a significant impact on local air quality. Based on the above,	to have a significant impact on local air quality. Based on the above,	to have a significant impact on local air quality. Based on the above,	to have a significant impact on local air quality. Based on the above,	to have a significant impact on local air quality. Based on the above,	to have a significant impact on local air quality. Based on the above,	
			and stable flight profile during the final approach	when compared to the baseline scenario, Option 8 is seen to be of equal benefit.	when compared to the baseline scenario, Option 22 is seen to be of equal benefit.	when compared to the baseline scenario, Option 9 is seen as beneficial.	when compared to the baseline scenario, Option 12 is seen as beneficial.	when compared to the baseline scenario, Option 14 is seen as beneficial.	when compared to the baseline scenario, Option 16 is seen as beneficial.	beneficial.
			phases of flight. In terms of AQMAs, both the Easterly modal track doe	ess essential and the second essential and the						
			not overfly any AQMAs. However, the 'Modal Modal' tracks each overfly 1 AQMA each. Overflight of these							
			AQMAs occurs when the aircraft is above 1,000ft.							
Wider Society	Greenhouse Gas impact	Initial Options Appraisal: Qualitative	Current arrival operations do not support continuous descent approaches. It must be noted that the exact	Option 8 has been designed to support a continuous descent approach, however, an element of radar vectoring may be required	Option 22 has been designed to support a continuous descent approach, however, an element of radar vectoring may be required	Option 9 has been designed to support a continuous descent approach, however, an element of radar vectoring may be required	Option 12 has been designed to support a continuous descent approach, however, an element of radar vectoring may be required	Option 14 has been designed to support a continuous descent approach, however, an element of radar vectoring may be required	Option 16 has been designed to support a continuous descent approach, however, an element of radar vectoring may be required	Option 17 has been designed to support a continuous descent
		Quanturive	track length flown by aircraft may vary slightly due to	to manage aircraft separation distances. The track mileage of Option	to manage aircraft separation distances. The track mileage of Option	to manage aircraft separation distances. The track mileage of Option	to manage aircraft separation distances. The track mileage of Option	to manage aircraft separation distances. The track mileage of Option	to manage aircraft separation distances. The track mileage of Option	to manage aircraft separation distances. The track mileage of Option
			the nature of radar vectoring. Existing procedures do not support optimal aircraft performance and	baseline scenario, Option 8 is shorter and is therefore expected to	22 is 57.89km (31.26NM). Based on this, when compared to the baseline scenario, Option 22 is longer and is therefore expected to	9 is 54.39km (29.37NM). Based on this, when compared to the baseline scenario, Option 9 is shorter and is therefore expected to	12 is 48.72km (26.31NM). Based on this, when compared to the baseline scenario, Option 12 is shorter and is therefore expected to	14 is 56.11km (30.30NM). Based on this, when compared to the baseline scenario, Option 14 is shorter and is therefore expected to	baseline scenario, Option 16 is shorter and is therefore expected to	
			therefore are predicted to have a greater environmental impact compared to the proposed		emit more greenhouse gases. As such, this is seen as a dis-benefit. More in-depth analysis at Stage 3 is required to confirm the exact	emit less greenhouse gases. As such, this is seen as beneficial. More in-depth analysis at Stage 3 is required to confirm the exact volumes	emit less greenhouse gases. As such, this is seen as beneficial. More in-depth analysis at Stage 3 is required to confirm the exact volumes	emit less greenhouse gases. As such, this is seen as beneficial. More in-depth analysis at Stage 3 is required to confirm the exact volumes	emit less greenhouse gases. As such, this is seen as beneficial. More in-depth analysis at Stage 3 is required to confirm the exact volumes	emit more greenhouse gases. As such, this is seen as a dis-benefit. More in-depth analysis at Stage 3 is required to confirm the exact
			options. Within Stage 2 of the CAP 1616 process, there is no requirement for a change sponsor to conduct	of greenhouse gases released.	volumes of greenhouse gases released.	of greenhouse gases released.	of greenhouse gases released.	of greenhouse gases released.	of greenhouse gases released.	volumes of greenhouse gases released.
			quantitative fuel burn or emissions analysis; this will be covered in Stage 3. In order to make a comparison							
			track milage is used based on the theory that the	*						
			shorter the track mileage, the less greenhouse gases are emitted.							
			With regards to the modal track lengths, the easterly modal track is 54.55km (29.45NM) long. Meanwhile,							
			the 'Modal Modal' track is 57.27km (30.92NM) in							
			lengu).							
Wider Society	Capacity and resilience	Initial Options Appraisal:	Maintaining existing procedures would maintain	The introduction of PBN routes is expected to deliver benefits by	The introduction of PBN routes is expected to deliver benefits by	The introduction of PBN routes is expected to deliver benefits by	The introduction of PBN routes is expected to deliver benefits by	The introduction of PBN routes is expected to deliver benefits by	The introduction of PBN routes is expected to deliver benefits by	The introduction of PBN routes is expected to deliver benefits by
		Qualitative	current capacity and resilience.	increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delays (both in air or on the	increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delays (both in air or on the	increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delays (both in air or on the	increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delays (both in air or on the	increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delays (both in air or on the	increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delays (both in air or on the	increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delays (both in air or on the
				ground). The reduction of the reliance on outdated ground based	ground). The reduction of the reliance on outdated ground based	ground). The reduction of the reliance on outdated ground based	ground). The reduction of the reliance on outdated ground based	ground). The reduction of the reliance on outdated ground based	ground). The reduction of the reliance on outdated ground based	ground). The reduction of the reliance on outdated ground based
				navigational aids will significantly increase operational resilience for airlines and operators.	navigational aids will significantly increase operational resilience for airlines and operators.	navigational aids will significantly increase operational resilience for airlines and operators.	navigational aids will significantly increase operational resilience for airlines and operators.	navigational aids will significantly increase operational resilience for airlines and operators.	navigational aids will significantly increase operational resilience for airlines and operators.	navigational aids will significantly increase operational resilience fo airlines and operators.
Wider Society	Tranquillity	Initial Options Appraisal:	As per CAP 1616, Appendix B, Para B76, change	Option 8 does not overfly any AONBs or National Parks. However, it	Option 22 does not overfly any AONBs or National Parks. However, it	Option 9 does not overfly any AONBs, National Parks or Country	Option 12 does not overfly any AONBs, National Parks or Country	Option 14 does not overfly any AONBs, National Parks or Country	Option 16 does not overfly any AONBs, National Parks or Country	Option 17 does not overfly any AONBs, National Parks or Country
, , , , ,		Qualitative	sponsors are required to consider Tranquillity with specific reference to AONBs and National Parks only,	has been identified that this option overflies 1 Country Park and 9 SSSIs. Overflight of these areas is expected to occur at a higher	has been identified that this option overflies 2 Country Park and 7 SSSIs. Overflight of these areas is expected to occur at a higher	Parks. However, it has been identified that this option overflies 10 SSSIs. Overflight of these areas is expected to occur at a higher	Parks. However, it has been identified that this option overflies 9 SSSIs. Overflight of these areas is expected to occur at a higher	Parks. However, it has been identified that this option overflies 11 SSSIs. Overflight of these areas is expected to occur at a higher	Parks. However, it has been identified that this option overflies 10 SSSIs. Overflight of these areas is expected to occur at a higher	Parks. However, it has been identified that this option overflies 9 SSSIs. Overflight of these areas is expected to occur at a higher
			unless other areas have been identified through	altitude, minimising the impact of aircraft noise and emissions on	altitude, minimising the impact of aircraft noise and emissions on	altitude, minimising the impact of aircraft noise and emissions on	altitude, minimising the impact of aircraft noise and emissions on	altitude, minimising the impact of aircraft noise and emissions on	altitude, minimising the impact of aircraft noise and emissions on	altitude, minimising the impact of aircraft noise and emissions on
			community engagement. Although no specific areas were identified by community engagement, the	these areas. When compared to the baseline scenario, Option 8 is equal in that it does not overfly any AONBs or National Parks. This	these areas. When compared to the baseline scenario, Option 22 is equal in that it does not overfly any AONBs or National Parks. This	these areas. When compared to the baseline scenario, Option 9 is equal in that it does not overfly any AONBs, National Parks or	these areas. When compared to the baseline scenario, Option 12 is equal in that it does not overfly any AONBs, National Parks or	these areas. When compared to the baseline scenario, Option 14 is equal in that it does not overfly any AONBs, National Parks or	these areas. When compared to the baseline scenario, Option 16 is equal in that it does not overfly any AONBs, National Parks or	these areas. When compared to the baseline scenario, Option 17 is equal in that it does not overfly any AONBs, National Parks or
			change sponsor has decided to include Internationally (SACs, SPAs, RAMSAR) and Nationally (SSSIs and	 option overflies less Country Parks and SSSIs in comparison to the baseline scenario. As such, this option is deemed to be beneficial. 	option overflies fewer Country Parks and SSSIs in comparison to the baseline scenario. As such, this option is deemed to be beneficial.	Country Parks. This option overflies less SSSIs in comparison to the baseline scenario. As such, this option is deemed to be beneficial.	Country Parks. This option overflies fewer SSSIs in comparison to the baseline scenario. As such, this option is deemed to be beneficial.	 Country Parks. This option overflies fewer SSSIs in comparison to the baseline scenario. As such, this option is deemed to be beneficial. 	Country Parks. This option overflies less SSSIs in comparison to the baseline scenario. As such, this option is deemed to be beneficial.	Country Parks. This option overflies less SSSIs in comparison to the baseline scenario. As such, this option is deemed to be beneficial.
			National Nature Reserves) designated habitats and Country Parks. Neither of the modal tracks produced							, , , , , , , , , , , , , , , , , , , ,
			overfly any AONBs and National Parks. However, the							
			Easterly modal track overflies 5 Country Parks and 11 SSSIs while the 'Modal Modal' track overflies 1							
			Country Park and 14 SSSIs.							
Wider Society	Biodiversity	Initial Options Appraisal: Qualitative	Analysis conducted by the change sponsor shows that the existing operations at STN overfly or fly within the	designated sites are around STN. At this stage, there is expected to		The change sponsor has conducted work to understand where the designated sites are around STN. At this stage, there is expected to	The change sponsor has conducted work to understand where the designated sites are around STN. At this stage, there is expected to	The change sponsor has conducted work to understand where the designated sites are around STN. At this stage, there is expected to		designated sites are around STN. At this stage, there is expected to
			vicinity of Internationally (SACs, SPAs, RAMSAR) or Nationally (SSSIs, National Nature Reserves)	be no change likely to affect biodiversity at these sites. From an air quality perspective, these sites will be overflown at altitudes above	be no change likely to affect biodiversity at these sites. From an air quality perspective, these sites will be overflown at altitudes above		be no change likely to affect biodiversity at these sites. From an air quality perspective, these sites will be overflown at altitudes above	be no change likely to affect biodiversity at these sites. From an air quality perspective, these sites will be overflown at altitudes above	be no change likely to affect biodiversity at these sites. From an air quality perspective, these sites will be overflown at altitudes above	
			designated sites. In today's operation, aircraft are flying above 1,000ft when passing over these sites.	1,000ft. As per CAP 1616 Appendix B, Para B74, because of dispersion	n 1,000ft. As per CAP 1616 Appendix B, Para B74, because of dispersion	1,000ft. As per CAP 1616 Appendix B, Para B74, because of dispersion	n 1,000ft. As per CAP 1616 Appendix B, Para B74, because of dispersio	1,000ft. As per CAP 1616 Appendix B, Para B74, because of dispersion	1,000ft. As per CAP 1616 Appendix B, Para B74, because of dispersion	1,000ft. As per CAP 1616 Appendix B, Para B74, because of dispersi
			Due to the effects of mixing and dispersion, there is a	aircraft above 1,000ft. Furthermore, CAP 1616, Appendix B, Para B80	aircraft above 1,000ft. Furthermore, CAP 1616, Appendix B, Para B80	aircraft above 1,000ft. Furthermore, CAP 1616, Appendix B, Para B80	aircraft above 1,000ft. Furthermore, CAP 1616, Appendix B, Para B80	aircraft above 1,000ft. Furthermore, CAP 1616, Appendix B, Para B80	aircraft above 1,000ft. Furthermore, CAP 1616, Appendix B, Para B80	aircraft above 1,000ft. Furthermore, CAP 1616, Appendix B, Para B8
			limited impact, in terms of the air quality specific to these sites. STN acknowledges that there are sites	states that in general, airspace change proposal will not have an impact on biodiversity as they do not involve ground-based	states that in general, airspace change proposal will not have an impact on biodiversity as they do not involve ground-based	states that in general, airspace change proposal will not have an impact on biodiversity as they do not involve ground-based	states that in general, airspace change proposal will not have an impact on biodiversity as they do not involve ground-based	states that in general, airspace change proposal will not have an impact on biodiversity as they do not involve ground-based	impact on biodiversity as they do not involve ground-based	states that in general, airspace change proposal will not have an impact on biodiversity as they do not involve ground-based
			within the vicinity of the airport; any potential impact will be assessed by further analysis in Stage 3 of the		infrastructure. That said, STN acknowledges that any potential impact to the designated sites around STN will be assessed in Stage 3	infrastructure. That said, STN acknowledges that any potential impact to the designated sites around STN will be assessed in Stage:	infrastructure. That said, STN acknowledges that any potential impact to the designated sites around STN will be assessed in Stage.	infrastructure. That said, STN acknowledges that any potential impact to the designated sites around STN will be assessed in Stage:	infrastructure. That said, STN acknowledges that any potential impact to the designated sites around STN will be assessed in Stage 3	infrastructure. That said, STN acknowledges that any potential impact to the designated sites around STN will be assessed in Stage
			ACP process by Subject Matter Experts.	of the ACP process by Subject Matter Experts.	of the ACP process by Subject Matter Experts.	of the ACP process by Subject Matter Experts.	of the ACP process by Subject Matter Experts.	of the ACP process by Subject Matter Experts.	of the ACP process by Subject Matter Experts.	of the ACP process by Subject Matter Experts.
General Aviation	Access	Initial Options Appraisal:	No change to exicting aircnare arrangements. GA user	No change to the existing aircnare arrangements (within the baseline)	e No change to the existing airspace arrangements (within the baseline	No change to the existing aircnare arrangements (within the hasaline	a No change to the existing aircnare arrangements (within the haceling	a No change to the existing aircnare arrangements (within the baseline	No change to the existing aircrare arrangements (within the baseline	No change to the existing aircnare arrangements (within the haseling
		Qualitative	of STN will maintain their current level of access under	scenario) are expected as a consequence of this ACP. However, it is	scenario) are expected as a consequence of this ACP. However, it is	scenario) are expected as a consequence of this ACP. However, it is	scenario) are expected as a consequence of this ACP. However, it is	scenario) are expected as a consequence of this ACP. However, it is	scenario) are expected as a consequence of this ACP. However, it is	scenario) are expected as a consequence of this ACP. However, it is
			extant operational arrangements.	recommended that all VRPs and existing Letters of Agreement pertaining to GA access are reviewed prior to implementation to	recommended that all VRPs and existing Letters of Agreement pertaining to GA access are reviewed prior to implementation to	recommended that all VRPs and existing Letters of Agreement pertaining to GA access are reviewed prior to implementation to	recommended that all VRPs and existing Letters of Agreement pertaining to GA access are reviewed prior to implementation to	recommended that all VRPs and existing Letters of Agreement pertaining to GA access are reviewed prior to implementation to	recommended that all VRPs and existing Letters of Agreement pertaining to GA access are reviewed prior to implementation to	recommended that all VRPs and existing Letters of Agreement pertaining to GA access are reviewed prior to implementation to
				ensure their continued validity.	ensure their continued validity.	ensure their continued validity.	ensure their continued validity.	ensure their continued validity.	ensure their continued validity.	ensure their continued validity.
General Aviation / commercial airlines	Economic impact from increased effective capacity	Initial Options Appraisal: Qualitative	No increase to effective capacity anticipated for continued use of existing procedures, therefore no	The introduction PBN is expected to deliver benefits by increasing airspace capacity which in turn will lead to more predictable flight	The introduction PBN is expected to deliver benefits by increasing airspace capacity which in turn will lead to more predictable flight	The introduction PBN is expected to deliver benefits by increasing airspace capacity which in turn will lead to more predictable flight	The introduction PBN is expected to deliver benefits by increasing airspace capacity which in turn will lead to more predictable flight	The introduction PBN is expected to deliver benefits by increasing airspace capacity which in turn will lead to more predictable flight	The introduction PBN is expected to deliver benefits by increasing airspace capacity which in turn will lead to more predictable flight	The introduction PBN is expected to deliver benefits by increasing airspace capacity which in turn will lead to more predictable flight
commercial allithes		- Carrier C	economic benefit for GA/airlines.	paths and fewer delays (both in the air or on the ground). This is	paths and fewer delays (both in the air or on the ground). This is	paths and fewer delays (both in the air or on the ground). This is	paths and fewer delays (both in the air or on the ground). This is	paths and fewer delays (both in the air or on the ground). This is	paths and fewer delays (both in the air or on the ground). This is	paths and fewer delays (both in the air or on the ground). This is
				expected to facilitate economic benefit to airlines by increasing the frequency of air transport movements, increasing passenger	expected to facilitate economic benefit to airlines by increasing the frequency of air transport movements, increasing passenger	expected to facilitate economic benefit to airlines by increasing the frequency of air transport movements, increasing passenger	expected to facilitate economic benefit to airlines by increasing the frequency of air transport movements, increasing passenger	expected to facilitate economic benefit to airlines by increasing the frequency of air transport movements, increasing passenger	expected to facilitate economic benefit to airlines by increasing the frequency of air transport movements, increasing passenger	expected to facilitate economic benefit to airlines by increasing the frequency of air transport movements, increasing passenger
				numbers and increasing cargo tonnage carried. It is not proportionate for STN to predict the precise economic benefit to	numbers and increasing cargo tonnage carried. It is not proportionate for STN to predict the precise economic benefit to	numbers and increasing cargo tonnage carried. It is not proportionate for STN to predict the precise economic benefit to	numbers and increasing cargo tonnage carried. It is not proportionate for STN to predict the precise economic benefit to	numbers and increasing cargo tonnage carried. It is not proportionate for STN to predict the precise economic benefit to	numbers and increasing cargo tonnage carried. It is not proportionate for STN to predict the precise economic benefit to	numbers and increasing cargo tonnage carried. It is not proportionate for STN to predict the precise economic benefit to
				commercial airlines using the new procedures as any increase in individual airline capacity will depend on private commercial	commercial airlines using the new procedures as any increase in individual airline capacity will depend on private commercial	commercial airlines using the new procedures as any increase in individual airline capacity will depend on private commercial	commercial airlines using the new procedures as any increase in individual airline capacity will depend on private commercial	commercial airlines using the new procedures as any increase in individual airline capacity will depend on private commercial	commercial airlines using the new procedures as any increase in individual airline capacity will depend on private commercial	commercial airlines using the new procedures as any increase in individual airline capacity will depend on private commercial
				business characteristics. It is not proportionate for STN to assess the economic benefit to the GA community however they are expected	business characteristics. It is not proportionate for STN to assess the economic benefit to the GA community however they are expected	business characteristics. It is not proportionate for STN to assess the economic benefit to the GA community however they are expected	business characteristics. It is not proportionate for STN to assess the	business characteristics. It is not proportionate for STN to assess the economic benefit to the GA community however they are expected	business characteristics. It is not proportionate for STN to assess the economic benefit to the GA community however they are expected	business characteristics. It is not proportionate for STN to assess th economic benefit to the GA community however they are expecte-
				to benefit from increased predictability of commercial airline	to benefit from increased predictability of commercial airline	to benefit from increased predictability of commercial airline	to benefit from increased predictability of commercial airline	to benefit from increased predictability of commercial airline	to benefit from increased predictability of commercial airline	to benefit from increased predictability of commercial airline
				movements which is expected to lead to reduced on-ground and in- air delays for all users.	movements which is expected to lead to reduced on-ground and in- air delays for all users.	movements which is expected to lead to reduced on-ground and in- air delays for all users.	movements which is expected to lead to reduced on-ground and in- air delays for all users.	movements which is expected to lead to reduced on-ground and in- air delays for all users.	movements which is expected to lead to reduced on-ground and in- air delays for all users.	movements which is expected to lead to reduced on-ground and ir air delays for all users.
						<u> </u>			<u> </u>	
General Aviation / commercial airlines	Fuel burn	Initial Options Appraisal: Qualitative	The existing STN procedures do not support		Option 22 supports a continuous descent approach, meaning that aircraft would not be required to level off during arrival, reducing the	Option 9 supports a continuous descent approach, meaning that	Option 12 supports a continuous descent approach, meaning that		Option 16 supports a continuous descent approach, meaning that aircraft would not be required to level off during arrival, reducing the	Option 17 does support continuous descent operations, meaning
			to be greater due to tactical ATC intervention and	overall amount of fuel burnt. There is no requirement within Stage 2	overall amount of fuel burnt. There is no requirement within Stage 2	overall amount of fuel burnt. There is no requirement within Stage 2	overall amount of fuel burnt. There is no requirement within Stage 2	overall amount of fuel burnt. There is no requirement within Stage 2	overall amount of fuel burnt. There is no requirement within Stage 2	reducing the overall amount of fuel burnt. There is no requirement
			periods of level flight in the approach phase. In the case of the Easterly modal track, this is 54.55km	in Stage 3. Therefore, to enable a comparison, the logic applied is	of the CAP1616 process to quantify fuel burn, this will be conducted in Stage 3. Therefore, to enable a comparison, the logic applied is	in Stage 3. Therefore, to enable a comparison, the logic applied is	of the CAP1616 process to quantify fuel burn, this will be conducted in Stage 3. Therefore, to enable a comparison, the logic applied is	in Stage 3. Therefore, to enable a comparison, the logic applied is	of the CAP1616 process to quantify fuel burn, this will be conducted in Stage 3. Therefore, to enable a comparison, the logic applied is	be conducted in Stage 3. Therefore, to enable a comparison, the
			(29.45NM) long. Meanwhile, the 'Modal Modal' track is 57.27km (30.92NM) in length.	to this option, it is 54.39km (29.37NM) long. When compared to the	that the shorter the track length, the less fuel is burnt. With regards to this option, it is 57.89km (31.26NM) long. When compared to the	to this option, it is 54.39km (29.37NM) long. When compared to the	that the shorter the track length, the less fuel is burnt. With regards to this option, it is 48.72km (26.31NM) long. When compared to the	to this option, it is 56.11km (30.30NM) long. When compared to the	that the shorter the track length, the less fuel is burnt. With regards to this option, it is 50.84km (27.45NM) long. When compared to the	burnt. With regards to this option, it is 57.52km (31.06NM) long.
				baseline scenario, Option 8 is shorter and at this stage it assumed will require a smaller amount of fuel burn, therefore, this option is	baseline scenario, Option 22 is longer and at this stage it assumed will require a greater amount of fuel burn, therefore, this option is of	baseline scenario, Option 9 is shorter and at this stage it assumed will require a smaller amount of fuel burn, therefore, this option is	baseline scenario, Option 12 is shorter and at this stage it assumed will require a smaller amount of fuel burn, therefore, this option is	baseline scenario, Option 14 is shorter and at this stage it assumed will require a smaller amount of fuel burn, therefore, this option is	baseline scenario, Option 16 is shorter and at this stage it assumed will require a smaller amount of fuel burn, therefore, this option is	When compared to the baseline scenario, Option 17 is longer and this stage it assumed will require a greater amount of fuel burn,
				beneficial in terms of fuel burn. More in-depth analysis will be carried out in Stage 3 to confirm.	dis-benefit in terms of fuel burn. More in-depth analysis will be carried out in Stage 3 to confirm.	beneficial in terms of fuel burn. More in-depth analysis will be carried out in Stage 3 to confirm.	beneficial in terms of fuel burn. More in-depth analysis will be carried out in Stage 3 to confirm.	beneficial in terms of fuel burn. More in-depth analysis will be carried out in Stage 3 to confirm.	beneficial in terms of fuel burn. More in-depth analysis will be carried out in Stage 3 to confirm.	therefore, this option is of dis-benefit in terms of fuel burn. More is depth analysis will be carried out in Stage 3 to confirm.
				Connect out in stage 5 to confirm.	Out in stage 3 to confirm.	Committee of the contract of t	connect out in stage 5 to confirm.	Out in Stage 3 to COMMIN.	out in stage 5 to continu.	Supply directions will be confied out in stage 3 to confirm.
Commercial airlines	Training costs	Initial Options Appraisal:	No additional training predicted.	It is expected that no extra Pilot/Crew training will be required to	It is expected that no extra Pilot/Crew training will be required to	It is expected that no extra Pilot/Crew training will be required to	It is expected that no extra Pilot/Crew training will be required to	It is expected that no extra Pilot/Crew training will be required to	It is expected that no extra Pilot/Crew training will be required to	It is expected that no extra Pilot/Crew training will be required to
		Qualitative		enable pilots to fly the new PBN procedures. PBN is a common standard of navigation throughout the world. It is not proportionate	enable pilots to fly the new PBN procedures. PBN is a common standard of navigation throughout the world. It is not proportionate	enable pilots to fly the new PBN procedures. PBN is a common standard of navigation throughout the world. It is not proportionate	enable pilots to fly the new PBN procedures. PBN is a common	enable pilots to fly the new PBN procedures. PBN is a common standard of navigation throughout the world. It is not proportionate	enable pilots to fly the new PBN procedures. PBN is a common standard of navigation throughout the world. It is not proportionate	enable pilots to fly the new PBN procedures. PBN is a common standard of navigation throughout the world. It is not proportional
				for STN to assess on-going competency for individual commercial airlines due to the significant variables involved e.g. number of	for STN to assess on-going competency for individual commercial airlines due to the significant variables involved e.g. number of	for STN to assess on-going competency for individual commercial airlines due to the significant variables involved e.g. number of	for STN to assess on-going competency for individual commercial airlines due to the significant variables involved e.g. number of	for STN to assess on-going competency for individual commercial airlines due to the significant variables involved e.g. number of	for London Stansted Airport to assess on-going competency for individual commercial airlines due to the significant variables	for STN to assess on-going competency for individual commercial airlines due to the significant variables involved e.g. number of
				pilots, airline policies on training (simulator versus live flight training), fleet types, and variations in on-board equipment etc.	pilots, airline policies on training (simulator versus live flight training), fleet types, and variations in on-board equipment etc.	pilots, airline policies on training (simulator versus live flight training), fleet types, and variations in on-board equipment etc.	pilots, airline policies on training (simulator versus live flight training), fleet types, and variations in on-board equipment etc.	pilots, airline policies on training (simulator versus live flight training), fleet types, and variations in on-board equipment etc.	involved e.g. number of pilots, airline policies on training (simulator	pilots, airline policies on training (simulator versus live flight
				in on-board equipment etc.	on-ooard equipment etc.	, reex types, and variations in on-board equipment etc.	neer types, and variations in on-board equipment etc.	sommels, neer types, and variations in on-board equipment etc.	versus live flight training), fleet types, and variations in on-board equipment etc.	training), fleet types, and variations in on-board equipment etc.
Commercial airlines	Other costs	Initial Options Appraisal:	It is not proportionate for STN to assess potential	Other costs to commercial airlines may include updates to Flight	Other costs to commercial airlines may include updates to Flight	Other costs to commercial airlines may include updates to Flight	Other costs to commercial airlines may include updates to Flight	Other costs to commercial airlines may include updates to Flight	Other costs to commercial airlines may include updates to Flight	Other costs to commercial airlines may include updates to Flight
		Qualitative	other costs for commercial airlines - there may be costs associated with maintaining legacy systems to	Management Systems (FMS), navigation databases and operating procedures, increased pilot hire costs versus training etc. It is not	Management Systems (FMS), navigation databases and operating procedures, increased pilot hire costs versus training etc. It is not	Management Systems (FMS), navigation databases and operating procedures, increased pilot hire costs versus training etc. It is not	Management Systems (FMS), navigation databases and operating procedures, increased pilot hire costs versus training etc. It is not	Management Systems (FMS), navigation databases and operating procedures, increased pilot hire costs versus training etc. It is not	Management Systems (FMS), navigation databases and operating procedures, increased pilot hire costs versus training etc. It is not	Management Systems (FMS), navigation databases and operating procedures, increased pilot hire costs versus training etc. It is not
			continue flying conventional navigation but there are too many variables (e.g., aircraft types, on-board		proportionate for STN to assess the 'other costs' to commercial airlines of flying PBN procedures due to significant variables; some	proportionate for STN to assess the 'other costs' to commercial airlines of flying PBN procedures due to significant variables; some	proportionate for STN to assess the 'other costs' to commercial airlines of flying PBN procedures due to significant variables; some	proportionate for STN to assess the 'other costs' to commercial airlines of flying PBN procedures due to significant variables; some	proportionate for STN to assess the 'other costs' to commercial airlines of flying PBN procedures due to significant variables; some	proportionate for STN to assess the 'other costs' to commercial airlines of flying PBN procedures due to significant variables; some
			system capability etc.) to consider these effectively.	airlines of liying PBN procedures due to significant variables; some airlines may already be 'PBN ready' whereas others may not.	airlines or nying PBN procedures due to significant variables; some airlines may already be 'PBN ready' whereas others may not.	airlines or riving PBN procedures due to significant variables; some airlines may already be 'PBN ready' whereas others may not.	airlines of liying PSN procedures due to significant variables; some airlines may already be 'PBN ready' whereas others may not.	airlines of Hying PBN procedures due to significant variables; some airlines may already be 'PBN ready' whereas others may not.	airlines of nying PBN procedures due to significant variables; some airlines may already be 'PBN ready' whereas others may not.	airlines of nying PBN procedures due to significant variables; some airlines may already be 'PBN ready' whereas others may not.
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Group	Impact	Level of Analysis	DO NOTHING BASELINE'							
Airport / Air navigation service provider		initial Options Appraisal: Qualitative		All options relate to the implementation of PBN and no additional infrastructure is required. The introduction of PBN reduces the relation confirmation that the relation confirmation that properties are no longer needed. The floundation for PBN 16MN or SINP-address and actival straining and departing 3TN using the proposed RMAV/RMP process of the properties will do so based on their performance-based nivingstion capability.	OPTION 22 (EAST) All options relate to the implementation of PBN and no additional infrastructure is required. The introduction of PBN reduces the retriance on infrastructure, in particular ground-based navigation aids are no longer needed. The foundation for PBN is NRW or RNF; according to the proposed RWA/VPNP proposed to the result of the result of the proposed RWA/VPNP proposed to the result of the re	infrastructure is required. The introduction of PBN reduces the	infrastructure is required. The introduction of PBN reduces the reliance on infrastructure, in particular ground-based navigation aids are no longer needed. The foundation for PBN is RRAV or RNP; aircraft arriving and departing STN using the proposed RNAV/RNP	All options relate to the implementation of PBN and no additional infrastructure is required. The introduction of PBN reduces the relation of noting the reduces the relation of ninfrastructure, in particular ground-based navigation aids are no longer needed. The foundation for PBN is RBN or RBN; asknown and reduced the foundation for PBN is RBN or RBN; asknown and reduced the reduced to the reduced	OFFION 16 (WEST) All options relate to the implementation of PBN and no additional infrastructure is required. The introduction of PBN reduces the relation of relative the relation of relation o	OPTION 17 (WEST) All ligitions relate to the implementation of PBN and no additional infrastructure is required. The introduction of PBN reduces the relance on infrastructure, in particular ground-based analysistion aids are no longer needed. The foundation for PBN is RNAV or RNP, and arcraft arriving and departing STN using the proposed RNAV/RNP procedures will do so based on their performance-based navigation capability.
Airport / Air navigation service provider	Operational costs	Initial Options Appraisal: Qualitative	No change to operational costs is attributable to maintaining the existing procedures.	Air Taffic Control at STN is contracted out to a third-party organisation. This esting commercial control between STN and their choice MXSP is considered to be an ongoing cost. ICAO describe Improved operational Efficiency 3r. a benefit delivered by the introduction of PBIA in general, STN predicts that operational efficiency will improve and that there may be potential for a net reduction in operational costs.	Air Taffic Control at STN is contracted out to a third-party organisation. This essiting commercial control between STN and their chosen AKSP is considered to be an ongoing cost. IGAO describle "improved operational Efficiency" as benefit delivered by the introduction of PRIx in general, STN predicts that operational efficiency will improve and that there may be potential for a net reduction in operational costs.	Air Traffic Centrol at STN is contracted out to a third-party organisation. This esting commercial contract between STN and their chosen AKSP is considered to be an ongoing cost. ICAD describle "Improved Operational Efficiency" as a benefit delivered by the introduction of PBN. In general, STN predicts that operational efficiency will improve and that there may be potential for a net reduction in operational costs.	Air Traffic Control at STN is contracted out to a third-pairty organisation. This esting commercial contract between STN and their chosen AKSP is considered to be an ongoing cost. ICAD describle "Improved Operational Efficiency" as a benefit delivered by the introduction of PBN. In general, STN predicts that operational efficiency will improve and that there may be potential for a net reduction in operational costs.	Air Taffic Centrol at STN is contracted out to a third-party organisation. This esting commercial contract between STN and their chosen AKSP is considered to be an ongoing cost. ICAO describe "Improved Operational Efficiency" as a benefit delivered by the introduction of PBN. In general, STN predicts that operational efficiency will improve and that there may be potential for a net reduction in operational costs.	Air Traffic Control at STN is contracted out to a third-jurity organisation. This existing commercial contract between STN and their chosen AKSP is considered to be an ongoing cost. ICAD describe Improved Operational Efficiency as a benefit delivered by the introduction of PBIs in general, STN predicts that operational efficiency will improve and that there may be potential for a net reduction in operational costs.	Air Taffic Control at STM is contracted out to a third-party organisation. This existing commercial contract between STM and their chosen AMSP is considered to be an ongoing cost. ICAO describe "Improved Operational Efficiency" as benefit delivered by the introduction of PBM. In general, STM predicts that operational efficiency will improve and that there may be potential for a net reduction in operational costs.
Airport / Air navigation service provider	Deployment costs	Initial Options Appraisal: Qualitative	No Deployment costs applicable to extant procedures	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.
Safety Assessment	Safety Assessment	initial Options Appraisal: Qualitative		Possible conflict with STN proposed SIDs. Given this, there is a potential for a loss of horizontal and/or vertical separation requiring ATC tactical intervention, causing an increase in ATCO workload. The design process itself is also a mitigation in this instance as procedures could be designed with the appropriate horizontal/vertical separation standards.	possible conflict with STN proposed SIDs. Given this, there is a potential for a loss of horizontal and/or vertical separation requiring ATC lactical intervention, causing an increase in ATCD workload. The design process itself is also amilgation in this instance as procedures could be designed with the appropriate horizontal/vertical separation standards.	Possible conflict with STN proposed SIDs. Given this there is a potential for a loss of horizontal and/or vertical separation requiring ATC tactical intervention, causing an increase in ATCO workload. The design process itself is also a miligation in this instance as procedures could be designed with the appropriate horizontal/vertical separation standards.	Possible conflict with STN proposed SIDs. Given this, there is a potential for a loss of horizontal and/or vertical separation requiring ATC tactical intervention, causing an increase in ATCO workload. The design process itself is also a mitigation in this instance as procedures could be designed with the appropriate horizontal/vertical separation standards.	Possible conflict with STN proposed STDs. Given this, there is a potential for a loss of horizontal and/or vertical separation requiring ATC tactical intervention, causing an increase in ATCD workload. The design process itself is also a mitigation in this instance as procedures could be designed with the appropriate horizontal/vertical separation standards.	Possible conflict with STN proposed STD. Given this, there is a potential for a loss of horizontal and/or vertical separation requiring ATC tactical intervention, causing an increase in ATCD workload. The dreign process itself is also a mitigation in this instance as procedures could be designed with the appropriate horizontal/vertical separation standards.	Possible conflict with STN proposed SIDs. Given this, there is a potential for a loss of horizontal and/or vertical separation requiring ATC tactical intervention, causing an increase in ATCD workfload. The design process itself is also a mitigation in this instance as procedures could be designed with the appropriate horizontal/vertical separation standards.
			a vable option as it does not provide a sustainable solution in terms of airraper emoderisation and is unvaisable following the removal of the VOR beacons in Centenber 2022, which would have a significant impact on capacity and resilience. The existing arrival arrangements do not support continuous descent operations, which leads to a greater volume of fuel to provide the provided of the provide	In terms of notes impact, greenhouse gas emissions, tranquillin, he but, capacity/relience and economic impact of capacity. The remaining criteria are deemed to be of equal benefit because there is not change when compared to today's operation. Having said that its time, it is not possible to fully determine the safety implications of this specific option. The change shome has identified become the safety of the specific option. The change shome has identified become the safety of the specific option. The change shome has deminded and under the capacity of the capacity of the specific option and past of a wide system. Addination analysis is required in Stage 3 to determine the cumulative impact of this option when compared to all the other options. Based on performance in the ICAD, Option 8 has been selected as the Preferred Option with the 2 DODE ICAT of merchange. When the CAP is the safe is the CAP is the other options.	terms of noise impact, tranquillits, capacity/esilence and economic impact of capacity. The remaining reflate are deemed to be of equal benefit because there is no change when compared to today's operation. Having said that, at this time, it is not possible to fully determine the safety implications of this specific option. The change sponsor has identified possible conflicts with other STM proposed departure options but the each rature of these conflicts is unclear at this stage. Further analysis and engagement is required in Stage 3/4 of the CAP SIGS process to determine this. Furthermore, this option has been assessed as a stand-alone option rather than as a six of design options, as part of a wider system. Additional analysis is	In terms of noise impact, air quality, greenhouse gas emissions, tranquillity, fuel bour, quachty/resilience and economic impact of capacity. The remaining criteria are deemed to be of equal benefit because there is no change when compared to today's operation. Having said that, at this time, it is not possible to fully determine saidly implications of this specific option. The change sporses has identified possible conflicts with other STN proposed departure options but the east cat nature of these conflicts is unclear at this stage. Further analysis and engagement is required in Stage 3/4 of the CAP 1051 proposts to determine this. Furthermore, this point has been assessed as a stand-alone option rather than as a set of design options a part of awder system. Additional analysis is required in Stage 3 to determine the cumulative impact of this option when compared to all the other options.	In terms of noise impact, air quality, greenhouse gas emissions, tranquillity, fuel box, quackly/resiliens and economic impact of capacity. The remaining criteria are deemed to be of equal benefit because there is no change when compared to today's operation. Having said that, at this time, it is not possible to fully determine has identified possible conflicts with other STN proposed departure options but the exact activative of these conflicts is unclear at this stage. Further analysis and engagement is required in Stage 34 of the CAP 1515 proposes to determine this. Furthermore, this position has been assessed as a stand-alone option rather than as a set of design options a part of a wider system. Additional analysis is required in Stage 31 to determine the cumulative impact of this proposed to all the other options. Based on performance in the IOA, Option 12 has been rejected as batted operation. Stage 3 to determine the cumulative impact of this part the 2,000 West enveloped to all the other options.	When compared to the baseline scenario, Option 14 performs better in terms of noise impact, air quality, precisione special serious, stranguillay, fuel burn, capacity/fersilience and economic impact of capacity. The remaining criteria are deemed to be of equal benefit because there is no change when compared to today's operation. I straining said that, at this time, it is no possible to fally determine the safety implications of this specific option. The change sponsor has insentified possible so conflicts with other 57% proposed departure options but the exact nature of these conflicts in unclear at this stage. Further analysis and engagement or required in Stage 34% of the CVP 1016 process to determine this. Furthermore, this option has been assessed as stand-alone option rather than as a set of design options ap ant of a wider system. Additional analysis is required in Stage 31% to determine the cumulative impact of this option when compared to all the other option. Been rejected as start also option when compared to all the other option. Set the 2000 West of the compared to all the other option. Set the start the 2,000 West one-loop in the combination overfles more opened analysis is corresponding option for farmway 22, in total Option 5, and 37, but less than the other corresponding options within this design envelope (2,000ft WEST).	When compared to the baseline scenario, Option 15 performs better in terms of note impact, sir quality, presembuse gas emissions, tranquillity, fuel burn, capacity/fersilience and economic impact of capacity. The remaining criteria are deemed to be of equal better because there is no change when compared to today's operation. Having said that, at this time, it is not possible to fully determine the safety implications of this specific option. The change sponsor has identified possible conflicts with other 5TN proposed departure options but the each nature of these conflicts in under a this statestified possible to said the statestified possible said and the said statestified possible of this determine the statestified possible of the determine option. The change sponsor has destined possible said to the said statestified possible of the determine option trater than as a set of the CP 2016 process to determine this. Furthermore, this option has been assessed as a stand-alone option rather than as a set of design options as part of a wider system. Additional analysis is required in Stage 3 to determine the countilative impact of this option when compared to all the other option. Sentence of the compared to all the other option. Sentence of the compared to all the other option. Sentence of the compared to all the other option. Sentence of the compared to all the other option. Sentence of the compared to all the other option. Sentence of the compared to all the other option. Sentence of the compared to all the other option. Sentence of the compared to all the other option. Sentence of the other option.	When compared to the baseline scenario, Option 17 performs worse in terms of greenbouse gas emissions and feel burn but better in terms of noise impact, air quality, tranquillity, capacity/resilience and economic impact of capacity. The remaining criteria are deemed to be of equal benefit because there is no change when compared to the of equal benefit because there is no change when compared to fully determine the safety implications of this specific option. The change spossors has identified possible conflicts with other STN proposed departure options but the exact nature of these conflicts is unclear at this state. It is not said to such as the safety of the conflict with other STN proposed departure options but the exact nature of these conflicts is to such as the safe properties of the safe safe safe safe safe safe safe saf

Colour Key	Description
Preferred Option(s)	When compared to the baseline, there is a clear and obvious benefit. This option is viewed as more favourable than the other within the design envelope and as such is the preferred option within the design envelope.
Favourable	When compared to the baseline, there is a clear and obvious benefit.
Acceptable	When compared to the baseline, there is an equal benefit.
Rejected	When compared to the baseline, there is a clear and obvious dis-benefit. As such, these options are rejected.
Baseline/Previously Rejected	Option included for completeness but, in the case of previously rejected options, not subject to IOA.

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Design Area: RWY 04 2,500ft Transitions

Design Area:	RWY 04 2,500ft Transi	itions									
Group	Impact	Level of Analysis	DO NOTHING BASELINE	OPTION 1 (EAST)	OPTION 10 (EAST)	OPTION 19 (EAST)	OPTION 20 (EAST)	OPTION 21 (EAST)	OPTION 14 (WEST)	OPTION 16 (WEST)	OPTION 28 (CENTRAL)
Communities	Noise impact on health and	Initial Options Appraisal:	The 'Do Nothing baseline' for arrivals consists of	Option 1 is a Transition which contains an IAF to the south-east of	Option 10 is a Transition which contains an IAF to the south-east of	Option 19 is a Transition which contains an IAF to the south-east of	Option 20 is a Transition which contains an IAF to the south-east of	Option 21 is a Transition which contains an IAF to the east of STN at	Option 14 is a Transition which contains an IAF to the north-west of	Option 16 is a Transition which contains an IAF to the north-west of	Option 2B is a Transition which contains an IAF approximately
	quality of life	Qualitative	Modal tracks that have been generated. These modal	STN at 7,000ft. This option enables a continuous descent operations at 2,8% (2,2 Degrees). In terms of noise impact. Option 1 quarties	STN at 7,000ft. This option enables a continuous descent operation at 2,8% (2,2 Degrees). In terms of poise impact. Option 10 quarfiles	s STN at 7,000ft. This option enables a continuous descent operation at 2.4% (1.95 Degrees). In terms of poise impact. Option 19 quarties	s STN at 7,000ft. This option enables a continuous descent operation at 3.3% (1.9 Degrees). In terms of noise impact, Option 20 overflies	5 7,000ft. This option enables a continuous descent operations at 3% (1.7 Decrees). In terms of poise impact. Option 21 quarties 24.170	STN at 7,000ft. This option enables a continuous descent operation:	s STN at 7,000ft. This option enables a continuous descent operations at 3.5% (2 Degrees). In terms of noise impact, Option 16 overflies	overhead STN at 7,000ft. This option enables a continuous descent operations at 3.4% (2 Degrees). In terms of noise impact, Option 2B
			provide an accurate representation of what occurs in	21,033 people and 10,169 residential buildings. When compared to	14,121 people and 7,078 residential buildings. When compared to	20,144 people and 9,773 residential buildings. When compared to	20,480people and 9,914 residential buildings. When compared to	people and 11,202 residential buildings. When compared to the	28,635 people and 13,381 residential buildings. When compared to	31,915 people and 15,197 residential buildings. When compared to	overflies 26,150 people and 12,171 residential buildings. When
			today's operation.	the baseline scenario, this option overflies less people and residential buildings and as such is seen as beneficial.	the baseline scenario, this option overflies less people and residential buildings and as such is seen as beneficial.	the baseline scenario, this option overflies less people and residential buildings and as such is seen as beneficial.	the baseline scenario, this option overflies less people and residential buildings and as such is seen as beneficial.	baseline scenario, this option overflies less people and residential buildings and as such is seen as beneficial.	the baseline scenario, this option overflies less people and residential buildings and as such is seen as beneficial.	the baseline scenario, this option overflies less people and residential buildings and as such is seen as beneficial.	compared to the baseline scenario, this option overflies less people and residential buildings and as such is seen as beneficial.
			For comparison purposes within the IOA, Easterly and	residential bundings and as such is seen as beneficial.	residential dulidings and as such is seen as delicitical.	residential dululings and as such is seen as denericial.	residential buildings and as such is seen as beneficial.	buildings and as such is seen as deficition.	residential buildings and as such is seen as denericial.	residential buildings and as such is seen as dehencial.	and residential buildings and as such is seen as deherical.
			Central B options are compared to a defined Easterly								
			Modal Track. The East Modal track overflies 34,093 people and 15,298 residential buildings.								
			Westerly and Central A options are compared to a 'Modal Modal' track, which combines two lateral								
			modal tracks from the West and South West. The								
			'Modal Modal' track overflies 32,158 people and 15,379 residential buildings.								
			15,379 residential buildings.								
Communities	Air Quality	Initial Options Appraisal:	No change to air quality is predicted in maintaining	In terms of air quality. Option 1 overflies 1 AOMA. Furthermore, as	In terms of air quality. Option 10 overflies 1 AQMA. Furthermore, a	In terms of air quality. Option 19 overflies 1 AOMA. Furthermore, a	s In terms of air quality. Option 20 overflies 1 AQMA. Furthermore, a	In terms of air quality, Option 21 overflies 1 AQMA. Furthermore, as	As per the baseline scenario, Option 14 overflies 1 AQMA.	As per the baseline scenario, Option 16 overflies 1 AQMA.	In terms of air quality, Option 2B overflies 1 AQMA. Furthermore, a
	,	Qualitative	baseline conditions, the majority of the extant	per CAP 1616 Para B74, due to the effects of mixing and dispersion,	per CAP 1616 Para B74, due to the effects of mixing and dispersion,	per CAP 1616 Para B74, due to the effects of mixing and dispersion	per CAP 1616 Para B74, due to the effects of mixing and dispersion,	per CAP 1616 Para B74, due to the effects of mixing and dispersion,	Furthermore, as per CAP 1616 Para B74, due to the effects of mixing	Furthermore, as per CAP 1616 Para B74, due to the effects of mixing	per CAP 1616 Para B74, due to the effects of mixing and dispersion
			procedures involves overflight above 1,000ft, other than the areas in the immediate vicinity of STN. For	emissions from aircraft above 1,000 ft are unlikely to have a significant impact on local air quality. Based on the above, when	emissions from aircraft above 1,000 ft are unlikely to have a significant impact on local air quality. Based on the above, when	emissions from aircraft above 1,000 ft are unlikely to have a significant impact on local air quality. Based on the above, when	emissions from aircraft above 1,000 ft are unlikely to have a significant impact on local air quality. Based on the above, when	emissions from aircraft above 1,000 ft are unlikely to have a significant impact on local air quality. Based on the above, when		and dispersion, emissions from aircraft above 1,000 ft are unlikely to have a significant impact on local air quality. Based on the above,	emissions from aircraft above 1,000 ft are unlikely to have a significant impact on local air quality. Based on the above, when
			safety reasons, aircraft are required to establish a	compared to the baseline scenario, Option 1 overflies more AQMAs	compared to the baseline scenario, Option 10 overflies more	compared to the baseline scenario, Option 19 overflies more	compared to the baseline scenario, Option 20 overflies more	compared to the baseline scenario, Option 21 overflies more	when compared to the baseline scenario, Option 14 is seen to be of	when compared to the baseline scenario, Option 16 is seen to be of	compared to the baseline scenario, Option 2B overflies more
			safe and stable flight profile during the final approach	and as such is seen as being of dis-benefit.	AQMAs and as such is seen as being of dis-benefit.	AQMAs and as such is seen as being of dis-benefit.	AQMAs and as such is seen as being of dis-benefit.	AQMAs and as such is seen as being of dis-benefit.	equal benefit.	equal benefit.	AQMAs and as such is seen as being of dis-benefit.
			In terms of AQMAs, both the Easterly modal track								
			does not overfly any AQMAs. However, the 'Modal								
			Modal' tracks does overfly 1 AQMA each. Overflight of these AMQAs occurs when the aircraft is above								
			1,000ft.								
Wider Society	Greenhouse Gas impact	Initial Options Appraisal:	Current arrival operations do not support continuous descent. It must be noted that the exact track length	Option 1 has been designed to support a continuous descent approach, however, an element of radar vectoring may be required	Option 10 has been designed to support a continuous descent	Option 19 has been designed to support a continuous descent	Option 20 has been designed to support a continuous descent d approach, however, an element of radar vectoring may be required	Option 21 has been designed to support a continuous descent	Option 14 has been designed to support a continuous descent	Option 16 has been designed to support a continuous descent approach, however, an element of radar vectoring may be required	Option 2B has been designed to support a continuous descent approach, however, an element of radar vectoring may be required
		Quantative	flown by aircraft may vary slightly due to the nature	to manage aircraft separation distances. The track mileage of	to manage aircraft separation distances. The track mileage of	to manage aircraft separation distances. The track mileage of	to manage aircraft separation distances. The track mileage of	to manage aircraft separation distances. The track mileage of	to manage aircraft separation distances. The track mileage of	to manage aircraft separation distances. The track mileage of	to manage aircraft separation distances. The track mileage of
			of radar vectoring. Existing procedures do not	Option 1 is 52.98km (28.61NM). Based on this, when compared to	Option 10 is 53.37km (28.82NM). Based on this, when compared to	Option 19 is 57.28km (30.93NM). Based on this, when compared to	Option 20 is 58.30km (31.48NM). Based on this, when compared to	Option 21 is 62.07km (33.51NM). Based on this, when compared to	Option 14 is 61.86km (33.40NM). Based on this, when compared to	Option 16 is 56.34km (30.42NM). Based on this, when compared to	Option 2B is 56.78km (30.66NM). Based on this, when compared to
			support optimal aircraft performance and therefore are predicted to have a greater environmental impact	the baseline scenario, Option 1 is shorter and is therefore expected to emit less greenhouse gases. As such, this is seen as beneficial.	the baseline scenario, Option 10 is shorter and is therefore expected to emit less greenhouse gases. As such, this is seen as	the baseline scenario, Option 19 is longer and is therefore expected to emit more greenhouse gases. As such, this is seen as a dis-	the baseline scenario, Option 20 is longer and is therefore expected to emit more greenhouse gases. As such, this is seen as a dis-	the baseline scenario, Option 21 is longer and is therefore expected to emit more greenhouse gases. As such, this is seen as a dis-		the baseline scenario, Option 16 is longer and is therefore expected to emit more greenhouse gases. As such, this is seen as a dis-	the baseline scenario, Option 2B is longer and is therefore expected to emit more greenhouse gases. As such, this is seen as a dis-
				More in-depth analysis at Stage 3 is required to confirm the exact	beneficial. More in-depth analysis at Stage 3 is required to confirm	benefit. More in-depth analysis at Stage 3 is required to confirm th	benefit. More in-depth analysis at Stage 3 is required to confirm the	benefit. More in-depth analysis at Stage 3 is required to confirm the		benefit. More in-depth analysis at Stage 3 is required to confirm the	benefit. More in-depth analysis at Stage 3 is required to confirm th
			CAP 1616 process, there is no requirement for a change sponsor to conduct quantitative fuel burn or	volume of greenhouse gases released.	the exact volume of greenhouse gases released.	exact volume of greenhouse gases released.	exact volume of greenhouse gases released.	exact volume of greenhouse gases released.	exact volume of greenhouse gases released.	exact volume of greenhouse gases released.	exact volume of greenhouse gases released.
			emissions analysis. This will be covered in Stage 3. In								
			order to make a comparison, track milage is used								
			based on the theory that the shorter the track mileage, the less greenhouse gases are emitted.	I					I		
			With regards to the modal track lengths, the easterly								
			modal track is 54.55km (29.45NM) long. Meanwhile, the 'Modal Modal' track is 57.27km (30.92NM) in	I					I		
			length.								
				I					I		
Wider Society	Capacity and resilience	Initial Options Appraisal:	Maintaining existing procedures would maintain	The introduction of PBN routes is expected to deliver benefits by	The introduction of PBN routes is expected to deliver benefits by	The introduction of PBN routes is expected to deliver benefits by	The introduction of PBN routes is expected to deliver benefits by	The introduction of PBN routes is expected to deliver benefits by	The introduction of PBN routes is expected to deliver benefits by	The introduction of PBN routes is expected to deliver benefits by	The introduction of PBN routes is expected to deliver benefits by
		Qualitative	current capacity and resilience.	increasing airspace capacity which subsequently leads to more	increasing airspace capacity which subsequently leads to more	increasing airspace capacity which subsequently leads to more	increasing airspace capacity which subsequently leads to more	increasing airspace capacity which subsequently leads to more	increasing airspace capacity which subsequently leads to more	increasing airspace capacity which subsequently leads to more	increasing airspace capacity which subsequently leads to more
				predictable flight paths and fewer delays (both in air or on the ground). The reduction of the reliance on outdated ground based	predictable flight paths and fewer delays (both in air or on the ground). The reduction of the reliance on outdated ground based	predictable flight paths and fewer delays (both in air or on the ground). The reduction of the reliance on outdated ground based	predictable flight paths and fewer delays (both in air or on the ground). The reduction of the reliance on outdated ground based	predictable flight paths and fewer delays (both in air or on the ground). The reduction of the reliance on outdated ground based	predictable flight paths and fewer delays (both in air or on the ground). The reduction of the reliance on outdated ground based	predictable flight paths and fewer delays (both in air or on the ground). The reduction of the reliance on outdated ground based	predictable flight paths and fewer delays (both in air or on the ground). The reduction of the reliance on outdated ground based
				navigational aids will significantly increase operational resilience for	navigational aids will significantly increase operational resilience for	navigational aids will significantly increase operational resilience for	navigational aids will significantly increase operational resilience for	navigational aids will significantly increase operational resilience for	navigational aids will significantly increase operational resilience for	navigational aids will significantly increase operational resilience for	navigational aids will significantly increase operational resilience for
				airlines and operators.	airlines and operators.	airlines and operators.	airlines and operators.	airlines and operators.	airlines and operators.	airlines and operators.	airlines and operators.
Wider Society	Tranquillity	Initial Options Appraisal:	As per CAP 1616, Appendix B, Para B76, change	Option 1 does not overfly any AONBs or National Parks. However it			Option 20 does not overfly any AONBs or National Parks. However,			Option 16 does not overfly any AONBs or National Parks. However,	Option 2B does not overfly any AONBs or National Parks. However,
		Qualitative	sponsors are required to consider Tranquillity with	has been identified that this option overflies 1 Country Park and 3	it has been identified that this option overflies 1 Country Park and 4	it has been identified that this option overflies 1 Country Park and	it has been identified that this option overflies 1 Country Park and 3	it has been identified that this option overflies 2 Country Parks and	it has been identified that this option overflies 1 Country Park and	it has been identified that this option overflies 1 Country Park and 8	it has been identified that this option overflies 2 Country Parks and
			specific reference to AONBs and National Parks only, unless other areas have been identified through	SSSIs. Overflight of these areas is expected to occur at a higher altitude, minimising the impact of aircraft noise and emissions on	SSSIs. Overflight of these areas is expected to occur at a higher altitude, minimising the impact of aircraft noise and emissions on	SSSIs. Overflight of these areas is expected to occur at a higher altitude, minimising the impact of aircraft noise and emissions on	SSSIs. Overflight of these areas is expected to occur at a higher altitude, minimising the impact of aircraft noise and emissions on	4 SSSIs. Overflight of these areas is expected to occur at a higher altitude, minimising the impact of aircraft noise and emissions on	11 SSSIs. Overflight of these areas is expected to occur at a higher altitude, minimising the impact of aircraft noise and emissions on	SSSIs. Overflight of these areas is expected to occur at a higher altitude, minimising the impact of aircraft noise and emissions on	4 SSSIs. Overflight of these areas is expected to occur at a higher altitude, minimising the impact of aircraft noise and emissions on
			community engagement. Although no specific areas	these areas. When compared to the baseline scenario, Option 1 is	these areas. When compared to the baseline scenario, Option 10 is	these areas. When compared to the baseline scenario, Option 19 is	these areas. When compared to the baseline scenario, Option 20 is	these areas. When compared to the baseline scenario, Option 21 is	these areas. When compared to the baseline scenario, Option 14 is	these areas. When compared to the baseline scenario, Option 16 is	these areas. When compared to the baseline scenario, Option 2B is
			were identified by community engagement, the	equal in that it does not overfly any AONBs or National Parks. This	equal in that it does not overfly any AONBs or National Parks. This	equal in that it does not overfly any AONBs or National Parks. This	equal in that it does not overfly any AONBs or National Parks. This	equal in that it does not overfly any AONBs or National Parks. This	equal in that it does not overfly any AONBs or National Parks. This	equal in that it does not overfly any AONBs or National Parks. This	equal in that it does not overfly any AONBs or National Parks. This
			change sponsor has decided to include Internationally (SACs. SPAs. RAMSAR) and Nationally	option overflies fewer Country Parks and SSSIs when compared to the baseline scenario. As such, this option is deemed to be	option overflies fewer Country Parks and SSSIs compared to the baseline scenario. As such, this option is deemed to be beneficial.	option overflies fewer Country Parks and SSSIs compared to the baseline scenario. As such, this option is deemed to be beneficial.	option overflies fewer Country Parks and SSSIs compared to the baseline scenario. As such, this option is deemed to be beneficial.	option overflies fewer Country Parks and SSSIs compared to the baseline scenario. As such, this option is deemed to be beneficial.	option overflies overflies an equal number of Country Parks but fewer SSSIs compared to the baseline scenario. As such, this option	option overflies overflies an equal number of Country Parks but fewer SSSIs compared to the baseline scenario. As such, this option	option overflies fewer Country Parks and SSSIs compared to the baseline scenario. As such, this option is deemed to be beneficial.
			(SSSIs and National Nature Reserves) designated	beneficial.					is deemed to be beneficial.	is deemed to be beneficial.	
			habitats and Country Parks. Neither of the modal tracks produced overfly any AONBs and National								
			Parks. However, the Easterly modal track overflies 5								
			Country Parks and 11 SSSIs while the 'Modal Modal'								
			track overflies 1 Country Park and 14 SSSIs.								
Wider Society	Biodiversity	Initial Options Appraisal:	Analysis conducted by the change sponsor shows that the existing operations at STN overfly or fly	The change sponsor has conducted work to understand where the designated sites are around STN. At this stage, there is expected to			The change sponsor has conducted work to understand where the designated sites are around STN. At this stage, there is expected to			The change sponsor has conducted work to understand where the designated sites are around STN. At this stage, there is expected to	The change sponsor has conducted work to understand where the designated sites are around STN. At this stage, there is expected to
		Qualitative	within the vicinity of Internationally (SACs, SPAs,		be no change likely to affect biodiversity at these sites. From an air	be no change likely to affect biodiversity at these sites. From an air	be no change likely to affect biodiversity at these sites. From an air	be no change likely to affect biodiversity at these sites. From an air	be no change likely to affect biodiversity at these sites. From an air	be no change likely to affect biodiversity at these sites. From an air	be no change likely to affect biodiversity at these sites. From an air
			RAMSAR) or Nationally (SSSIs, National Nature	quality perspective, these sites will be overflown at altitudes above	quality perspective, these sites will be overflown at altitudes above	quality perspective, these sites will be overflown at altitudes above	quality perspective, these sites will be overflown at altitudes above	quality perspective, these sites will be overflown at altitudes above	quality perspective, these sites will be overflown at altitudes above	quality perspective, these sites will be overflown at altitudes above	quality perspective, these sites will be overflown at altitudes above
			Reserves) designated sites. In today's operation, aircraft are flying above 1,000ft when passing over	1,000ft. As per CAP 1616 Appendix B, Para B74, because of dispersion and mixing, there is unlikely to be an impact on local air	1,000ft. As per CAP 1616 Appendix B, Para B74, because of	1,000ft. As per CAP 1616 Appendix B, Para B74, because of	1,000ft. As per CAP 1616 Appendix B, Para B74, because of dispersion and mixing, there is unlikely to be an impact on local air	1,000ft. As per CAP 1616 Appendix B, Para B74, because of	1,000ft. As per CAP 1616 Appendix B, Para B74, because of	1,000ft. As per CAP 1616 Appendix B, Para B74, because of dispersion and mixing, there is unlikely to be an impact on local air	1,000ft. As per CAP 1616 Appendix B, Para B74, because of dispersion and mixing, there is unlikely to be an impact on local air
			these sites. Due to the effects of mixing and	quality from aircraft above 1,000ft. Furthermore, CAP 1616,	quality from aircraft above 1,000ft. Furthermore, CAP 1616,	quality from aircraft above 1,000ft. Furthermore, CAP 1616,	quality from aircraft above 1,000ft. Furthermore, CAP 1616,	quality from aircraft above 1,000ft. Furthermore, CAP 1616,	quality from aircraft above 1,000ft. Furthermore, CAP 1616,	quality from aircraft above 1,000ft. Furthermore, CAP 1616,	quality from aircraft above 1,000ft. Furthermore, CAP 1616,
				Appendix B, Para B80 states that in general, airspace change	Appendix B, Para B80 states that in general, airspace change	Appendix B, Para B80 states that in general, airspace change	Appendix B, Para B80 states that in general, airspace change	Appendix B, Para B80 states that in general, airspace change	Appendix B, Para B80 states that in general, airspace change	Appendix B, Para B80 states that in general, airspace change	Appendix B, Para B80 states that in general, airspace change
			air quality specific to these sites. STN acknowledges that there are sites within the vicinity of the airport;	proposal will not have an impact on biodiversity as they do not involve ground-based infrastructure. That said, STN acknowledges	proposal will not have an impact on biodiversity as they do not involve ground-based infrastructure. That said, STN acknowledges	proposal will not have an impact on biodiversity as they do not involve ground-based infrastructure. That said, STN acknowledges	proposal will not have an impact on biodiversity as they do not involve ground-based infrastructure. That said, STN acknowledges	proposal will not have an impact on biodiversity as they do not involve ground-based infrastructure. That said, STN acknowledges	proposal will not have an impact on biodiversity as they do not involve ground-based infrastructure. That said, STN acknowledges	proposal will not have an impact on biodiversity as they do not involve ground-based infrastructure. That said, STN acknowledges	proposal will not have an impact on biodiversity as they do not involve ground-based infrastructure. That said, STN acknowledges
			any potential impact will be assessed by further	that any potential impact to the designated sites around STN will be	that any potential impact to the designated sites around STN will be	that any potential impact to the designated sites around STN will be	that any potential impact to the designated sites around STN will be	that any potential impact to the designated sites around STN will be	that any potential impact to the designated sites around STN will be	that any potential impact to the designated sites around STN will be	that any potential impact to the designated sites around STN will be
			analysis in Stage 3 of the ACP process by Subject	assessed in Stage 3 of the ACP process by Subject Matter Experts.	assessed in Stage 3 of the ACP process by Subject Matter Experts.	assessed in Stage 3 of the ACP process by Subject Matter Experts.	assessed in Stage 3 of the ACP process by Subject Matter Experts.	assessed in Stage 3 of the ACP process by Subject Matter Experts.	assessed in Stage 3 of the ACP process by Subject Matter Experts.	assessed in Stage 3 of the ACP process by Subject Matter Experts.	assessed in Stage 3 of the ACP process by Subject Matter Experts.
			matter experts.								
General Aviation	Access	Initial Options Appraisal:	No change to existing airspace arrangements. GA	No change to the existing airspace arrangements (within the	No change to the existing airspace arrangements (within the	No change to the existing airspace arrangements (within the	No change to the existing airspace arrangements (within the	No change to the existing airspace arrangements (within the	No change to the existing airspace arrangements (within the	No change to the existing airspace arrangements (within the	No change to the existing airspace arrangements (within the
		Qualitative	users of STN will maintain their current level of access under extant operational arrangements.	baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of	baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of	baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of	baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of	baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of	baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of	baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of	baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of
			under extant operational arrangements.	Agreement pertaining to GA access are reviewed prior to	Agreement pertaining to GA access are reviewed prior to	Agreement pertaining to GA access are reviewed prior to	Agreement pertaining to GA access are reviewed prior to	Agreement pertaining to GA access are reviewed prior to	Agreement pertaining to GA access are reviewed prior to	Agreement pertaining to GA access are reviewed prior to	Agreement pertaining to GA access are reviewed prior to
				implementation to ensure their continued validity.	implementation to ensure their continued validity.	implementation to ensure their continued validity.	implementation to ensure their continued validity.	implementation to ensure their continued validity.	implementation to ensure their continued validity.	implementation to ensure their continued validity.	implementation to ensure their continued validity.
General Aviation /	Economic impact from	Initial Options Appraisal:	No increase to effective capacity anticipated for	The introduction PBN is expected to deliver benefits by increasing	The introduction PBN is expected to deliver benefits by increasing	The introduction PBN is expected to deliver benefits by increasing	The introduction PBN is expected to deliver benefits by increasing	The introduction PBN is expected to deliver benefits by increasing	The introduction 00M is avanated to deliver bonefits by increasing	The introduction PBN is expected to deliver benefits by increasing	The introduction PBN is expected to deliver benefits by increasing
commercial airline		Qualitative	continued use of extant procedures, therefore no	airspace capacity which in turn will lead to more predictable flight	airspace capacity which in turn will lead to more predictable flight	airspace capacity which in turn will lead to more predictable flight		airspace capacity which in turn will lead to more predictable flight	airspace capacity which in turn will lead to more predictable flight		airspace capacity which in turn will lead to more predictable flight
			economic benefit for GA/airlines.	paths and fewer delays (both in the air or on the ground). This is	paths and fewer delays (both in the air or on the ground). This is	paths and fewer delays (both in the air or on the ground). This is	paths and fewer delays (both in the air or on the ground). This is	paths and fewer delays (both in the air or on the ground). This is	paths and fewer delays (both in the air or on the ground). This is	paths and fewer delays (both in the air or on the ground). This is	paths and fewer delays (both in the air or on the ground). This is
				expected to facilitate economic benefit to airlines by increasing the frequency of air transport movements, increasing passenger	expected to facilitate economic benefit to airlines by increasing the frequency of air transport movements, increasing passenger	expected to facilitate economic benefit to airlines by increasing the frequency of air transport movements, increasing passenger	expected to facilitate economic benefit to airlines by increasing the frequency of air transport movements, increasing passenger	expected to facilitate economic benefit to airlines by increasing the frequency of air transport movements, increasing passenger	expected to facilitate economic benefit to airlines by increasing the frequency of air transport movements, increasing passenger	expected to facilitate economic benefit to airlines by increasing the frequency of air transport movements, increasing passenger	expected to facilitate economic benefit to airlines by increasing the frequency of air transport movements, increasing passenger
				numbers and increasing cargo tonnage carried. It is not	numbers and increasing cargo tonnage carried. It is not	numbers and increasing cargo tonnage carried. It is not	numbers and increasing cargo tonnage carried. It is not	numbers and increasing cargo tonnage carried. It is not	numbers and increasing cargo tonnage carried. It is not	numbers and increasing cargo tonnage carried. It is not	numbers and increasing cargo tonnage carried. It is not
				proportionate for London Stansted Airport to predict the precise economic benefit to commercial airlines using the new procedures	proportionate for London Stansted Airport to predict the precise	proportionate for London Stansted Airport to predict the precise economic benefit to commercial airlines using the new procedures	proportionate for London Stansted Airport to predict the precise	proportionate for London Stansted Airport to predict the precise economic benefit to commercial airlines using the new procedures	proportionate for London Stansted Airport to predict the precise	proportionate for London Stansted Airport to predict the precise economic benefit to commercial airlines using the new procedures	proportionate for London Stansted Airport to predict the precise economic benefit to commercial airlines using the new procedures
				as any increase in individual airline capacity will depend on private	economic benefit to commercial airlines using the new procedures as any increase in individual airline capacity will depend on private		economic benefit to commercial airlines using the new procedures as any increase in individual airline capacity will depend on private			as any increase in individual airline capacity will depend on private	as any increase in individual airline capacity will depend on private
				commercial business characteristics. It is not proportionate for	commercial business characteristics. It is not proportionate for	commercial business characteristics. It is not proportionate for	commercial business characteristics. It is not proportionate for	commercial business characteristics. It is not proportionate for	commercial business characteristics. It is not proportionate for	commercial business characteristics. It is not proportionate for	commercial business characteristics. It is not proportionate for
				London Stansted Airport to assess the economic benefit to the GA community however they are expected to benefit from increased	London Stansted Airport to assess the economic benefit to the GA community however they are expected to benefit from increased	London Stansted Airport to assess the economic benefit to the GA community however they are expected to benefit from increased	London Stansted Airport to assess the economic benefit to the GA community however they are expected to benefit from increased	London Stansted Airport to assess the economic benefit to the GA community however they are expected to benefit from increased	London Stansted Airport to assess the economic benefit to the GA	London Stansted Airport to assess the economic benefit to the GA community however they are expected to benefit from increased	London Stansted Airport to assess the economic benefit to the GA community however they are expected to benefit from increased
				predictability of commercial airline movements which is expected to	predictability of commercial airline movements which is expected to	predictability of commercial airline movements which is expected to	 predictability of commercial airline movements which is expected to 	predictability of commercial airline movements which is expected to	predictability of commercial airline movements which is expected to	predictability of commercial airline movements which is expected to	predictability of commercial airline movements which is expected t
				lead to reduced on-ground and in-air delays for all users.	lead to reduced on-ground and in-air delays for all users.	lead to reduced on-ground and in-air delays for all users.	lead to reduced on-ground and in-air delays for all users.	lead to reduced on-ground and in-air delays for all users.	lead to reduced on-ground and in-air delays for all users.	lead to reduced on-ground and in-air delays for all users.	lead to reduced on-ground and in-air delays for all users.
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General Aviation /	Fuel burn	Initial Options Appraisal:	The existing STN procedures do not support	Option 1 supports a continuous descent approach, meaning that			Option 20 does support continuous descent operations, meaning			Option 16 supports a continuous descent approach, meaning that	Option 2B supports a continuous descent approach, meaning that
commercial airline	1	Qualitative	continuous descent approaches. Fuel burn is expected to be greater due to tactical ATC	aircraft would not be required to level off during arrival, reducing the overall amount of fuel burnt. There is no requirement within	aircraft would not be required to level off during arrival, reducing the overall amount of fuel burnt. There is no requirement within	aircraft would not be required to level off during arrival, reducing the overall amount of fuel burnt. There is no requirement within	that aircraft would not be required to level off during arrival, reducing the overall amount of fuel burnt. There is no requirement	aircraft would not be required to level off during arrival, reducing the overall amount of fuel burnt. There is no requirement within	aircraft would not be required to level off during arrival, reducing the overall amount of fuel burnt. There is no requirement within	aircraft would not be required to level off during arrival, reducing the overall amount of fuel burnt. There is no requirement within	aircraft would not be required to level off during arrival, reducing the overall amount of fuel burnt. There is no requirement within
			intervention and periods of level flight in the	Stage 2 of the CAP1616 process to quantify fuel burn, this will be	Stage 2 of the CAP1616 process to quantify fuel burn, this will be	Stage 2 of the CAP1616 process to quantify fuel burn, this will be	within Stage 2 of the CAP1616 process to quantify fuel burn, this	Stage 2 of the CAP1616 process to quantify fuel burn, this will be	Stage 2 of the CAP1616 process to quantify fuel burn, this will be	Stage 2 of the CAP1616 process to quantify fuel burn, this will be	Stage 2 of the CAP1616 process to quantify fuel burn, this will be
			approach phase. In the case of the Easterly modal	conducted in Stage 3. Therefore, to enable a comparison, the logic	conducted in Stage 3. Therefore, to enable a comparison, the logic applied is that the shorter the track length, the less fuel is burnt.	conducted in Stage 3. Therefore, to enable a comparison, the logic applied is that the shorter the track length, the less fuel is burnt.	will be conducted in Stage 3. Therefore, to enable a comparison, the logic applied is that the shorter the track length, the less fuel is	conducted in Stage 3. Therefore, to enable a comparison, the logic applied is that the shorter the track length, the less fuel is burnt.	conducted in Stage 3. Therefore, to enable a comparison, the logic applied is that the shorter the track length, the less fuel is burnt.	conducted in Stage 3. Therefore, to enable a comparison, the logic applied is that the shorter the track length, the less fuel is burnt.	conducted in Stage 3. Therefore, to enable a comparison, the logic applied is that the shorter the track length, the less fuel is burnt.
			'Modal Modal' track is 57.27km (30.92NM) in Jeneth	applied is that the shorter the track length, the less fuel is burnt. With regards to this option, it is 52.98km (28.61NM) long. When	applied is that the shorter the track length, the less fuel is burnt. With regards to this option, it is 53.37km (28.82NM) long. When	With regards to this option, it is 57.28km (30.93NM) long. When	the logic applied is that the shorter the track length, the less fuel is burnt. With regards to this option, it is 58.30km (31.48NM) long.	applied is that the shorter the track length, the less fuel is burnt. With regards to this option, it is 62.07km (33.51NM) long. When	applied is that the shorter the track length, the less fuel is burnt. With regards to this option, it is 61.86km (33.40NM) long. When	applied is that the shorter the track length, the less fuel is burnt. With regards to this option, it is 56.34km (30.42NM) long. When	applied is that the shorter the track length, the less fuel is burnt. With regards to this option, it is 56.78km (30.66NM) long. When
			, , , , ,	compared to the baseline scenario, Option 1 is shorter and at this	compared to the baseline scenario, Option 10 is shorter and at this	compared to the baseline scenario, Option 19 is longer and at this	When compared to the baseline scenario, Option 20 is longer and a	t compared to the baseline scenario, Option 21 is longer and at this	compared to the baseline scenario, Option 14 is longer and at this	compared to the baseline scenario, Option 16 is longer and at this	compared to the baseline scenario, Option 2B is longer and at this
				stage it assumed will require a smaller amount of fuel burn, therefore, this option is beneficial in terms of fuel burn. More in-	stage it assumed will require a smaller amount of fuel burn, therefore, this option is beneficial in terms of fuel burn. More in-	stage it assumed will require a greater amount of fuel burn,	this stage it assumed will require a greater amount of fuel burn, therefore, this option is of dis-benefit in terms of fuel burn. More in	stage it assumed will require a greater amount of fuel burn,	stage it assumed will require a greater amount of fuel burn,	stage it assumed will require a greater amount of fuel burn, therefore, this option is of dis-benefit in terms of fuel burn. More in-	stage it assumed will require a greater amount of fuel burn, therefore, this option is of dis-benefit in terms of fuel burn. More in
				depth analysis will be carried out in Stage 3 to confirm.	depth analysis will be carried out in Stage 3 to confirm.	depth analysis will be carried out in Stage 3 to confirm.	depth analysis will be carried out in Stage 3 to confirm.	 therefore, this option is of dis-benefit in terms of fuel burn. More in- depth analysis will be carried out in Stage 3 to confirm. 	depth analysis will be carried out in Stage 3 to confirm.	 therefore, this option is of dis-benefit in terms of fuel burn. More in- depth analysis will be carried out in Stage 3 to confirm. 	therefore, this option is of dis-benefit in terms of fuel burn. More in depth analysis will be carried out in Stage 3 to confirm.
				1							
Commercial side	s Training costs	Initial Options Appraisal:	No additional training predicted.	It is expected that no extra Dilot/Cross training will be considered.	It is expected that no extra Dilet/Crow training will be seen in the	It is expected that no extra Silot/Craw training will be seen in the	It is expected that no extra Pilot/Crew training will be required to	It is expected that no extra Diot/Crow training will be sourced to	It is expected that no extra Dilot/Crew training will be considered.	It is expected that no extra Pilot/Crew training will be required to	It is expected that no extra Pilot/Crew training will be required to
Commercial ainine		Qualitative	no additional daining predicted.	enable pilots to fly the new PBN procedures. PBN is a common	enable pilots to fly the new PBN procedures. PBN is a common	enable pilots to fly the new PBN procedures. PBN is a common	enable pilots to fly the new PBN procedures. PBN is a common	enable pilots to fly the new PBN procedures. PBN is a common	enable pilots to fly the new PBN procedures. PBN is a common	enable pilots to fly the new PBN procedures. PBN is a common	enable pilots to fly the new PBN procedures. PBN is a common
				standard of navigation throughout the world. It is not proportionate	standard of navigation throughout the world. It is not proportionate	standard of navigation throughout the world. It is not proportional	e standard of navigation throughout the world. It is not proportionat	standard of navigation throughout the world. It is not proportionate	standard of navigation throughout the world. It is not proportionate	e standard of navigation throughout the world. It is not proportionate	standard of navigation throughout the world. It is not proportionat
				for STN to assess on-going competency for individual commercial airlines due to the significant variables involved e.g. number of	for STN to assess on-going competency for individual commercial airlines due to the significant variables involved e.g. number of	for STN to assess on-going competency for individual commercial airlines due to the significant variables involved e.g. number of	for STN to assess on-going competency for individual commercial airlines due to the significant variables involved e.g. number of	for STN to assess on-going competency for individual commercial airlines due to the significant variables involved e.g. number of	for STN to assess on-going competency for individual commercial airlines due to the significant variables involved e.g. number of	for STN to assess on-going competency for individual commercial airlines due to the significant variables involved e.g. number of	for STN to assess on-going competency for individual commercial airlines due to the significant variables involved e.g. number of
				pilots, airline policies on training (simulator versus live flight	pilots, airline policies on training (simulator versus live flight	pilots, airline policies on training (simulator versus live flight	pilots, airline policies on training (simulator versus live flight	pilots, airline policies on training (simulator versus live flight	pilots, airline policies on training (simulator versus live flight	pilots, airline policies on training (simulator versus live flight	pilots, airline policies on training (simulator versus live flight
				training), fleet types, and variations in on-board equipment etc.	training), fleet types, and variations in on-board equipment etc.	training), fleet types, and variations in on-board equipment etc.	training), fleet types, and variations in on-board equipment etc.	training), fleet types, and variations in on-board equipment etc.	training), fleet types, and variations in on-board equipment etc.	training), fleet types, and variations in on-board equipment etc.	training), fleet types, and variations in on-board equipment etc.
Commercial airline	s Other costs	Initial Options Appraisal:	It is not proportionate for STN to assess potential	Other costs to commercial airlines may include updates to Flight	Other costs to commercial airlines may include updates to Flight	Other costs to commercial airlines may include updates to Flight	Other costs to commercial airlines may include updates to Flight	Other costs to commercial airlines may include updates to Flight	Other costs to commercial airlines may include updates to Flight	Other costs to commercial airlines may include updates to Flight	Other costs to commercial airlines may include updates to Flight
		Qualitative	other costs for commercial airlines - there may be	Management Systems (FMS), navigation databases and operating	Management Systems (FMS), navigation databases and operating	Management Systems (FMS), navigation databases and operating	Management Systems (FMS), navigation databases and operating	Management Systems (FMS), navigation databases and operating	Management Systems (FMS), navigation databases and operating	Management Systems (FMS), navigation databases and operating	Management Systems (FMS), navigation databases and operating
			costs associated with maintaining legacy systems to	procedures, increased pilot hire costs versus training etc. It is not	procedures, increased pilot hire costs versus training etc. It is not	procedures, increased pilot hire costs versus training etc. It is not	procedures, increased pilot hire costs versus training etc. It is not	procedures, increased pilot hire costs versus training etc. It is not	procedures, increased pilot hire costs versus training etc. It is not	procedures, increased pilot hire costs versus training etc. It is not	procedures, increased pilot hire costs versus training etc. It is not
			continue flying conventional navigation but there are too many variables (e.g., aircraft types, on-board	proportionate for STN to assess the 'other costs' to commercial airlines of flying PBN procedures due to significant variables; some	proportionate for STN to assess the 'other costs' to commercial airlines of flying PBN procedures due to significant variables; some	proportionate for STN to assess the 'other costs' to commercial airlines of flying PBN procedures due to significant variables; some	proportionate for STN to assess the 'other costs' to commercial airlines of flying PBN procedures due to significant variables; some	proportionate for STN to assess the 'other costs' to commercial airlines of flying PBN procedures due to significant variables; some	proportionate for STN to assess the 'other costs' to commercial airlines of flying PBN procedures due to significant variables; some	proportionate for STN to assess the 'other costs' to commercial airlines of flying PBN procedures due to significant variables; some	proportionate for STN to assess the 'other costs' to commercial airlines of flying PBN procedures due to significant variables; some
			system capability etc.) to consider these effectively.	airlines of flying PBN procedures due to significant variables; some airlines may already be 'PBN ready' whereas others may not.	airlines or riying Pan procedures due to significant variables; some airlines may already be 'PBN ready' whereas others may not.	airlines of riying Pan procedures due to significant variables; some airlines may already be 'PBN ready' whereas others may not.	airlines or riying Pan procedures due to significant variables; some airlines may already be 'PBN ready' whereas others may not.	airlines or riying PBN procedures due to significant variables; some airlines may already be 'PBN ready' whereas others may not.	airlines of frying PBN procedures due to significant variables; some airlines may already be 'PBN ready' whereas others may not.	airlines of flying Pan procedures due to significant variables; some airlines may already be 'PBN ready' whereas others may not.	airlines or nying PBN procedures due to significant variables; some airlines may already be 'PBN ready' whereas others may not.
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Airport / Air navigation service	infrastructure costs	Initial Options Appraisal: Qualitative	No additional infrastructure is required at STN to maintain extant conventional arrival procedures.	All options relate to the implementation of PBN and no additional infrastructure is required. The introduction of PBN reduces the	All options relate to the implementation of PBN and no additional infrastructure is required. The introduction of PBN reduces the	All options relate to the implementation of PBN and no additional infrastructure is required. The introduction of PBN reduces the	All options relate to the implementation of PBN and no additional infrastructure is required. The introduction of PBN reduces the	All options relate to the implementation of PBN and no additional infrastructure is required. The introduction of PBN reduces the	All options relate to the implementation of PBN and no additional infrastructure is required. The introduction of PBN reduces the	All options relate to the implementation of PBN and no additional infrastructure is required. The introduction of PBN reduces the	All options relate to the implementation of PBN and no additional infrastructure is required. The introduction of PBN reduces the
provider		-January C	conventional arrival procedures.	reliance on infrastructure, in particular ground-based navigation	reliance on infrastructure, in particular ground-based navigation	reliance on infrastructure, in particular ground-based navigation	reliance on infrastructure, in particular ground-based navigation	reliance on infrastructure, in particular ground-based navigation	reliance on infrastructure, in particular ground-based navigation	reliance on infrastructure, in particular ground-based navigation	reliance on infrastructure, in particular ground-based navigation
				aids are no longer needed. The foundation for PBN is RNAV or RNP;	aids are no longer needed. The foundation for PBN is RNAV or RNP;	aids are no longer needed. The foundation for PBN is RNAV or RNP	aids are no longer needed. The foundation for PBN is RNAV or RNP,	aids are no longer needed. The foundation for PBN is RNAV or RNP;	aids are no longer needed. The foundation for PBN is RNAV or RNP,	aids are no longer needed. The foundation for PBN is RNAV or RNP;	aids are no longer needed. The foundation for PBN is RNAV or RNP
				aircraft arriving and departing STN using the proposed RNAV/RNP procedures will do so based on their performance-based navigation	aircraft arriving and departing STN using the proposed RNAV/RNP procedures will do so based on their performance-based navigation		aircraft arriving and departing STN using the proposed RNAV/RNP procedures will do so based on their performance-based navigation			aircraft arriving and departing STN using the proposed RNAV/RNP procedures will do so based on their performance-based navigation	aircraft arriving and departing STN using the proposed RNAV/RNP procedures will do so based on their performance-based navigatio
				capability.	capability.	capability.	capability.	capability.	capability.	capability.	capability.
Atomic - 4 s		Law Lord		W.T. W. C. and M.C.	,		L. T. W. C. and L. C.	A TOTAL CONTRACTOR		10.7 m C	to Tuffe Control of The
Airport / Air navigation service	Operational costs	Initial Options Appraisal: Qualitative	No change to operational costs is attributable to maintaining the extant procedures	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and	Air Traffic Control at STN is contracted out to a third-party	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and	Air Traffic Control at STN is contracted out to a third-party	Air Traffic Control at STN is contracted out to a third-party	Air Traffic Control at STN is contracted out to a third-party	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and
navigation service provider		Quantauvé	maintaining the extant procedures.	their chosen ANSP is considered to be an ongoing cost. ICAO	organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost. ICAO	organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost. ICAO	organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost. ICAO	organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost. ICAO	organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost. ICAO	organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost. ICAO	organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost. ICAO
				describe 'Improved Operational Efficiency' as a benefit delivered by	describe 'Improved Operational Efficiency' as a benefit delivered by	describe 'Improved Operational Efficiency' as a benefit delivered b	y describe 'Improved Operational Efficiency' as a benefit delivered by	describe 'Improved Operational Efficiency' as a benefit delivered by	describe 'Improved Operational Efficiency' as a benefit delivered by	describe 'Improved Operational Efficiency' as a benefit delivered by	describe 'Improved Operational Efficiency' as a benefit delivered b
				the introduction of PBN. In general, STN predicts that operational efficiency will improve and that there may be potential for a net	the introduction of PBN. In general, STN predicts that operational efficiency will improve and that there may be potential for a net	the introduction of PBN. In general, STN predicts that operational efficiency will improve and that there may be potential for a net	the introduction of PBN. In general, STN predicts that operational efficiency will improve and that there may be potential for a net	the introduction of PBN. In general, STN predicts that operational efficiency will improve and that there may be potential for a net	the introduction of PBN. In general, STN predicts that operational efficiency will improve and that there may be potential for a net	the introduction of PBN. In general, STN predicts that operational efficiency will improve and that there may be potential for a net	the introduction of PBN. In general, STN predicts that operational efficiency will improve and that there may be potential for a net
				reduction in operational costs.	reduction in operational costs.	efficiency will improve and that there may be potential for a net reduction in operational costs.	reduction in operational costs.	reduction in operational costs.	efficiency will improve and that there may be potential for a net reduction in operational costs.	reduction in operational costs.	reduction in operational costs.
Africa - A A	Out to the second secon	Law Lord		·			·	·	· ·		
Airport / Air navigation service	Deployment costs	Initial Options Appraisal: Qualitative	No Deployment costs applicable to extant procedures	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and
provider				their chosen ANSP is considered to be an ongoing cost.	their chosen ANSP is considered to be an ongoing cost.	their chosen ANSP is considered to be an ongoing cost.	their chosen ANSP is considered to be an ongoing cost.	their chosen ANSP is considered to be an ongoing cost.	their chosen ANSP is considered to be an ongoing cost.	their chosen ANSP is considered to be an ongoing cost.	their chosen ANSP is considered to be an ongoing cost.
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Group		Level of Analysis	DO NOTHING BASELINE'	OPTION 1 (EAST)	OPTION 10 (EAST)	OPTION 19 (EAST)	OPTION 20 (EAST)	OPTION 21 (EAST)	OPTION 14 (WEST)	OPTION 16 (WEST)	OPTION 2B (CENTRAL)
Safety Assessment	Safety Assessment	Initial Options Appraisal: Qualitative		Possible conflict with STIP proposed SIDs. Given this, there is a potential for a loss of horizontal and/or vertical separation requiring ATC tactical intervention, causing an increase in ATCO workload. The design process itself is also a mitigation in this instance as procedures could be designed with the appropriate horizontal/vertical separation standards.	Possible conflict with STN proposed SIDs. Given this, there is a potential for a loss of horizontal and/or vertical separation requiring ATC tactical intervention, causing an increase in ATCO workload. The design process itself is also a mitigation in this instance as procedures could be designed with the appropriate horizontal/vertical separation standards.	Possible conflict with STN proposed SIbs. Given this, there is a potential for a loss of horizontal and/or vertical separation requiring ATC tactical intervention, causing an increase in ATEO workload. The design process itself is also a mitigation in this instance as procedures could be designed with the appropriate horizontal/vertical separation standards.		ATC tactical intervention, causing an increase in ATCO workload. The design process itself is also a mitigation in this instance as procedures could be designed with the appropriate	Possible conflict with STN proposed SIDs. Given this, there is a potential for a loss of horizontal and/or vertical separation requiring ATC tactical intervention, causing an increase in ATCO workload. The design process itself is also a mitigation in this instance as procedures could be designed with the appropriate horizontal/vertical separation standards.	Possible conflict with STN proposed SIDs. Given this, there is a potential for a loss of horizontal and/or vertical separation requiring ATC tactical intervention, causing an increase in ATCO workload. The design process itself is also a mitigation in this instance as procedures could be designed with the appropriate horizontal/vertical separation standards.	Possible conflict with STN proposed SIDs. Given this, there is a potential for a loss of horizontal and/or vertical separation requiring ATC tactical intervention, causing an increase in ATCO workload. The design process itself is also a mitigation in this instance as procedures could be designed with the appropriate horizontal/vertical separation standards.
		Summary of Analysis	a viable option as it does not provide a sustainable solution in terms of dampace modernation and is unvailable following the removal of the VDR Beacons in concentre 202, which would have a significant mask of the viable of viable of the viable of the viable of the viable of	greehouse gis emissions, tranquillin, fuel burn, capacity/resilinen de deconnel impact of capatry. The remaining criteria are deemed to be of equal benefit because there is no change when compared to today's operation. Naving sald that, git this time, it is not possible to fully determine the safety implications of this specific option. The change sponner has identified possible conflicts with other STV perspected departure options but the east nature of these conflicts is undear at this safe retriber analysis determine the Larrichermore, this option has been assessed as stand-alone option nature than as as of the digin poptions as part and wider system. Additional analysis is required in Stage 3 to determine the cumulater impact of this option when compared for a wider system. Additional analysis is required in Stage 3 to determine the cumulater impact of this option when compared on the compared to the contraction of the contraction	wore in term of air quality but better in terms of noise impact, generhouse gas emission, traquality, include burn, capacity, relations, traquality, include burn, capacity, relations and economic impact of capacity. The remaining circleria are deemed to be of equal benefit because there is not change when compared to today operation. Issing said that, at that time, it is not possible to faily determine the safety implications of this specific option. The classified possible nature of these conflicts is unders at this safe; nother analysis and engagement is required in Stage 31/6 of the CAP 51/5 process to determine this. Ferthermore, this option has been assessed as stand-alone option rather than as a set of design options as part of a undersystem. Addional analysis is required in Stage 31 to determine the cumulative impact of this option when compared to alter other continuous analysis of the capacity of the cap	burn but better in terms of noise impact, tranquillity, capacity/ir-silience on denomine impact of capacity. The remaining criteria are deemed to be of equal benefit because there is no change when companies to lordy's operation. Nursing said that a; this sime, it is not possible to fully determine the safety implications of this specific option. The change sponsor has defettified possible conflicts with other STN proposed departure options but the each nature of these conflicts as undear at this size. Further analysis and engagement is required in Stage 1/4 of the CAP 1615 process to determine this. Furthermore, this option has been assured as a stand-slone option rather than as a set of design options as part of avider system. Adding analysis is required in Stage 2 to	worse in terms of air quality, greenhouse gas emissions and furl burn but better in terms of noise impact, transpality, realization, and the transpality realization and economic impact of capacity. The remaining carteria are deemed to be of equal benefit because there in no change when compared to today's operation. Having gain that, at this time, it is not possible to findly determine the safety implications of this specific option. The changes sponsor has deemined possibles and the control of the specific option. The changes sponsor has deemined possibles and engagement is required in Stage 31 of the CAP 1516 process a stand-alone option rather than as a set of design options as part of audier system. Additional analysis reception in Stage 31 of determine the cumulative impact of this option when compared to antier system. Additional analysis reception 15 determine the camulative impact of this option when compared to antier system. Additional analysis reception 15 determine the camulative impact of this option when compared to antier system. Additional analysis required in Stage 32 to determine the cumulative impact of this option when compared to antier system. Additional analysis resumed in 3 determine the camulative impact of this option when compared to antier system. Additional analysis resumption 15 determine Acceptable and the other options 10 and 15 determine the camulative impact of this option when the option is assessed in the control of the system	worse in terms of air quality, greemhouse gas emissions and full born but better in terms of noise impact, transquilley, capacity/resilience and economic impact of capacity. The remaining criteria are deemed to be of equal benefit because there is no change when compared to today's operation. Having said that, at this time, it is no possible to fully determine the safety implications of this specific option. The change sponsor has dentified possible results of the control of the specific option. The change sponsor has dentified possible results of the control of the specific option. The change sponsor has dentified possible results of the control of the specific option. The change sponsor has dentified possible and enginement is required in Sage 14 of the CAP 3616 process to determine the Cambridon students of the speciment of the specimen of the specimen option is a stand-alone option state than as a set of design options as part of determine the cumulative impact of this option when compared to adder specime. Additional analysis is registered in Sage 3 to a stand-alone option state than as a set of design options as part of determine the cumulative impact of this option when compared to alter option. All options are part of the compared to	worse in terms of greenhouse gas emissions and furl burn but better in terms of noise integrat transplants, peaching-tellizene and economic impact of capacity. The remaining criteria are deemed to be of equal benefit because there in on charge when compared to today's operation. Having said that, at this time, it is not possible to today's operation. Having said that, at this time, it is not possible to flarly determine the selfery implications of this specific option. The change sponsor has identified possible conflicts with other STN proposed departmer options but the exact nature of these conflicts is undear at this stage. Further analysis and engagement is required in Saga 34 of the CV 2015 Expresses to determine this.	be of equal benefit because there is no change when compared to today's operation. Having said that, at this time, it is not possible to fully determine the safety implications of this specific option. The change sponsor has identified possible conflicts with other STN proposed departure options but the exact nature of these conflicts.	When compared to the baseline scenario, Option 28 performs wore in terms of a quality, greenhous ges emissions and furl burn but better in terms of noise impact, tranquille, capacity/resilence and economic impact of opacity. The remaining others are desired to be of equal benefit because these data and the state of the capacity free in the cap

Colour Key	Description
	When compared to the baseline, there is a clear and obvious benefit. This option is viewed as more
	favourable than the other within the design envelope and as such is the preferred option within the design
	envelope.
Favourable	When compared to the baseline, there is a clear and obvious benefit.
Acceptable	When compared to the baseline, there is an equal benefit.
Rejected	When compared to the baseline, there is a clear and obvious dis-benefit. As such, these options are rejected.
Baseline/Previously Rejecto	Option included for completeness but, in the case of previously rejected options, not subject to IOA.

cian	Ares.	RW/V	22	2 000f	t Trans	itions

Design Area:	RWY 22 2,000ft Transi	tions								
Group	Impact	Level of Analysis	DO NOTHING BASELINE							
Communities	Noise impact on health and	Initial Options Appraisal:	The 'Do Nothing baseline' for arrivals consists of Mod	Ial Option 8 is a Transition which contains an IAF to the south-east of	OPTION 22 (EAST) Option 22 is a Transition which contains an IAF to the east of STN at	Option 9 is a Transition which contains an IAF to the north-west of	Option 12 (WEST) Option 12 is a Transition which contains an IAF to the north-west of	Option 14 (WEST) Option 14 is a Transition which contains an IAF to the north-west of	OPTION 16 (WEST) Option 16 is a Transition which contains an IAF to the north-west of	OPTION 17 (WEST) Option 17 is a Transition which contains an IAF to the north-west of
	quality of life	Qualitative		STN at 7,000ft. This option enables a continuous descent approach a	t 7,000ft. This option enables a continuous descent approach at 5.8%	STN at 7,000ft. This option enables a continuous descent approach		STN at 7,000ft. This option enables a continuous descent approach a		
				5.3% (3 Degrees). In terms of potential noise impact, Option 8	(3.3 Degrees). In terms of potential noise impact, Option 22 overflies		3.8% (2.2 Degrees). In terms of potential noise impact, Option 12		4.7% (2.7 Degrees). In terms of potential noise impact, Option 16	4.8% (2.75 Degrees). In terms of potential noise impact, Option 17
			an accurate representation of what occurs in today's	overflies 8,074 people and 3,601 residential buildings. When compared to the baseline scenario, this option overflies less people	9,838 people and 4,357 residential buildings. When compared to the baseline scenario, this option overflies less people and fewer	overflies 5,919 people and 2,811 residential buildings. When compared to the baseline scenario, this option overflies less people	overflies 6,905 people and 3,233 residential buildings. When compared to the baseline scenario, this option overflies less people	overflies 21,269 people and 10,211 residential buildings. When compared to the baseline scenario, this option overflies less people	overflies 7,631 people and 3,538 residential buildings. When compared to the baseline scenario, this option overflies less people	overflies 7,687 people and 3,673 residential buildings. When compared to the baseline scenario, this option overflies less peopl
			operation.	and fewer residential buildings and as such is seen as beneficial.	residential buildings and as such is seen as beneficial.	and fewer residential buildings and as such is seen as beneficial.	and fewer residential buildings and as such is seen as beneficial.	and fewer residential buildings and as such is seen as beneficial.	and fewer residential buildings and as such is seen as beneficial.	and residential buildings and as such is seen as beneficial.
			For comparison purposes within the IOA, Easterly					8		
			options are compared to a defined Easterly Modal							
			Track. The East Modal track overflies 28,637 people							
			and 14,434 residential buildings.							
			Westerly options are compared to a 'Modal Modal'							
			track, which combines two lateral modal tracks from							
			the West and South West. The 'Modal Modal' track							
			overflies 23,020 people and 11,004 residential							
			buildings.							
Communities	Air Quality	Initial Options Appraisal: Qualitative	No change to air quality is predicted in maintaining	In terms of air quality, Option 8 does not overfly any AQMAs. Furthermore, as per CAP 1616 Para B74, due to the effects of mixing.	In terms of air quality, Option 22 does not overfly any AQMAs. Furthermore, as per CAP 1616 Para B74, due to the effects of mixing	In terms of air quality, Option 9 does not overfly any AQMAs.	In terms of air quality, Option 12 does not overfly any AQMAs.	In terms of air quality, Option 14 overflies 1 AQMA. Overflight of this AQMA occurs when aircraft would be above 1,000ft. Furthermore, a	In terms of air quality, Option 16 does overfly 1 AQMA. Overflight if	In terms of air quality, Option 17 does not overfly any AQMAs. Furthermore, as per CAP 1616 Para B74, due to the effects of mixi
		Qualitative	baseline conditions, the majority of the extant	and dispersion, emissions from aircraft above 1,000 ft are unlikely to						
				have a significant impact on local air quality. Based on the above,	have a significant impact on local air quality. Based on the above,	have a significant impact on local air quality. Based on the above,	have a significant impact on local air quality. Based on the above,	emissions from aircraft above 1,000 feet are unlikely to have a	and dispersion, emissions from aircraft above 1,000 ft are unlikely to	
			safety reasons, aircraft are required to establish a safe	when compared to the baseline scenario, Option 8 is seen as	when compared to the baseline scenario, Option 22 is seen as	when compared to the baseline scenario, Option 9 is seen as	when compared to the baseline scenario, Option 12 is seen as	significant impact on local air quality. Based on the above, when	have a significant impact on local air quality. Based on the above,	
			and stable flight profile during the final approach	beneficial.	beneficial.	beneficial.	beneficial.	compared to the baseline scenario, Option 14 is deemed to be of	when compared to the baseline scenario, Option 16 is deemed to be	beneficial.
			phases of flight. In terms of AOMAs, both the Fasterly and 'Modal					equal benefit in terms of air quality.	of equal benefit in terms of air quality.	
			Modal' tracks overfly 1 AQMA each. Overflight of							
			these AMQAs occurs when the aircraft is above							
			1,000ft.							
Wider Society	Greenhouse Gas impact	Initial Options Appraisal: Qualitative	descent to both runways. It must be noted that the	Option 8 has been designed to support a continuous descent approach, however, an element of radar vectoring may be required	Option 22 has been designed to support continuous descent approaches, however, an element of radar vectoring may be required	Option 9 has been designed to support continuous descent approaches, however, an element of radar vectoring may be require	Option 12 has been designed to support continuous descent d approaches, however, an element of radar vectoring may be require	Option 14 has been designed to support continuous descent	Option 16 has been designed to support continuous descent d approaches, however, an element of radar vectoring may be required	Option 17 has been designed to support continuous descent approaches, however, an element of radar vectoring may be requ
		Qualitative	exact track length flown by aircraft may vary slightly			to manage aircraft separation distances. The track mileage of Ootion	to manage aircraft separation distances. The track mileage of Ootion	to manage aircraft separation distances. The track mileage of Option	to manage aircraft separation distances. The track mileage of Option	to manage aircraft separation distances. The track mileage of Opt
			due to the nature of radar vectoring. Existing	8 is 42.71km (23.06NM). Based on this, when compared to the	22 is 40.37km (21.80NM). Based on this, when compared to the	9 is 42.71km (23.06NM). Based on this, when compared to the	12 is 54.22km (29.27NM). Based on this, when compared to the	14 is 38.52km (20.80NM). Based on this, when compared to the	16 is 46.09km (24.89NM). Based on this, when compared to the	17 is 45.53km (24.58NM). Based on this, when compared to the
			procedures do not support optimal aircraft	baseline scenario, Option 8 is longer and is therefore expected to	baseline scenario, Option 22 is shorter and is therefore expected to	baseline scenario, Option 9 is shorter and is therefore expected to	baseline scenario, Option 12 is longer and is therefore expected to		baseline scenario, Option 16 is longer and is therefore expected to	baseline scenario, Option 17 is longer and is therefore expected t
				emit more greenhouse gases. As such, this is seen as a dis-benefit.		emit less greenhouse gases. As such, this is seen as beneficial. More			emit more greenhouse gases. As such, this is seen as a dis-benefit.	emit more greenhouse gases. As such, this is seen as a dis-benefit
			greater environmental impact compared to proposed options. Within Stage 2 of the CAP 1616 process, ther	More in-depth analysis at Stage 3 is required to confirm the exact	in-depth analysis at Stage 3 is required to confirm the exact volumes of greenhouse gases released.	in-depth analysis at Stage 3 is required to confirm the exact volume of greenhouse gases released.	More in-depth analysis at Stage 3 is required to confirm the exact volumes of greenhouse gases released.	in-depth analysis at Stage 3 is required to confirm the exact amounts of greenhouse volumes released.	More in-depth analysis at Stage 3 is required to confirm the exact volumes of greenhouse gases released.	More in-depth analysis at Stage 3 is required to confirm the exact volume of greenhouse gases released.
			is no requirement for a change sponsor to conduct	volulile of greefillouse gases released.	of greenhouse gases released.	of greefillouse gases released.	volunies of greenitouse gases released.	oi greeinouse voiumes releaseu.	voluntes of greenhouse gases released.	volume of greenhouse gases released.
			quantitative fuel burn or emissions analysis; this will							
			be conducted in Stage 3. In order to make a							
			comparison, track milage is used as a proxy using the							
			theory that the shorter the track mileage, the less greenhouse gases are emitted.			H			1	
			greenhouse gases are emitted. With regards to the modal track lengths, the easterly			II				
			modal track is 42.43km (22.91NM) long. Meanwhile,			H			1	
			the 'Modal Modal' track is 45.01km (24.31NM) in			II.				
			length.			H			1	
						II.				
						H				
Wider Society	Capacity and resilience	Initial Options Appraisal: Qualitative	Maintaining the existing procedures would maintain current capacity and resilience.	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which subsequently leads to more	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which subsequently leads to more	The introduction of PBN routes is expected to deliver benefits by increasing airsnace canacity which subsequently leads to more	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which subsequently leads to more	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which subsequently leads to more	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which subsequently leads to more	The introduction of PBN routes is expected to deliver benefits by increasing airspace capacity which subsequently leads to more
		Qualitative	current capacity and resilience.	predictable flight paths and fewer delays (both in air or on the	predictable flight paths and fewer delays (both in air or on the	predictable flight paths and fewer delays (both in air or on the	predictable flight paths and fewer delays (both in air or on the	predictable flight paths and fewer delays (both in air or on the	predictable flight paths and fewer delays (both in air or on the	predictable flight paths and fewer delays (both in air or on the
				ground). The reduction of the reliance on outdated ground based	ground). The reduction of the reliance on outdated ground based	ground). The reduction of the reliance on outdated ground based	ground). The reduction of the reliance on outdated ground based	ground). The reduction of the reliance on outdated ground based	ground). The reduction of the reliance on outdated ground based	ground). The reduction of the reliance on outdated ground based
				navigational aids will significantly increase operational resilience for		navigational aids will significantly increase operational resilience for	navigational aids will significantly increase operational resilience for	navigational aids will significantly increase operational resilience for	navigational aids will significantly increase operational resilience for	navigational aids will significantly increase operational resilience for
				airlines and operators.	airlines and operators.	airlines and operators.	airlines and operators.	airlines and operators.	airlines and operators.	airlines and operators.
Mide Codes	T	In Wal Onkinson Association	As a second action and a second secon	Carlos O dans and surefly any ACNIDs on Notice of Bards, Harrison III	Cables 22 days and asserting as ACMPs as Mattered Bards Harrison II	Cation Colors and a self- and ACME National Radio of Country	Online 13 days and smaller are 10MPs. Make and Barde and Country	Carlos AA days and a really any ACMITY Making a Daylo or County	Online AC description of Courts Noticed Reduces Courts	Continue 47 does not except our ACNIDA National Davids on Country
Wider Society	Tranquillity	Initial Options Appraisal: Qualitative	As per CAP 1616, Appendix B, Para B76, change sponsors are required to consider Tranquillity with	Option 8 does not overfly any AUNBS or National Parks. However, it has been identified that this option overflies 1 Country Park and 3	Option 22 does not overfly any AONBs or National Parks. However, it has been identified that this option overflies 2 Country Parks and 2	Option 9 does not overfly any AONBs, National Parks or Country Parks. However, it has been identified that this option overflies 5	Option 12 does not overfly any AONBs, National Parks or Country Parks. However, it has been identified that this option overflies 4	Option 14 does not overfly any AONBs, National Parks or Country Parks. However, it has been identified that this option overflies 5	Option 16 does not overfly any AONBs, National Parks or Country Parks. However, it has been identified that this option overflies 5	Option 17 does not overfly any AONBs, National Parks or Country Parks. However, it has been identified that this option overflies 5
		Quantative	specific reference to AONBs and National Parks only,		SSSIs. Overflight of these areas is expected to occur at a higher	SSSIs. Overflight of these areas is expected to occur at a higher	SSSIs. Overflight of these areas is expected to occur at a higher	SSSIs. Overflight of these areas is expected to occur at a higher	SSSIs. Overflight of these areas is expected to occur at a higher	SSSIs. Overflight of these areas is expected to occur at a higher
			unless other areas have been identified through	altitude, minimising the impact of aircraft noise and emissions on	altitude, minimising the impact of aircraft noise and emissions on	altitude, minimising the impact of aircraft noise and emissions on	altitude, minimising the impact of aircraft noise and emissions on	altitude, minimising the impact of aircraft noise and emissions on	altitude, minimising the impact of aircraft noise and emissions on	altitude, minimising the impact of aircraft noise and emissions on
			community engagement. Although no specific areas		these areas. When compared to the baseline scenario, Option 8 is	these areas. When compared to the baseline scenario, Option 9 is	these areas. When compared to the baseline scenario, Option 12 is	these areas. When compared to the baseline scenario, Option 14 is	these areas. When compared to the baseline scenario, Option 16 is	these areas. When compared to the baseline scenario, Option 17 is
			were identified by community engagement, the	equal in that it does not overfly any AONBs or National Parks.	equal in that it does not overfly any AONBs or National Parks. This	equal in that it does not overfly any AONBs, National Parks or	equal in that it does not overfly any AONBs, National Parks or	equal in that it does not overfly any AONBs, National Parks or	equal in that it does not overfly any AONBs, National Parks or	equal in that it does not overfly any AONBs, National Parks or
			change sponsor has decided to include Internationally (SACs, SPAs, RAMSAR) and Nationally (SSSIs and		option overflies an equal number of SSSIs. However, this option does overfly more Country Parks. As such, this option is deemed to be of		Country Parks. This option overflies less SSSIs than the baseline scenario, as such it is seen as beneficial.	Country Parks. This option overflies less SSSIs than the baseline scenario, as such it is seen as beneficial.	Country Parks. This option overflies less SSSIs than the baseline scenario, as such it is seen as beneficial.	Country Parks. This option overflies less SSSIs than the baseline scenario, as such it is seen as beneficial.
			National Nature Reserves) designated habitats and		dis-benefit when compared to the baseline scenario.	scenario, as socir it is seen as beneficial.	scendio, as such it is seen as beneficial.	scendro, as such it is seen as denericial.	scenario, as such it is seen as beneficial.	scenario, as such it is seen as beneficial.
			Country Parks. Neither of the modal tracks produced							
			overfly any AONBs, National Parks or Country Parks.							
			However, the Easterly modal track overflies 2 SSSIs							
			while the 'Modal Modal' track overflies 6 SSSIs.							
Wider Society	Biodiversity	Initial Options Appraisal:	Analysis conducted by the change sponsor shows that	t The change sponsor has conducted work to understand where the	The change sponsor has conducted work to understand where the	The change sponsor has conducted work to understand where the	The change sponsor has conducted work to understand where the	The change sponsor has conducted work to understand where the	The change sponsor has conducted work to understand where the	The change sponsor has conducted work to understand where the
		Qualitative	the existing operations at STN overfly or fly within the		designated sites are around STN. At this stage, there is expected to				designated sites are around STN. At this stage, there is expected to	
			vicinity of Internationally (SACs, SPAs, RAMSAR) or Nationally (SSSIs, National Nature Reserves)					be no change likely to affect biodiversity at these sites. From an air		
			designated sites. In today's operation, aircraft are		1,000ft. As per CAP 1616 Appendix B, Para B74, because of dispersion			quality perspective, these sites will be overflown at altitudes above in 1,000ft. As per CAP 1616 Appendix B, Para B74, because of dispersion		
			flying above 1,000ft when passing over these sites.	and mixing, there is unlikely to be an impact on local air quality from	and mixing, there is unlikely to be an impact on local air quality from	and mixing, there is unlikely to be an impact on local air quality from	and mixing, there is unlikely to be an impact on local air quality from	and mixing, there is unlikely to be an impact on local air quality from	and mixing, there is unlikely to be an impact on local air quality from	and mixing, there is unlikely to be an impact on local air quality fro
				aircraft above 1,000ft. Furthermore, CAP 1616, Appendix B, Para B80	aircraft above 1,000ft. Furthermore, CAP 1616, Appendix B, Para B80	aircraft above 1,000ft. Furthermore, CAP 1616, Appendix B, Para B80	aircraft above 1,000ft. Furthermore, CAP 1616, Appendix B, Para B8	aircraft above 1,000ft. Furthermore, CAP 1616, Appendix B, Para B80	aircraft above 1,000ft. Furthermore, CAP 1616, Appendix B, Para B80	aircraft above 1,000ft. Furthermore, CAP 1616, Appendix B, Para B
					states that in general, airspace change proposal will not have an	states that in general, airspace change proposal will not have an	states that in general, airspace change proposal will not have an	states that in general, airspace change proposal will not have an	states that in general, airspace change proposal will not have an	states that in general, airspace change proposal will not have an
			these sites. STN acknowledges that there are sites		impact on biodiversity as they do not involve ground-based	impact on biodiversity as they do not involve ground-based	impact on biodiversity as they do not involve ground-based	impact on biodiversity as they do not involve ground-based	impact on biodiversity as they do not involve ground-based	impact on biodiversity as they do not involve ground-based
			within the vicinity of the airport; any potential impact will be assessed by further analysis in Stage 3 of the	t infrastructure. That said, STN acknowledges that any potential impact to the designated sites around STN will be assessed in Stage 3	infrastructure. That said, STN acknowledges that any potential limnart to the designated sites around STN will be assessed in Stage 3	infrastructure. That said, STN acknowledges that any potential impact to the designated sites around STN will be assessed in Stage	infrastructure. That said, STN acknowledges that any potential impact to the designated sites around STN will be assessed in Stage.	infrastructure. That said, STN acknowledges that any potential 3 impact to the designated sites around STN will be assessed in Stage:	infrastructure. That said, STN acknowledges that any potential	infrastructure. That said, STN acknowledges that any potential impact to the designated sites around STN will be assessed in Stag
			ACP process by Subject Matter Experts.	of the ACP process by Subject Matter Experts.	of the ACP process by Subject Matter Experts.	of the ACP process by Subject Matter Experts.	of the ACP process by Subject Matter Experts.	of the ACP process by Subject Matter Experts.	of the ACP process by Subject Matter Experts.	of the ACP process by Subject Matter Experts.
General Aviation	Access	Initial Options Appraisal:	No change to existing airspace arrangements. GA user	rs No change to the existing airspace arrangements (within the baseline er scenario) are expected as a consequence of this ACP. However, it is	No change to the existing airspace arrangements (within the baseline	No change to the existing airspace arrangements (within the baselin	e No change to the existing airspace arrangements (within the baselin	e No change to the existing airspace arrangements (within the baseline	No change to the existing airspace arrangements (within the baseline	No change to the existing airspace arrangements (within the baseli
		Qualitative	of STN will maintain their current level of access unde extant operational arrangements.	recommended that all VRPs and existing Letters of Agreement	scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement	scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement	scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement	scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement	scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement	scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of Agreement
			and a second sec	pertaining to GA access are reviewed prior to implementation to	pertaining to GA access are reviewed prior to implementation to	pertaining to GA access are reviewed prior to implementation to	pertaining to GA access are reviewed prior to implementation to	pertaining to GA access are reviewed prior to implementation to	pertaining to GA access are reviewed prior to implementation to	pertaining to GA access are reviewed prior to implementation to
				ensure their continued validity.	ensure their continued validity.	ensure their continued validity.	ensure their continued validity.	ensure their continued validity.	ensure their continued validity.	ensure their continued validity.
					·	<u> </u>		The state of the s		•
	Economic impact from	Initial Options Appraisal:	No increase to effective capacity anticipated for		The introduction PBN is expected to deliver benefits by increasing	The introduction PBN is expected to deliver benefits by increasing			The introduction PBN is expected to deliver benefits by increasing	The introduction PBN is expected to deliver benefits by increasing
commercial airlines	increased effective capacity	Qualitative	continued use of existing procedures, therefore no economic benefit for GA/airlines.	airspace capacity which in turn will lead to more predictable flight	airspace capacity which in turn will lead to more predictable flight paths and fewer delays (both in the air or on the ground). This is	airspace capacity which in turn will lead to more predictable flight	airspace capacity which in turn will lead to more predictable flight	airspace capacity which in turn will lead to more predictable flight	airspace capacity which in turn will lead to more predictable flight	airspace capacity which in turn will lead to more predictable flight paths and fewer delays (both in the air or on the ground). This is
			continue benefit for Gayarrines.	paths and fewer delays (both in the air or on the ground). This is expected to facilitate economic benefit to airlines by increasing the	paths and fewer delays (both in the air or on the ground). This is expected to facilitate economic benefit to airlines by increasing the	paths and fewer delays (both in the air or on the ground). This is expected to facilitate economic benefit to airlines by increasing the	paths and fewer delays (both in the air or on the ground). This is expected to facilitate economic benefit to airlines by increasing the	paths and fewer delays (both in the air or on the ground). This is expected to facilitate economic benefit to airlines by increasing the	paths and fewer delays (both in the air or on the ground). This is expected to facilitate economic benefit to airlines by increasing the	paths and fewer delays (both in the air or on the ground). This is expected to facilitate economic benefit to airlines by increasing th
				frequency of air transport movements, increasing passenger	frequency of air transport movements, increasing passenger	frequency of air transport movements, increasing passenger	frequency of air transport movements, increasing passenger	frequency of air transport movements, increasing passenger	frequency of air transport movements, increasing passenger	frequency of air transport movements, increasing passenger
				numbers and increasing cargo tonnage carried. It is not	numbers and increasing cargo tonnage carried. It is not	numbers and increasing cargo tonnage carried. It is not	numbers and increasing cargo tonnage carried. It is not	numbers and increasing cargo tonnage carried. It is not	numbers and increasing cargo tonnage carried. It is not	numbers and increasing cargo tonnage carried. It is not
				proportionate for STN to predict the precise economic benefit to	proportionate for STN to predict the precise economic benefit to	proportionate for STN to predict the precise economic benefit to	proportionate for STN to predict the precise economic benefit to	proportionate for STN to predict the precise economic benefit to	proportionate for STN to predict the precise economic benefit to	proportionate for STN to predict the precise economic benefit to
				commercial airlines using the new procedures as any increase in individual airline capacity will depend on private commercial	commercial airlines using the new procedures as any increase in	commercial airlines using the new procedures as any increase in	commercial airlines using the new procedures as any increase in	commercial airlines using the new procedures as any increase in	commercial airlines using the new procedures as any increase in	commercial airlines using the new procedures as any increase in
				individual airline capacity will depend on private commercial business characteristics. It is not proportionate for STN to assess the	individual airline capacity will depend on private commercial business characteristics. It is not proportionate for STN to assess the	individual airline capacity will depend on private commercial business characteristics. It is not proportionate for STN to assess the	individual airline capacity will depend on private commercial business characteristics. It is not proportionate for STN to assess the	individual airline capacity will depend on private commercial business characteristics. It is not proportionate for STN to assess the	individual airline capacity will depend on private commercial business characteristics. It is not proportionate for STN to assess the	individual airline capacity will depend on private commercial business characteristics. It is not proportionate for STN to assess t
					economic benefit to the GA community however they are expected	economic benefit to the GA community however they are expected	economic benefit to the GA community however they are expected	economic benefit to the GA community however they are expected		economic benefit to the GA community however they are expecte
				to benefit from increased predictability of commercial airline	to benefit from increased predictability of commercial airline	to benefit from increased predictability of commercial airline	to benefit from increased predictability of commercial airline	to benefit from increased predictability of commercial airline	to benefit from increased predictability of commercial airline	to benefit from increased predictability of commercial airline
				movements which is expected to lead to reduced on-ground and in-	movements which is expected to lead to reduced on-ground and in-	movements which is expected to lead to reduced on-ground and in-	movements which is expected to lead to reduced on-ground and in-	movements which is expected to lead to reduced on-ground and in-	movements which is expected to lead to reduced on-ground and in-	movements which is expected to lead to reduced on-ground and in
				air delays for all users.	air delays for all users.	air delays for all users.	air delays for all users.	air delays for all users.	air delays for all users.	air delays for all users.
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General Aviation /	Fuel burn	Initial Options Appraisal:	The existing STN procedures do not support	Option 8 supports a continuous descent approach, meaning that	Option 22 supports a continuous descent approach, meaning that	Option 9 supports a continuous descent approach, meaning that	Option 12 supports a continuous descent approach, meaning that	Option 14 supports a continuous descent approach, meaning that	Option 16 supports a continuous descent approach, meaning that	Option 17 supports a continuous descent approach, meaning that
commercial airlines		Qualitative	continuous descent approaches. Fuel burn is expected	aircraft would not be required to level off during arrival, reducing the	aircraft would not be required to level off during arrival, reducing the	aircraft would not be required to level off during arrival, reducing th	aircraft would not be required to level off during arrival, reducing the	e aircraft would not be required to level off during arrival, reducing the	aircraft would not be required to level off during arrival, reducing the	aircraft would not be required to level off during arrival, reducing t
			to be greater due to tactical ATC intervention and	overall amount of fuel burnt. There is no requirement within Stage 2	overall amount of fuel burnt. There is no requirement within Stage 2	overall amount of fuel burnt. There is no requirement within Stage 2	overall amount of fuel burnt. There is no requirement within Stage	overall amount of fuel burnt. There is no requirement within Stage 2	overall amount of fuel burnt. There is no requirement within Stage 2	overall amount of fuel burnt. There is no requirement within Stage
			periods of level flight in the approach phase. In the		of the CAP1616 process to quantify fuel burn, this will be conducted			of the CAP1616 process to quantify fuel burn, this will be conducted		
			case of the Easterly modal track, this is 42.43km	in Stage 3. Therefore, to enable a comparison, the logic applied is		in Stage 3. Therefore, to enable a comparison, the logic applied is			in Stage 3. Therefore, to enable a comparison, the logic applied is	
			(22.91NM) long. Meanwhile, the 'Modal Modal' track is 45.01km (24.31NM) in length.	that the shorter the track length, the less fuel is burnt. With regards to this ontion, it is 42.71km (23.06NM) long. When compared to the	that the shorter the track length, the less fuel is burnt. With regards to this option, it is 40.37km (21.80NM) long. When compared to the			that the shorter the track length, the less fuel is burnt. With regards to this option, it is 38.52km (20.80NM) long. When compared to the		
			5 -5.01km (24.51mm) in length.	baseline scenario, Option 8 is longer and at this stage it assumed will	to this option, it is 40.37km (21.80NM) long. When compared to the baseline scenario, Option 22 is shorter and at this stage it assumed			baseline scenario, Option 14 is shorter and at this stage it assumed		
				require a greater amount of fuel burn, therefore, this option is of dis-	will require a smaller amount of fuel burn, therefore, this option is	will require a smaller amount of fuel burn, therefore, this option is			will require a greater amount of fuel burn, therefore, this option is of	
				benefit in terms of fuel burn. More in-depth analysis will be carried	beneficial in terms of fuel burn. More in-depth analysis will be	beneficial in terms of fuel burn. More in-depth analysis will be	dis-benefit in terms of fuel burn. More in-depth analysis will be	beneficial in terms of fuel burn. More in-depth analysis will be	dis-benefit in terms of fuel burn. More in-depth analysis will be	dis-benefit in terms of fuel burn. More in-depth analysis will be
				out in Stage 3 to confirm.	carried out in Stage 3 to confirm.	carried out in Stage 3 to confirm.	carried out in Stage 3 to confirm.	carried out in Stage 3 to confirm.	carried out in Stage 3 to confirm.	carried out in Stage 3 to confirm.
						II.				
Commercial airlines	Training costs	Initial Options Appraisal:	No additional training predicted.	It is expected that no extra Pilot/Crew training will be required to	It is expected that no extra Pilot/Crew training will be required to	It is expected that no extra Pilot/Crew training will be required to	It is expected that no extra Pilot/Crew training will be required to	It is expected that no extra Pilot/Crew training will be required to	It is expected that no extra Pilot/Crew training will be required to	It is expected that no extra Pilot/Crew training will be required to
commercial anniles		Qualitative	Sociona daning predicted.	enable pilots to fly the new PBN procedures. PBN is a common	enable pilots to fly the new PBN procedures. PBN is a common	enable pilots to fly the new PBN procedures. PBN is a common	enable pilots to fly the new PBN procedures. PBN is a common	enable pilots to fly the new PBN procedures. PBN is a common	enable pilots to fly the new PBN procedures. PBN is a common	enable pilots to fly the new PBN procedures. PBN is a common
					standard of navigation throughout the world. It is not proportionate			standard of navigation throughout the world. It is not proportionate		standard of navigation throughout the world. It is not proportiona
				for STN to assess on-going competency for individual commercial	for STN to assess on-going competency for individual commercial	for STN to assess on-going competency for individual commercial	for STN to assess on-going competency for individual commercial	for STN to assess on-going competency for individual commercial	for STN to assess on-going competency for individual commercial	for STN to assess on-going competency for individual commercial
				airlines due to the significant variables involved e.g. number of	airlines due to the significant variables involved e.g. number of	airlines due to the significant variables involved e.g. number of	airlines due to the significant variables involved e.g. number of	airlines due to the significant variables involved e.g. number of	airlines due to the significant variables involved e.g. number of	airlines due to the significant variables involved e.g. number of
				pilots, airline policies on training (simulator versus live flight	pilots, airline policies on training (simulator versus live flight	pilots, airline policies on training (simulator versus live flight	pilots, airline policies on training (simulator versus live flight	pilots, airline policies on training (simulator versus live flight	pilots, airline policies on training (simulator versus live flight	pilots, airline policies on training (simulator versus live flight
				training), fleet types, and variations in on-board equipment etc.	training), fleet types, and variations in on-board equipment etc.	training), fleet types, and variations in on-board equipment etc.	training), fleet types, and variations in on-board equipment etc.	training), fleet types, and variations in on-board equipment etc.	training), fleet types, and variations in on-board equipment etc.	training), fleet types, and variations in on-board equipment etc.
Commercial states	Other costs	Initial Ontions Approved	It is not amounticante for STN to	Other costs to commercial sidies was include an dear as 50 1	Other roots to commercial sidings may include undersease 5th 1	Other costs to commercial sidings may be able to the second as a second	Other costs to commercial sidies and in the december as The Co	Other costs to commercial aidines may include undetected the	Other costs to commercial aidings may include an date to 50 11	Other costs to commercial airlines may include updates to Flight
Commercial airlines	Other costs	Initial Options Appraisal: Qualitative	It is not proportionate for STN to assess potential other costs for commercial airlines - there may be	Other costs to commercial airlines may include updates to Flight Management Systems (FMS), navigation databases and operating	Other costs to commercial airlines may include updates to Flight Management Systems (FMS), navigation databases and operating	Other costs to commercial airlines may include updates to Flight Management Systems (FMS), navigation databases and operating	Other costs to commercial airlines may include updates to Flight Management Systems (FMS), navigation databases and operating	Other costs to commercial airlines may include updates to Flight Management Systems (FMS), navigation databases and operating	Other costs to commercial airlines may include updates to Flight Management Systems (FMS), navigation databases and operating	Other costs to commercial airlines may include updates to Flight Management Systems (FMS), navigation databases and operating
		Commitative	costs associated with maintaining legacy systems to		procedures, increased pilot hire costs versus training etc. It is not	procedures, increased pilot hire costs versus training etc. It is not	management systems (FMS), navigation databases and operating procedures, increased pilot hire costs versus training etc. It is not	management systems (FMS), navigation databases and operating procedures, increased pilot hire costs versus training etc. It is not	procedures, increased pilot hire costs versus training etc. It is not	procedures, increased pilot hire costs versus training etc. It is not
			continue flying conventional navigation but there are	proportionate for STN to assess the 'other costs' to commercial	proportionate for STN to assess the 'other costs' to commercial	proportionate for STN to assess the 'other costs' to commercial	proportionate for STN to assess the 'other costs' to commercial	proportionate for STN to assess the 'other costs' to commercial	proportionate for STN to assess the 'other costs' to commercial	proportionate for STN to assess the 'other costs' to commercial
			too many variables (e.g., aircraft types, on-board	airlines of flying PBN procedures due to significant variables; some	airlines of flying PBN procedures due to significant variables; some	airlines of flying PBN procedures due to significant variables; some	airlines of flying PBN procedures due to significant variables; some	airlines of flying PBN procedures due to significant variables; some	airlines of flying PBN procedures due to significant variables; some	airlines of flying PBN procedures due to significant variables; some
			system capability etc.) to consider these effectively.	airlines may already be 'PBN ready' whereas others may not.	airlines may already be 'PBN ready' whereas others may not.	airlines may already be 'PBN ready' whereas others may not.	airlines may already be 'PBN ready' whereas others may not.	airlines may already be 'PBN ready' whereas others may not.	airlines may already be 'PBN ready' whereas others may not.	airlines may already be 'PBN ready' whereas others may not.
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Applications of the second state of the second	Group	Impact	Level of Analysis	DO NOTHING BASELINE'							
Applications and processing and proc					OPTION 8 (EAST)	OPTION 22 (EAST)	OPTION 9 (WEST)	OPTION 12 (WEST)	OPTION 14 (WEST)	OPTION 16 (WEST)	OPTION 17 (WEST)
where the final content of the property of the		Infrastructure costs									
are to tape model. The foundation from the starter of the partners and the	navigation service		Qualitative	maintain the existing conventional arrival procedures.							
In the control of the	provider										
Security and the state of the production cells and specific production and the state of the production cells and specific production and the state of the specific production and the specific production and the state of the specific production and t											
Seption of Market Seption of M											
The state of the s						canability			procedures will do so based on their performance-based navigation		
population. The noting commonic control trinses That and population. The noting control trinses That and pop					cupulinty.	capability.	cupulity.	coponity.	copublicy.	copubitity.	capability.
on control MP is confident to be required control to the required control to t	Airport / Air	Operational costs	Initial Options Appraisal:	No change to operational costs is attributable to	Air Traffic Control at STN is contracted out to a third-party	Air Traffic Control at STN is contracted out to a third-party	Air Traffic Control at STN is contracted out to a third-party	Air Traffic Control at STN is contracted out to a third-party	Air Traffic Control at STN is contracted out to a third-party	Air Traffic Control at STN is contracted out to a third-party	Air Traffic Control at STN is contracted out to a third-party
Secretary of Augustian State Segretary as a served designed of the segretary of the segreta	navigation service		Qualitative	maintaining the existing procedures.	organisation. This existing commercial contract between STN and	organisation. This existing commercial contract between STN and	organisation. This existing commercial contract between STN and	organisation. This existing commercial contract between STN and	organisation. This existing commercial contract between STN and	organisation. This existing commercial contract between STN and	organisation. This existing commercial contract between STN and
the introduction of PRRs. I paymed, Thy proficts the department of the company of the paymed of the	provider				their chosen ANSP is considered to be an ongoing cost. ICAO	their chosen ANSP is considered to be an ongoing cost. ICAO	their chosen ANSP is considered to be an ongoing cost. ICAO	their chosen ANSP is considered to be an ongoing cost. ICAO	their chosen ANSP is considered to be an ongoing cost. ICAO	their chosen ANSP is considered to be an ongoing cost. ICAO	their chosen ANSP is considered to be an ongoing cost. ICAO
efficiency will improve a dire factor may be particular for any department for any depart					describe 'Improved Operational Efficiency' as a benefit delivered by	describe 'Improved Operational Efficiency' as a benefit delivered by	describe 'Improved Operational Efficiency' as a benefit delivered by	describe 'Improved Operational Efficiency' as a benefit delivered by	describe 'Improved Operational Efficiency' as a benefit delivered by	describe 'Improved Operational Efficiency' as a benefit delivered by	describe 'Improved Operational Efficiency' as a benefit delivered by
deficition is operationed costs. In this Coprision of Exposured Costs. In this Coprision of Ex					the introduction of PBN. In general, STN predicts that operational	the introduction of PBN. In general, STN predicts that operational	the introduction of PBN. In general, STN predicts that operational	the introduction of PBN. In general, STN predicts that operational	the introduction of PBN. In general, STN predicts that operational	the introduction of PBN. In general, STN predicts that operational	the introduction of PBN. In general, STN predicts that operational
A TOTAL COURSE STATE COURSE STA					efficiency will improve and that there may be potential for a net	efficiency will improve and that there may be potential for a net	efficiency will improve and that there may be potential for a net	efficiency will improve and that there may be potential for a net	efficiency will improve and that there may be potential for a net	efficiency will improve and that there may be potential for a net	efficiency will improve and that there may be potential for a net
Segretarian The entire geometral contract between Th and proposation. The entire geometral contract between Th and procedures the among anguing contract and contract between Th and procedures the among anguing contract and contract between Th and procedures the among anguing contract and contract between Th and procedures. The contract procedures the among anguing contract and contract between Th and procedures. The contract procedures the among anguing contract and contract between Th and procedures. The contract procedures the among anguing contract and contract procedures the among anguing contract and contract procedures. The contract procedures the among anguing contract and contract procedures. The contract procedures the among anguing contract and contract procedures the among anguing contract and contract procedures. The contract procedures the among anguing contract and contract procedures the among anguing contract and contract procedures the among anguing contract and contract procedures the among anguing contract procedures the among and the contract procedures that the contract procedures the among and the contract procedures the among and t					reduction in operational costs.	reduction in operational costs.	reduction in operational costs.				
Segretarian The entire geometral contract between Th and proposation. The entire geometral contract between Th and procedures the among anguing contract and contract between Th and procedures the among anguing contract and contract between Th and procedures the among anguing contract and contract between Th and procedures. The contract procedures the among anguing contract and contract between Th and procedures. The contract procedures the among anguing contract and contract between Th and procedures. The contract procedures the among anguing contract and contract procedures the among anguing contract and contract procedures. The contract procedures the among anguing contract and contract procedures. The contract procedures the among anguing contract and contract procedures the among anguing contract and contract procedures. The contract procedures the among anguing contract and contract procedures the among anguing contract and contract procedures the among anguing contract and contract procedures the among anguing contract procedures the among and the contract procedures that the contract procedures the among and the contract procedures the among and t	Airmort / Air	Donloumont costs	Initial Options Appraisals	No Deployment costs applicable to output procedures	Air Traffic Control of STM is contracted out to a third party	Air Troffic Control at STM is contracted out to a third earty	Air Traffic Control at STN is contracted out to a third marks	Air Traffic Control at STN is contracted out to a third party	Air Teriffic Control at STN is contracted out to a third party	Air Traffic Control at STN is contracted out to a third party	Air Troffic Control of STM is contracted out to a third party
The contract Post is an engage cat. The contrac		Deployment costs		No beproyment costs applicable to extant procedures							
Sidely Assessment South Page 2 and 19	nrovider		Qualitative								
Secretary of Audigs.	provider				their closes Area is considered to be all ongoing cost.	their chosen whom is considered to be all ongoing cost.	area crosen seem to considered to be an ongoing cost.	their crosers with 13 considered to be an origonia cost.	their ender Medi is considered to be all ongoing cost.	their chosen with its considered to be an ongoing cost.	their chosen with 15 considered to be an ongoing cost.
ATC (actical intervention, causing an increase in ATCO workload. The design processes that it also an implicant to increase in ATCO workload. The design processes that it also an implicant to increase in ATCO workload. The design processes that it also an implicant to increase in ATCO workload. The design processes that it also an implicant to increase in ATCO workload. The design processes that it also an implicant to increase in ATCO workload. The design processes that it also an implicant to increase in ATCO workload. The design processes that it is an implicant to increase in ATCO workload. The design processes that it is an implicant to increase in ATCO workload. The design processes that it is an implicant to increase in ATCO workload. The design processes in a triangle in the intervention, causing an increase in ATCO workload. The design processes in ATCO w	Safety Assessment	Safety Assessment	Initial Options Appraisal:	The baseline assumption is that current operations at	Possible conflict with STN proposed SIDs. Given this, there is a	Possible conflict with STN proposed SIDs. Given this, there is a	Possible conflict with STN proposed SIDs. Given this, there is a	Possible conflict with STN proposed SIDs. Given this, there is a	Possible conflict with STN proposed SIDs. Given this, there is a	Possible conflict with STN proposed SIDs. Given this, there is a	Possible conflict with STN proposed SIDs. Given this, there is a
design process treff is also a miligation in this instance as procedures could be designed with the appropriate an concellence tould be designed with the appropriate an concellence tould be designed with the appropriate and concele			Qualitative	STN are safe, including use of the existing conventional	potential for a loss of horizontal and/or vertical separation requiring	potential for a loss of horizontal and/or vertical separation requiring	potential for a loss of horizontal and/or vertical separation requiring	potential for a loss of horizontal and/or vertical separation requiring	potential for a loss of horizontal and/or vertical separation requiring	potential for a loss of horizontal and/or vertical separation requiring	potential for a loss of horizontal and/or vertical separation requiring
Seamony of Analysis.				procedures.	ATC tactical intervention, causing an increase in ATCO workload. The	ATC tactical intervention, causing an increase in ATCO workload. The	ATC tactical intervention, causing an increase in ATCO workload. The	ATC tactical intervention, causing an increase in ATCO workload. The	ATC tactical intervention, causing an increase in ATCO workload. The	ATC tactical intervention, causing an increase in ATCO workload. The	ATC tactical intervention, causing an increase in ATCO workload. The
Semmany of Analysis Semmany o					design process itself is also a mitigation in this instance as	design process itself is also a mitigation in this instance as	design process itself is also a mitigation in this instance as	design process itself is also a mitigation in this instance as	design process itself is also a mitigation in this instance as	design process itself is also a mitigation in this instance as	design process itself is also a mitigation in this instance as
Summary of Analysis. The Too Nothing' Scenarios in enlation to this AP' a not a varied explores a to disease group mode a substanciable upon the service of the baseline scenario, Option 12 performs worse a varied explores a varied vari					procedures could be designed with the appropriate		procedures could be designed with the appropriate	procedures could be designed with the appropriate	procedures could be designed with the appropriate	procedures could be designed with the appropriate	procedures could be designed with the appropriate
In terms of tranquality, but better in terms of tranquality, post-phread passes and feel burn, but better in more of tranquality, post-phread passes and feel burn, tranquality, capacity/resilinence and burn, tranquality, capacity/resilience and burn, tranquality, capacity/resilience and burn, tranquality, capacity/resilience and burn, tranquality, capacity/resilience and common impact of capacity. The remaining criteria are deemend to be depatible post-passes and feel burn, tranquality, capacity/resilience and common impact of capacity. The remaining criteria are deemend to be of capacity. The remaining criteria are deemend to be of capacity. The remaining criteria are deemend to be of capacity. The remaining criteria are deemend to be of capacity. The remaining criteria are deemend to be of capacity. The remaining criteria are deemend to be of capacity. The remaining criteria are deemed to be of capacity. The remaining					horizontal/vertical separation standards.	horizontal/vertical separation standards.	horizontal/vertical separation standards.				
In terms of tranquality, but better in terms of tranquality, post-phread passes and feel burn, but better in more of tranquality, post-phread passes and feel burn, tranquality, capacity/resilinence and burn, tranquality, capacity/resilience and burn, tranquality, capacity/resilience and burn, tranquality, capacity/resilience and burn, tranquality, capacity/resilience and common impact of capacity. The remaining criteria are deemend to be depatible post-passes and feel burn, tranquality, capacity/resilience and common impact of capacity. The remaining criteria are deemend to be of capacity. The remaining criteria are deemend to be of capacity. The remaining criteria are deemend to be of capacity. The remaining criteria are deemend to be of capacity. The remaining criteria are deemend to be of capacity. The remaining criteria are deemend to be of capacity. The remaining criteria are deemed to be of capacity. The remaining			Summary of Analysis	The 'Do Nothing' scenario in relation to this ACD is not	When compared to the baceline coeparin. Ontion 8 performs worse	When compared to the baceline constrint Option 22 performs worse	When compared to the baceline coeparin Option 9 performs better	When compared to the baceline cremarin Option 12 performs worse	When compared to the baceline cremarin Ontion 14 performs better	When compared to the baseline crenario Ontion 16 performs worse	When compared to the baseline coenario. Ontion 17 performs worse
substion is terms of arrangement of the strain point and as unable following the removal of the YouThey fermittener and compared to the properties of packing the removal of the YouThey for and the properties of packing the removal of the YouThey for a properties of packing the removal of the YouThey for a properties of packing the removal of the YouThey for a properties of packing the removal of the YouThey for a properties of packing the removal of the YouThey for a properties of packing the removal of packing the packing the packing the packin			Summary of Amarysis								
unwikely following the removal of the Volls beacons: in pact of capacity. The remaining criteria are deemed to be of equal benefit because there is no change when compared to to day's operation. Having said that, at this time, it is not possible to fully determine the safety implication of this specific coptom. The change sponsor has identified possible conflicts with other STN quaragements for one support conflicts with other STN quaragements are not as a form a state possible conflicts with other STN quaragements are not as a form a state possible conflicts with other STN quaragements are not as a form a state possible to lodgy's operation. Having said that, at this time, it is not possible to fully determine the safety implications of this specific coptom. The change sponsor has identified possible conflicts with other STN quaragements are not as a form a state possible conflicts with other STN quaragements are not as a form a state possible conflicts with other STN quaragements are not as a form a state possible to lodgy's operation. Having said that, at this time, it is not possible to fully determine the safety implications of this specific optom. The charge sponsor has identified possible conflicts with other STN quaragements are not possible to fully determine the safety implications of this specific optom. The charge sponsor has identified possible conflicts with other STN quaragements are not possible to fully determine the safety implications of this specific optom. The charge sponsor has identified possible conflicts with other STN proposed departure options but the exact nature of these conflicts with other STN proposed departure options but the exact nature of these conflicts with other STN proposed departure options to the exact nature of these conflicts with other STN proposed departure options to the exact nature of these conflicts with other STN proposed departure options to the exact nature of these conflicts with other STN proposed departure options to the exact nature of these conflicts wit											
neember 2022, which would have a significant free region or regions the region of the proper design and a region of the proper design and the proper desig											
and resilience. The esting arrival managements can one support continuous descent the sport support and the time. It is not possible to fully determine the safety implications of this specific option. The shape groups of the sport of the sport support the sport su											
arrangements do not support continuous descrived in approaches, which leasts to a greater volume of flesh proportion of this specific option. The change sponsor has identified possible conflicts with other STN proposed departure options but the exact nature of these conflicts in formal proposed departure options but the exact nature of these conflicts in formal proposed departure options but the exact nature of these conflicts in formal proposed departure options but the exact nature of these conflicts in unders at this stage. Further analysis and engagements required in flags 3/4 of the CAP 1516 process to determine this. Furthermore, this option is proposed departure options but the exact nature of these conflicts in formal proposed departure options but the exact nature of these conflicts in unders at this stage. Further analysis and engagements required in stage 3/4 of the CAP 1516 process to determine this. Furthermore, this option is proposed departure options but the exact nature of these conflicts in unders at this stage. Further analysis and engagements required in stage 3/4 of the CAP 1516 process to determine the suffey implications of this specific option. The change sponsor has identified possible conflicts with other STN proposed departure options but the exact nature of these conflicts in unders at this stage. Further analysis and engagements required in stage 3/4 of the CAP 1516 process to determine the suffering expectage at a stand-alone option rather than as a very limited cost incurrange as a result of this specific option. The change sponsor has demanded possible conflicts with other STN proposed departure options but the exact nature of these conflicts is unders at this stage. Further analysis and engagement is required in large 3/4 of the CAP 1516 process to determine the surfage option rather than as a very limited cost incurrange as a result of this specific option. The change sponsor has settled possible conflicts with other STN proposed departure options but the exact nature of these											
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Tranquilling, Bodhereating, GA Access and excommends impact, the Dec Notherlap Sealine For Expertment on Stage 24 of the CAP 1565 process to determine this. Furthermore, by the CAP 1565 process to d				approaches, which leads to a greater volume of fuel	change sponsor has identified possible conflicts with other STN	change sponsor has identified possible conflicts with other STN	identified possible conflicts with other STN proposed departure	change sponsor has identified possible conflicts with other STN	conflicts with other STN proposed departure options but the exact	sponsor has identified possible conflicts with other STN proposed	change sponsor has identified possible conflicts with other STN
maget, the Too Nothing baseline is provided minimal/hor (sharpes too Index) spearlions. Furthermore, this again is a provided minimal/hor (sharpes too Index) spearlions. Furthermore, this again is a provided minimal/hor (sharpes too Index) spearlions. Furthermore, this again is a provided minimal/hor (sharpes too Index) spearlions. Furthermore, this again is a provided minimal/hor (sharpes too Index) spearlions. Furthermore, this again is a provided minimal/hor (sharpes too Index) spearlions as a provided minimal/hor (sharpes too Index) spearlions. Furthermore, this again is a provided minimal/hor (sharpes too Index) spearlions as a provided minimal/hor (sharpes too Ind				burn, emissions and noise at lower levels. In terms of	proposed departure options but the exact nature of these conflicts is	proposed departure options but the exact nature of these conflicts is	options but the exact nature of these conflicts is unclear at this	proposed departure options but the exact nature of these conflicts is	nature of these conflicts is unclear at this stage. Further analysis and	departure options but the exact nature of these conflicts is unclear	proposed departure options but the exact nature of these conflicts is
change to today's operations. Furthermore, three are severy limited cost incurred as are setted as a stand-alone option rather than as a set set of edisping options as part of a wider system. Additional analysis is required in Stage 3 to determine the cumulative impact of this option has been assessed as a stand-alone option rather than as a set of edisping options as part of a wider system. Additional analysis is required in Stage 3 to determine the cumulative impact of this option has been assessed as a stand-alone option rather than as a set of edisping options as part of a wider system. Additional analysis is required in Stage 3 to determine the cumulative impact of this option when compared to all the other options. Story operations as set as a stand-alone option rather than as a set of edisping options as part of a wider system. Additional analysis is required in Stage 3 to determine the cumulative impact of this option when compared to all the other options. Story option when compared to all the other options. Story operations are set, for a start option option as set and alone option rather than as a set of edisping options as part of a wider system. Additional analysis is required in Stage 3 to determine the cumulative impact of this option when compared to all the other options. Story option when compared to all the other options. Story option when compared to all the other options. Story option when compared to all the other options. Story option when compared to all the other options. Story option when compared to all the other options. Story option when compared to all the other options. Story option when compared to all the other options. Story option when compared to all the other options. Story option when compared to all the other options. Story option when compared to all the other options. Story option when compared to all the other options. Story option when compared to all the other options. Story option when compared to the town option when compared to all the other options				Tranquillity, Biodiversity, GA Access and economic	unclear at this stage. Further analysis and engagement is required in	unclear at this stage. Further analysis and engagement is required in	stage. Further analysis and engagement is required in Stage 3/4 of	unclear at this stage. Further analysis and engagement is required in	engagement is required in Stage 3/4 of the CAP 1616 process to	at this stage. Further analysis and engagement is required in Stage	unclear at this stage. Further analysis and engagement is required in
wery limited costs incurrale as a result of this search and prices are the companied by the perfective dissipation of the perf				impact, the 'Do Nothing baseline' provides minimal/no	Stage 3/4 of the CAP 1616 process to determine this. Furthermore,	Stage 3/4 of the CAP 1616 process to determine this. Furthermore,	the CAP 1616 process to determine this. Furthermore, this option	Stage 3/4 of the CAP 1616 process to determine this. Furthermore,	determine this. Furthermore, this option has been assessed as a	3/4 of the CAP 1616 process to determine this. Furthermore, this	Stage 3/4 of the CAP 1616 process to determine this. Furthermore,
From a safety perspective, it is assumed that current of Stage 3 to determine the cumulative impact of this option when compared to all the other options. Show that is acknowledged that ATCO workload may electroning. Which is a skinowledged that ATCO workload may electroning. Which is a skinowledged that ATCO workload may electroning. Which is a skinowledged that ATCO workload may electroning. Which is a skinowledged that ATCO workload may electroning. Which is a skinowledged that ATCO workload may electroning. Which is a skinowledged that ATCO workload may electroning to the compared to all the other options. Based on performance in the IOA, Option 12 hs been rejected as the Preferred Option when compared to all the other options. Based on performance in the IOA, Option 12 hs been rejected as the Preferred Option when the Compared to all the other options. Based on performance in the IOA, Option 12 his deemed Favourable within the 2,00th EXET envelope. When this option is assessed and part of the complete its corresponding option for Rumway (A), in total Option 3 to well-seld as to complete its corresponding option for Rumway (A), in total Option 3 to well-seld as to complete its corresponding option for Rumway (A), in total Option 3 to well-seld as to complete its corresponding option for Rumway (A), in total Option 3 to well-seld as to complete its corresponding option for Rumway (A), in total Option 3 to well-seld as				change to today's operations. Furthermore, there are	this option has been assessed as a stand-alone option rather than as	this option has been assessed as a stand-alone option rather than as	has been assessed as a stand-alone option rather than as a set of	this option has been assessed as a stand-alone option rather than as		option has been assessed as a stand-alone option rather than as a	this option has been assessed as a stand-alone option rather than as
STRY operations are sufe. Following the remnval of the 100 potion when compared to all the other options. BUGNE, it is activated get that TACL Option 2 has been selected as the programmen in the 100, Option 1 has been selected as the programmen in the 100, Option 1 has been selected as the programmen in the 100, Option 1 has been selected as the programmen in the 100, Option 1 has been selected as the programmen in the 100, Option 1 has been selected as the programmen in the 100, Option 1 has been selected as the programmen in the 100, Option 1 has been selected as the programmen in the 100, Option 1 has been rejected as part the 2,000 ft MST envelope. When this option is assessed alongside its corresponding option for Planway (A), in total Option 2 lowerflies 313,801 people. This combination overflies more people than Option 3, but the other options. Based on performance in the 100, Option 1 has been rejected as based on performance in the 100, Option 1 has been rejected as the reference option. The sevent of the 100 performance in the 100, Option 1 has been rejected as the reference option. The sevent of the 100 performance in the 100, Option 1 has been rejected as the reference option. The sevent of the 100 performance in the 100, Option 1 has been rejected as part the 2,000 ft MST envelope. When this option is assessed alongside its corresponding option for Runway (A), intall Option 3, but the option of Runway (A), intall Option 3, but the option is assessed alongside its corresponding option for Runway (A), intall Option 3, but the option of Runway (A), intall Option 3, but the option is assessed alongside its corresponding option for Runway (A), intall Option 3, but the option of Runway (A), intall Option 3, but the option is assessed alongside its corresponding option for Runway (A), intall Option 3, but the option of Runway (A), intall Option 3, but the option of Runway (A), intall Option 3, but the option of Runway (A), intall Option 3, but the option of Runway (A), intall Option 3, but the option of											
Works, it is acknowledged that ATCO workload many increase due to the enduring requirement for radar sectioning. Based on performance in the IOA, Option 14 has been rejected as the performance in the IOA, Option 14 has been rejected as the performance in the IOA, Option 14 has been rejected as the performance in the IOA, Option 15 is deemed Favourable within the 2,000ft EST envelope. When this option is assessed alongside its corresponding option for flumway OI, in total Option 2 alongside its corresponding option for flumway OI, in total Option 3 performance in the IOA, Option 14 has been rejected as placed on performance in the IOA, Option 14 has been rejected as placed on performance in the IOA, Option 14 has been rejected as the Perferred Option within the 2,000ft EST envelope. When this option is assessed alongside its corresponding option for flumway OI, in total Option 3 poselles 31,800 people. This combination overflies more people than the OPTION option 3,283 people. This combination overflies more people than option 3,283 people. This combination overflies more people than option 3, people option 3,	1								the cumulative impact of this option when compared to all the other		
is correct due to the enduring requirement for radar greatment for product greatment for product greatment									options.		
wectoring. option is assessed alongside its corresponding option for Runway QA, in total Option 22 option is assessed alongside its corresponding option for Runway QA, in total Option 22 option is assessed alongside its corresponding option for Runway QA, in total Option 22 option is assessed alongside its corresponding option for Runway QA, in total Option 22 option is assessed alongside its corresponding option for Runway QA, in total Option 22 option is assessed alongside its corresponding option for Runway QA, in total Option 22 option is assessed alongside its corresponding option for Runway QA, in total Option 22 option is assessed alongside its corresponding option for Runway QA, in total Option 22 option is assessed alongside its corresponding option for Runway QA, in total Option 22 option is assessed alongside its corresponding option for Runway QA, in total Option 22 option is assessed alongside its corresponding option for Runway QA, in total Option 22 option is assessed alongside its corresponding option for Runway QA, in total Option 22 option is assessed alongside its corresponding option for Runway QA, in total Option 22 option is assessed alongside its corresponding option for Runway QA, in total Option 22 option is assessed alongside its corresponding option for Runway QA, in total Option 22 option is assessed alongside its corresponding option for Runway QA, in total Option 22 option is assessed alongside its corresponding option for Runway QA, in total Option 22 option is assessed alongside its corresponding option for Runway QA, in total Option 22 option is assessed alongside its corresponding option for Runway QA, in total Option 22 option is assessed alongside its corresponding option for Runway QA, in total Option 22 option is assessed alongside its corresponding option for Runway QA, in total Option 22 option is assessed alongside its corresponding option for Runway QA, in total Option 22 option is assessed alongside its corresponding option for Runway QA, in total Option 22 option 22											
in total Option 8 overflies 31,801 people. This combination overflies more people than Option 9, but less than the other corresponding options within				increase due to the enduring requirement for radar							
the least number of people when compared to the east number of people when compared to the other corresponding options within a Option 9, 16 and 17, but less than the other corresponding options within than Option 9, 16 and 17, but less than the other corresponding options within than Option 9, 16 and 17, but less than the other corresponding options within than Option 9, 16 and 17, but less than the other corresponding options within than Option 9, 16 and 17, but less than the other corresponding options within than Option 9, 16 and 17, but less than the other corresponding options within than Option 9, 16 and 17, but less than the other corresponding options within than Option 9, 16 and 17, but less than the other corresponding options within than Option 9, 16 and 17, but less than the other corresponding options within than Option 9, 16 and 17, but less than the other corresponding options within than Option 9, 16 and 17, but less than the other corresponding options within than Option 9, 16 and 17, but less than the other corresponding options within than Option 9, 16 and 17, but less than the other corresponding options within than Option 9, 16 and 17, but less than the other corresponding options within than Option 9, 16 and 17, but less than the other corresponding options within than Option 9, 16 and 17, but less than the other corresponding options within the other corresponding options wit	1			vectoring.							
corresponding options within this design envelope (2,000ft EAST). Using envelope (2,000ft EAST). Using envelope (2,000ft WEST). It is design envel											
					corresponding options within this design envelope (2,000ft EAST).	this design envelope (2,000ft EAST).	corresponding options within this design envelope (2,000ft WEST).	options within this design envelope (2,000ft WEST).	options within this design envelope (2,000ft WEST).	this design envelope (2,000ft WEST).	within this design envelope (2,000ft WEST).

IOA Critoria Evaluat

Colour Key	Description
	When compared to the baseline, there is a clear and
	obvious benefit. This option is viewed as more
	favourable than the other within the design envelope
	and as such is the preferred option within the design
	envelope.
Favourable	When compared to the baseline, there is a clear and
	obvious benefit.
Acceptable	When compared to the baseline, there is an equal
	benefit.
	When compared to the baseline, there is a clear and
Rejected	obvious dis-benefit. As such, these options are
	rejected.
	Option included for completeness but, in the case of
Baseline/Previously Rejected	previously rejected options, not subject to IOA.
	previously rejected options, not subject to load

71288 019 Arrivals											
Design Area:	RWY 22 2,500ft Transi		DO NOVINICO DO COMPA								
Communities	Impact Noise impact on health and	Level of Analysis Initial Options Appraisal:	DO NOTHING BASELINE' The 'Do Nothing baseline' for arrivals consists of	OPTION 1 (EAST) Option 1 is a Transition which contains an IAF to the south-east of	OPTION 10 (EAST) Option 10 is a Transition which contains an IAF to the south-east of	OPTION 19 (EAST) Option 19 is a Transition which contains an IAF to the south-east of	OPTION 20 (EAST) Option 20 is a Transition which contains an IAF to the south-east of	OPTION 21 (EAST) F Option 21 is a Transition which contains an IAF to the east of STN at	OPTION 14 (WEST) Option 14 is a Transition which contains an IAF to the north-west o	OPTION 16 (WEST) f Option 16 is a Transition which contains an IAF to the north-west of	OPTION 2B (CENTRAL) Option 2B is a Transition which contains an IAF approximately
	quality of life	Qualitative	Modal tracks that have been generated. These modal tracks have been created by the change sponsor to	at 3.8% (2.2 Degrees). In terms of noise impact, Option 1 overflies	STN at 7,000ft. This option enables a continuous descent operations at 3.8% (2.2 Degrees). In terms of noise impact, Option 10 overflies	at 4.3% (2.5 Degrees). In terms of noise impact, Option 19 overflies	at 4.1% (2.3 Degrees). In terms of noise impact, Option 20 overflies		at 5% (2.9 Degrees). In terms of noise impact, Option 14 overflies	s STN at 7,000ft. This option enables a continuous descent operations at 4% (2.3 Degrees). In terms of noise impact, Option 16 overflies	overhead STN at 7,000ft. This option enables a continuous descent operations at 3.4% (2 Degrees). In terms of noise impact, Option 2B
			provide an accurate representation of what occurs in today's operation.	9,726 people and 4,159 residential buildings. When compared to the baseline scenario, this option overfiles less people and	9,888 people and 4,306 residential buildings. When compared to the baseline scenario, this option overflies less people and	9,493 people and 4,081 residential buildings. When compared to the baseline scenario, this option overflies less people and	9,344 people and 4,507 residential buildings. When compared to the baseline scenario, this option overflies less people and	people and 2,946 residential buildings. When compared to the baseline scenario, this option overflies less people and residential	21,448 people and 10,340 residential buildings. When compared to the baseline scenario, this option overflies less people and	6,154 people and 2,974 residential buildings. When compared to the baseline scenario, this option overflies less people and	overflies 16,011 people and 6,598 residential buildings. When compared to the baseline scenario, this option overflies less people
			For comparison purposes within the IOA, Easterly and	residential buildings and as such is seen as beneficial.	residential buildings and as such is seen as beneficial.	residential buildings and as such is seen as beneficial.	residential buildings and as such is seen as beneficial.	buildings and as such is seen as beneficial.	residential buildings and as such is seen as beneficial.	residential buildings and as such is seen as beneficial.	and residential buildings and as such is seen as beneficial.
			Central B options are compared to a defined Easterly Modal Track. The East Modal track overflies 28,637								
			people and 14,434 residential buildings.								
			Westerly options are compared to a 'Modal Modal' track, which combines two lateral modal tracks from								
			the West and South West. The 'Modal Modal' track overflies 23,020 people and 11,004 residential								
			buildings.								
Communities	Air Quality	Initial Options Appraisal:	No change to air quality is predicted in maintaining	In terms of air quality, Option 1 does not overfly any AQMAs.	In terms of air quality, Option 10 does not overfly any AQMAs.	In terms of air quality, Option 19 does not overfly any AQMAs.	In terms of air quality, Option 20 does not overfly any AQMAs.	In terms of air quality, Option 21 does not overfly any AQMAs. Furthermore, as per CAP 1616 Para B74, due to the effects of mixing	As per the baseline scenario, Option 14 overflies 1 AQMA. Furthermore, as per CAP 1616 Para 874, due to the effects of mixin	In terms of air quality, Option 16 does not overfly any AQMAs. g Furthermore, as per CAP 1616 Para B74, due to the effects of mixing	In terms of air quality, Option 2B does not overfly any AQMAs. Furthermore, as per CAP 1616 Para B74, due to the effects of mixin
		Qualitative	baseline conditions, the majority of the extant procedures involves overflight above 1,000ft, other	and dispersion, emissions from aircraft above 1,000 feet are	and dispersion, emissions from aircraft above 1,000 feet are	and dispersion, emissions from aircraft above 1,000 feet are	and dispersion, emissions from aircraft above 1,000 feet are	and dispersion, emissions from aircraft above 1,000 feet are	and dispersion, emissions from aircraft above 1,000 feet are	and dispersion, emissions from aircraft above 1,000 feet are	and dispersion, emissions from aircraft above 1,000 feet are
			than the areas in the immediate vicinity of STN. For safety reasons, aircraft are required to establish a safe and stable flight profile during the final approach		unlikely to have a significant impact on local air quality. Based on the above, when compared to the baseline scenario, Option 10 is seen as beneficial.	unlikely to have a significant impact on local air quality. Based on the above, when compared to the baseline scenario, Option 19 is seen as beneficial.	unlikely to have a significant impact on local air quality. Based on the above, when compared to the baseline scenario, Option 20 is seen as beneficial.	unlikely to have a significant impact on local air quality. Based on the above, when compared to the baseline scenario, Option 21 is seen as beneficial.	unlikely to have a significant impact on local air quality. Based on the above, when compared to the baseline scenario, Option 14 is seen to be of equal benefit.	unlikely to have a significant impact on local air quality. Based on the above, when compared to the baseline scenario, Option 16 is seen as beneficial.	unlikely to have a significant impact on local air quality. Based on the above, when compared to the baseline scenario, Option 2B is seen as beneficial.
			phases of fight. In terms of AQMAs, both the Easterly and 'Modal	seen as penencial.	seen as penencial.	seen as denenda.	seen as denential.	Seeli as Deliencial.	seem to be or equal benefit.	seen as penencial.	seem as penenda.
			Modal' tracks overfly 1 AQMA each. Overflight of these AMQAs occurs when the aircraft is above								
Wider Society	Greenhouse Gas impact	Initial Options Appraisal:	1,000ft. Current arrival operations do not support continuous	Option 1 has been designed to support continuous descent	Option 10 has been designed to support continuous descent	Option 19 has been designed to support continuous descent	Option 20 has been designed to support continuous descent	Option 21 has been designed to support continuous descent	Option 14 has been designed to support continuous descent	Option 16 has been designed to support continuous descent	Option 2B has been designed to support continuous descent
Wide Society	Greening Gas impact	Qualitative	descent. It must be noted that the exact track length flown by aircraft may vary slightly due to the nature	operations, however, an element of radar vectoring may be required to manage aircraft separation distances. The track mileage	operations, however, an element of radar vectoring may be	operations, however, an element of radar vectoring may be	operations, however, an element of radar vectoring may be	operations, however, an element of radar vectoring may be required to manage aircraft separation distances. The track mileage	operations, however, an element of radar vectoring may be required to manage aircraft separation distances. The track mileage	operations, however, an element of radar vectoring may be	operations, however, an element of radar vectoring may be required to manage aircraft separation distances. The track mileage
			of radar vectoring. Extant procedures do not support optimal aircraft performance and therefore are	of Option 1 is 53.15km (28.70NM). Based on this, when compared to the baseline scenario, Option 1 is longer and is therefore	of Option 10 is 53.44km (28.85NM). Based on this, when compared	of Option 19 is 48.78km (26.34NM). Based on this, when compared to the baseline scenario, Option 19 is longer and is therefore	of Option 20 is 50.33km (27.17NM). Based on this, when compared to the baseline scenario, Option 20 is longer and is therefore	d of Option 21 is 44.03km (23.77NM). Based on this, when compared to the baseline scenario, Option 21 is longer and is therefore	of Option 14 is 44.22km (23.88NM). Based on this, when compared to the baseline scenario, Option 14 is shorter and is therefore	of Option 16 is 51.48km (27.79NM). Based on this, when compared to the baseline scenario, Option 16 is longer and is therefore	of Option 2B is 56.95km (30.75NM). Based on this, when compared to the baseline scenario, Option 2B is longer and is therefore
			predicted to have a greater environmental impact	expected to emit more greenhouse gases. As such, this is seen as a	expected to emit more greenhouse gases. As such, this is seen as a	expected to emit more greenhouse gases. As such, this is seen as a	expected to emit more greenhouse gases. As such, this is seen as a		expected to emit less greenhouse gases. As such, this is seen as	expected to emit more greenhouse gases. As such, this is seen as a dis-benefit. More in-depth analysis at Stage 3 is required to confirm	expected to emit more greenhouse gases. As such, this is seen as a
			CAP 1616 process, there is no requirement for a change sponsor to conduct quantitative fuel burn or	the exact amounts of greenhouse gases released.	the exact amounts of greenhouse gases released.	the exact amounts of greenhouse gases released.	the exact amounts of greenhouse gases released.	the exact amounts of greenhouse gases released.	the exact amounts of greenhouse gases released.	the exact amounts of greenhouse gases released.	the exact amounts of greenhouse gases released.
			emissions analysis. This will be covered in Stage 3. In order to make a comparison, track milage is used								
			based on the theory that the shorter the track mileage, the less greenhouse gases are emitted.								
			With regards to the modal track lengths, the easterly modal track is 42.43km (22.91NM) long. Meanwhile,								
			the 'Modal Modal' track is 45.01km (24.31NM) in length.								
Wider Society	Capacity and resilience	Initial Options Appraisal:	Maintaining extant procedures would maintain	The introduction of PBN routes is expected to deliver benefits by	The introduction of PBN routes is expected to deliver benefits by		The introduction of PBN routes is expected to deliver benefits by		The introduction of PBN routes is expected to deliver benefits by	The introduction of PBN routes is expected to deliver benefits by	The introduction of PBN routes is expected to deliver benefits by
		qualitative	current capacity and resilience.	increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delays (both in air or on the	increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delays (both in air or on the	increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delays (both in air or on the	increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delays (both in air or on the	increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delays (both in air or on the	increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delays (both in air or on the	increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delays (both in air or on the	increasing airspace capacity which subsequently leads to more predictable flight paths and fewer delays (both in air or on the
					ground). The reduction of the reliance on outdated ground based navigational aids will significantly increase operational resilience for	ground). The reduction of the reliance on outdated ground based navigational aids will significantly increase operational resilience for	navigational aids will significantly increase operational resilience for	r navigational aids will significantly increase operational resilience for	ground). The reduction of the reliance on outdated ground based navigational aids will significantly increase operational resilience fo	ground). The reduction of the reliance on outdated ground based r navigational aids will significantly increase operational resilience for	ground). The reduction of the reliance on outdated ground based navigational aids will significantly increase operational resilience for
Marine 11	T	Laboratoria di		airlines and operators.	airlines and operators.	airlines and operators.	airlines and operators.	airlines and operators.	airlines and operators.	airlines and operators.	airlines and operators.
Wider Society	Tranquility	Initial Options Appraisal: Qualitative	As per CAP 1616, Appendix B, Para B76, change sponsors are required to consider Tranquillity with	has been identified that this option overflies 1 Country Park and 3	it has been identified that this option overflies 1 Country Park and 2	it has been identified that this option overflies 1 Country Park and 2		2 it has been identified that this option overflies 2 Country Parks and	Option 14 does not overfly any AONBs, National Parks or Country Parks. However, it has been identified that this option overflies 5	Option 16 does not overfly any AONBs, National Parks or Country Parks. However, it has been identified that this option overflies 3	Option 2B does not overfly any AONBs or National Parks. However, it has been identified that this option overflies 2 Country Parks and
			specific reference to AONBs and National Parks only, unless other areas have been identified through	SSSIs. Overflight of these areas is expected to occur at a higher altitude, minimising the impact of aircraft noise and emissions on these areas. When company to the baseline second Option 1 is	SSSIs. Overflight of these areas is expected to occur at a higher albitude, minimising the impact of aircraft noise and emissions of the impact of aircraft noise and emissions of the control of the con		altitude, minimising the impact of aircraft noise and emissions on		SSSIs. Overflight of these areas is expected to occur at a higher allitude, minimising the impact of aircraft noise and emissions on the second of the secon	SSSIs. Overflight of these areas is expected to occur at a higher altitude, minimising the impact of aircraft noise and emissions on these areas in the second of the seco	4 SSSIs. Overflight of these areas is expected to occur at a higher altitude, minimising the impact of aircraft noise and emissions on these areas and the state of the state
			community engagement. Although no specific areas were identified by community engagement, the	equal in that it does not overfly any AONBs or National Parks.	equal in that it does not overfly any AONBs or National Parks. This	equal in that it does not overfly any AONBs or National Parks. This	equal in that it does not overfly any AONBs or National Parks. This	these areas. When compared to the baseline scenario, Option 21 is equal in that it does not overfly any AONBs or National Parks. This	equal in that it does not overfly any AONBs, National Parks or	these areas. When compared to the baseline scenario, Option 16 is equal in that it does not overfly any AONBs, National Parks or	equal in that it does not overfly any AONBs or National Parks.
			change sponsor has decided to include Internationally (SACs, SPAs, RAMSAR) and Nationally	such, this option is deemed to be of dis-benefit when compared to	option overflies an equal number of SSSIs. However, this option does overfly more Country Parks. As such, this option is deemed to	does overfly more Country Parks. As such, this option is deemed to	option overflies an equal number of SSSIs. However, this option does overfly more Country Parks. As such, this option is deemed to	option overflies an equal number of SSSIs. However, this option of does overfly more Country Parks. As such, this option is deemed to	Country Parks. This option overflies less SSSIs in comparison to the baseline scenario. As such, this option is deemed to be beneficial.	Country Parks. This option overflies less SSSIs in comparison to the baseline scenario. As such, this option is deemed to be beneficial.	However, this option does overfly more Country Parks and SSSIs. A such, this option is deemed to be of dis-benefit when compared to
			(SSSIs and National Nature Reserves) designated habitats and Country Parks. Neither of the modal	the baseline scenario.	be of dis-benefit when compared to the baseline scenario.	be of dis-benefit when compared to the baseline scenario.	be of dis-benefit when compared to the baseline scenario.	be of dis-benefit when compared to the baseline scenario.			the baseline scenario.
			tracks produced overfly any AONBs, National Parks or Country Parks. However, the Easterly modal track								
			overflies 2 SSSIs while the 'Modal Modal' track overflies 6 SSSIs.								
Wider Society	Biodiversity	Initial Options Appraisal: Qualitative	Analysis conducted by the change sponsor shows that the existing operations at STN overfly or fly	designated sites are around STN. At this stage, there is expected to	designated sites are around STN. At this stage, there is expected to	designated sites are around STN. At this stage, there is expected to	designated sites are around STN. At this stage, there is expected to	The change sponsor has conducted work to understand where the designated sites are around STN. At this stage, there is expected to	designated sites are around STN. At this stage, there is expected to	The change sponsor has conducted work to understand where the designated sites are around STN. At this stage, there is expected to	The change sponsor has conducted work to understand where the designated sites are around STN. At this stage, there is expected to
			within the vicinity of Internationally (SACs, SPAs, RAMSAR) or Nationally (SSSIs, National Nature	quality perspective, these sites will be overflown at altitudes above	quality perspective, these sites will be overflown at altitudes above	quality perspective, these sites will be overflown at altitudes above	quality perspective, these sites will be overflown at altitudes above	be no change likely to affect biodiversity at these sites. From an air quality perspective, these sites will be overflown at altitudes above	quality perspective, these sites will be overflown at altitudes above	be no change likely to affect biodiversity at these sites. From an air quality perspective, these sites will be overflown at altitudes above	be no change likely to affect biodiversity at these sites. From an air quality perspective, these sites will be overflown at altitudes above
			Reserves) designated sites. In today's operation, aircraft are flying above 1,000ft when passing over		1,000ft. As per CAP 1616 Appendix B, Para B74, because of dispersion and mixing, there is unlikely to be an impact on local air			1,000ft. As per CAP 1616 Appendix B, Para B74, because of dispersion and mixing, there is unlikely to be an impact on local air	1,000ft. As per CAP 1616 Appendix B, Para B74, because of dispersion and mixing, there is unlikely to be an impact on local air	1,000ft. As per CAP 1616 Appendix B, Para B74, because of dispersion and mixing, there is unlikely to be an impact on local air	1,000ft. As per CAP 1616 Appendix B, Para B74, because of dispersion and mixing, there is unlikely to be an impact on local air
			these sites. Due to the effects of mixing and dispersion, there is a limited impact, in terms of the	quality from aircraft above 1,000ft. Furthermore, CAP 1616, Appendix B, Para B80 states that in general, airspace change	quality from aircraft above 1,000ft. Furthermore, CAP 1616, Appendix B, Para B80 states that in general, airspace change	quality from aircraft above 1,000ft. Furthermore, CAP 1616, Appendix B, Para B80 states that in general, airspace change	quality from aircraft above 1,000ft. Furthermore, CAP 1616, Appendix B, Para B80 states that in general, airspace change	quality from aircraft above 1,000ft. Furthermore, CAP 1616, Appendix B, Para B80 states that in general, airspace change	quality from aircraft above 1,000ft. Furthermore, CAP 1616, Appendix B, Para B80 states that in general, airspace change	quality from aircraft above 1,000ft. Furthermore, CAP 1616, Appendix B, Para B80 states that in general, airspace change	quality from aircraft above 1,000ft. Furthermore, CAP 1616, Appendix B, Para B80 states that in general, airspace change
			air quality specific to these sites. STN acknowledges that there are sites within the vicinity of the airport;	proposal will not have an impact on biodiversity as they do not involve ground-based infrastructure. That said, STN acknowledges	proposal will not have an impact on biodiversity as they do not involve ground-based infrastructure. That said, STN acknowledges	proposal will not have an impact on biodiversity as they do not involve ground-based infrastructure. That said, STN acknowledges		proposal will not have an impact on biodiversity as they do not involve ground-based infrastructure. That said, STN acknowledges	proposal will not have an impact on biodiversity as they do not involve ground-based infrastructure. That said, STN acknowledges	proposal will not have an impact on biodiversity as they do not involve ground-based infrastructure. That said, STN acknowledges	proposal will not have an impact on biodiversity as they do not involve ground-based infrastructure. That said, STN acknowledges
			any potential impact will be assessed by further analysis in Stage 3 of the ACP process by Subject	that any potential impact to the designated sites around STN will be assessed in Stage 3 of the ACP process by Subject Matter Experts.	that any potential impact to the designated sites around STN will be assessed in Stage 3 of the ACP process by Subject Matter Experts.	that any potential impact to the designated sites around STN will be assessed in Stage 3 of the ACP process by Subject Matter Experts.	that any potential impact to the designated sites around STN will be assessed in Stage 3 of the ACP process by Subject Matter Experts.	 that any potential impact to the designated sites around STN will be assessed in Stage 3 of the ACP process by Subject Matter Experts. 	that any potential impact to the designated sites around STN will be assessed in Stage 3 of the ACP process by Subject Matter Experts.	 that any potential impact to the designated sites around STN will be assessed in Stage 3 of the ACP process by Subject Matter Experts. 	that any potential impact to the designated sites around STN will be assessed in Stage 3 of the ACP process by Subject Matter Experts.
			Matter Experts.								
General Aviation	Access	Initial Options Appraisal: Qualitative	No change to existing airspace arrangements. GA users of STN will maintain their current level of access under extant operational arrangements.	No change to the existing airspace arrangements (within the baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of	No change to the existing airspace arrangements (within the baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of	No change to the existing airspace arrangements (within the baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of	No change to the existing airspace arrangements (within the baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of	No change to the existing airspace arrangements (within the baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of	No change to the existing airspace arrangements (within the baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of	No change to the existing airspace arrangements (within the baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of	No change to the existing airspace arrangements (within the baseline scenario) are expected as a consequence of this ACP. However, it is recommended that all VRPs and existing Letters of
			unuer extant operational arrangements.	Agreement pertaining to GA access are reviewed prior to implementation to ensure their continued validity.	Agreement pertaining to GA access are reviewed prior to implementation to ensure their continued validity.	Agreement pertaining to GA access are reviewed prior to implementation to ensure their continued validity.	Agreement pertaining to GA access are reviewed prior to implementation to ensure their continued validity.	Agreement pertaining to GA access are reviewed prior to implementation to ensure their continued validity.	Agreement pertaining to GA access are reviewed prior to implementation to ensure their continued validity.	Agreement pertaining to GA access are reviewed prior to implementation to ensure their continued validity.	Agreement pertaining to GA access are reviewed prior to implementation to ensure their continued validity.
General Aviation /	Economic impact from increased effective capacity	Initial Options Appraisal:	No increase to effective capacity anticipated for continued use of extant procedures, therefore no	The introduction PBN is expected to deliver benefits by increasing airspace capacity which in turn will lead to more predictable flight	The introduction PBN is expected to deliver benefits by increasing airspace capacity which in turn will lead to more predictable flight	The introduction PBN is expected to deliver benefits by increasing		The introduction PBN is expected to deliver benefits by increasing	The introduction PBN is expected to deliver benefits by increasing airspace capacity which in turn will lead to more predictable flight	The introduction PBN is expected to deliver benefits by increasing airspace capacity which in turn will lead to more predictable flight	The introduction PBN is expected to deliver benefits by increasing airspace capacity which in turn will lead to more predictable flight
commercial arrance	increased effective capacity	Quantute	economic benefit for GA/airlines.	paths and fewer delays (both in the air or on the ground). This is expected to facilitate economic benefit to airlines by increasing the	paths and fewer delays (both in the air or on the ground). This is expected to facilitate economic benefit to airlines by increasing the	paths and fewer delays (both in the air or on the ground). This is expected to facilitate economic benefit to airlines by increasing the	paths and fewer delays (both in the air or on the ground). This is	paths and fewer delays (both in the air or on the ground). This is expected to facilitate economic benefit to airlines by increasing the	paths and fewer delays (both in the air or on the ground). This is expected to facilitate economic benefit to airlines by increasing the	paths and fewer delays (both in the air or on the ground). This is expected to facilitate economic benefit to airlines by increasing the	paths and fewer delays (both in the air or on the ground). This is expected to facilitate economic benefit to airlines by increasing the
				frequency of air transport movements, increasing passenger numbers and increasing cargo tonnage carried. It is not	requency of air transport movements, increasing passenger numbers and increasing cargo tonnage carried. It is not	frequency of air transport movements, increasing passenger numbers and increasing cargo tonnage carried. It is not	frequency of air transport movements, increasing passenger numbers and increasing cargo tonnage carried. It is not	frequency of air transport movements, increasing passenger numbers and increasing cargo tonnage carried. It is not	frequency of air transport movements, increasing passenger numbers and increasing cargo tonnage carried. It is not	frequency of air transport movements, increasing passenger numbers and increasing cargo tonnage carried. It is not	frequency of air transport movements, increasing passenger numbers and increasing cargo tonnage carried. It is not
				proportionate for London Stansted Airport to predict the precise	proportionate for London Stansted Airport to predict the precise economic benefit to commercial airlines using the new procedures	proportionate for London Stansted Airport to predict the precise	proportionate for London Stansted Airport to predict the precise economic benefit to commercial airlines using the new procedures	proportionate for London Stansted Airport to predict the precise	proportionate for London Stansted Airport to predict the precise economic benefit to commercial airlines using the new procedures	proportionate for London Stansted Airport to predict the precise	proportionate for London Stansted Airport to predict the precise economic benefit to commercial airlines using the new procedures
								as any increase in individual airline capacity will depend on private commercial business characteristics. It is not proportionate for		as any increase in individual airline capacity will depend on private commercial business characteristics. It is not proportionate for	as any increase in individual airline capacity will depend on private commercial business characteristics. It is not proportionate for
				London Stansted Airport to assess the economic benefit to the GA	London Stansted Airport to assess the economic benefit to the GA community however they are expected to benefit from increased	London Stansted Airport to assess the economic benefit to the GA	London Stansted Airport to assess the economic benefit to the GA community however they are expected to benefit from increased	London Stansted Airport to assess the economic benefit to the GA	London Stansted Airport to assess the economic benefit to the GA community however they are expected to benefit from increased	London Stansted Airport to assess the economic benefit to the GA community however they are expected to benefit from increased	London Stansted Airport to assess the economic benefit to the GA community however they are expected to benefit from increased
				predictability of commercial airline movements which is expected to lead to reduced on-ground and in-air delays for all users.			predictability of commercial airline movements which is expected to lead to reduced on-ground and in-air delays for all users.		predictability of commercial ariline movements which is expected to lead to reduced on-ground and in-air delays for all users.		predictability of commercial airline movements which is expected to lead to reduced on-ground and in-air delays for all users.
				grand and the strong and the strong	g	o and an analysis of the said.	g and an object of the same	grand of the straight for the straight	o	O and a straight on an uncla-	o and an occupation on oacid.
General Aviation /	Fuel burn	Initial Options Appraisal:	The existing STN procedures do not support	Option 1 does support continuous descent operations, meaning that aircraft would not be required to level off during arrival,	Option 10 does support continuous descent operations, meaning that aircraft would not be required to level off during arrival,	Option 19 does support continuous descent operations, meaning that aircraft would not be required to level off during arrival,	Option 20 does support continuous descent operations, meaning that aircraft would not be required to level off during arrival,	Option 21 does support continuous descent operations, meaning that aircraft would not be required to level off during arrival,	Option 14 does support continuous descent operations, meaning that aircraft would not be required to level off during arrival,	Option 16 does support continuous descent operations, meaning that aircraft would not be required to level off during arrival,	Option 2B does support continuous descent operations, meaning that aircraft would not be required to level off during arrival,
es an mies			to be greater due to tactical ATC intervention and	reducing the overall amount of fuel burnt. There is no requirement within Stage 2 of the CAP1616 process to quantify fuel burn, this	reducing the overall amount of fuel burnt. There is no requirement	reducing the overall amount of fuel burnt. There is no requirement	that aircraft would not be required to level off during arrival, reducing the overall amount of fuel burnt. There is no requirement within Stage 2 of the CAP1616 process to quantify fuel burn, this	reducing the overall amount of fuel burnt. There is no requirement	that aircraft would not be required to level off ouring arrival, reducing the overall amount of fuel burnt. There is no requirement within Stage 2 of the CAP1616 process to quantify fuel burn, this	that aircraft would not be required to level off ouring arrival, reducing the overall amount of fuel burnt. There is no requirement within Stage 2 of the CAP1616 process to quantify fuel burn, this	reducing the overall amount of fuel burnt. There is no requirement within Stage 2 of the CAP1616 process to quantify fuel burn. this
			case of the Easterly modal track, this is 42.43km	will be conducted in Stage 3. Therefore, to enable a comparison,	will be conducted in Stage 3. Therefore, to enable a comparison, the logic applied is that the shorter the track length, the less fuel is	will be conducted in Stage 3. Therefore, to enable a comparison,	will be conducted in Stage 3. Therefore, to enable a comparison,	will be conducted in Stage 3. Therefore, to enable a comparison, the logic applied is that the shorter the track length, the less fuel is	will be conducted in Stage 3. Therefore, to enable a comparison, the logic applied is that the shorter the track length, the less fuel is	will be conducted in Stage 3. Therefore, to enable a comparison, the logic applied is that the shorter the track length, the less fuel is	will be conducted in Stage 3. Therefore, to enable a comparison, the logic applied is that the shorter the track length, the less fuel is
			is 45.01km (24.31NM) in length.	burnt. With regards to this option, it is 53.15km (28.70NM) long.	burnt. With regards to this option, it is 53.44km (28.85NM) long.	burnt. With regards to this option, it is 48.78km (26.34NM) long.	burnt. With regards to this option, it is 50.33km (27.17NM) long.		burnt. With regards to this option, it is 44.22km (23.88NM) long.	the logic applied is that the shorter the track length, the less fuel is burnt. With regards to this option, it is 51.48km (27.79NM) long. When compared to the baseline scenario, Option 16 is longer and at	burnt. With regards to this option, it is 56.95km (30.75NM) long. When compared to the baseline scenario, Option 2B is longer and
				this stage it assumed will require a greater amount of fuel burn,	this stage it assumed will require a greater amount of fuel burn,	this stage it assumed will require a greater amount of fuel burn,	this stage it assumed will require a greater amount of fuel burn,		at this stage it assumed will require a smaller amount of fuel burn, therefore, this option is beneficial in terms of fuel burn. More in-	this stage it assumed will require a greater amount of fuel burn, therefore, this option is of dis-benefit in terms of fuel burn. More in	at this stage it assumed will require a greater amount of fuel burn, therefore, this option is of dis-benefit in terms of fuel burn. More in
				depth analysis will be carried out in Stage 3 to confirm.	depth analysis will be carried out in Stage 3 to confirm.	depth analysis will be carried out in Stage 3 to confirm.	depth analysis will be carried out in Stage 3 to confirm.	depth analysis will be carried out in Stage 3 to confirm.	depth analysis will be carried out in Stage 3 to confirm.	depth analysis will be carried out in Stage 3 to confirm.	depth analysis will be carried out in Stage 3 to confirm.
ommercial airlines	Training costs	Initial Options Appraisal:	No additional training predicted.	It is expected that no extra Pilot/Crew training will be required to	It is expected that no extra Pilot/Crew training will be required to	It is expected that no extra Pilot/Craw training will be required to	It is expected that no extra Pilot/Crew training will be required to	It is expected that no extra Pilot/Crew training will be received to	It is expected that no extra Pilot/Crew training will be required to	It is expected that no extra Pilot/Crew training will be required to	It is expected that no extra Pilot/Crew training will be required to
	,	Qualitative		enable pilots to fly the new PBN procedures. PBN is a common standard of navigation throughout the world. It is not proportionate	enable pilots to fly the new PBN procedures. PBN is a common standard of navigation throughout the world. It is not proportionate	enable pilots to fly the new PBN procedures. PBN is a common standard of navigation throughout the world. It is not proportional	enable pilots to fly the new PBN procedures. PBN is a common estandard of navigation throughout the world. It is not proportional	enable pilots to fly the new PBN procedures. PBN is a common	enable pilots to fly the new PBN procedures. PBN is a common standard of navigation throughout the world. It is not proportional	enable pilots to fly the new PBN procedures. PBN is a common e standard of navigation throughout the world. It is not proportionate	enable pilots to fly the new PBN procedures. PBN is a common standard of navigation throughout the world. It is not proportional
				for STN to assess on-going competency for individual commercial airlines due to the significant variables involved e.g. number of			for STN to assess on-going competency for individual commercial airlines due to the significant variables involved e.g. number of		for STN to assess on-going competency for individual commercial airlines due to the significant variables involved e.g. number of	for STN to assess on-going competency for individual commercial airlines due to the significant variables involved e.g. number of	for STN to assess on-going competency for individual commercial airlines due to the significant variables involved e.g. number of
				pilots, airline policies on training (simulator versus live flight training), fleet types, and variations in on-board equipment etc.	pilots, airline policies on training (simulator versus live flight training), fleet types, and variations in on-board equipment etc.	pilots, airline policies on training (simulator versus live flight training), fleet types, and variations in on-board equipment etc.	pilots, airline policies on training (simulator versus live flight training), fleet types, and variations in on-board equipment etc.	pilots, airline policies on training (simulator versus live flight training), fleet types, and variations in on-board equipment etc.	pilots, airline policies on training (simulator versus live flight training), fleet types, and variations in on-board equipment etc.	pilots, airline policies on training (simulator versus live flight training), fleet types, and variations in on-board equipment etc.	pilots, airline policies on training (simulator versus live flight training), fleet types, and variations in on-board equipment etc.
ommercial airlines	Other costs	Initial Options Appraisal:	It is not proportionate for STN to assess potential	Other costs to commercial airlines may include updates to Flight	Other costs to commercial airlines may include updates to Flight	Other costs to commercial airlines may include updates to Flight	Other costs to commercial airlines may include updates to Flight	Other costs to commercial airlines may include updates to Flight	Other costs to commercial airlines may include updates to Flight	Other costs to commercial airlines may include updates to Flight	Other costs to commercial airlines may include updates to Flight
		Qualitative	other costs for commercial airlines - there may be costs associated with maintaining legacy systems to	Management Systems (FMS), navigation databases and operating procedures, increased pilot hire costs versus training etc. It is not	Management Systems (FMS), navigation databases and operating procedures, increased pilot hire costs versus training etc. It is not	Management Systems (FMS), navigation databases and operating	Management Systems (FMS), navigation databases and operating procedures, increased pilot hire costs versus training etc. It is not	Management Systems (FMS), navigation databases and operating	Management Systems (FMS), navigation databases and operating procedures, increased pilot hire costs versus training etc. It is not	Management Systems (FMS), navigation databases and operating procedures, increased pilot hire costs versus training etc. It is not	Management Systems (FMS), navigation databases and operating procedures, increased pilot hire costs versus training etc. It is not
			continue flying conventional navigation but there are too many variables (e.g., aircraft types, on-board	proportionate for STN to assess the 'other costs' to commercial airlines of flying PBN procedures due to significant variables; some	proportionate for STN to assess the 'other costs' to commercial airlines of flying PBN procedures due to significant variables; some	proportionate for STN to assess the 'other costs' to commercial	proportionate for STN to assess the 'other costs' to commercial airlines of flying PBN procedures due to significant variables; some	proportionate for STN to assess the 'other costs' to commercial	proportionate for STN to assess the 'other costs' to commercial airlines of flying PBN procedures due to significant variables; some	proportionate for STN to assess the 'other costs' to commercial airlines of flying PBN procedures due to significant variables; some	proportionate for STN to assess the 'other costs' to commercial airlines of flying PBN procedures due to significant variables; some
			system capability etc.) to consider these effectively.	airlines may already be 'PBN ready' whereas others may not.	airlines may already be 'PBN ready' whereas others may not.	airlines may already be 'PBN ready' whereas others may not.	airlines may already be 'PBN ready' whereas others may not.	airlines may already be 'PBN ready' whereas others may not.	airlines may already be 'PBN ready' whereas others may not.	airlines may already be 'PBN ready' whereas others may not.	airlines may already be 'PBN ready' whereas others may not.
Airport / Air navigation service	Infrastructure costs	Initial Options Appraisal: Qualitative	No additional infrastructure is required at STN to maintain extant conventional arrival procedures.	All options relate to the implementation of PBN and no additional infrastructure is required. The introduction of PBN reduces the	All options relate to the implementation of PBN and no additional infrastructure is required. The introduction of PBN reduces the	All options relate to the implementation of PBN and no additional infrastructure is required. The introduction of PBN reduces the	All options relate to the implementation of PBN and no additional infrastructure is required. The introduction of PBN reduces the	All options relate to the implementation of PBN and no additional infrastructure is required. The introduction of PBN reduces the	All options relate to the implementation of PBN and no additional infrastructure is required. The introduction of PBN reduces the	All options relate to the implementation of PBN and no additional infrastructure is required. The introduction of PBN reduces the	All options relate to the implementation of PBN and no additional infrastructure is required. The introduction of PBN reduces the
rovider			and a second control of the second control o	reliance on infrastructure, in particular ground-based navigation	reliance on infrastructure, in particular ground-based navigation aids are no longer needed. The foundation for PBN is RNAV or RNP;	reliance on infrastructure, in particular ground-based navigation	reliance on infrastructure, in particular ground-based navigation	reliance on infrastructure, in particular ground-based navigation ; aids are no longer needed. The foundation for PBN is RNAV or RNP;	reliance on infrastructure, in particular ground-based navigation aids are no longer needed. The foundation for PBN is RNAV or RNP	reliance on infrastructure, in particular ground-based navigation	reliance on infrastructure, in particular ground-based navigation aids are no longer needed. The foundation for PBN is RNAV or RNP;
				aircraft arriving and departing STN using the proposed RNAV/RNP procedures will do so based on their performance-based navigation	aircraft arriving and departing STN using the proposed RNAV/RNP procedures will do so based on their performance-based navigation	aircraft arriving and departing STN using the proposed RNAV/RNP procedures will do so based on their performance-based navigation	aircraft arriving and departing STN using the proposed RNAV/RNP	aircraft arriving and departing STN using the proposed RNAV/RNP		aircraft arriving and departing STN using the proposed RNAV/RNP in procedures will do so based on their performance-based navigation	aircraft arriving and departing STN using the proposed RNAV/RNP procedures will do so based on their performance-based navigation
				capability.	capability.	capability.	capability.	capability.	capability.	capability.	capability.
rport / Air avigation service	Operational costs	Initial Options Appraisal: Qualitative	No change to operational costs is attributable to maintaining the extant procedures.	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and	Air Traffic Control at STN is contracted out to a third-party organisation. This existing commercial contract between STN and
ovider				their chosen ANSP is considered to be an ongoing cost. ICAO	their chosen ANSP is considered to be an ongoing cost. ICAO	their chosen ANSP is considered to be an ongoing cost. ICAO	their chosen ANSP is considered to be an ongoing cost. ICAO	organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost. ICAO by describe 'Improved Operational Efficiency' as a benefit delivered by	their chosen ANSP is considered to be an ongoing cost. ICAO	organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost. ICAO y describe 'improved Operational Efficiency' as a benefit delivered by	organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost. ICAO describe 'Improved Operational Efficiency' as a benefit delivered b
				the introduction of PBN. In general, STN predicts that operational	the introduction of PBN. In general, STN predicts that operational	the introduction of PBN. In general, STN predicts that operational	the introduction of PBN. In general, STN predicts that operational	y describe 'Improved Operational Efficiency' as a benefit delivered by the introduction of PBN. In general, STN predicts that operational efficiency will improve and that there may be potential for a net	describe 'Improved Operational Efficiency' as a benefit delivered by the introduction of PBN. In general, STN predicts that operational efficiency will improve and that there may be potential for a net	the introduction of PBN. In general, STN predicts that operational efficiency will improve and that there may be potential for a net	describe 'Improved Operational Efficiency' as a benefit delivered by the introduction of PBN. In general, STN predicts that operational efficiency will improve and that there may be potential for a net
				efficiency will improve and that there may be potential for a net reduction in operational costs.	efficiency will improve and that there may be potential for a net reduction in operational costs.	efficiency will improve and that there may be potential for a net reduction in operational costs.	efficiency will improve and that there may be potential for a net reduction in operational costs.	efficiency will improve and that there may be potential for a net reduction in operational costs.	efficiency will improve and that there may be potential for a net reduction in operational costs.	efficiency will improve and that there may be potential for a net reduction in operational costs.	efficiency will improve and that there may be potential for a net reduction in operational costs.
irport / Air	Deployment costs	Initial Options Appraisal:	No Deployment costs applicable to extant	Air Traffic Control at STN is contracted out to a third-party	Air Traffic Control at STN is contracted out to a third-party	Air Traffic Control at STN is contracted out to a third-party	Air Traffic Control at STN is contracted out to a third-party	Air Traffic Control at STN is contracted out to a third-party	Air Traffic Control at STN is contracted out to a third-party	Air Traffic Control at STN is contracted out to a third-party	Air Traffic Control at STN is contracted out to a third-party
avigation service rovider		Qualitative	procedures	organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.	organisation. This existing commercial contract between STN and their chosen ANSP is considered to be an ongoing cost.
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-		Level of Analysis	DO NOTHING RASELINE								
Group	Impact		DO NOTHING BASELINE	OPTION 1 (EAST)	OPTION 10 (EAST)	OPTION 19 (EAST)	OPTION 20 (EAST)	OPTION 21 (EAST)	OPTION 14 (WEST)	OPTION 16 (WEST)	OPTION 2B (CENTRAL)
Safety Assessment	Safety Assessment	Initial Options Appraisal:	The baseline assumption is that current operations at	Possible conflict with STN proposed SIDs. Given this, there is a	Possible conflict with STN proposed SIDs. Given this, there is a	Possible conflict with STN proposed SIDs. Given this, there is a	Possible conflict with STN proposed SIDs. Given this, there is a	Possible conflict with STN proposed SIDs. Given this, there is a	Possible conflict with STN proposed SIDs. Given this, there is a	Possible conflict with STN proposed SIDs. Given this, there is a	Possible conflict with STN proposed SIDs. Given this, there is a
		Qualitative	STN are safe including use of the existing	potential for a loss of horizontal and/or vertical separation requiring	potential for a loss of horizontal and/or vertical separation requirin		potential for a loss of horizontal and/or vertical separation requiring	potential for a loss of horizontal and/or vertical separation requiring		potential for a loss of horizontal and/or vertical separation requiring	potential for a loss of horizontal and/or vertical separation requiring
			conventional procedures.	ATC tactical intervention, causing an increase in ATCO workload.	ATC tactical intervention, causing an increase in ATCO workload.	ATC tactical intervention, causing an increase in ATCO workload.	ATC tactical intervention, causing an increase in ATCO workload.	ATC tactical intervention, causing an increase in ATCO workload.	ATC tactical intervention, causing an increase in ATCO workload.	ATC tactical intervention, causing an increase in ATCO workload.	ATC tactical intervention, causing an increase in ATCO workload.
				The design process itself is also a mitigation in this instance as	The design process itself is also a mitigation in this instance as	The design process itself is also a mitigation in this instance as	The design process itself is also a mitigation in this instance as	The design process itself is also a mitigation in this instance as	The design process itself is also a mitigation in this instance as	The design process itself is also a mitigation in this instance as	The design process itself is also a mitigation in this instance as
				procedures could be designed with the appropriate	procedures could be designed with the appropriate	procedures could be designed with the appropriate	procedures could be designed with the appropriate	procedures could be designed with the appropriate	procedures could be designed with the appropriate	procedures could be designed with the appropriate	procedures could be designed with the appropriate
				horizontal/vertical separation standards.	horizontal/vertical separation standards.	horizontal/vertical separation standards.	horizontal/vertical separation standards.	horizontal/vertical separation standards.	horizontal/vertical separation standards.	horizontal/vertical separation standards.	horizontal/vertical separation standards.
		Summary of Analysis		When compared to the baseline scenario, Option 1 performs worse		When compared to the baseline scenario, Option 19 performs		When compared to the baseline scenario, Option 21 performs	When compared to the baseline scenario, Option 14 performs	When compared to the baseline scenario, Option 16 performs	When compared to the baseline scenario, Option 2B performs
					worse in terms of tranquillity, greenhouse gas emissions and fuel			worse in terms of tranquillity, greenhouse gas emissions and fuel	better in terms of noise impact, greenhouse gas emissions,	worse in terms of greenhouse gas emissions and fuel burn, but	worse in terms of tranquillity, greenhouse gas emissions and fuel
				but better in terms of noise impact, air quality, capacity/resilience	burn, but better in terms of noise impact, air quality,	burn, but better in terms of noise impact, air quality,		burn, but better in terms of noise impact, air quality,		better in terms of noise impact, air quality, tranquillity,	burn, but better in terms of noise impact, air quality,
				and economic impact of capacity. The remaining criteria are	capacity/resilience and economic impact of capacity. The remaining	capacity/resilience and economic impact of capacity. The remaining		capacity/resilience and economic impact of capacity. The remaining	capacity. The remaining criteria are deemed to be of equal benefit	capacity/resilience and economic impact of capacity. The remaining	capacity/resilience and economic impact of capacity. The remaining
			December 2022, which would have a significant	deemed to be of equal benefit because there is no change when	criteria are deemed to be of equal benefit because there is no	criteria are deemed to be of equal benefit because there is no	criteria are deemed to be of equal benefit because there is no	criteria are deemed to be of equal benefit because there is no	because there is no change when compared to today's operation.	criteria are deemed to be of equal benefit because there is no	criteria are deemed to be of equal benefit because there is no
			impact on capacity and resilience. The existing arrival		change when compared to today's operation. Having said that, at	change when compared to today's operation. Having said that, at	change when compared to today's operation. Having said that, at	change when compared to today's operation. Having said that, at	Having said that, at this time, it is not possible to fully determine the		change when compared to today's operation. Having said that, at
			arrangements do not support continuous descent	not possible to fully determine the safety implications of this	this time, it is not possible to fully determine the safety implications	this time, it is not possible to fully determine the safety implications	this time, it is not possible to fully determine the safety implications	this time, it is not possible to fully determine the safety implications	safety implications of this specific option. The change sponsor has	this time, it is not possible to fully determine the safety implications	this time, it is not possible to fully determine the safety implications
				specific option. The change sponsor has identified possible conflicts	of this specific option. The change sponsor has identified possible	of this specific option. The change sponsor has identified possible	of this specific option. The change sponsor has identified possible	of this specific option. The change sponsor has identified possible	identified possible conflicts with other STN proposed departure	of this specific option. The change sponsor has identified possible	of this specific option. The change sponsor has identified possible
				with other STN proposed departure options but the exact nature of	conflicts with other STN proposed departure options but the exact	conflicts with other STN proposed departure options but the exact	conflicts with other STN proposed departure options but the exact	conflicts with other STN proposed departure options but the exact	options but the exact nature of these conflicts is unclear at this	conflicts with other STN proposed departure options but the exact	conflicts with other STN proposed departure options but the exact
				these conflicts is unclear at this stage. Further analysis and	nature of these conflicts is unclear at this stage. Further analysis	nature of these conflicts is unclear at this stage. Further analysis		nature of these conflicts is unclear at this stage. Further analysis	stage. Further analysis and engagement is required in Stage 3/4 of	nature of these conflicts is unclear at this stage. Further analysis	nature of these conflicts is unclear at this stage. Further analysis
			impact, the 'Do Nothing baseline' provides	engagement is required in Stage 3/4 of the CAP 1616 process to		and engagement is required in Stage 3/4 of the CAP 1616 process to				and engagement is required in Stage 3/4 of the CAP 1616 process to	
					determine this. Furthermore, this option has been assessed as a	determine this. Furthermore, this option has been assessed as a		determine this. Furthermore, this option has been assessed as a		determine this. Furthermore, this option has been assessed as a	determine this. Furthermore, this option has been assessed as a
				stand-alone option rather than as a set of design options as part of			stand-alone option rather than as a set of design options as part of		design options as part of a wider system. Additional analysis is	stand-alone option rather than as a set of design options as part of	stand-alone option rather than as a set of design options as part of
				a wider system. Additional analysis is required in Stage 3 to	a wider system. Additional analysis is required in Stage 3 to	a wider system. Additional analysis is required in Stage 3 to		a wider system. Additional analysis is required in Stage 3 to	required in Stage 3 to determine the cumulative impact of this	a wider system. Additional analysis is required in Stage 3 to	a wider system. Additional analysis is required in Stage 3 to
				determine the cumulative impact of this option when compared to			determine the cumulative impact of this option when compared to		option when compared to all the other options.	determine the cumulative impact of this option when compared to	determine the cumulative impact of this option when compared to
			Following the removal of the VORs, it is	all the other options.	all the other options.	all the other options.		all the other options.			all the other options.
				Based on performance in the IOA, Option 1 has been rejected as	Based on performance in the IOA, Option 10 has been selected as	Based on performance in the IOA, Option 19 is deemed Favourable		Based on performance in the IOA, Option 21 has been rejected as	within the 2,500ft WEST envelope. When this option is assessed	Based on performance in the IOA, Option 16 has been selected as	Based on performance in the IOA, Option 2B has been selected as
			to the enduring requirement for radar vectoring.	part the 2,500ft EAST envelope. When this option is assessed	the Preferred Option within the 2,500ft EAST envelope. When this	within the 2,500ft EAST envelope. When this option is assessed	within the 2,500ft EAST envelope. When this option is assessed	part the 2,500ft EAST envelope. When this option is assessed	alongside its corresponding option for Runway 04, in total Option	the Preferred Option within the 2,500ft WEST envelope. When this	the Preferred Option within the 2,500ft CENTRAL envelope. When
				alongside its corresponding option for Runway 04, in total Option 1	option is assessed alongside its corresponding option for Runway	alongside its corresponding option for Runway 04, in total Option	alongside its corresponding option for Runway 04, in total Option	alongside its corresponding option for Runway 04, in total Option	14 overflies 50,083 people. This combination overflies more people	option is assessed alongside its corresponding option for Runway	this option is assessed alongside its corresponding option for
				overflies 30,759 people. This combination overflies more people	04, in total Option 10 overflies 24,009 people. This combination	19 overflies 29,637 people. This combination overflies more people	20 overflies 29,824 people. This combination overflies more people	21 overflies 30,497 people. This combination overflies more people	than Option 16, but less than the other corresponding options	04, in total Option 16 overflies 38,069 people. This combination	Runway 04, in total Option 2B overflies 42,161 people.
				than Option 10, 19 and 20, but less than the other corresponding	overflies the least number of people when compared to the other			than Option 10, 19 and 20, but less than the other corresponding	within this design envelope (2,500ft WEST).	overflies the least number of people when compared to the other	
				options within this design envelope (2,500ft EAST).	corresponding options within this design envelope (2,500ft EAST).	within this design envelope (2,500ft EAST).	options within this design envelope (2,500ft EAST).	options within this design envelope (2,500ft EAST).		corresponding options within this design envelope (2,500ft WEST).	
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Colour Key	Description
Preferred Oution(s)	When compared to the baseline, there is a clear and obvious benefit. This option is viewed as more favourable than the other within the design envelope and as such is the preferred option within the design envelope.
Favourable	When compared to the baseline, there is a clear and obvious benefit.
Acceptable	When compared to the baseline, there is an equal benefit.
Rejected	When compared to the baseline, there is a clear and obvious dis-benefit. As such, these options are rejected.
Baseline/Previously Rejecte	d Option included for completeness but, in the case of previously rejected options, not subject to IOA.