

PROPOSAL TITLE:	Stansted Second Runway	Group:	Dispersed
SUBMITTED BY:	Manchester Airport Group	Reference No.:	42

PROPOSAL

Two in-principle options for the provision of a second runway: either to the northwest of the existing runway or to the east, broadly based upon the options considered for BAA's Stansted Generation 2 project. Neither option is fully defined. This proposal assumes Heathrow remains open.

The closer spaced northwest runway options, depending upon separation could operate in either segregated mode or provide independent departures, whereas the wide-spaced east runway would permit fully independent mixed mode operations to both runways.



ASSESSMENT SUMMARY

The scheme provides an additional runway at Stansted, contributing to dispersed hub capacity in the London system. The additional capacity is comparable to, but marginally lower, than the second runway at Gatwick as the increased capacity generated is offset by the reduction or closure of Luton Airport.

Costs are comparable to those estimated for Birmingham and Gatwick (£14.1bn compared to £14.8bn and £13bn respectively), with a greater proportion spent on surface transport improvements necessary to improve access to the airport.

Necessary surface transport improvements include an upgrade to West Anglia Main Line to 4-track between the airport and central London to facilitate improved journey times, a second rail tunnel, and upgrades to the M11, M25 and local roads.

The capacity is likely to be taken up by LCCs, charter services, cargo and European network carriers to short and medium-haul destinations, improving the variety of services offered to passengers. Any growth in long haul services at Stansted would be substantially dependent on continued constraint of capacity at Heathrow and Gatwick. Few airlines/services are expected to transfer from Heathrow.

As with Gatwick's proposal for a second runway, in isolation the scheme does not appear to provide a compelling solution to the growing pressure at Heathrow and in the London system in general, but may instead form a strong component of a wider commitment by Government towards a dispersed hub model.

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OVERVIEW

Approach	Phased, privately funded, expansion of the airport in line with prevailing incremental demand, which may require a second runway by the early 2030’s. Unspecified contribution only to wider public funded surface transport developments .							Opening Year 2032	
Capacity	Net system effect based upon 40 mppa max use capacity, which exceeds current infrastructure and planning permission limits, but should be achievable in time with market pressure on aircraft fleet. The closure of Luton reduces the net increase.		North-West			East			
Airport			Net	Airport	Net				
Runway			2	0	2	0			
ATM			500,000	75,000	575,000	150,000			
			pax	75	17	90	32		
Cost			Airport	Access	Other	Sub Total	Including Risk/OB		
			2.6	3.6	0.5	6.7	14.1		
Surface Transport	There is some spare capacity in existing rail and road facilities that would accommodate increased demand, but increased frequencies and faster rail services would require expanded rail capacity on the airport branch line and the WAML. Local road upgrades, expansion of access roads to the M11 and the M11 between Stansted and the M25 will be necessary.					1 hr isochrone	12		
						2 hr isochrone	25		
						London centre	30 miles		
Economic	Borough	Uttlesford	Harlow	Epping Forest		E. Herts	S. Cambs		
	Unemployment (%)	7.0	14.9	9.4		6.3	7.2		
	Ave. Gross Salary (£/yr)	29,442	24,159	24,794		25,428	24,700		
	County	Essex	Hertfordshire	Cambridgeshire		Suffolk			
	GVA (£/capita)	16,707	23,073	21,598		16,913			
Environment	Loss of good agricultural land, ancient woodland and cultural heritage interest. Net reduction in noise impact given the closure of Luton airport.					Airport	Net		
						57 LA _{eq}	7,000	(1,000)	
						55 L _{DEN}	40,000		
	SAC ¹	SPA ¹	Ramsar	CA ¹	AONB ¹	SSSI ¹	Listed Buildings	SAM ¹	Houses Lost
	-	-	-	-	-	-	30	2	90

¹ SAC: Special Areas of Conservation; SPA: Special Protection Areas; CA: Conservation Area; SSSI: Site of Special Scientific Interest; SAM: Scheduled Ancient Monument.

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ECONOMY

Borough	Uttlesford	Harlow	Epping Forest	E. Hertfordshire	S. Cambridgeshire
Unemployment (%)	7.0	14.9	9.4	6.3	7.2
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County	Essex	Hertfordshire	Cambridgeshire	Suffolk	
GVA (£/capita)	16,707	23,073	21,598	16,913	

Impact on Industry

A second runway at Stansted would allow Stansted to provide sufficient capacity to allow it to meet its unconstrained demand through to at least 2050. This will allow Stansted to meet demand for higher frequencies, new routes and airlines at Stansted (as there are some constraints at peak times). This growth will be primarily based on LCCs, charter services, cargo and European network carriers. Any growth in long haul services at Stansted would be substantially dependent on continued constraint of capacity at Heathrow and Gatwick. It will enhance competition with Gatwick Airport, and may attract some services from Gatwick. It is expected to have a negligible effect on demand at Heathrow. However, expansion of Stansted with a second runway would necessitate the closure of services at Luton with the redistribution of services to Stansted (non-competing routes) and Gatwick, reducing the net benefit of the second runway. A second runway at Stansted would support incremental commercial development in the vicinity of that airport, and employment around Uttlesford, Harlow and East Hertfordshire.

Airports A second runway at Stansted Airport could allow for between 475,000-575,000 ATM p.a. representing an additional 200,000-300,000 ATM p.a. compared to maximum utilisation of the existing airport, although this benefit is eroded by the closure of Luton Airport. The net capacity increase would help it forecasts demand primarily driven by LCCs, European carriers and dedicated cargo services. However, it is likely to have only a negligible impact on demand at Heathrow. It may be more likely to attract charter and LCC services from Gatwick as availability (and the price) of slots at Gatwick rises as demand exceeds capacity. This capacity at Gatwick would be likely to be quickly utilised by new LCC or network carrier services. The closure of Luton would reduce competition in the airport system.

Airlines Airlines using Stansted Airport and others seeking to use it would benefit from more runway capacity as it would continue to allow them to expand services. The main beneficiaries will be the LCCs, charter airlines, pure cargo and European network carriers operating to the airport. The closure of Luton however would impose costs on airlines relocating and may limit competition between airports in the system. It is likely to mean a low level of relocation of lower-yielding services from Heathrow and Gatwick, as airlines realise the value of slots held at Heathrow and Gatwick, to maximise their utility either by using such slots for higher yielding services or to sell/lease such slots to other carriers for such services.

Passengers Passengers will benefit from any increase in routes, frequencies and competition at the airports over time. Users in Essex, Hertfordshire, Cambridgeshire and Suffolk will particularly benefit from any expansion in services, compared to options for expansion at other airports. There will be disbenefits travellers who preferred shorter surface access travel times for services at Luton Airport. Users of other London airports may see little impact, beyond the incremental transfer of some services between airports, and the likely greater concentration of higher yielding (and higher fare) services at Heathrow, although the effect on competition between airport on the loss of Luton is unclear.

Local & Regional Economic Impacts

An additional runway at Stansted Airport would support growth of new and existing industries in aviation, airport and aviation support services and travel, tourism, logistics and other related sectors in Essex and Hertfordshire. Additional airline services will support economic development there and beyond into Cambridgeshire and Suffolk. It is likely to have a modest impact on economic development in greater London by supporting some increase in demand for primarily LCC services to European destinations. **Submission from MAG claims that a second runway at Stansted will support between 13,000 – 16,000 additional jobs by 2050.** This estimate does not appear to be unreasonable.

National Economic Impacts

Limited national impacts, as primary effect will be to support some growth in demand from greater London, primarily for European services by LCCs and pure cargo services, as well as trade, tourism and economic development in Essex, Hertfordshire, Cambridgeshire and Suffolk. Will not make a significant impact upon UK connectivity.

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SURFACE ACCESS

Time/Distance to Central London <45 minutes 30 miles Journey times to other population centre Birmingham 3hr	1 hr isochrone population 12 million 2 hr isochrone population 25 million	Key required upgrade schemes <ul style="list-style-type: none"> ▪ Second rail tunnel at Stansted ▪ Improvements to the WAML to provide 4 tracks south of Stansted ▪ Upgraded M11 junction and airport spur road ▪ M11 widening between Stansted and M25 ▪ New airport access linkages and junction upgrades ▪ Local road upgrades
Rail Infrastructure Capacity Analysis Stansted station has sufficient additional capacity to accommodate higher frequency rail services with substantially longer trains, both to London and towards Cambridge and the West Midlands. Rail demand forecasts from the MAG identify little need for enhanced rail capacity before 2040. Beyond that, the only necessary projects to cater for the long term demand anticipated from a second runway would be a second rail tunnel under the runway (to enable rail service frequencies to go beyond 14 return services per hour) and four tracking of the WAML south of Stansted (primarily to allow non-stop services to operate during peak commuter periods and significantly improve service reliability of the Stansted Express). However, at present the business case for four tracking of the WAML is not proven, given that it is commuters that are the primary users of the line, and they would see low benefits for such an upgrade. This may change over the next 10-20 years if commuter housing expands along the corridor. The proposal includes extension of either Crossrail 1 or 2 to the airport, but this is not seen to be essential.		
Highways Capacity Analysis A two runway airport would require an upgraded junction and access link to the M11, new airport access linkages and junction upgrades, and upgrade of local roads. MAG states that if demand increases significantly, widening of the M11 widening (Stansted – M25) would be appropriate. Highway capacity analysis for the two runway option in 2041 (assuming an additional 10% mode shift to public transport) identifies that several road links will be congested including the A120 north of Bishops Cleeve and east of Stansted, M11 north of J8, and parts of the A12. This suggests that further highway improvements may be needed.		
Accessibility to Population & Business centres Current Stansted Express rail journey times to London Liverpool Street are 47 minutes with 15 minute frequencies. Hourly services run to Cambridge and Birmingham. Road access is good to London, Cambridge and across Essex and Hertfordshire. Distances from airport to other settlements include: Bishop's Cleeve (3.5km), Great Dunmow (8km), Stansted Mountfitchet (3.5km), and Harlow (20km). The proposal states that around 11.2 million people live within 1 hour drive of airport and 23 million people live within a two hours' drive . Implementation of all proposed improvements (including Crossrail extensions) would result in 3.8-5.3 million people falling within a 1 hour public transport catchment and 14-14.7 million people falling within a 2 hour public transport catchment .		
Accessibility to Transport Interchanges Current rail links connect Stansted to Liverpool Street and Tottenham Hale and a separate service to Cambridge, Peterborough and Birmingham. An extension of either Crossrail 1 or Crossrail 2 would significantly increase the number of important interchanges served directly.		
Accessibility to Workforce Proposed highway improvements would be necessary in the longer term to maintain good road access to the airport for commuters from Essex, Hertfordshire and Cambridgeshire. The proposal suggests that up to 5.3 million people would fall within a 1 hour public transport journey if infrastructure upgrades can be provided (four tracking of WAML, Crossrail extension and faster rail services).		
Demand Management Stansted has a Travel Plan in place for direct and indirect employees and has previously introduced an Airport Travel Card, Employee Car Share Scheme and a Passenger Transport Levy. Passenger and employee travel initiatives and new services will continue to be applied in the future in partnership with Airport Transport Forum.		
Potential Wider Use Surface access improvements along M11 corridor and WAML could benefit existing populations along corridors including commuters, particularly if the expanded airport increases local populations along the corridors.		

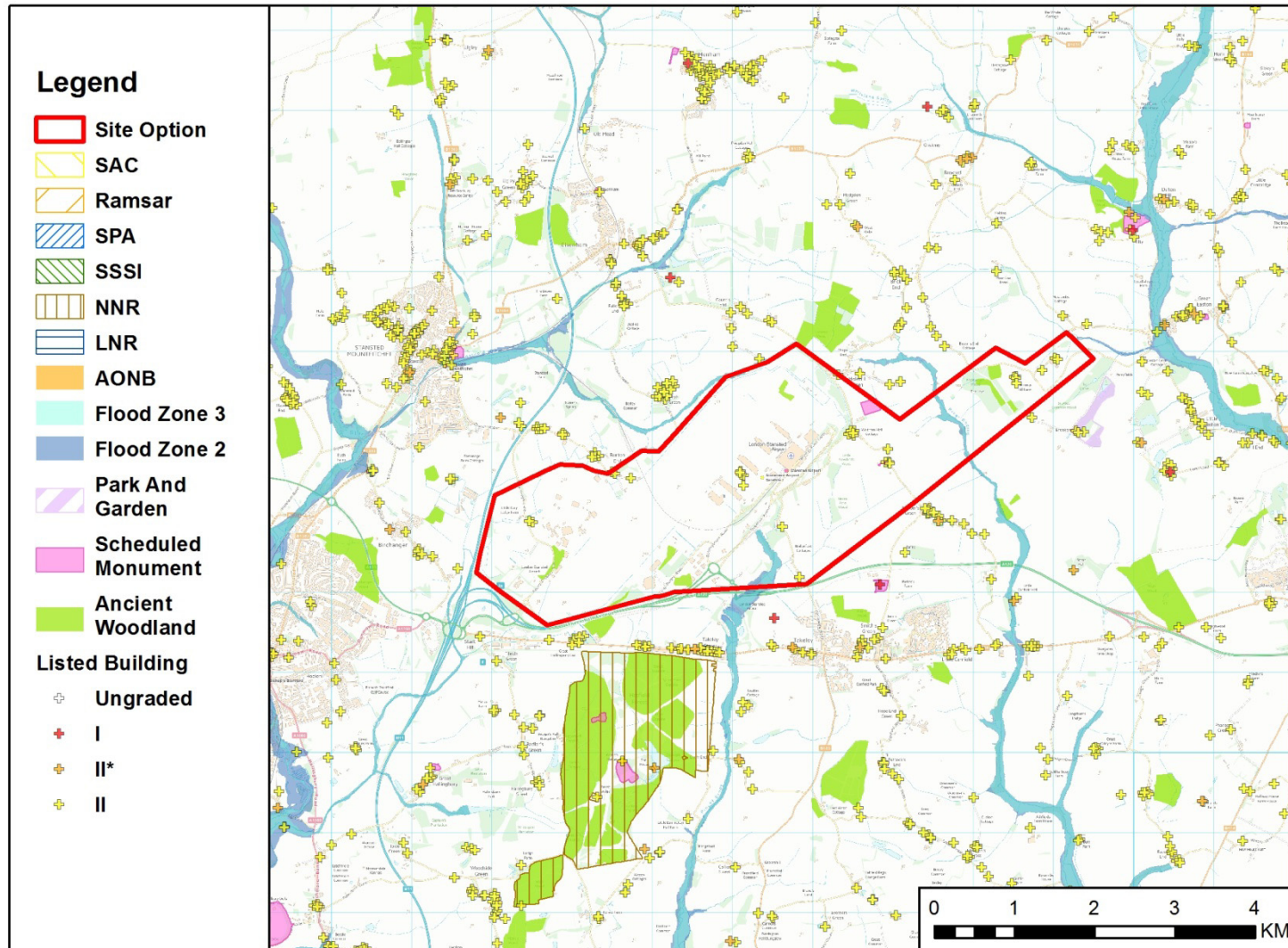
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ENVIRONMENT

Overall noise impact	Net reduction in noise impact given closure of Luton Airport.						57 LA_{eq}	Airport	Net
							55 L_{DEN}	7,000	(1,000)
	SAC	SPA	Ramsar	CA	AONB	SSSI	Listed Buildings	SAM	Houses Lost
	-	-	-	-	-	-	30	2	90
Air Quality Additional ATMs and associated road traffic likely to have negatively impact local air quality.							Mitigation Plan		
Noise MAG indicates an additional 12,000 people will be affected by noise of 57 dBA by 2030. Independent noise modelling results: <ul style="list-style-type: none"> 57dBA_{Leq}: 7,000 people; Net: (1,000) reduction achieved on closure of Luton 54dBA_{Lden}: 40,000 people 							Mitigation Plan		
Designations <ul style="list-style-type: none"> 30 listed buildings and 2 Scheduled Monuments lost 9 small blocks of Ancient Woodland lost. 							Mitigation Plan Limited scope to reduce impacts on designations		
Climate Change Total emissions (t CO₂; worst case): 1,752,534 - 1,986,205 Operations – not likely to affect UK targets as for all options. Construction - embedded CO ₂ from Luton decommissioning additional cm.							Mitigation Plan <ul style="list-style-type: none"> A commitment to sustainable, carbon-minimising construction and operation. 		
Other Issues The water resource zone that supplies Stansted Airport would have a deficit. Large area of agricultural land loss including high proportion of grade 2 (good) land.							Mitigation Plan Limited scope to reduce impacts on agricultural land loss		

PEOPLE

Housing	Demolished
Relatively limited impact on residential dwellings.	90
Vulnerable Groups <ul style="list-style-type: none"> Vulnerable groups not addressed specifically. However, local areas of relative high unemployment may imply that some vulnerable groups may benefit from the additional employment opportunities. 	
Quality of Life and Health <ul style="list-style-type: none"> Increased local population affected by aircraft noise nuisance with no net benefit through reductions at Heathrow but a small benefit through closure of Luton airport Loss of open space and recreational amenity. Potential benefits from improved opportunities and access to service. 	
Wider Social Impacts Additional local employment of between 13,000-16,000, with wider economic benefits for Upper and Lower Lea Valley and East London. Potential for negative impacts in the region of Luton Airport on its closure.	



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COST

Capital Cost	£ bn	1
<u>Estimated at £2.5 to £4.0 bn including approximately 20% of risk, unadjusted for bias.</u>	Airport	2.6
<u>Cost excludes road and rail infrastructure, and offices. It is not clear if the cost includes allowances for environmental/social mitigation measures.</u>	Access	3.6
	Other:	0.5
Independent cost analysis assesses the scheme to cost £14.0bn based upon wide spaced mixed mode runway arrangement.	Sub-Total	6.7
	Risk	2.7
When compared to other dispersed airport schemes which share the same set of common assumptions, this option appears to be in the middle of the range of cost estimates.	Optimism Bias	4.7
	Total	14.1
Key Risks		
<ul style="list-style-type: none"> Value of land and its acquisition Tunnel construction Widening of M11 		
Risk and Contingency Allowances		
40% contingency adopted for all costs. 50% optimism bias applied.		
Surface Access Costs		
£3.6bn estimate for road and rail links based on requirement for infrastructure identified by the independent analysis, including upgrading of the West Anglia Main Line and the widening of the M11 motorway between the airport and M25.		
Other Off-Airport Costs		
An allowance of £0.5bn has been included to cover typical environmental mitigations measures.		
Summary Comments		
In general the cost estimation for on-site works is reasonable, however it is considered that this underestimates the total cost of the option.		

OPERATIONAL VIABILITY

Capacity	Northwest		East		
Net system effect based upon 40 mppa max use capacity, which exceeds current infrastructure and planning permission limits, but should be achievable in time with market pressure on aircraft fleet. This scale of expansion would necessitate the closure of Luton further reducing the net increase.	Runway	Airport	Net	Airport	Net
		<u>2</u>	1	<u>1</u>	1
	ATM	<u>500,000</u>	225,000	<u>575,000</u>	300,000
	pax	<u>75</u>	35	<u>90</u>	50
Resilience, Reliability and Efficiency					
The east runway would support independent parallel approaches on the runways, offering the greatest resilience and reliability of operations of the two options. However, both options could be defined to meet resilience targets.					
Safety					
The northwest runway configuration requires runway crossings to access the second runways. There does not appear to be any need to overfly significant population centres on final approach or immediately after departure.					
Scalability					
Either runway option could form the first phase of long term expansion to the four runway configuration as set out by MAG.					
Airspace					
The proposal would require reasonably significant airspace design in terms of relocating the boundaries of the London terminal manoeuvring area (LTMA), and Stansted’s SIDs, STARS and interfaces with en route airspace to accommodate the additional runway. The LTMA would be amended to close Luton, which would offer a capacity benefit to Stansted given the current interaction between the two airports. Given the long-term nature of the options and the likely airspace and air traffic management developments under SESAR, restructuring could be achieved as part of the on-going development process.					

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DELIVERY

Timescale

Developed in line with demand, which would imply that the second runway would be required in the early-mid 2030's. It could reasonably be delivered earlier with supportive public policy.

Commercial Deliverability

Anticipates private financing of £2.5-4bn capex on airport development with potential for some negotiated contribution towards cost of ancillary surface access infrastructure with remaining costs of this funded by government. Private financeability stated to be subject to prevailing/anticipated demand. Range of support measures potentially needed for private financing, including government support/commitment and supportive regulatory framework. Uncertain which elements of these potential measures would be needed to achieve sufficient private financing but indicates financing less challenging for two runway option than new hub. Robustness of private financing rests on natural capacity constraint expectations elsewhere in the London system.