

<b>PROPOSAL TITLE:</b>	<b>Stansted Second Runway</b>	<b>Group:</b>	<b>Dispersed</b>
<b>SUBMITTED BY:</b>	<b>Manchester Airport Group</b>	<b>Reference No.:</b>	<b>66</b>

## PROPOSAL

Based upon two in-principle options for the provision of a second runway: either to the north-west of the existing runway or to the east, broadly based upon the options considered for BAA's Stansted Generation 2 project, this assessment considers the widest-spaced, eastern runway option. Neither option was fully defined by MAG. The wide-spaced east runway permits fully independent mixed mode operations to both runways.



## ASSESSMENT SUMMARY

STRATEGIC FIT / ECONOMY / OPERATIONS			ENVIRONMENT			
Runways (net increase)	Passengers (net mppa)	ATMs (net)	London Airports Impact	57 dBA Leq 2030 pop'n with scheme	Listed Bldgs Grades I&II*, SM, CA, RP&G	Heritage & Designations Affected
	62	370,000	LHR ➡	1,400	0	SPA
2	60	317,000	LGW ➡	▶ 2,500 ◀	▶ 3 ◀	Ramsar
	53	▶ 268,000 ◀		6,300		SSSI
▶ 1 ◀	▶ 46 ◀	260,000	STN ➡	13,500	4	Grade I
	40	250,000	LTN ⬇	142,600	5	Grade II*
	34	222,500		144,000	8	Sched. Mon.
	30	190,000	LCY ➡	144,600		
				180,900	14	

SURFACE ACCESS			COST / DELIVERY		PEOPLE	
45 min Population (millions)	1hr Population (millions)	2hr Population (millions)	2030 Risk- Adjusted Total (£bn)	Aero Yield (relative to LHR Q6)	Houses Demolished	IMD (Average within 5km)
17	18	38	▶ 9-13 ◀	1.3x	200	26
14	16	36	10-13	1.5x	▶ 260 ◀	21
10	14	27	13-18	▶ 1.6x ◀	720	20
9	13	▶ 25 ◀	16-22		800	19
▶ 6 ◀	▶ 12 ◀	20	50-67	2.4x	1,300	14
			82-112	3.4x	1,500	8
					1,600	▶ 7 ◀

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## OVERVIEW

Approach	Proposer suggests a 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
Operational Viability	The net benefit assumes Luton Airport would be constrained due to airspace conflicts.			Capacity	Airport	Net	Forecast Use of Maximum Capacity		
				Runways	2	1	2030	2050	
				ATM	575,000	268,000	45%	80%	
				pax	90	46	45%	80%	
Cost	£b	Airport	Access	Other	Total	Risk	OB	Risk Adjusted Total	Promoter Estimate
	2030	4-5	~1	~1	4-6	1-3	3-4	9-13	£4.4bn
	2050	6-9	~1	~1	7-10	3-4	5-7	15-20	
Surface Access	Spare capacity is available on the existing rail and road services which would cater for the increased surface access demand, apart from some local capacity improvements on the A120 and the access road from the A120. Journey time to central London likely to be at best just under 45 minutes.							Isochrone	Pop <sup>n</sup> (million)
								45 min	6
								1 hr	12
								2 hr	25
								London centre	30 miles
Economic									
Borough	Uttlesford		East Herts		Harlow		Broxbourne		Enfield
Unempnt (%)	3.7%		4.4%		10.5%		5.9%		10.5%
Ave. Salary (£/yr)	29,968		32,765		26,733		29,630		28,850
Borough	South Cambs		Epping Forest		Welwyn Hatfield		North Herts		Stevenage
Unempnt (%)	4.1%		5.7%		5.3%		6.9%		7.6%
Ave. Salary (£/yr)	31,938		29,016		32,448		28,314		32,183
County	Hertfordshire		Essex ex UAs		Cambs ex UAs		Outer London E&NE		
GVA (£/cap)	23,073		16,707		21,598		13,428		
Environment	<div>▪ Net noise is approximate change from local population currently within 57 dBA L<sub>eq</sub> contour (Luton and Stansted) to population affected in 2030 with 2nd runway (with Luton reduced by 20%).</div> <div>▪ Communities affected include Molehill Green, Brick End, Pledgdon Green and Broxted although overall housing loss is limited to around 260 properties.</div> <div>▪ Two SSSIs and small areas of ancient woodland would be lost. Around 39 listed buildings are likely to be lost including one Grade II* listed building and 2 scheduled monuments. The setting of the surrounding cultural heritage interest would be affected.</div> <div>▪ Impact on flood plain storage is small.</div> <div>▪ Large loss of good quality agricultural land.</div>					57 dBA L <sub>eq</sub>		2012 local	1,250
						2030 local - with scheme			2,500
						2030 Net Local Impact			1,000
						2030 system - with scheme			244,340
						2030 Net System Impact			(1,360)
						55 L <sub>DEN</sub>		2030	5,600
						50 L <sub>night</sub>		2030	2,800
						N70		2030	4,000

<sup>1</sup> SAC: Special Areas of Conservation; SPA: Special Protection Areas; CA: Conservation Area; AONB: Area of Outstanding Natural Beauty; SSSI: Site of Special Scientific Interest; SM: Scheduled Monument.

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## ECONOMY

<b>Borough</b>	<b>Uttlesford</b>	<b>East Herts</b>	<b>Harlow</b>	<b>Broxbourne</b>	<b>Enfield</b>
<b>Unemployment (%)</b>	3.7%	4.4%	10.5%	5.9%	10.5%
<b>Ave. Gross Salary (£/yr)</b>	29,968	32,765	26,733	29,630	28,850
<b>Borough</b>	<b>South Cambs</b>	<b>Epping Forest</b>	<b>Welwyn Hatfield</b>	<b>North Herts</b>	<b>Stevenage</b>
<b>Unemployment (%)</b>	4.1%	5.7%	5.3%	6.9%	7.6%
<b>Ave. Gross Salary (£/yr)</b>	31,938	29,016	32,448	28,314	32,183
<b>County</b>	<b>Essex</b>	<b>Hertfordshire</b>	<b>Cambridgeshire</b>	<b>Suffolk</b>	
<b>GVA (£/capita)</b>	16,707	23,073	21,598	16,913	

### Impact on Industry

An additional runway may constrain Luton airport, reducing system benefits. This would support higher frequencies, new routes and airlines at Stansted, particularly growth based mainly on the existing major LCC operations. However, expansion of Stansted is unlikely to result in a significant transfer of services from Heathrow and, because of its location, it is likely to remain less attractive than Gatwick for network carriers' overflow services for some time to come. Economic expansion at Stansted, being LCC focused, is likely to attract mainly airline ancillary services in the area, though it is also the focus of some industrial agglomeration because of the increasing volume of dedicated air cargo flights operating to the airport.

<b>Airports</b>	Stansted already has permission to expand from the existing 17 mppa to around 35mppa before a second runway would be required and if expanded could provide capacity for up to 90 mppa. A second runway would allow Stansted to compete more strongly with Gatwick but Gatwick is likely to remain a premium location. Luton would be constrained. Expansion of Stansted is unlikely to significantly impact on demand for capacity at Heathrow, and overflow traffic from there is likely to continue to prefer Gatwick given its location and connections to central London. It is also unlikely that Stansted would attract material network carrier activity, given comments received from the alliances, existing airline commitments to Heathrow, commercial experience of airlines that have offered services at more than one London airport and the fluid, cross-cutting and overlapping relationships and interlining dependencies between airlines within and across alliances e.g. many non-One World carriers have an interlining agreement with British Airways. Competing hubs in countries nearby may also present more profitable avenues for airline expansion than developing an additional London hub.
<b>Airlines</b>	Expansion of Stansted would mainly facilitate on-going growth of the LCC market, without relieving the constraints at Heathrow. Some operations at Luton would relocate to Stansted, which would not be an advantage for those airlines (as they could operate such services to Stansted today). Some airlines may be attracted from Gatwick if the pricing is competitive, and network carriers may increase their overflow operations into Gatwick, particularly if Stansted's expansion allows it to be competitive in attracting LCC/charter traffic from Gatwick.
<b>Passengers</b>	Passengers would potentially benefit from increased capacity mainly due to a growing offer from the airport in terms of destinations and frequencies. Users in Essex, Hertfordshire, and North-East London would particularly benefit, compared to options for expansion at other airports. Users of other London area airports would see little impact, beyond the incremental transfer of some services between airports. Users of Luton airport may be disadvantaged, although direct replacement flights may operate from Stansted limiting the negative impact only to those passengers for whom surface travel to Stansted is more inconvenient than to Luton.

### Local & Regional Economic Impacts

The airport is located in Uttlesford district, and close to East Hertfordshire, an area of low unemployment. Whilst many other surrounding areas have low unemployment, Harlow and Enfield have high unemployment and are of easy access to the airport. Adjacent areas have low economic product. Providing an expanded airport with sufficient capacity to meet expected long term demand would facilitate growth of new and existing industries in aviation, airport and aviation support services and travel, tourism, logistics and other related sectors, to service the growth in passenger demand met by the new airport. There is some incipient agglomeration in the M11 corridor which would be reinforced. The immediate effect would be to increase commercial property development in the vicinity of the new site. Existing commuters in the area may experience increased congestion and travel costs, despite the improved transport connections necessary to serve the expanded airport. MAG forecast an additional 13,000 jobs from an expanded airport, split roughly evenly between airport-related and other. The second runway may provide a further 13,000-16,000 airport related jobs with a similar amount of additional employment generation, but this is likely to be gradual over many years as the scale of direct and indirect employment would be in proportion to the numbers of additional passengers..

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#### **National Economic Impacts**

The main national economic impacts come from the provision of new capacity, enabling more flights and connectivity, and the increase in business and leisure trips, and trade in goods and services (and the indirect effects on inward investment, but on a materially small scale than options that provide for an expanded hub). Increased choices of flights and airlines, reducing travel time and possibly fares should generate significant consumer/welfare benefits, but again smaller than for an expanded hub. In general, since Gatwick is generally perceived as a premium airport relative to Stansted, and Stansted has not yet occupied the full capacity of its existing runway, benefits would be smaller than for an expanded Gatwick.

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## SURFACE ACCESS

Time/Distance to Central London	Isochrone pop <sup>n</sup> (million)	Key required upgrade schemes (above those already committed)
~50 minutes 30 miles	45 min 6	<ul style="list-style-type: none"> <li>Capacity improvements on local airport access road to/from A120</li> <li>Capacity improvements on the A120</li> </ul>
<b>Journey times to other population centre</b>	60 min 12	
Birmingham: 1hr 50mins	120 min 25	
Manchester: 2hr 30mins		
<b>Mode Split Assumptions</b> Currently 51% of passengers use public transport modes to access Stansted, (27% using bus/coach services and 24% using rail) and 23% of employees use public transport modes to access Stansted. The surface access strategy is based on maintaining the existing rail and bus/coach services, so it would be unrealistic to assume any significant increases in public transport mode split targets. We have therefore assumed a nominal 1% increase in the passenger public mode split target to 52% (split 27% bus/coach and 25% rail) and a nominal 1% increase to the employee public transport mode split target (split 10% coach and 14% rail).		
<b>Rail Infrastructure Capacity Analysis</b> A number of rail infrastructure projects are already committed including the delivery of 12 car trains for the Stansted Express; the addition of two new platforms at Cambridge and the extension of platforms at some intermediate stations between Stansted and London; the completion of the Thameslink project which would extend Thameslink to Cambridge and divert some longer distance demand from the West Anglia Main Line (WAML) and improved interchange possibilities at Finsbury Park and an increased frequency on the Great Northern Hertford Loop, which should divert demand from Hertford East and Enfield Town, thus relieving the West Anglia Inner services. Peak hour one-directional rail flows to/from Stansted on a 'busy day' in 2031 estimated to be around 1,200 passengers per hour in the peak direction (pphpd). Based on the current geographic distribution of airport-related rail trips, pphpd estimated on Stansted Express as 1,100 and Cambridge/Birmingham 100. Estimated volume/capacity (v/c) ratios for airport-related demand are 0.45 on Stansted Express and 0.20 Cambridge/Birmingham. As the Stansted Express is primarily used by airport-related traffic, we conclude that there is sufficient capacity on the 12-car Stansted Express to cater for the airport-related demand. Furthermore, there is enough capacity on the Cambridge/Birmingham service for other commuter and leisure trips.		
<b>Highways Capacity Analysis</b> Based on the current geographic distribution of airport-related car trips and assessed v/c ratios on each link it is estimated that an additional 900 cars per hour in the peak direction (phpd) would be on the airport access road in 2031. Whilst we predict that J8 on the M11 can cater for this additional traffic, capacity improvements would be required on the airport access road from the A120, and on the A120 itself. We also predict additional airport-related flows of around 600 cars phpd on the M11 J6-8 and around 200 cars phpd on the M11 J8-J11, but our analysis suggests that the capacity of these sections is sufficient to cater for this demand. We also predict additional airport-related flows of around 200 cars phpd on the M25 J15-27, but these flows are not sufficient to warrant any lane widening on their own account. Over a wider area, airport-related traffic dissipates quickly to less than 100 vehicles phpd on any link and no further road widening is required.		
<b>Accessibility to Population &amp; Business centres</b> Stansted is located 50 km north-east of London and 35 km south-east of Cambridge. It is directly connected to London by the Stansted Express rail service, which currently takes c 50 mins and runs at a 15 min frequency. The service is relatively slow as the Stansted Express trains have to mix with other West Anglia train services, and there are only 2 tracks north of Copperhill Junction, with few opportunities to pass slow stopping trains. There is an hourly train service to Birmingham, via Cambridge and Peterborough. Stansted has a direct connection with the M11, which provides a D3 motorway south to the M25 and a D2 motorway north to Cambridge. Stansted is also directly connected to the A120. Distances to local towns include: Bishop's Stortford (5km), Great Dunmow (8km), Stansted Mountfitchet (4km), and Harlow (15km).		
<b>Accessibility to Transport Interchanges</b> Current rail links connect Stansted to Liverpool Street via Tottenham Hale (providing a connection to the Victoria underground line) and a separate service to Cambridge, Peterborough and Birmingham.		
<b>Accessibility to Workforce</b> Most of the workforce currently resides in the local towns of Bishop's Stortford, Harlow, Braintree and in East Hertfordshire. This would be likely to remain the case in this scenario.		
<b>Demand Management</b> 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 would continue to be applied in the future in partnership with Airport Transport Forum.		

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## ENVIRONMENT

Overall noise impact	By 2030, of the 2,500 people within the 57 dBA L <sub>eq</sub> contour, 1,700 people would be newly affected by noise than at present.  *Net system impact is the change from the local population currently within 57 dBA L <sub>eq</sub> contour (all London system airports) to the population affected in 2030 with 2 <sup>nd</sup> runway (Luton operating with 20% lower capacity). Therefore while the local population within the 57 L <sub>eq</sub> contour increases by 1,000, there is an overall reduction of 1,360 people.						57 dBA L <sub>eq</sub>	2012 local	1,250
								2030 local - without scheme	1,500
								2030 local - with scheme	2,500
								2012-2030 Local Impact with scheme	1,250
								2030 Net Local Impact	1,000
								2012 system	269,250
								2030 system - without scheme	245,700
								2030 system - with scheme	244,340
								2012-2030 system impact with scheme	(24,910)
								2030 Net System* Impact	(1,360)
								2030 population within 2012 and 2030 57L <sub>eq</sub> contour	800
								2030 additional population within 2030 57L <sub>eq</sub> contour	1,700
							55 L <sub>DEN</sub>	2030	5,600
							50 L <sub>night</sub>	2030	2,800
							N70	2030	4,000
SAC		SPA	Ramsar	CA	AONB	SSSI	Listed Buildings	SM	
-		-	-	-	-	2	39	2	

### Air Quality

Additional ATMs and associated road traffic likely to negatively impact local air quality. Modest surface access improvements comprising capacity improvement for A120 link road.

### Noise

**2030 Forecast:** Independent noise modelling provided the following results based on 2030 forecast population distribution and forecast aircraft mix appropriate for the number of aircraft movements and passenger load and taking account of housing demolished:

- 57 dBA  $L_{eq}$ : 2,500 people affected of which 1,700 would be newly affected.
- 55  $L_{DEN}$ : 5,600 people affected.
- 50  $L_{night}$ : 2,800 people affected.
- N70: 4,000 people affected at the 50 event contour, which is slightly lower than Gatwick +1 (5,100), and significantly lower than all Heathrow +1 options.

**2050 Forecast:** From 2030 to 2050, Stansted with 2 runways is forecast to have the highest increase in ATMs of all options (66% increase compared to a range of 25-45% for other options as growth is largely after 2030 as other airports in the London system reach capacity). The consequential noise increase would be 2.7dB in overall noise levels, which would affect all contours equally. However, assuming no further change to the aircraft mix, it is considered likely that improvements in aircraft engine and airframe technology would result in quieter aircraft which would off-set this increase in ATMs.

**Net Noise:** Within its local context Stansted 2 runway, has a net benefit (through the reduced capacity of Luton) although the number of people affected at Stansted doubles, even with improvements to aircraft technology resulting in quieter aircraft. Heathrow would continue to operate with two runways, so populations continue to be affected, but are reduced through aircraft noise improvements.

### Designations

#### Ecology:

- 2x SSSIs, Eastend Wood and Pledgdon Wood, with the former being lost entirely and the latter suffering partial loss. 9 small blocks of Ancient Woodland lost. Impacts to Pledgdon Wood may be avoidable by adjustments to land take.

#### Cultural Heritage:

- 39 listed buildings within new development footprint, although no Grade I and only 1 Grade II\* (Wood Farmhouse).
- 2 Scheduled Monuments lost.
- Wider impacts on the setting of surrounding cultural heritage interest.

#### Landscape and Townscape:

- No national landscape designations affected.

### Climate Change

**Operational:** Total greenhouse gas emissions are predicted to increase accompanied by greater passenger capacity. Dependent on surface transport choices, growth in operational emissions per passenger may be greater than other single runway expansion options. A high proportion of passengers currently use public transport to reach Stansted in its current market. It is unclear how to achieve increased public transport use for Stansted which may work against climate change goals.



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**Construction and demolition:** Construction related carbon emissions are indicated as 0.85Mt in a central estimate based on runway, taxiway and terminal build. Additional impacts likely from probable required rail improvements have not been estimated at this stage. This is considerably lower than new hub construction, but is the highest embodied carbon option of all the single runway growth footprints.

#### Other Issues

##### Water Resources and Flood Risk:

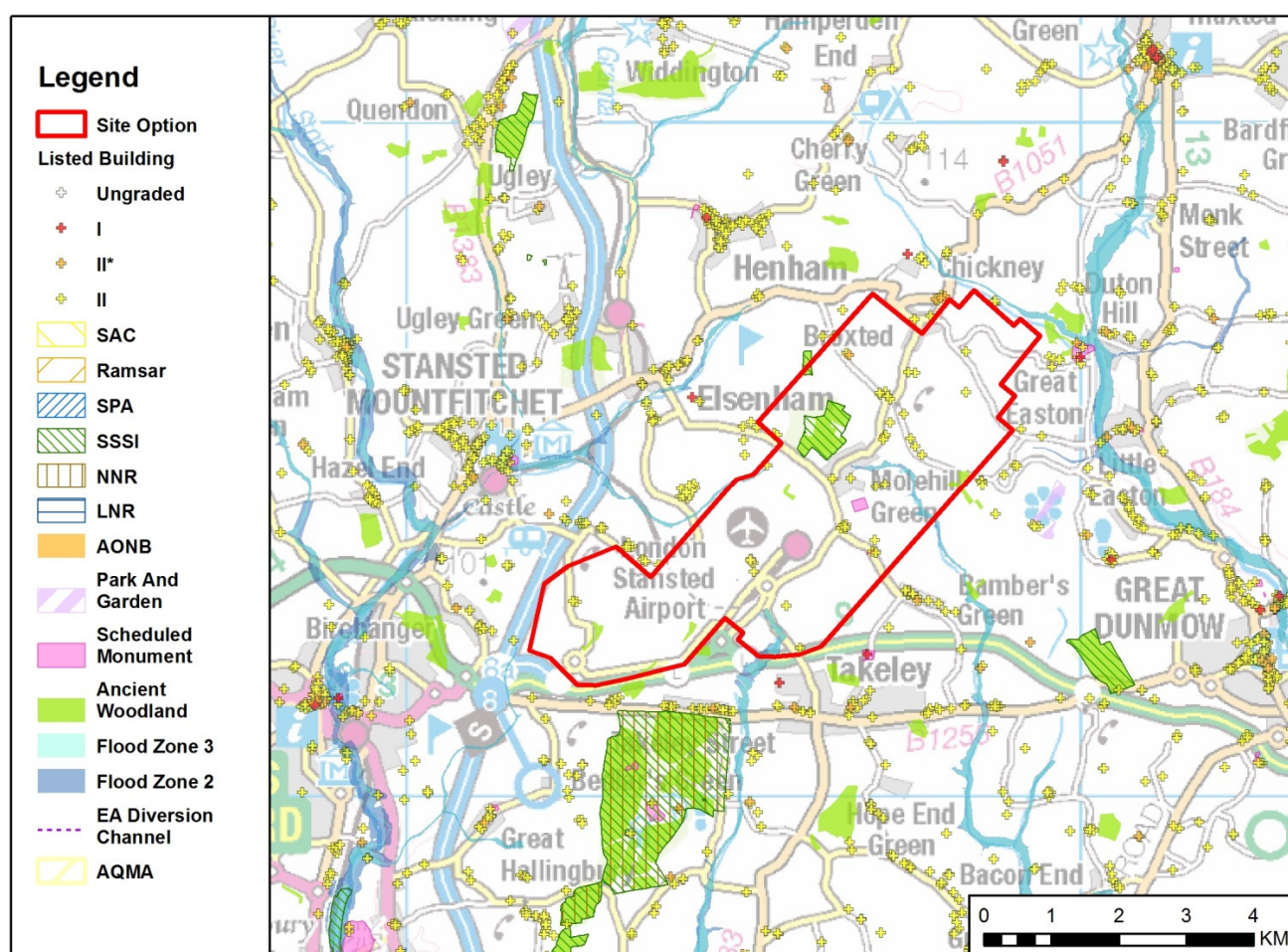
- Low Flood Risk and small area of flood plain loss (~2% of footprint in Flood Zones 2&3).
- Promoter notes that the water resource zone that supplies Stansted Airport would have a deficit.

##### Land Use and Development

- No loss of Greenbelt.
- Loss of large area (around 1,470ha) of Grade 1 and 2 (best and most versatile) agricultural land; mainly Grade 2.
- Approximately 1,500 ha of greenfield land would be lost; a larger area of undeveloped land compared to the Heathrow and Gatwick options but less than the hubs at Stansted and the Isle of Grain options. This is likely to include loss of local landscape and cultural heritage features, significant length of hedgerows (possibly with historic landscape value), protected species habitat, footpaths and archaeological interest.
- No significant contaminated land issues.

##### Surface Access Improvements:

Potential impacts related to all access improvements.



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## PEOPLE

<b>Housing</b> Land take required across a number of villages including Molehill Green, Brick End, Pledgdon Green and Broxton. Likely to increase pressure for housing in the surrounding areas to accommodate growing workforce.	<b>Demolished</b> 260
<b>Vulnerable Groups</b> <ul style="list-style-type: none"> <li>Overall Index of Multiple Deprivation (IMD) averaged over 5km area around the airport is 7.5, indicating a population generally not characterised by deprivation. This compares with an IMD averaging 14.4 around Gatwick, and the greater proportion of population affected by deprivation around Heathrow (IMDs of 18.7- 20.8) and around the Isle of Grain (26.1). However, local areas of relative high unemployment near Stansted may imply vulnerable groups who could benefit from the additional employment opportunities. Urban areas further afield e.g. Harlow 10km to the south contain some highly deprived areas with some employment dependent on the airport.</li> <li>The Health Impact Assessment (HIA) for Stansted G2 (2008) highlighted a particular concern over impacts on children and health through school life, predominantly associated with adverse impacts due to increased traffic and road congestion. One school is located within the development footprint.</li> </ul>	
<b>Quality of Life and Health</b> The SG2 HIA concluded that there would generally be negative impacts in relation to Quality of Life and residents' sense of health and wellbeing. <ul style="list-style-type: none"> <li>Approximately 16,961 and 68,599 people are located within 2km and 5km respectively of the airport.</li> <li>Increased population affected by aircraft noise nuisance with no net benefit through reductions at Heathrow but potential reductions at Luton. Around 1,700 people newly impacted by noise compared to 4,800 at Gatwick or 34,800-37,500 for a 3<sup>rd</sup> runway at Heathrow, 12,400 for 5 runway Stansted and 1,200 for the Isle of Grain.</li> <li>Some change to character and setting of surrounding settlements from increased aircraft noise, traffic and surrounding ancillary development. Areas affected by ground noise would extend further from the airport than at present with varying degrees of impact.</li> <li>Some loss of open space but within a largely rural setting.</li> <li>Possible additional benefits to current accessibility and connectivity through surface transport improvements and also from improved local services.</li> <li>Significant benefits to local area as contributor to economic wellbeing and supporting social and economic objectives in wider area.</li> </ul>	
<b>Wider Social Impacts</b> Proposer claims 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 were it to reduce in size.	

## COST

<b>Capital Cost</b> Promoter estimates £4.4bn including £0.6bn for surface transport.	<b>£ bn</b>	<b>2030</b>	<b>2050</b>
	<b>Airport</b>	4-5	6-9
	<b>Access</b>	~1	~1
	<b>Other</b>	~1	~1
	<b>Total</b>	4-6	7-10
	<b>Risk</b>	1-3	3-4
	<b>Optimism Bias</b>	3-4	5-7
	<b>Risk Adjusted Total</b>	9-13	15-20
<b>Key Risks</b> <ul style="list-style-type: none"> <li>Land prices and acquisition.</li> <li>Tunnel construction beneath the runway.</li> <li>Widening of M11</li> </ul>			
<b>Risk and Contingency Allowances</b> 40% contingency adopted for all costs. 50% optimism bias applied.			
<b>Surface Access Costs</b> Costs based upon upgrades to roads locally around the airport. Cost analysis assumes that rail upgrades to Stansted Express is a committed scheme funded by others.			
<b>Other Off-Airport Costs</b> An allowance has been included to cover typical environmental mitigations measures for flood protection and habitat loss. No allowance has been made for any potential payments that might be due to Luton airport in compensation for the necessary reduction in its capacity.			



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#### OPERATIONAL VIABILITY

<b>Capacity</b>	<b>Net</b>	<b>Airport</b>	<b>Net</b>	<b>Forecast Usage of Maximum Capacity</b>	
The net system effect is based upon achieving 40 mppa capacity at the existing airport. This exceeds current infrastructure and planning permission limits, but would be expected to be achieved in time with anticipated investment and increasing p/ATM. This scale of expansion could necessitate a reduction in capacity at Luton reducing the net increase.	<b>Runways</b>	<b>1</b>	<b>1</b>	<b>2030</b>	<b>2050</b>
	<b>ATM</b>	<b>575,000</b>	<b>268,000</b>	<b>45%</b>	<b>80%</b>
	<b>pax</b>	<b>90</b>	<b>46</b>	<b>45%</b>	<b>80%</b>
<b>Resilience, Reliability and Efficiency</b>					
The east runway would support independent parallel approaches on the runways, offering the greatest resilience and reliability of operations.					
<b>Safety</b>					
Of the two options, the east runway, avoiding the need to cross either runway potentially offers the safer of the two configurations. There does not appear to be any need to overfly significant population centres on final approach or immediately after departure.					
<b>Scalability</b>					
Could form the first phase of long term expansion to the four runway configuration as set out by MAG or five runway configuration proposed by the Mayor of London.					
<b>Airspace</b>					
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. 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.					

#### DELIVERY

<b>Timescale</b>
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.
<b>Commercial Deliverability</b>
Independent high level assessment suggests that, to meet the full debt requirement, aero yield may have to be increased by between ~170% and 180% and indexed at 2.5% per annum thereafter, depending upon the level of contribution to surface access costs. Alternatively, without indexation, an increase of between 335% and 350% may be required.
Aeronautical yield index relative to Heathrow Q6 to breakeven: 1.6.
The borrowing requirement is large and above precedent for finance to be raised in the context of a wholly privately funded, single transaction. Without a clear economic rationale it is unlikely that the remainder of the funding would be attractive to external investors or third party debt providers so the extent of the Government subsidy may need to be sizeable.