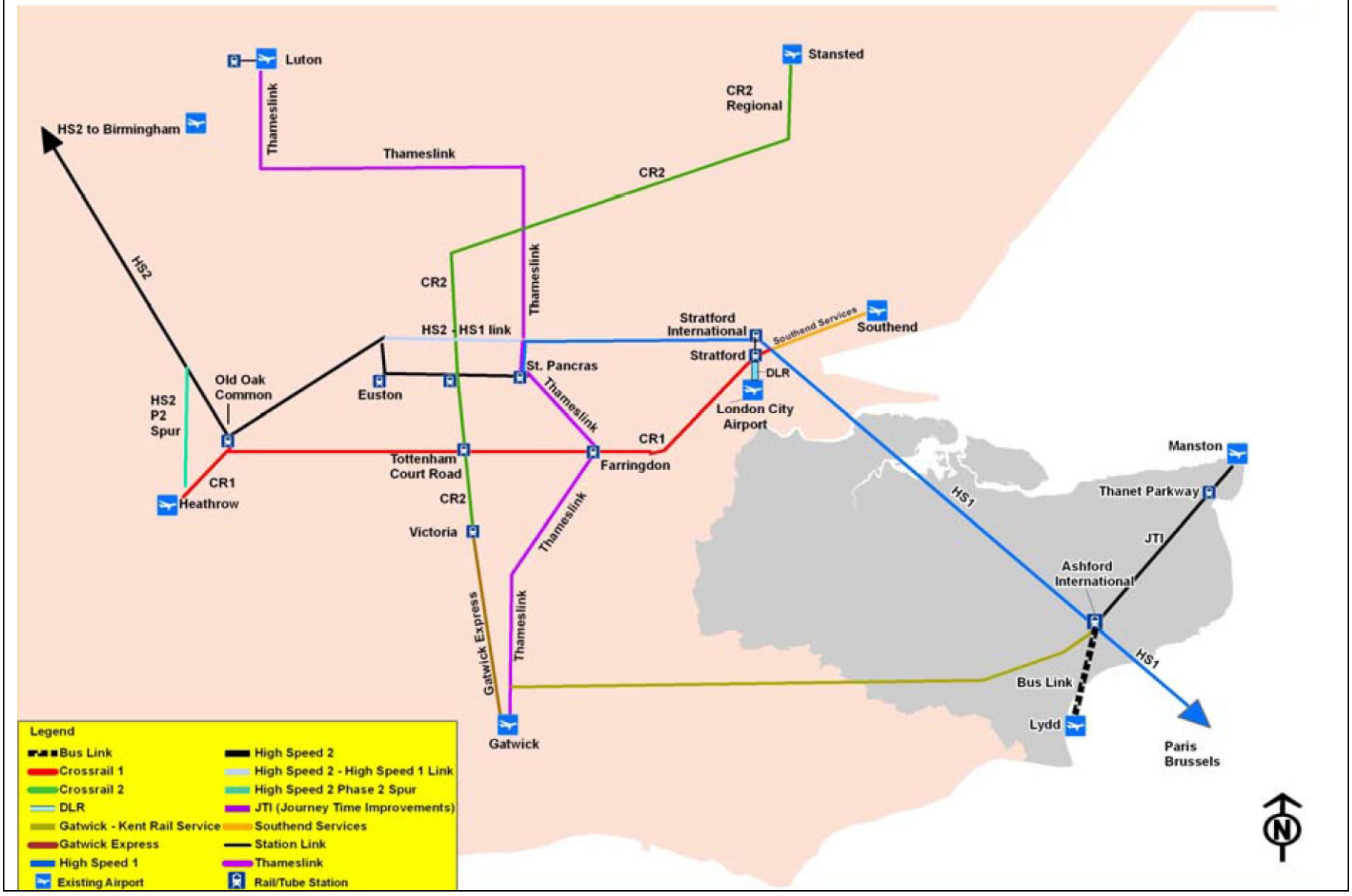
PROPOSAL TITLE:	**“Dispersed Hub” Model**	**Group:**	**Dispersed**
SUBMITTED BY:	**Kent County Council**	**Reference No.:**	**41**

PROPOSAL

High level presentation **<u>of provision of additional capacity at some existing airports, together with improved rail access to facilitate better strategic use of the London/South East multi-airport system. Better utilisation of regional airports including Manston and Lydd in Kent, for point to point flights, to release capacity and complement the main London airports to provide enhanced “hub” operations.</u>**

Additional runways proposed at Gatwick and subsequently Stansted, to encourage competition with Heathrow and establish a “dispersed/constellation hub”, with the potential for second runway at Birmingham should future capacity be required.

The submission also includes a recommendation to Government to **<u>keep UK airports competitive with European airports in terms of APD</u>**.



ASSESSMENT SUMMARY

The scheme sets out a dispersed hub option in which additional runways are developed at Gatwick and subsequently Stansted (and ultimately Birmingham if required), while surface transport upgrades enable regional airports Manston and Lydd to act as reliever airports and provide point-to-point capacity.

Key benefits of the scheme are that it: aims to provide capacity to accommodate unconstrained growth; is claimed to relieve pressure at Heathrow; spreads the benefit of economic activity and development across several areas of London and the south east; retains Heathrow and thereby avoids the negative economic impact of its closure; and will improve the frequencies and variety of destinations available to passengers. However, the dispersed/constellation hub concept is unproven and may result in some lost economic activity as traffic could be lost from London to other European hubs. Further, it is unlikely to result in any significant relocation of services by any airlines operating at Heathrow.

In comparison to the proposal to develop a second runway at Birmingham, this scheme creates capacity closer to relevant population centres, although both the Gatwick and Stansted schemes require substantive enhancements to existing road and rail infrastructure to improve access. However, for Manston and Lydd to become viable reliever airports, surface transport improvements will be necessary that will deliver only limited wider benefits in comparison to schemes such as widening of the M42, for example.

The proposal implicitly assumes that the business case for each individual airport scheme would be sufficiently attractive for the individual owners to fund, and therefore a clear policy commitment from UK Government would be necessary for the scheme to be initiated.

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OVERVIEW

Approach	Effectively policy led initiative that implicitly precludes the development of Heathrow or any other, new, replacement hub, allowing the remaining airports in the London network to expand as their own business cases dictate.			Opening Year n/a

Capacity	The expansion of Stansted to two runways is likely to necessitate the closure of Luton, therefore only one net runway is added to the London system. However, the greater potential use of runways at Gatwick and Stansted enable a greater number of passengers to be handled compared to the lost runway at Luton. A second runway at Birmingham would add a further 250,000 ATMs and c 36 mppa to the UK network.	Net	Airports	Net
		Runways	**4**	1
		ATM	1,077,500	372,500
		pax	174	66

Cost	Gatwick cost may be c £13bn and Stansted £14.1bn. Including broader surface access costs. The wider schemes suggested may add a further cost of c. £5bn+.	Phase (£b)	Airport	Access	Other	Sub Total	Including Risk/OB
		LGW	4.3	1.3	0.6	6.2	13.0
		STN	2.6	3.6	0.5	6.7	14.1

Surface Transport	To support Gatwick expansion, two additional fast rail tracks are needed on the BML, and expansion of Gatwick Airport Rail Station. At a minimum, realignment of the A23, improved M23 link roads and an upgrade of the A23 north of the M25 are likely to be required. Stansted requires an upgrade of the WAML and expansion of Stansted Airport Rail Station, and expansion of the M11, to significantly improve surface access. Combined isochrone population stated.	1 hr isochrone	18
		2 hr isochrone	20
		London centre	LGW: 25 miles STN: 30 miles

Economic					
Borough	Crawley	Mid-Sussex	Uttlesford	E. Hertfordshire	Solihull
Unemployment (%)	7.6	7.7	3.7	4.4	7.0
Ave. Salary (£/yr)	25,527	24,050	29,968	26,946	29,442
County	West Sussex	Surrey	Essex	Hertfordshire	W. Midlands
GVA (£/capita)	19,841	25,432	16,707	23,073	17,358

Environment	Loss of cultural heritage interest, large area of good quality agricultural land and flood plain storage. Overall impacts and benefits more evenly spread regionally.		Airport	Net
		57 LA_{eq}	18,000	7,000
		55 L_{DEN}	70,000	

	SAC[1]	SPA[1]	Ramsar	CA[1]	AONB[1]	SSSI[1]	Listed Buildings	SAM[1]	Houses Lost
LGW	-	-	-	1	-	-	18	-	220
STN	-	-	-	-	-	-	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.

ECONOMY

Borough	Crawley	Mid-Sussex	Uttlesford	E. Hertfordshire	Solihull
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Impact on Industry

Adding second runways to Gatwick, Stansted and Birmingham Airports, in that order, according to demand, will create benefits by allowing unconstrained growth in new services at those airports. These services are primarily expected to be European and domestic services, and some marginal growth in long haul services. The growth of such airports will support commercial activity adjacent to those airports. However, expansion of those airports is unlikely to have more than a negligible impact on demand at Heathrow. Expansion will encourage competition between those airports and Luton, but will have a relatively low impact on connectivity compared with options to expand Heathrow or to develop a new hub airport at a single site. It is likely to have a small positive national economic impact, less than would be expected from allowing substantial growth at a hub airport.

Airports	The additional capacity provides for approximately a doubling of capacity at all three airports by 2050, providing sufficient capacity to meet peak demand at all three airports. This is likely to promote greater competition between those airports, and with others including Luton and to a lesser extent Heathrow (as the airports seek to maximise utility of the new capacity). It is unlikely to result in any significant relocation of services by any airlines operating at Heathrow. The proposed expansion of Gatwick, followed by Stansted then Birmingham broadly reflects existing demand/capacity profiles for those airports.
Airlines	Airlines currently using and seeking to use Gatwick, Stansted and Birmingham would benefit from the increase in capacity allowing new direct routes, higher frequencies and competition at times of peak demand. This would particularly benefit LCCs, European carriers and a handful of foreign long haul carriers with economically viable services to non-hub UK airports, encouraging them to expand services at those airports. Given continued capacity constraints at Heathrow, it is likely some airlines at Heathrow will rationalise services there to realise the value of existing slots by transferring some services to Gatwick (or abandoning services that are not viable from non-hub airports), to enable higher-yielding services to commence at Heathrow (or to lease/sell such slots to other carriers).
Passengers	Passengers will benefit from increased capacity as airlines introduce new services based on market demand, with a possible greater choice of destinations/enhanced frequencies and more competition (reducing fares). Users of Heathrow are likely to see services increasingly concentrated on highest yielding routes, reducing some service frequencies and routes, and increasing fares for direct routes not available from other London area airports.

Local & Regional Economic Impacts

Expansion at the airports, will allow continued commercial growth in the vicinity of those airports, supporting existing businesses at those sites. This will initially benefit Sussex, Surrey and Kent, then Essex, Hertfordshire and Cambridgeshire, followed by the West Midlands. However, is it unlikely based on our assumptions that any of this growth will be any relief for the constraint on growth in the Heathrow/Thames Valley/M4 corridor area, or substantially replicate the agglomeration effects of that area. Connectivity improvements are likely to be incremental and have localised impact, and may be offset by airlines abandoning lower yielding routes at Heathrow (which may not be available without utilising a foreign based hub). This is likely to constrain business and employment growth that is dependent on connectivity through Heathrow.

National Economic Impacts

The main national economic impacts come from allowing increased demand at those three airports to be met by airlines providing services according to market circumstances. This is likely to facilitate some growth in business and leisure trips, and generate modest consumer/welfare benefits particularly for connectivity to short-haul destinations. It is highly unlikely that these benefits would substitute those likely from expansion of Heathrow or redevelopment of any site as a major new hub airport.

SURFACE ACCESS

Time/Distance to Central London	1 hr isochrone population	Key required upgrade schemes
Gatwick: 28-46 mins, 25 miles Stansted: <45 mins, 30 miles **Journey times to other population centre**	Combined: 18 million **2 hr isochrone population** Combined: 20 million	▪ M23 link and junction improvements ▪ Local A23 road improvements ▪ D4 M11 widening ▪ Two additional fast rail tracks north of Windmill Bridge Junction on BML ▪ Improvements to Gatwick station ▪ Upgrade WAML or extend (proposed) Crossrail 2 ▪ Increase platforms at Stansted station

Rail Infrastructure Capacity Analysis

No quantitative assessment has been undertaken in regards to capacity; however the following proposals have been made. **Gatwick second runway:** Significant extra capacity required for fast services on the London to Brighton line. Extension of the South Croydon to Milton Keynes service to Gatwick to provide direct access to West Coast Mainline. Increased frequency of service between Gatwick and Reading, a new rail service between Gatwick and mid Kent, additional platform capacity at Gatwick and CrossRail 2 Option B with some modification to provide additional capacity to serve Gatwick. Expansion of the Brighton Mainline (BML) is likely to have a positive business case. **Stansted second runway:** Upgrade the West Anglia Main Line (WAML) to four tracks to provide for 8 trains per hour to Stansted Airport from Liverpool Street or extend the proposed CrossRail 2. Increase the number of platforms at Stansted Airport Station. Further analysis is required to demonstrate that these service improvements and bottleneck capacity improvement schemes are sufficient to cater for the increased capacity of the airports and more substantial and expensive new rail lines are not required. The business case for upgrading the WAML is understood to be poor.

Highways Capacity Analysis

No quantitative assessment has been undertaken. **Gatwick second runway:** Additional airport traffic will put increased pressure on the M25. The A23 would need to be diverted around the new runway and improvements would be needed to connections to the M23. The main highway corridor into central London via the A23 would need to be upgraded with expensive dualling and grade separation likely to be necessary. **Stansted second runway: sponsor cites the 2003 Air Transport White Paper would require the capacity of the M11 south of the airport to be increased to 4 lanes**. Further analysis is required to demonstrate that these rather localised highway capacity schemes are sufficient to cater for the increased capacity of the airports and that there are no wider network widening or new corridor schemes required to cater for the increased airport-related traffic.

Accessibility to Population & Business centres

Gatwick second runway: Rail access to south and central London will be good. Road access to Gatwick will generally be good from Sussex via the M23/A23 and to the wider South East region via the M25, but will be poor to London via A23. **Stansted second runway:** Road access will be good to north east London and Cambridge by the M11 motorway and Braintree, Colchester and Harwich by the A120.

Accessibility to Transport Interchanges

Gatwick second runway: The proposed schemes will result in faster and more frequent access to Victoria, London Bridge and Kings Cross/St Pancras on the Brighton Mainline. **Stansted second runway:** The proposal will see faster and more frequent services to Liverpool Street and Cambridge.

Accessibility to Workforce

Gatwick second runway: Improved surface access links would provide jobs and economic growth to west Kent, Sussex, Surrey and South London. Access for employees from London is good for those with access to the Brighton Mainline, but poor for commuting by other modes.

Potential Wider Use

Improved surface access links would provide jobs and economic growth to west Kent, Sussex, Surrey and South London. **Gatwick second runway:** Significant capacity improvements to the BML will benefit commuters on this route and in south London. Improvements to the M23, M25 and A23 would generate further benefits for these areas. **Stansted second runway:** Capacity improvements on the West Anglia Mainline will benefit commuters along that corridor. Expanded highway capacity will benefit Essex and Cambridgeshire access towards London.

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ENVIRONMENT

			Airport	Nett
Overall impact	Impacts as set out in submission from GAL and MAG for Gatwick and Stansted respectively. Relatively small increase in combined population affected by noise.	57 LA_{eq}	18,000	7,000
		55 L_{DEN}	70,000	

	SAC	SPA	Ramsar	CA	AONB	SSSI	Listed Buildings	SAM	Houses Lost
LGW	-	-	-	1	-	-	18	-	220
STN	-	-	-	-	-	-	30	2	90

PEOPLE

Housing	Demolished
Increased housing pressure around Gatwick and Stansted but more dispersed.	LGW: 220 STN: 90

Vulnerable Groups

Both Gatwick and Stansted airports are located within areas with relatively few deprived wards. Both Manston and Lydd are situated in areas that are relatively high scoring on the Index of Multiple Deprivation, indicating that there is scope for improvement and development of the area, such as through employment generated by expanded use of these airports.

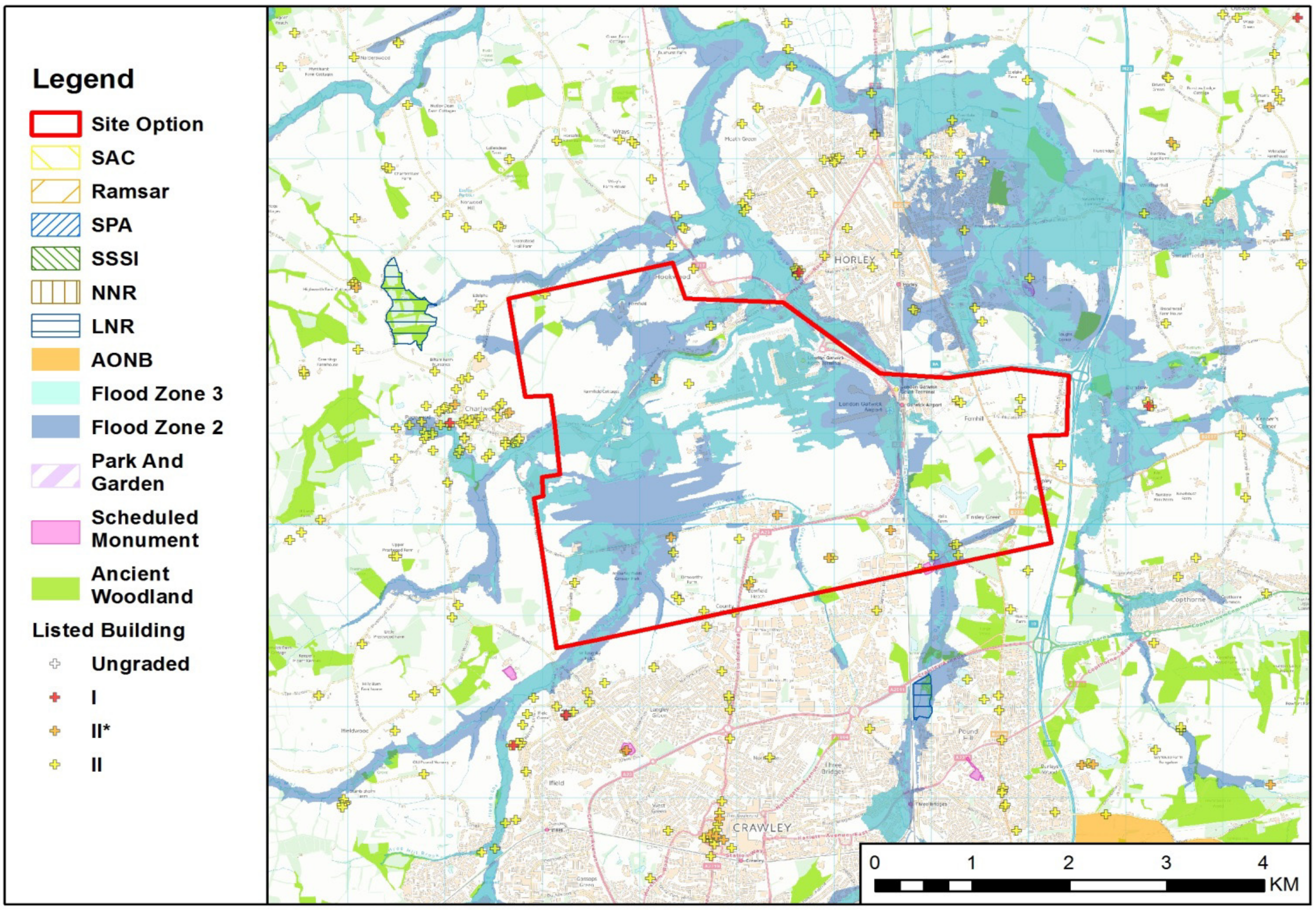
Quality of Life and Health

- Increased population affected by aircraft noise nuisance, with no net benefit through reductions at Heathrow.
- Loss of open space and recreational amenities.
- Potential benefits from greater opportunities, such as employment and access to public services.

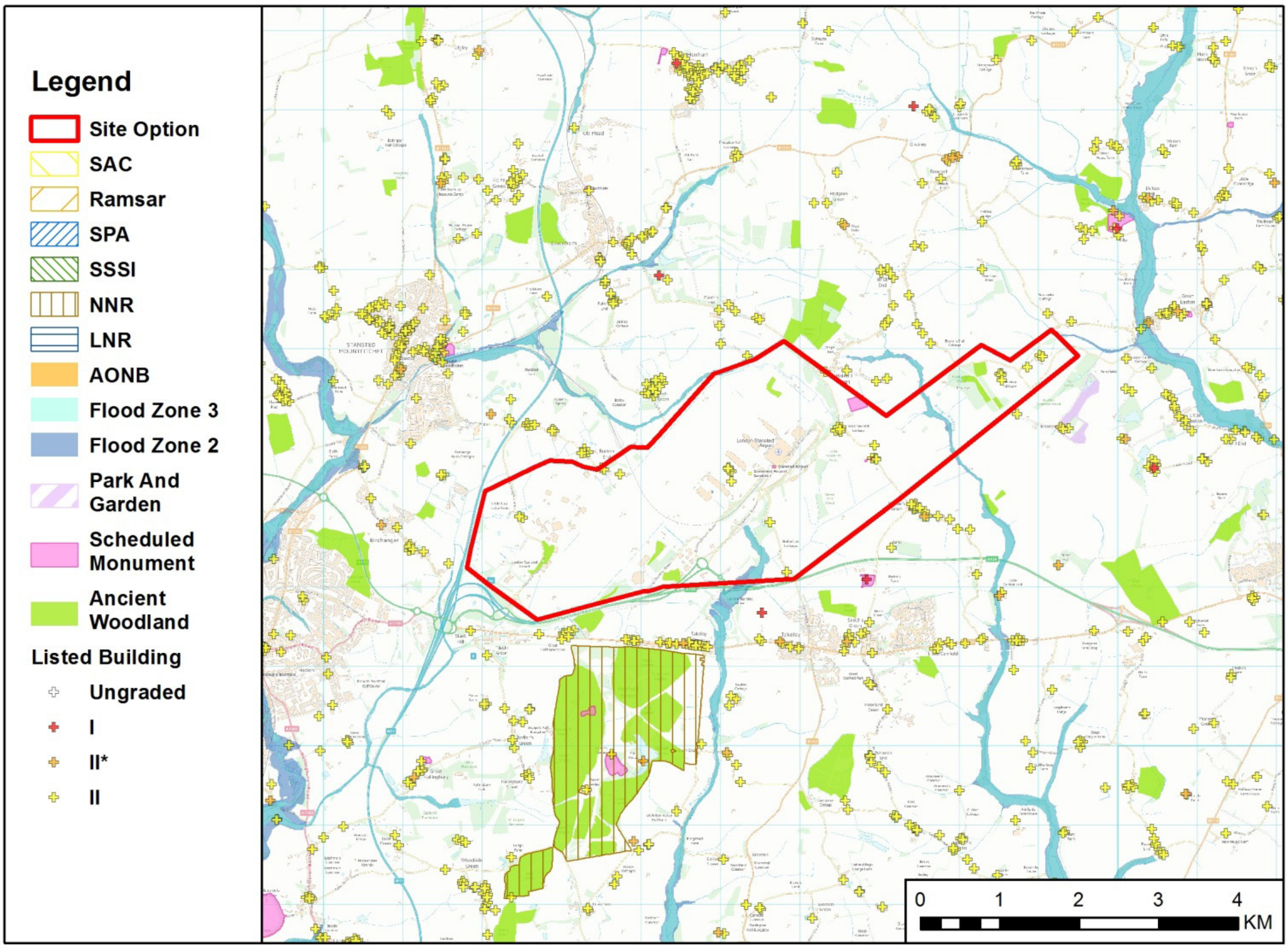
Wider Social Impacts

Retains local employment around Heathrow compared to other schemes closing Heathrow and avoids the loss of opportunity and access to services that closure might bring.

Gatwick Airport



Stansted Airport



COST

Capital Cost

Submitted estimates the cost of a second runway at Gatwick to be £5bn but does not provide any further details. Independent cost analysis assesses the scheme to cost c £13bn.

Second runway at Stansted has been estimated by submitter to around £2-2.5 billion, excluding surface access infrastructure. No further details provided. Independent cost analysis assesses the scheme to cost £14bn.

£ bn	LGW	STN
Airport	4.3	2.6
Access	1.3	3.6
Other:	0.6	0.5
Sub-Total	6.2	6.7
Risk	2.5	2.7
Optimism Bias	4.3	4.7
Total	13.0	14.1

Key Risks

- Surface access links at both airports
- Construction within congested operational environments.
- River Mole Diversion at Gatwick.
- Potential for further environmental costs at both airports.
- Widening of M11 at Stansted.

Risk and Contingency Allowances

40% contingency adopted for all costs. 50% optimism bias applied.

Surface Access Costs

LGW - £0.3bn estimate for road and rail links based on requirement for infrastructure identified by the independent analysis however, further allowance of £1bn made for the broader transport requirements.

STN - £3.6bn estimate for road and rail links based on requirement for infrastructure identified by the independent analysis, plus an allowance has been made for the upgrading of the West Anglia Main Line and the widening of the M11 motorway between the airport and M25.

Upgrading access to Lydd and Manston may increase the total cost by a further c.£2bn to c.£5bn.

Other Off-Airport Costs

Mitigation and/or compensation required to ensure Water Framework Directive and flood risk storage requirements are met an allowance of £0.5bn per scheme has been included to cover typical mitigations measures.

Summary Comments

The cost of both major schemes is likely to have been underestimated, with additional costs likely to be required to upgrade the broader surface access.

OPERATIONAL VIABILITY

Capacity

The expansion of Stansted to two runways is likely to necessitate the closure of Luton, therefore only one net runway is added to the London system; however, the greater potential use of runways at Gatwick and Stansted enable a greater number of passengers to be handled compared to the lost runway at Luton. A second runway at Birmingham would add a further 250,000 ATMs and c.36 mppa to the UK network.

Net	Airports	Net
Runways	<u>4</u>	1
ATM	1,077,500	372,500
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Resilience, Reliability and Efficiency

All options could be defined to meet resilience targets. Kent CC have proposed a wide-spaced runway option at Gatwick, which offers the greatest capacity benefit.

Safety

All options could be designed to meet safety requirements.

Scalability

The second runway to both Gatwick and Stansted could be the first phase of longer term expansion as set out in the proposals from GAL and MAG respectively.

Airspace

Neither proposal would require significant airspace design. The boundaries of the London terminal manoeuvring area (LTMA), SIDs, STARS and interfaces with en route airspace would be amended to include the second runway. However, 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. There would not need to be any change of international boundaries.

DELIVERY

Timescale Delivery dependent upon the needs of the individual airports. May potentially lead to slow capacity growth as individual airport investors would require clear visibility of demand and policy certainty before investing.
Commercial Deliverability Implicitly assumes that the business case for each of the airport schemes would be sufficiently attractive for the individual owners to fund. Government investment in surface transport is likely to be required (the amount is unknown, but is likely to be in the order of around £5bn for both airports). The business case is likely to be subject to prevailing/anticipated demand. Range of support measures potentially needed in addition to financing, including UK Government support/commitment and supportive regulatory framework. Robustness of private financing at either airport may rest upon existing capacity constraints elsewhere in the London system.