


Performance Criteria for Assessing Airport Expansion Alternatives for the London Region

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Some background


- ▶ Airport expansion in the London region is challenging: No new full-length runway has been laid down since the 1940s.
 - ▶ In the aftermath of the breakup of BAA, London airports are now all in separate and (in most cases) private ownership.
 - ▶ Although Government does not direct privately-owned airports on their operations and investment decisions, it has an important role to play. In particular the Government:
 - ▶ determines the overall policy for aviation and carries out negotiations at international level
 - ▶ delivers the surface transport infrastructure on which airports rely
 - ▶ determines how airports should engage with local communities
 - ▶ establishes emissions targets and restrictions
 - ▶ **sets out the process for delivering any major new airport infrastructure developments.**
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In 2012, the Prime Minister appointed an Independent Airports Commission (AC)

“The Airports Commission will examine the scale and timing of any requirement for additional capacity to maintain the UK’s position as Europe’s most important aviation hub, and it will identify and evaluate how any need for additional capacity should be met in the short, medium and long term.

It should maintain a UK-wide perspective, taking appropriate account of the national, regional and local implications of any proposals. (...)

The Commission should base the recommendations in its final report on a detailed consideration of the case for each of the credible options. This should include the development or examination of detailed business cases and environmental assessments for each option, as well as consideration of their operational, commercial and technical viability.

As part of its final report in summer 2015, it should also provide materials, based on this detailed analysis, which will support the government in preparing a National Policy Statement to accelerate the resolution of any future planning applications for major airports infrastructure.”

Approach

- ▶ Transparent and collaborative
- ▶ Scenario-based
- ▶ Iterative assessment and methodology development
- ▶ Accounting for positive and negative knock-on impacts (region-wide assessments taking into account the impacts on other airports)
- ▶ Assessments directly linked to the objective of the exercise
- ▶ Expert judgment (rather than applying weights to different criteria)



The Commission undertook an extensive programme of engagement with stakeholders

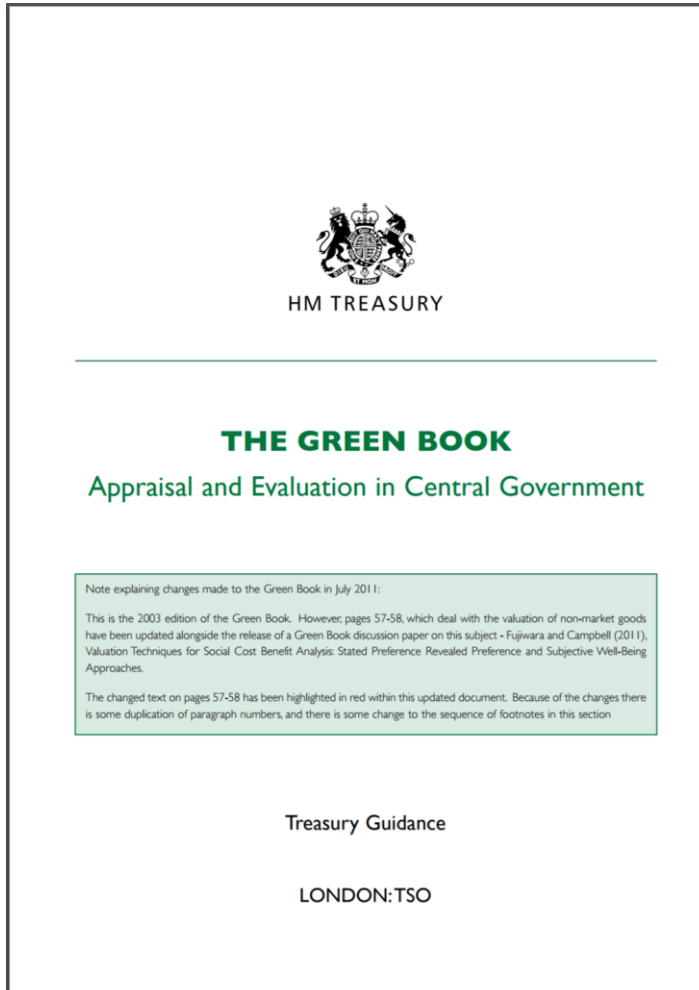


Phases

- ▶ Phase 1:
 - ▶ Assessment of need for new capacity
 - ▶ Result: One new runway needed in the London region
 - ▶ Sifting through 52 proposals
 - ▶ A shortlist of 3 expansion options
- ▶ Phase 2:
 - ▶ Development and analysis of shortlisted proposals
 - ▶ Output: A recommendation to build a third runway at Heathrow




HMT's Green Book provides guidance on how to appraise and compare different expansion options




- ▶ But there is no guidance available with respect to measuring aviation system performance to support decision-making on increasing airport capacity
- ▶ The Commission had to develop its own methodology in this respect



What “performance measures” in this case?

- ▶ Which of the short-listed schemes maximises the benefits and at what cost?
 - ▶ Benefits
 - ▶ To the users of aviation (passengers and freight forwarders)
 - ▶ Local communities (jobs)
 - ▶ National economy (trade, investment)
 - ▶ Costs
 - ▶ To the aviation industry (and possibly the taxpayer)
 - ▶ To local communities (noise, pollution)
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The AC set out six broad criteria of assessment

- ▶ **Economic factors:** The UK-wide effects of connectivity (trade, tourism, access to international business) and the local effects of airport expansion (employment, skills, local investment, impact on other airports)
 - ▶ **Social factors:** Alignment with regional development politics and the impacts on well-being
 - ▶ **Climate change impacts:** The overall compatibility of growth in air travel with the national and global climate change targets, impacts on emission levels
 - ▶ **Local environmental factors:** Impacts on biodiversity (incl. birdlife), conservation, landscape, heritage, water and flooding, waste
 - ▶ **Accessibility:** Impacts on access to aviation for UK residents, surface transport integration and associated developments
 - ▶ **Feasibility considerations:** Affordability and financeability (costs to UK taxpayer, passengers, investors, airlines – calculation of airport charges important); deliverability; operational feasibility and safety
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Then the six assessment criteria were refined and became the eight sift criteria

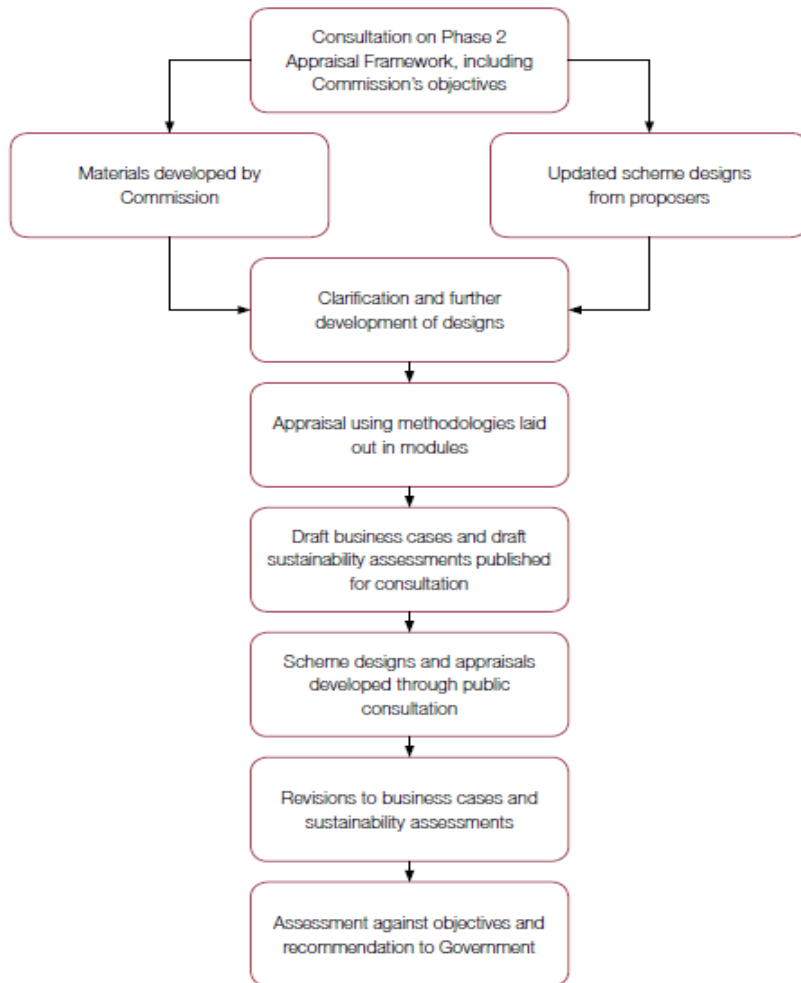
- ▶ Economic factors
 - ▶ Social factors
 - ▶ Climate change impacts
 - ▶ Local environmental factors
 - ▶ Accessibility
 - ▶ Feasibility considerations
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- ▶ Strategic fit
 - ▶ Economy
 - ▶ Surface access
 - ▶ Environment
 - ▶ Air quality
 - ▶ Noise
 - ▶ Designated sites
 - ▶ Climate change
 - ▶ People
 - ▶ Cost
 - ▶ Operational viability
 - ▶ Delivery
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8 sift criteria became 16 appraisal modules

Phase 1 sift criteria categories	Phase 2 objective	Phase 2 appraisal module
Strategic Fit	To provide additional capacity that facilitates connectivity in line with the assessment of need.	Strategic Fit
	To improve the experience of passengers and other users of aviation.	
	To maximise the benefits of competition to aviation users and the broader economy.	
	To maximise benefits in line with relevant long-term strategies for economic and spatial development.	
Economy	To maximise economic benefits and support the competitiveness of the UK economy.	Economy Impacts
	To promote employment and economic growth in the local area and surrounding region.	Local Economy Impacts
	To produce positive outcomes for local communities and the local economy from any surface access that may be required to support the proposal.	
Surface Access	To maximise the number of passengers and workforce accessing the airport via sustainable modes of transport.	Surface Access
	To accommodate the needs of other users of transport networks, such as commuters, intercity travellers and freight.	
	To enable access to the airport from a wide catchment area.	

Environment	To minimise and where possible reduce noise impacts.	Noise
	To improve air quality consistent with EU standards and local planning policy requirements.	Air Quality
	To protect and maintain natural habitats and biodiversity.	Biodiversity
	To minimise carbon emissions in airport construction and operation.	Carbon
	To protect the quality of surface and ground waters, use water resources efficiently and minimise flood risk.	Water and Flood Risk
	To minimise impacts on existing landscape character and heritage assets.	Place
	To identify and mitigate any other significant environmental impacts.	To be defined
People	To maintain and where possible improve the quality of life for local residents and the wider population.	Quality of Life
	To manage and reduce the effects of housing loss on local communities.	Community
	To reduce or avoid disproportionate impacts on any social group.	
Cost	To make efficient use of public funds, where they are required, and ensure that the benefits of schemes clearly outweigh the costs, taking account of social, environmental and economic costs and benefits.	To be assessed in the business case
Delivery	To be affordable and financeable, including any public expenditure that may be required and taking account of the needs of airport users.	Cost and Commercial Viability
	To have the equivalent overall capacity of one new runway operational by 2030.	Delivery
	To actively engage local groups in scheme progression, design and management.	
Operational Viability	To enhance individual airport and airports system resilience.	Operational Risk
	To ensure individual airport and airports system efficiency.	Operational Efficiency
	To build flexibility into scheme designs.	
	To meet present industry safety and security standards.	
	To maintain and where possible enhance current safety performance with a view to future changes and potential improvements in standards.	

Analysis of Commission's shortlist: Process



- ▶ Schemes developed together with the scheme promoters
- ▶ Collaboration with other stakeholders
- ▶ Consistent approach across the proposals
- ▶ Iterative – scheme designs and assessments developed in parallel

An example: Strategic Fit Module (1/2)

Objective 1: To provide additional capacity that facilitates connectivity in line with the assessment of need (AoN).

<p>1 – LHR-NWR</p> <p>Provides a net additional: 260k ATMs and 14 million long-haul seats (carbon-traded, AoN).</p>	<p>2 – LHR-ENR</p> <p>Provides a net additional: 220k ATMs and 10 million long-haul seats (c.-t., AoN).</p>	<p>3 – LGW-2R</p> <p>Provides a net additional: 280k ATMs and 5 million long-haul seats (carbon-traded, AoN).</p>
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All three schemes fulfil the Commission’s AoN. However, while the Gatwick scheme provides the largest net increase in ATM capacity, there is significantly less risk to both Heathrow schemes’ ability to foster a wider long-haul route network, and the take up of new capacity by airlines. There are no significant differences regarding the provision of short-haul connectivity.

Objective 2: To improve the experience of passengers and other users of aviation.

<p>1 – LHR-NWR</p> <p>Slightly improves SPF=44m²/DHP (higher than other EU hubs); improvements on existing and new transport links (HS2 and Crossrail); LHR-NWR likely to be highly beneficial to the freight sector (an expanded freight handling capacity part of the masterplan).</p>	<p>2 – LHR-ENR</p> <p>Appraisal essentially as per the LHR-NWR scheme, though no additional freight capacity specified within the expanded airport boundary – any such development would therefore have to be located outside of the currently proposed limits.</p>	<p>3 – LGW-2R</p> <p>Slightly reduces SPF=30m²/DHP, likely delays during construction; improvements on existing transport links, but resilience issues and London in the way of travellers from up north; space for freight facility, but cargo growth uncertain as external investment required.</p>
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The two Heathrow schemes perform better on both passenger experience and potential effects on the freight sector. On balance, there are risks to the provision of adequate passenger experience at Gatwick during construction; Heathrow is more resilient against major transport incidents; and difficult to predict if cargo handlers would significantly invest in facilities at LGW.

An example: Strategic Fit Module (2/2)

3: To maximise the benefits of competition to aviation users and the broader economy.

1 – LHR-NWR

V significant benefits from scarcity rents reduction and increased competition on long haul (and short h. if LCCs enter).

2 - LHR-ENR

Appraisal as per LHR-NWR, but different ATMs so slightly lower competition benefits.

3 – LGW-2R

Significant benefits of reduction of scarcity rents, benefits of competition on long haul less certain than at Heathrow.

Each of the two Heathrow schemes delivers higher benefits of competition and higher wider economic benefits than expansion of Gatwick; there is also more risks to potential benefits at Gatwick as they depend on the success of the airport in attracting long-haul carriers.

4: To maximise benefits in line with relevant long-term strategies for economic and spatial development.

1 – LHR-NWR

Provides significant number of new jobs and investment, well aligned to support the M4 corridor/Thames Valley; easily accessible from all geographical locations; Heathrow considered to have a substantial adverse impacts on the local environment (part of the London Plan and other local plans), these impacts could however be mitigated.

2 – LHR-ENR

Appraisal as per LHR-NWR, but lower employment and agglomeration benefits, and worse air quality impacts (with a risk that they could be difficult to keep within acceptable levels).

3 – LGW-2R

Closely connected to Croydon Opportunity Area identified in the London Plan, provides London with two alternatives for long-haul traffic (if attractive to LH carriers), but not easily accessible to outside of London/SE England; relatively small number of people adversely affected by the second runway.

All three schemes support growth of the economy identified in national and regional development strategies, LEP and other business plans. While the London Plan currently opposes Heathrow expansion for environmental reasons, LHR-NRW and LHR-ENR deliver significantly higher employment and agglomeration benefits than LGW-2R, due to the airport's business model and location (also better than Gatwick for national access). Gatwick's potential advantage could be in providing London with two alternatives for long-haul connectivity, if Gatwick successfully attracts long-haul carriers (there are risks to this potential benefit).

Concluding remarks

- ▶ The Airports Commission's appraisal process demonstrated that it is both feasible and useful to develop system performance measures to support decision-making on airport investment.
- ▶ The process demonstrated the importance of harmonising data provided by different airports to allow comparison of different expansion options.
- ▶ The exercise wouldn't be possible without close collaboration by the Commission with all aviation stakeholders (airports, airlines, CAA).



Thank you

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