

PROPOSAL TITLE:		Group:	
SUBMITTED BY:		Reference No.:	

PROPOSAL

High level description of the scheme either drawn from the promoter's submission or our summary of the development.

Similarly the plan is either drawn from the submission, or is a combination of indicative schemes generated for assessment.

ASSESSMENT SUMMARY

The summary chart shows the highlighted metrics of the specific scheme against those for the other Stage 3 schemes across a range of parameters reflecting the sift criteria. Specifically:

- Capacity figures show the net impact of the scheme on the London system (specifically Heathrow, Luton, Stansted, London City and Gatwick airports) taking into account any consequential lost or reduced capacity at other airports, which are shown with RAG indications;
- Environment data show the population affected by noise at the 57 dBA L_{eq} level in 2030, based upon our independent noise analysis using forecast demand in 2030, and the number of designated sites directly impacted;
- The forecast cost is our independent assessment of the total cost including surface transport works, risk and optimism bias of the infrastructure required to accommodate the forecast demand in 2030;
- The aeronautical yield index relates the non-indexed, inclusive of all costs, yield required to fully pay the estimated debt by 2050, to the proposed Q6 regulatory settlement yield for Heathrow Airport. The yield is therefore not related to the current charges at the airports other than Heathrow: rather the index compares all the schemes to the yield at Heathrow. The increase in yield at an individual airport with respect to its current charges required is as stated in the assessment overview on the second page of the template, this summary chart seeks to show all options against the common benchmark (of Heathrow's Q6 yield).
- The estimated number of houses demolished is based upon our GIS analysis.
- Similarly, the IMD value is the average value within 5km of the site drawn from the GIS analysis.

KEY



No impact



Reduced capacity



Airport closed

Heritage

Impacted

Heritage

Not impact

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OVERVIEW

Approach	Description of the stated, or inferred, approach for delivery of the development. The opening year is generally as stated by the submission with commentary on the appropriateness.
Capacity	The maximum potential capacity of the airport with development is either as stated in the submission, where we accept the capacity, or as interpreted otherwise. The capacity takes into account a reduction below a theoretical maximum to allow for respite or increased resilience. The net capacity takes account of system impacts based upon our assessment, or as informed by NATS's view. London system airports considered were: Heathrow, Luton, Stansted, London City and Gatwick. The percentage of uptake of airport capacity is based upon our interpretation of the provided DfT forecasts and is expressed related to the stated airport capacity.
Cost	The cost breakdown is our independent assessment of the cost of providing the infrastructure required to accommodate the forecast demand in 2030 and 2050 (within the over-riding capacity of the number of runways provided). The cost is therefore not necessarily reflective of the maximum potential build-out of the airport to its theoretical maximum capacity. 40% risk and 50% optimism bias applied to all costs. The promoter's cost estimate is as stated in the submission and/or responses to questions.
Surface Access	Key summary views of our assessment of surface access requirements to serve the forecast demand in 2030 and, when reasonable to do so, in 2050. Isochrone populations based upon 2030 forecast population, back-ground surface access upgrades anticipated and the upgrades required as part of the scheme. The distance to central London is a rounded statement of the straight line distance to Charing Cross mainline train station.
Economic	Key Office of National Statistics economic data presented for neighbouring boroughs and counties.
Environment	<p>Key summary views of our assessment of environmental impacts. These are based upon:</p> <ul style="list-style-type: none"> ▪ review of the submission; ▪ our independent noise assessment (in 2030 with forecast demand – not theoretical capacity); and ▪ inspection of the GIS database maintained by Jacobs. <p>The numbers of impacted designated sites/features are those directly impacted by the development. Other designated sites may be affected by their proximity to the development, but not directly impacted.</p>
People	The IMD score is the average within 5km of the site. The number of houses to be demolished is as drawn from the GIS data base, rounded to two significant figures.
Delivery	<p>The percentages shown are the increase in aeronautical yield needed to fully repay the debt required to fund construction of the independently assessed infrastructure required by 2050. These are shown for the airport works only and assuming the full cost of the surface transport works is included. (In reality, a position between these two costs would be expected to be negotiated.) Two indexation assumptions are shown: either no indexation of charges or allowing an assumed 2.5% annual increase.</p> <p>The increases relate to the airport's current yield for the existing airports and assuming Heathrow's yield as the starting value for the Isle of Grain new airport and the five runway Stansted option.</p>

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ECONOMY

Key economic data presented for neighbouring boroughs and counties taken from the Office of National Statistics.	
Impact on Industry Strategic assessment of the impacts on airports, airlines and passengers, and any other strategic impacts.	
Airports	Specific discussion of the key impacts of the scheme on impacted airports.
Airlines	Specific discussion of the key impacts of the scheme on airlines serving London and the UK.
Passengers	Specific discussion of the key impacts of the scheme on passengers within London and the UK.
Local & Regional Economic Impacts Strategic assessment of the key likely impacts of the scheme on local and regional economies around the airport and of other airports impacted by the development of the given scheme.	
National Economic Impacts Overview of the impact of the scheme on the national economy.	

SURFACE ACCESS

Time/Distance to Central London Estimated times to any relevant points in London e.g. rail termini. The distance to central London is a rounded statement of the straight line distance to Charing Cross mainline train station. Journey times to other population centre Estimated times to any other relevant centres.	Isochrone popⁿ (million) Populations based upon 2030 forecast population, back-ground surface access upgrades anticipated and the upgrades required as part of the scheme.	Key required upgrade schemes (above those already committed) Summary, drawn from the discussion below of the key schemes required to facilitate the development, excluding those developments already planned or committed.
Modal Split Assumptions Comment on the assumptions made by the promoter of the scheme and an explanation of the assumptions adopted within our independent 2030 analysis where different from the promoter's.		
Rail Infrastructure Capacity Analysis Summary conclusion of our independent analysis, in 2030, stating estimated passengers per hour in the peak direction and forecast volume/capacity ratios for key links. Summary conclusion of the ability of the network to accommodate the forecast demand and any upgrades required to meet that demand.		
Highways Capacity Analysis Similar discussion presenting summary conclusion of our independent analysis of the highway requirements.		
Accessibility to Population & Business centres Comment on the location of the scheme and its connections to relevant populations and centres.		
Accessibility to Transport Interchanges Similar discussion on connections to relevant interchanges.		
Accessibility to Workforce Comment on the general area from where the workforce is, or maybe expected to be, located, with the potential for connection to the airport.		
Demand Management Assumptions Comment on the promoter suggested assumptions and suggestions, or comment otherwise of potential options.		

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ENVIRONMENT

Overall noise impact	Summary comment of our independent noise analysis with reference to the promoter’s analysis if available.	The first set of values concern the impact of the scheme on the local populations impacted in 2030 and 2012. These data are drawn from our independent analysis, with presentation of the promoter’s estimate if available.
	Our analysis was based upon 2030 forecast demand (not maximum theoretical capacity) and the forecast 2030 population, assumed aircraft fleet and effects of changing aircraft technology.	The second set of values take into account system affects at airports impacted by the specific scheme to present an overall change of the noise impact to the system, again in 2030 and 2012. These data are also drawn from our independent analysis, with presentation of the promoter’s estimate if available.
		The third set of values present the key populations impacted in 2012 and 2030, or by 2030 at the 57 dBA level.
		Result of our independent analysis of the population impacted in 2030 by the 55 L _{DEN} and 50 L _{night} contours, with comparison with the promoter’s data if available.
		Result of our independent analysis of the N70 population, at 50 events, impacted in 2030.
		The numbers of impacted designated sites/features are those directly impacted by the development. Other designated sites may be affected by their proximity to the development, but are not directly impacted and so are not listed here.
Air Quality Discussion and comment on the promoter’s air quality presentation.		
Noise Comment on the promoter’s analysis and subsequently summary of our independent assessment: <ul style="list-style-type: none">▪ presentation of populations affected in 2030, as assessed at the 57 dBA L_{eq}, 55 L_{DEN}, 50 L_{night}, and N70 levels;▪ comment on the potential changes that may be observed between 2030 and 2050; and▪ conclusion of the local and systemic net impacts of the scheme. Comparisons with other relevant schemes are drawn as appropriate. It is important to note that this is an external, independent assessment undertaken without access to promoter’s data that would enable a mathematically correct analysis that could be expected to align with the promoter’s assessment. Therefore differences between our and the promoter’s assessment should be expected, however, our assessment is consistent across the options permitting a consistent interpretation of relative performance.		
Designations Comment on the direct and indirect impacts of the scheme on sites/areas of designation including on cultural heritage and landscape, based upon the promoter’s presentation and our independent assessment. Our assessment was based upon interrogation of the GIS database held by Jacobs within an estimated development footprint boundary.		
Climate Change Comment on any relevant statement made by the promoter, plus our estimate of construction related carbon emissions.		
Other Issues Scheme specific comments on other environmental aspects not captured in the above discussion, typical examples would include greenbelt, agricultural impacts, other heritage aspects and comment of the wider surface access works.		

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PEOPLE

Housing

Comment on the promoter's statement with respect to impacts on houses and other buildings. Our estimate of demolished houses was based upon interrogation of the above GIS database within an estimated development footprint boundary.

Vulnerable Groups

Statement of the Index of Multiple Deprivation averaged within 5km of the airport, drawn from the above GIS database. Any major aviation infrastructure development will need to incorporate a detailed Equality Assessment. Dependent on location, the people with protected characteristics (PPCs), as defined by the Equality Act 2010, may be differentially affected (i.e. affected more than people without these characteristics) by airport development, particularly in terms of key local environmental impacts of noise and air quality. In our current assessment this has been referenced by proxy use of statistics from the Index of Multiple Deprivation (IMD), which indicates the potential for differential impacts.

Further scheme specific comments of potential positive and negative impacts on vulnerable groups around the specific scheme airport and, as appropriate, other airports impacted by the given development.

Comparisons with other relevant schemes are drawn as appropriate.

Quality of Life and Health

Statement of the estimated population within 2km and 5km of the airport, with scheme specific comments of potential positive and negative impacts on quality of life and health aspects around the specific scheme airport and, as appropriate, other airports impacted by the given development.

Comparisons with other relevant schemes are drawn as appropriate.

Wider Social Impacts

Comments, by exception, of any aspects of the scheme that could have wider social impacts.

GIS Figure

Graphical output from the above referenced GIS database showing principally designated sites in the area of the scheme.

COST

Capital Cost

Summary statement of our independent cost estimate with reference, when possible, to the promoter's estimate. The table presents direct airport and off-site surface transport cost, scheme specific other costs not normally forming part of either the airport or transport costs (e.g. construction of an artificial island or replacement of reservoirs) and risk adjustments as below. The costs in 2030 and 2050 are reflective of our estimate of infrastructure to accommodate the forecast demand in each year allowing headroom of capacity for future growth. The costs therefore are not necessarily reflective of build out to the maximum capacity of the runways provided.

Key Risks

Key risks that could materially impact the cost estimate.

Risk and Contingency Allowances

40% contingency adopted for all costs. 50% optimism bias applied to the risk adjusted total. Collectively these contingencies are intended to reflect the potential for variability in cost from the calculated cost do to unknown engineering details of the identified works and the, potential more significant, unknown scope of all works, including off-site works throughput access and utility networks, to deliver a fully operational scheme. The risk adjusted cost is therefore reflective of the total scheme cost including all consequential costs. Not all such costs may be borne by the airport developer, although the distribution of cost would be ultimately a matter of negotiation through the planning process.

Surface Access Costs

Statement summarising the surface access strategy which has been costed. Where appropriate, it also states exclusions and additional costs for infrastructure not included within the estimate.

Other Off-Airport Costs

Identifies specific items included within the cost estimate which are unique to the particular scheme. Also includes allowance made for unknown environmental issues.

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OPERATIONAL VIABILITY

Capacity

The maximum potential capacity of the airport with development is either as stated in the submission, where we accept the capacity, or as interpreted otherwise. The capacity takes into account a reduction below a theoretical maximum to allow for respite or increased resilience. The net capacity takes account of system impacts based upon our assessment, or as influenced by NATS's view. The percentage of uptake of airport capacity is based upon our interpretation of the provided DfT forecasts and is expressed related to the stated airport capacity.

Resilience, Reliability and Efficiency

Comments, by exception, of any aspects of the scheme that could influence resilience, reliability and efficiency of operations.

Safety

Either confirmation that the scheme appears to be able to be designed to comply with safety requirements or comments, by exception, on aspects that may potentially lower the perception or actual safety of operations.

Scalability

Comments, by exception, of any aspects of the scheme that could support or hinder future expansion.

Airspace

Comment on airspace changes that would be required to deliver the scheme, noting in particular whether international cooperation would be required.

DELIVERY

Timescale

Description of the stated, or inferred, approach for delivery of the developments. The opening year is generally as stated by the submission with comment on its reasonableness.

Commercial Deliverability

Summary of the assessment of required scale of increase of aeronautical yield over the current charges specific to that airport, required to fully re-pay the estimated debt by 2050 and general comment of the potential for the scale of investment required. The values stated are the increase in aeronautical yield needed to fully repay the debt required to fund construction of the independently assessed infrastructure required by 2050. The range of increases is for the airport works only and assuming the full cost of the surface transport works included. Two indexation assumptions are provided: either no indexation of charges or allowing an assumed 2.5% annual increase.

The increases relate to the airport's current yield for the existing airports and assuming Heathrow's yield as the starting value for the Isle of Grain new airport and the five runway Stansted option.

The aeronautical yield index relates the non-indexed, inclusive of all costs, yield needed to fully pay the estimated debt by 2050, to the Q6 regulatory settlement yield for Heathrow Airport, as shown on the Summary Chart on the first page of the template.