

Airports Commission **Inner Thames Estuary: Feasibility Study 3** **Socio-economic impacts**

The Mayor of London's response

August 2014

1. Purpose of Paper

- 1.1. In July 2014, the Airports Commission published four draft feasibility studies, related to a new hub airport in the Inner Thames Estuary (ITE).
- 1.2. The Airports Commission have invited responses and they have asked that respondents focus on i) the factual accuracy of the Commission's work, and ii) if there is any new evidence and information that the Commission should consider.
- 1.3. This paper comprises the Mayor of London's response to Feasibility Study 3: Review of the evidence on socio-economic impacts, authored by Price Waterhouse Coopers (PwC) ('the study').

2. Summary of the Mayor's response

- 2.1. The Airports Commission's Interim Report suggested that the Commission would seek to undertake its own work on the local, regional and national economic impacts of a new hub airport (Interim Report, Para 6.28). We note that this study principally constitutes a review of work undertaken by others, rather than a standalone assessment using PwC's preferred tools and techniques.
- 2.2. It is also noted that there is a general acknowledgement that TfL's approach to assessing the potential social-economic impacts of the construction and operation of a new four-runway ITE hub airport is 'reasonable'. In particular, the study's following acknowledgements are welcomed:
 - The approach adopted by TfL / Ernst & Young (EY) in calculating aeronautical charges, including assumptions around debt, Heathrow acquisition costs and indexation, is reasonable. It follows that the 3.4x current Heathrow charge levels multiple reported in the Commission's Interim Report¹ represents a considerable over-estimate of likely future aeronautical charges at a new ITE airport.

¹ Airports Commission. Interim Report. Appendix 2, Page 27. December 2013.

- An ITE option would allow for significantly more freight capacity than at Heathrow and Gatwick.
 - The approach taken to assess direct, indirect and induced impacts is reasonable.
- 2.3. The report does however raise a number of concerns. Several conclusions appear to be based on inaccuracies, inconsistencies and contradictions. The Commission's interpretation of different evidence, datasets, methodologies and their translation to potential levels of risk is critical. Notably, in considering the issue of delivery, the PwC report fails to recognise the wider context and the unique catalytic and facilitative role that a new hub airport would have in terms of supporting development and regeneration within the Thames Gateway.
- 2.4. In the absence of substantial additional work, the PwC study nonetheless demonstrates that an ITE airport is credible. It makes a compelling case for the option to be added to the Commission's shortlist and for its potential impacts to be considered in more detail and alongside the options already on the shortlist. It should be noted that many of the risks and issues of concern identified in the study are also applicable to the options already shortlisted. The Commission should look to conduct further analysis and assessment of each scheme alongside one-another, in order to understand their relative impacts.

3. Key observations

3.1. *Despite the Commission's commitment in its Interim report, the study does little to further the understanding of socio economic impacts and fails to address the potential limitations it identifies.*

3.2. The absence of substantial new, standalone analysis in this study is noted. One specific gap which remains, as highlighted in the study is the benefits of modelling national economic impacts using a Computerised General Equilibrium (CGE) (or similar) macro-economic model, to fully assess economic impacts. Such an approach would identify potential economic impacts, and crucially, account for the potential feedback loops or displacement that would occur in the event of a new airport being built. It is vital that the land use changes that would occur in the event of a new ITE airport are taken into account.

3.3. TfL would be keen to work with the Commission to ensure that the scope, assumptions, and outputs of such an exercise were appropriate, and that it could be used to assess all schemes remaining on the table. This work could also be designed to link to other major projects such as the Expert Panel that High Speed 2 (HS2) have set up to explore the links between transport investment and the economy.

3.4. *The Study agrees that the approach taken by TfL in assessing economic impacts is reasonable.*

3.5. Whilst the study identifies some risks associated with the approach taken by TfL, it considers overall that the approach taken is a 'reasonable' one. It can therefore be assumed that the TfL figures provide a reasonable assumption of the level of economic benefit that would be realised from an ITE Option.

3.6. TfL's original estimates submitted to the Airports Commission in response to its Outline options Outline Feasibility in July 2013 were based on an airport operating a capacity of 180 million passengers per annum (mppa), and included an assessment of construction impacts. The effects and measures assessed are outlined in Table 1.

Table 1: Overview of TfL's economic assessment as submitted to the Airports Commission in July 2013

Effect	Measure	TfL Figures (July 2013)	PwC Study findings (paraphrased)
Connectivity	Net annual national economic boost due to connectivity improvement vs. today in 2050	+0.5pc GDP or £6.9bn/yr	Approach captures all implications of connectivity on GDP but there are some risks to achieving estimated increase in connectivity.

Construction Impacts	GVA and employment benefits in peak construction year (2020)	143,000 jobs / £7.4bn GVA	Reasonable approach but may not consider displacement or crowd-out
Gross National Jobs supported once airport is fully operational, in 2050	Direct	116,000	Use of Heathrow data for productivity data and multipliers is reasonable in the absence of alternative or more recent data.
	Indirect	144,000	
	Induced	129,000	
	Total	388,000	
Net local jobs supported once airport is fully operational in 2050	Direct	91,000	Passenger numbers are higher than Commission estimates.
	Indirect	6,000	
	Induced	38,000	
	Total	134,000	
Catalytic Jobs	Catalytic (local)	47,000 – 138,000	Recognises absence of agreed methodology in establishing catalytic impacts States that multiplier effects are likely to be at the lower end of the scale.
Additional Households	Additional households above baseline	31,000 – 35,000	-
Total economic contribution made by the new ITE airport	Annual boost to national GVA in 2050	£42bn	Use of Heathrow data for productivity data and multipliers is reasonable.
	Cumulative contribution to GVA between 2015 and 2050	£736bn	Passenger numbers are higher than Commission estimates.
	Annual boost to regional GVA in 2050	£2.1bn	-
Impact of Heathrow closure (2050)	Direct	76,000	OE estimates are most appropriate compared to other evidence.
	Indirect	93,000	
	Induced	76,000	

3.7. The Study fails to provide a comparative assessment between the ITE and the shortlisted options – thus failing to show the significantly greater level of benefits that could be achieved with an Inner Thames Estuary Option.

3.8. It is essential that the economic benefits of the ITE option are compared against those on the Commission's shortlist on a like for like comparison, so that an assessment of the overall benefit can be made. Such an assessment is required as it is possible for example, that the scale of benefit associated with an ITE could offset some of the unique challenges or higher costs associated with an ITE option. The PwC study does not do this.

3.9. In an attempt to overcome this shortcoming, TfL has undertaken an initial, high level comparison of an ITE airport against the shortlisted options. The revised assessment differs from TfL's 2013 approach for the following reasons.

- It focuses on two key socio-economic indicators relating to the operation of all options at a point in time (2050) when all options would be fully operational – rather than assessing the cumulative impact across the construction and operational years.
- It accounts for a slightly smaller Inner Thames Estuary airport – one with a capacity of 150mppa, rather than 180mppa. This is in response to revised passenger forecasts more closely aligned to the Commission's assumptions.

It also takes into account a number of other revised assumptions for both the ITE and other shortlisted options (including lower passenger numbers) which are appended to this submission.

3.10. The comparative indicators used are considered most useful in providing a high level comparison and all represent the **total contribution of each airport in its totality** rather than additional contribution which would occur. It is this change in approach which represents the main reasoning behind the revised figures to those previously submitted to the Commission. The two indicators that have been used to compare the relative economic benefits include:

- **Annual contribution of air service connectivity at the airport to national GDP in 2050** – calculated through use of Oxford Economics (OE)'s connectivity model, as detailed in Oxford Economics '*Impacts on the UK Economy through the Provision of International Connectivity*' (2013).
- **Total number of jobs supported nationally by the airport in 2050** – calculated by assessing the relationship between passenger numbers and jobs, based on long run modelling of this relationship at Heathrow and applied to potential future year airports in the ITE and Heathrow. Figures at Gatwick were determined through analysis of Gatwick employees per passenger.

3.11. The results for each measure are set out below. As noted above, these figures only allow for the impacts of airport operations and do not allow for surface access operational or capital cost impacts.

Table 2: Results of a comparative economic assessment between a new hub airport in the ITE and the options the Commission has currently shortlisted

	A new four runway Inner Thames Estuary (ITE) hub airport	A three runway Heathrow	A two runway Gatwick
Annual contribution of air service connectivity at the airport to national GDP in 2050. <i>(Airport in its entirety, £bn 2013 prices)</i>	£92.1bn	£59.1bn	£22.6bn
Total number of jobs supported nationally by the airport in 2050 (000 jobs)	336.4	269.2	61.7

- 3.12. This analysis clearly demonstrates that when considered on a like-for-like basis, the ITE would have significantly greater benefits than the other options in providing jobs and its contribution to national GDP. Substantial additional comparative work should be conducted by the Commission, and shortlisting an ITE option would enable this work to occur. TfL would be able to assist with this if required.

3.13. The operational and connectivity benefits of an ITE airport would be impossible to replicate by providing equivalent runway capacity across several other airports – contrary to what the study claims

- 3.14. The suggestion in the study that the additional capacity the UK needs could be accommodated across other London / UK airports [3.2.2] fails to appreciate the unique ability of a hub airport to unlock wider social and economic benefits and is based on an assumption within the report that the scale of operational impacts are likely to be broadly proportionate to the level of traffic accommodated. This is not the case. An unconstrained four runway hub airport would be able to facilitate a very different and much more comprehensive route network than any expansion of non-hub airports.
- 3.15. The vital importance of a hub airport to meet our future connectivity needs was set out in the Mayor's 2013 response to the Airports Commission's Discussion Paper 04². Analysis undertaken by York Aviation looked at the connectivity resulting from

² "Airports Commission Discussion Paper 04 – Airport Operational Models: The Mayor of London's response", TfL, July 2013

different expansion scenarios. The following table compares two options for 2 additional runways, i) 1 each at Gatwick and Stansted and ii) 2 net new runways at an Estuary hub (new 4 runway airport minus closure of 2-runway Heathrow).

Table 3: Destinations served by London airport system in different scenarios

	Today	Gatwick & Stansted expansion	ITE hub
Net additional runways	-	2	2
Total destinations offered	385	357	438
...of which			
Domestic	15	14	17
European	255	226	230
Longhaul	115	117	191

Source: York Aviation, 2013

- 3.16. Though the numbers of domestic and continental European destinations served by the London airport system in the two scenarios are broadly similar, the net two additional runways in the ITE hub scenario offer 63% more longhaul destinations than the two additional runways at Gatwick and Stansted – this is a very significant difference in global connectivity with commensurate economic benefits for the UK. It is therefore highly questionable to conclude, as the feasibility study does, that the equivalent new runway capacity at a non-hub airport would offer similar economic benefits to a 4-runway ITE airport.

3.17. The study overstates the current situation with regards to land use planning, failing to recognise the iterative and dynamic process that would occur in reality if a decision was taken to construct an ITE hub airport.

- 3.18. The Mayor has long impressed upon the Commission the importance of understanding the relationship between land use planning and a new airport in the ITE³. Notwithstanding this, a number of risks are identified in the study based on potential limitations of exiting policy frameworks, therefore failing to recognise that such processes are both iterative and dynamic and would be revised to take into account any decision to construct an ITE airport.
- 3.19. A more appropriate way of assessing the potential of the local area to accommodate growth would have been to determine both the potential long term development opportunities and the effect that building a new hub airport would have.
- 3.20. In relation to the former, a number of regional and sub-regional strategies have previously recognised the potential for significant development in the Thames

³ The Mayor of London. Letter to Sir Howard Davies, Chair of the Airports Commission, February 2014
<http://www.tfl.gov.uk/cdn/static/cms/documents/sir-howard-davies-enc-3-doc.pdf>

Gateway. A high-level review of monitoring information for the six local authorities demonstrates that this is still the case and that available land supply is likely to be higher than what is currently being planned for within some areas.

3.21. In relation to the latter, the study does not consider the effect that constructing a new hub airport may have. Construction of an ITE airport is likely to result in a series of changes to the way in which development is both planned for and delivered, meaning that a number of further opportunities would likely become available. Such changes may include:

- Updating of development strategies to accommodate future requirements.
- Increase in land values – making landowners more willing to offer land for development or developers ability to absorb higher development costs.
- Increased market demand – increasing the likelihood that sites will be developed;
- The establishment of special purpose vehicles to assist with delivery of a new hub airport and its associated infrastructure.

3.22. As an example, very few of the five East London host boroughs of the London 2012 Olympics had the Olympic Games and legacy development opportunities included in their land use plans prior to the decision to award London the Games. Following the decision, a significant new and replacement housing / employment development was delivered as a result of compulsory purchase and dedicated delivery by the Olympic Delivery Authority (ODA). This continues to be the case with the London Legacy Development Corporation (LLDC). Overall, this would mean that it is evidently plausible that a significant number of previously discounted or new development sites could become available for development under an airport scenario.

3.23. *There is no consistency in the study's approach to testing the soundness of evidence received from various sources.*

3.24. Given the range of submissions made, it is important that a consistent and appropriate level of scrutiny is applied if sound conclusions are to be drawn. One clear example of this is the submission made by Mark Reckless MP which is quoted a number of times within the study, without any further consideration of the nature of the discussions or the evidence base those claims were based upon. Without doing so, it is difficult to ascribe them any credibility, though the study appears to do so.

3.25. Another example is Kent and Medway Council's estimate of 79% of airport workers seeking to live locally (section 4.2.3); this is seemingly taken without challenge, yet in section 4.3.2, the study cites a report that found just 45% of Heathrow employees lived locally. The study does not seek to reconcile the difference between the

evidence, test or come to a few as to what assumption should be relied upon.

3.26. *The study recognises that TfL's approach and assumptions used to calculate the required increase in aeronautical charges are reasonable, implying an increase of 1.4x Heathrow's Q6 charges.*

- 3.27. TfL believe that aeronautical charges would need to rise modestly for a new ITE airport to be commercially viable— around 1.4x Heathrow Q6 levels to around £30 on opening (in today's prices). This is on the assumption that the Government will fund surface access improvements. The Commission's interim report stated a figure of 3.4x current levels. The PwC report however describes TfL's approach as 'reasonable'. This is welcomed as it shows that it is likely that an ITE Option would attract much lower aeronautical charges than previously set out in the Commission's Interim Report – crucial in ensuring that a new ITE airport is attractive to airlines.
- 3.28. Aeronautical charges are derived principally from capital spend. In working from total capital cost figures. TfL's calculated risk for core airport construction reflects the efficiency advantages of building in a non-operational environment (in contrast to building around operational facilities). It is noted that the PwC report has not attempted to provide a critical review of the various ITE costs or any justification for the Commission's very high levels of risk.
- 3.29. The report also notes that aeronautical charges at Heathrow are higher than other EU airports. This reflects the high level of capital investment at Heathrow, to a substantial extent not matched at the other major European hub airports in recent years. As such, PwC state that it would be reasonable to expect them to spend more as they become increasingly constrained. Their charges are therefore likely to increase as a result, meaning that the indicative charges for an ITE would be more competitive.

3.30. *A risk of non-aeronautical revenues being lower than required for a viable ITE airport is overstated, and is based on unjustified assumptions about passenger behaviour.*

- 3.31. High public transport utilisation could reduce non-aeronautical revenues. The Commission's Phase 2 objective is for schemes to "maximise the number of passengers and workforce accessing the airport via sustainable modes of transport". The risk therefore applies to all schemes still on the table.
- 3.32. In relation to other non-aeronautical revenues, an assumption is made that a more efficient airport would mean less passenger retail spend. Without qualifying such an assumption, it is equally plausible that a more efficient airport could result in increased spend as passengers pass through the 'process' side of an airports operation more quickly and therefore have more time to spend in airside retail

outlets. Similarly, if an efficient new airport is a more attractive place to change planes, this will successfully increase transfer passenger footfall, an approach pioneered by Schiphol airport.

3.33. *The Government's 'Green Book' approach to assessment to assessing construction impacts may not be the most appropriate one in the context of large infrastructure schemes such as a new hub airport.*

- 3.34. The use of a Benefit Cost Ratio (BCR), advocated in the study in the appraisal of large scale infrastructure projects, is not necessarily best suited and potentially not fit for purpose. A hub airport would have substantial economic and development impacts which go beyond the capabilities of a BCR approach, which would subsequently fail to provide an appropriate assessment of the bigger picture or strategic vision that is required. The difficulties of using the BCR approach for assessing the overall benefits of large infrastructure schemes has recently been highlighted in relation to HS2 and are equally applicable for example to the collective benefits of individual schemes which form part of Network Rail's Northern Hub programme.
- 3.35. TfL is therefore confident that its approach, which looks at the positive contribution from 'direct, indirect and induced' impacts remains valid in the context of delivering a large scale, airport related infrastructure project that has both national and local benefits. This approach would appear to be advocated by promoters of both ITE and other shortlisted schemes who have taken a similar approach.

3.36. *The study casts doubt on the direct of the relationship between international trade and international air connectivity. This is contrary to previous Commission findings and previous work by PwC.*

- 3.37. The study raises a number of concerns about the causality between international trade and international connectivity. This contradicts the Commission's Interim Report findings [Para 1.112] which state that:

"...an increase in seat capacity provides more scope for trade, that growth in trade increases the need for seat capacity, or some combination of the two. Regardless, this implies that any constraints on the capacity of the aviation sector may hinder the UK's ability to develop new trade or foreign investment opportunities or to reap the benefits when such opportunities arise in other ways".

- 3.38. It also runs counter to previous work undertaken by PwC set out in table 3.7 of the Study 3 report. This work was produced on the basis of this relationship being in existence and at a higher rate than TfL's July 2013 submission supported by work from Oxford Economics (OE).

3.39. *The study underplays the potential for an ITE hub to serve as a valuable catalyst meeting regeneration objectives across the Thames Gateway area.*

- 3.40. The airports debate is not one that can be considered in the isolation of runway and terminal construction alone, but also needs to be put into context of London and the South East's long term growth. Excessive housing demand is not exclusive to the area immediately surrounding the airport, but is an issue experienced across London, south east and wider UK as a whole and is an issue both the Mayor and Government are seeking to address. The PwC study does not appear to take these wider objectives into account.
- 3.41. Whilst there may be significant demand for housing in the local area, local authorities continue to under provide. Without any intervention, this is likely to continue, as demonstrated by an approximately 20% fall in the number of completions in 2012/13 compared to 2011/12. Equally, the delivery of employment opportunities has not been as hoped.
- 3.42. There is substantial evidence available, in relation to other major infrastructure schemes that demonstrates that significant development benefits can be realised as a result of large scale transport infrastructure projects. A new airport in the ITE would drive a step change in the delivery of housing and commercial development, not only within the vicinity of the airport, but across the Thames Gateway which will help make a positive contribution to wider regeneration objectives.

3.43. *There are unfounded concerns about the timeframe in which new housing could be delivered.*

- 3.44. There are a significant number of extant planning permissions (the number of houses with planning permission which are not yet completed), which could be implemented quickly and make a significant contribution to meeting any early demand. With approximately 30,000 extant permissions across the six local area authorities, a number of opportunities exist to bring forward the timely delivery of housing to help meet peak construction demand should an ITE Option be taken forward.
- 3.45. The study's conclusions that the construction of a new hub airport would negatively impact upon housing affordability is oversimplified. House prices across the north Kent area and elsewhere in the Thames Gateway are, on average, lower than in the rest of the south east. Whilst it is accepted that airport development is likely to increase land values (and therefore likely to have a positive effect on house prices), the report fails to consider the benefits this could also have in increasing the supply of affordable homes. For example, it is likely that any uplift in land values would have a positive effect of increasing the supply of affordable homes and local targets could be revised accordingly through policy framework reviews.

3.46. *The risks associated with redeveloping Heathrow airport are overstated and the study fails to consider long term challenges in London and the wider south east region.*

- 3.47. Since publication of the study, further masterplanning work (Heathrow City⁴) undertaken independently by three architecture firms has reported. This has demonstrated that the Heathrow site is capable of accommodating at least 80,000 houses together with new economic assets for London – many of which could be developed through the reuse of existing structures (e.g. a new international conference centre in Terminal 5). Early market testing with large scale developers operating in London and the south east confirm the attractiveness of the site and the power of its established international brand.

With regards to the risks identified relating to the redevelopment of Heathrow, these have either already been addressed by TfL in its wider consideration of the issue, or – as is recognised by the study – require further analysis to confirm their credibility. In particular, no consideration has been given by PwC to future issues of housing delivery and economic growth. It is this context that is important in determining the level of risk associated with redeveloping a large, previously developed site in west London and the potential impact on other major development proposals such as Old Oak Common.

3.48. *The acceptance that business location decisions are more than just about proximity to an airport shows the fragility in arguments that the ITE would have a cataclysmic effect on the west London / wider Western Wedge economy.*

- 3.49. The study is correct in identifying that business location decisions are more than just about proximity to an airport. This is an important consideration for an ITE option, not only in terms of delivering the catalytic jobs that will be delivered as a result of its opening, but also in relation to the suggested wider ‘cataclysmic’ economic impact around Heathrow and along the M4 Corridor as suggested by others.
- 3.50. Whilst there are a number of factors determining business location decisions, it is considered that the ITE would to some extent address a number of those identified in Table 5.1 (e.g. providing potentially cheaper employment locations in areas of good labour supply); and would therefore be well placed to capitalise on the significant number of catalytic jobs which would accompany such a development. It should also be noted that a number of these catalytic jobs could also be located in established employment centres within the London area, which also meet a significant number of

⁴ <http://www.heathrow-city.com/>

locational qualities (e.g. agglomeration benefits) sought by businesses.

3.51. *In the absence of any additional work in considering the catalytic impacts of an ITE option, it is disappointing that the study cites the lack of an established methodology to overlay the uncertainty of the findings.*

- 3.52. The lack of an agreed methodology is an issue for the shortlisted schemes, as well as the ITE. However, this is not a reason to overlook the catalytic impacts, given the importance role catalytic employment will have in maximising benefits from an ITE option.
- 3.53. Inevitably, Foreign Direct Investment (FDI) will continue to be important in supporting catalytic jobs and securing productivity improvements in the future. By value, the UK is already the leading country for inward FDI stock in Europe⁵, and in 2014, London was the destination for 37% of all new FDI into the UK. This resulted in the creation of 28,900 new jobs in the capital. Over the decade following the airport's opening and other factors remaining equal, this level of FDI could therefore result in 289,000 additional jobs for London. The Mayor's estimate for catalytic jobs is cautious by comparison – equating to between 16% and 48% of this figure – suggesting it is highly plausible.
- 3.54. However, as the study recognises, there would be need for some form of intervention so that the development of catalytic employment from a new ITE airport could be fully realised. This is a similar requirement for any large-scale infrastructure project. High Speed 2 has for example set up a special company and a series of dedicated delivery bodies to ensure this.
- 3.55. It is also not clear on what evidence some of the limitations identified in relation to the evidence submitted by TfL are based. A number of the 'additional limitations' identified in relation to the Atkins work appear to relate to issues which were considered in a way which is appropriate for the current assessment stage. The critique therefore seems overly simplified.

⁵ UKTI – Inward Investment Report 2013/14

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/341601/UKTI_Inward_Investment_Report_2013-2014.pdf

Summary table: Compatibility of the Study with the Mayor's view

Summary of the key observations made:

Issue	Draft Feasibility Study 3	The Mayor's view	Is the Study compatible with Mayor's position?
Further Work	Further work is required in a number of areas – e.g. assessment of macro-economic impacts using a CGE macro-economic model.	Further work is required, and TfL would be keen to work with the Commission to conduct a comprehensive comparative appraisal of an ITE airport option alongside those on the shortlist.	Yes – a number of questions remained unanswered and the study fails to significantly develop understanding of social and economic impacts of an ITE Option.
Socio-Economic Benefits of an ITE Option	Approach taken by TfL / Oxford Economics is reasonable, though some risks are identified.	An ITE airport would have a wide range of net positive socio-economic impacts at the local, regional and national scale.	Yes
Comparison of Options	Does not undertake a like for like comparative assessment between ITE and the shortlisted options.	An initial comparative assessment demonstrates that the ITE will have significantly greater benefits than the shortlisted options.	The study has not undertaken a comparative assessment between the ITE and shortlisted options.
Connectivity benefits of a ITE hub could be replicated by other expansion options in London System	Equivalent GDP benefit could be secured by increased capacity in London system.	Alternatives to a new hub airport, especially capacity at non-hub airports would not be able to provide the same level of international long haul connectivity required to meet London and the UK's needs.	The study fails to give full consideration to difference of overall benefit associated with hub connectivity.
Planning for an ITE Option	Local Planning Authorities are not currently planning for the scale of growth required to support an ITE which could affect delivery.	Local planning processes are not fixed. Clearly, in the event of a new airport, they would need to be revisited. Sufficient land and other infrastructure could be made available to accommodate the necessary and associated development.	The study is over reliant on current planning policy frameworks.
Testing of Evidence	In some cases, does not seek to come to a conclusion about which evidence is most suitable, or provide an alternative view.	The report appears to rely on certain evidence without testing its soundness or reaching a view upon its credibility.	PwC refer to some evidence without testing its credibility.
Aeronautical Charges	Recognises that approach taken by TfL in identifying aeronautical charges at 1.4 x Heathrow proposed charges is 'reasonable'.	Aeronautical charges at a viable new hub airport are in line with the likely future charging regime at Heathrow.	Yes
Non – Aeronautical Revenues	There is significant risk that revenue from non-aeronautical revenues will place undue pressure on aeronautical revenues in the event of reduced car parking revenue and passenger spend	Issues relating to non-aeronautical revenues would affect all shortlisted options equally, given objectives such as an effort to maximise sustainable access mode share.	The study overstates the level of risk associated with non-aeronautical charges
Construction Benefits	Construction benefits should not be considered a benefit, but treated as a cost as per Treasury Green Book assessment.	Use of a benefit cost ratio (BCR) approach is not necessarily best suited to a new hub airport. TfL's assessment of benefits is appropriate and can be applied consistently to compare different schemes.	The study relies heavily on traditional BCR methods of assessment
Relationship between Connectivity and GDP	The relationship between connectivity and GDP is unproven.	Numerous other studies (including earlier work by PwC) show evidence of such a strong and significant relationship.	Several other studies have identified a relationship. TfL have applied a conservative estimate which consistent with this evidence.
ITE's role as a catalyst for development and regeneration	The study fails to consider the catalytic role of an ITE airport in delivering regeneration objectives and addressing issues of deprivation	An ITE airport would transform housing delivery, create a better alignment between homes and jobs in the local area and East London, as well as stimulating additional development across the region.	The study undervalues the potential ability of a new airport to catalyse development and regeneration.

Housing Delivery	Identifies potential risk of a time lag between constructing the airport and delivering the houses and other development required to support it.	A new airport in the ITE would support the delivery of hundreds of thousands of new homes across East London and the Thames Gateway	The study fails to recognise the iterative and dynamic process that would occur if a decision was taken to construct an ITE hub airport
Heathrow Redevelopment	Recognises the significant benefits of redeveloping Heathrow but identifies a number of potential risks.	Heathrow needs to move, and the Heathrow site could provide tens of thousands of new homes and jobs for Londoners.	The study is over reliant on the current situation and barriers to change. Some risks are overstated.
Business Location Decisions	Business location decisions are based on more than just proximity to airport and are dependent on a number of other factors.	Business location decisions are based on a range of factors. There would not be the profound negative effects predicted by some if Heathrow were to move.	Yes
Catalytic Jobs	There is no defined methodology for assessing catalytic jobs and there remains significant uncertainty over the potential impacts.	Existing literature and other airport effects have been analysed, and a conservative multiplier applied to calculate the number of potential catalytic jobs.	TfL believe the assessment it has conducted is conservative and provides a reasonable estimate in absence of a well-defined and widely applied methodology

Appendix 1:

Comparative Socio-economic Assessment. Methodology and Assumptions TfL / Oxford Economics, Summer 2014

A series of assumptions have been made regarding the characteristics of the ITE and each of the shortlisted options, so that a like for like comparison can be made. These assumptions are described below:

Table 2: Assumptions used for comparative socio-economic assessment

Option		ITE 4 runways	LHR 3 runways	LGW 2 runways
Passenger capacity		150mppa	110mppa	70mppa
Freight capacity	capacity multiple	3.2m	2.4m	1.5m
	operating hours bonus (+20% if 24hr)	0.64m		
	total	3.84m	2.4m	1.5m

Explanation of assumptions:

- The Options:** Alongside a new four runway ITE airport, two alternative options have been identified. For the purposes of this assessment; the first option relates to the Commission's two shortlisted options for new runways at Heathrow (Heathrow Ltd's 'northwest runway' and Heathrow Hub's end-to-end runway) which are considered as one. The third option is Gatwick's proposal for a second runway
- Passenger Capacity:** A consistent set of assumptions underpin the passenger capacity figures which have been assigned to each option. The capacity assumptions (in million passengers per annum, or mppa) are an estimate, and reflect the airports available runway capacity (with a runway utilisation figure of around 80%); the airports likely operating hours; and the potential average size of aircraft serving the airport.
- Freight Capacity:** The current airfreight throughput at Heathrow, based on 70mppa is used as a unit rate to identify the potential throughput of a larger Heathrow, as well as an ITE airport and Gatwick. [It should be noted that this significantly flatters the throughput at Gatwick – with a limited longhaul network, even with 2 runways, the freight capacity of its flights will be limited.] An additional capacity increase of 20 per cent has been assigned to a new hub airport as a result of its likely night-time operating constraints being much less than Heathrow or Gatwick.