

APPENDIX D

Evidence and analysis on market definition

- D1 This appendix sets out the CAA's analysis and evidence relating to the definition of the market in which Heathrow Airport Limited (HAL) operates.
- Section 1 sets out the legal and analytical framework under which the CAA has undertaken its analysis.
 - Section 2 sets out the key points raised by stakeholders in response to the Consultation on Heathrow market power assessment, CAP 1051 (the Consultation),¹ and the CAA's conclusion.
 - Section 3 sets out the CAA's formal market definition analysis for this determination.
 - Section 4 sets out the CAA's conclusion on market definition.

Section 1: Legal and analytical framework

Legal framework

- D2 Market definition is a key component of the market power test and is relevant for assessing whether HAL, as the operator of Heathrow, has substantial market power (SMP) for the purposes of Test A.² The test is applied by reference to the relevant market, i.e. a market for one or more types of airport operation services within the airport area.
- D3 In coming to its decision on market definition, the CAA has had regard to its general duties under the Civil Aviation Act 2012 (CA Act) and the relevant notices and guidance issued by the European Commission (EC) and the Office of Fair Trading (OFT) regarding the application and enforcement of the Chapter I and II prohibitions and Articles 101 and 102 of the Treaty on the Functioning of the European Union (TFEU), here-in referred to as the competition law notices and guidance. The CAA also

¹ The Consultation was published by the CAA in April 2013 and is available at: <http://www.caa.co.uk/application.aspx?catid=33&pagetype=65&appid=11&mode=detail&id=5576>.

² Test A is one of the three tests that must be passed if the market power test is to be passed. Test A is that the relevant airport operator has, or is likely to acquire, SMP. The other two tests that must be passed are (1) Test B, which is that competition law does not provide sufficient protection against the risk that the airport operator may engage in conduct that amounts to an abuse of that SMP; and (2) Test C is that, for users of air transport services, the benefits of regulating the relevant operator by means of a licence are likely to outweigh the adverse effects.

made reference to its own guidance for the assessment of market power of airports (the Guidelines³).

Analytical framework

- D4 Market definition is also a useful tool for identifying, in a systematic way, the competitive constraints which the relevant operator faces in the relevant market and whether those constraints prevent it from operating independently of effective competitive pressure.⁴
- D5 However, there may be characteristics of the airport sector that make it difficult to define the market precisely. As explained in the Guidelines, a market power assessment should seek to analyse all the competitive constraints faced by HAL, regardless of whether they arise from within or outside the relevant market or markets.⁵
- D6 Rather than regarding market definition as an end in itself, the CAA considers it an economic framework within which to analyse the competitive effects of market definition to support and inform its regulatory policy.⁶
- D7 The exercise of market definition consists, in essence, of identifying the effective alternative sources of supply for the customers of the relevant operator in terms of the products or services supplied and their geographical location.⁷

Hypothetical monopolist test

- D8 The Guidelines state that, wherever feasible, the 'hypothetical monopolist test' should be adopted as a useful starting point for defining the relevant market.⁸

⁴ EC Market Definition Notice, paragraph 2.

⁵ The Guidelines, paragraph 3.5. This is consistent with the approach adopted in the Competition Commission's (CC) report on the supply of airport services by BAA in the UK 19 March 2009 (CC's 2009 BAA Report), paragraphs 2.48 to 2.49.

⁶ The Guidelines, paragraph 1.4 and paragraphs 3.3 to 3.4. See also OFT 403, paragraphs 2.1 and 2.6 and the EC Market Definition Notice, paragraph 2.

⁷ EC Market Definition Notice, paragraphs 7 to 9 and 13 and Guidelines, paragraphs 3.6 to 3.9.

⁸ The Guidelines, paragraphs 3.10 to 3.12; OFT 403, paragraphs 2.5 to 2.13 and EC Market Definition Notice, paragraphs 15 to 19.

- D9 This test involves starting with the narrowest possible bundle of products or services and the smallest geographical area (normally those supplied by the operator in question) and assessing marginal customers' switching reactions to a hypothetical monopolist making a small but significant non-transitory increase in price (SSNIP) above the competitive price level (generally considered as being 5 to 10 per cent).
- D10 If the price increase is unprofitable, due to marginal customers switching away to substitute products/services and areas or new suppliers entering the market and competing away any potential profits, then the test is repeated by widening the set of products/services and geographic area to include the closest substitute until the price increase is profitable. What is then left is the narrowest set of products/services and geographic area over which a hypothetical monopolist could profitably sustain prices 5 to 10 per cent above competitive levels.
- D11 Although the SSNIP test is a useful starting point, it requires significant information about the market and the supply and demand conditions. The test is also not mechanistic, as it requires the exercise of judgement at a number of points in the analysis.
- D12 The SSNIP test is also intended to be carried out by reference to the competitive price level. Where this is not possible, and where the prevailing price levels observed in a market are not reflective of the competitive price, an adjustment may be required to prevent the market being defined too widely or too narrowly.⁹
- D13 The test also assumes that the hypothetical monopolist is not subject to economic regulation that might affect its pricing behaviour. In addition, it assumes that competitors' pricing strategies are competitive. However, there may also be other external considerations that might affect the uniformity and/or the profitability of the price increase.¹⁰

⁹ Using prices that are above the competitive level risks the Cellophane Fallacy in which markets are defined too widely as non-substitutable products appear as substitutes. The reverse Cellophane Fallacy occurs where prices below the competitive level are used and the market is defined overly narrow. This is a result of substitutable products not being observed to be substitutes given the low price of the focal product.

¹⁰ OFT 403, paragraph 2.10 to 2.11 and 5.4 to 5.6. See also the Guidelines, paragraphs 3.15 to 3.16 and 3.24 to 3.25.

- D14 As a result, and as noted in the Guidelines, it is rarely possible to apply the SSNIP test in a precise manner due to data and evidential restrictions.¹¹ Therefore, the SSNIP test should be considered as a way to frame the market definition process rather than as a mechanistic process for producing a market definition.
- D15 Given the particular circumstances relating to the economic regulation and common ownership of Heathrow, Gatwick and Stansted, the CAA has been unable to carry out a formal SSNIP test. However, it has gathered a range of evidence, including catchment area analysis, passenger surveys, documentary evidence and the views of airlines and relevant airport operators on substitutability. This evidence has been interpreted, so far as possible, within the hypothetical monopolist framework.

Product market

- D16 As defined in both EC¹² and OFT¹³ guidance, a relevant product market comprises all those products and/or services that are regarded as interchangeable or substitutable by the consumer by reason of the characteristics, prices and intended use of the products or services concerned.¹⁴
- D17 The CAA has therefore looked at demand side substitutability for each user group individually, while accounting for interactions between the different groups, to determine whether services to each group constitute a distinct product market.¹⁵

Geographic market

- D18 The geographic market '*comprises the area in which the undertakings concerned are involved in the supply of products or services and in which the conditions of competition are sufficiently homogeneous*'.¹⁶

¹¹ The Guidelines, paragraph 3.13. See also the CC's 2009 BAA Report, paragraph 2.1.

¹² Commission Notice on the definition of relevant market for the purposes of Community competition law OJ C 372, 9.12.1997, pp. 5 to 13, available at: [http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31997Y1209\(01\):EN:HTML](http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31997Y1209(01):EN:HTML).

¹³ OFT, Understanding Competition Law: Market Definition, 2004, available at: http://www.of.gov.uk/shared_of/business_leaflets/ca98_guidelines/oft403.pdf.

¹⁴ The Guidelines, paragraphs 3.7 and 3.27.

¹⁵ The Guidelines, paragraphs 3.29 to 3.33.

¹⁶ The Guidelines, paragraph 3.8 and EC Market Definition Notice, paragraph 8.

- D19 The relevant geographic market can be distinguished from neighbouring areas because the conditions of competition are appreciably different. In addition, as airports serve a number of different users, there may be different relevant geographic markets for different groups of users.¹⁷
- D20 An assessment of competitive constraints for geographic market definition usually also includes an analysis of the ability of airlines to switch away from an airport and the potential for passengers to switch between airports, whether independently or by following a particular airline.

Supply side substitution

- D21 Supply side substitution is a key part of the market definition analysis. The EC summarised supply side substitution as:

Supply side substitutability may also be taken into account when [defining markets], in those situations in which its effects are equivalent to those of demand substitution in terms of effectiveness and immediacy. This means that suppliers are able to switch production to the relevant products and market them in the short-term without incurring significant permanent changes in relative prices. When these conditions are met, the additional production that is put on the market will have a disciplinary effect on the behaviour of the companies involved. Such an impact in terms of effectiveness and immediacy is equivalent to the demand substitution effect.¹⁸

- D22 Supply side substitution in the airports sector is likely to be limited. Although airport development may be motivated by competition or prospective competition between airports, this tends to be part of a long-term market dynamic rather than a short to medium term competitive response.
- D23 In addition, new entry and expansion are unlikely to be sufficiently timely market responses to a SSNIP by an incumbent airport operator, due to planning legislation and the time required for the construction of facilities to constrain its ability to raise prices above the competitive level. Therefore, airport markets are likely to be defined on the supply side based on currently available infrastructure.

¹⁷ The Guidelines, paragraph 3.59.

¹⁸ EC Market Definition Notice, paragraph 20.

Temporal markets

D24 OFT guidance¹⁹ states that a possible third dimension to market definition is time. The Guidelines also state that a time dimension may be appropriate where it is not possible for customers or suppliers to substitute between time periods.

Section 2: The consultation process

The Consultation

D25 In the Consultation, the CAA's analysis suggested that airport operators supply a broadly generic product. Where the CAA saw differentiation in the product market it was in the facilities required to service particular segments, which are low cost carriers (LCCs) and charter airlines, full service long-haul carriers and their associated feeder traffic, and cargo-only operators.

D26 The CAA considered that HAL operated in a single broad market for airport operation services to full service carriers (FSCs) and associated feeder traffic airlines. This market was limited to those services provided at Heathrow. In addition, it was unnecessary to define a separate market for cargo at Heathrow, given the limited freighter operations and the linkages between belly-hold cargo and the FSC business model.

Stakeholders' views

D27 The CAA received three responses to the Consultation:²⁰

- HAL;
- Virgin Atlantic Airways (VAA); and
- London Airline Consultative Committee (LACC) & Heathrow Airline Operators Committee (AOC) in a joint submission.

D28 HAL had concerns with the CAA's approach to market definition. In particular, it considered that the CAA's approach was:²¹

- Inconsistent with extensive precedent in the analysis of the airport sector (including in the London area) by competition authorities.

¹⁹ OFT 403, paragraphs 5.1 to 5.3.

²⁰ Non-confidential versions of these submissions are available on the CAA's website.

²¹ HAL, Response to CAA's Market Power Assessment, CAA/Q6/80 26 July 2013.

- Inconsistent with the CAA's own views as expressed in earlier market power assessment documents and in other contexts.
- Not supported by robust evidence.
- Inconsistent with the variation in competitive conditions facing different market segments.
- Inconsistent with the legal framework within the CA Act.

D29 The LACC & AOC²² and VAA²³ both supported the CAA's conclusions on Test A.

Consistency of CAA views

D30 The CAA responds to the criticism that it has been inconsistent in this section.

D31 On movement from prior decisions, the CAA does not consider that it is bound by its prior consideration where the evidence or subsequent analysis suggests that its previous position should be changed. Figures D.1 and D.2 below summaries HAL's view of previous decisions by competition authorities and the CAA.

Figure D.1: HAL's consideration of relevant precedents²⁴

	CC (2009)	EC (2006)	Netherlands Competition Authority (NMa) (2010)
Product market Segmentation	Aeronautical and commercial	Infrastructure, groundhandling and commercial Left open the possibility of further segmentation	Origin and destination (O&D), connecting, cargo, others
Inclusion of regional airports	Airports in the south east of England	Left open	Left open
Inclusion of other hubs	Considered	Left open	Left open

²² LACC and AOC, LACC & AOC Response to CAA's Market Power Assessment of Heathrow Airport Limited, July 2013.

²³ VAA, Virgin Atlantic Airways Response to CAA Consultation on Heathrow Market Power Assessment, 26 July 2013.

²⁴ HAL, Response to CAA's Market Power Assessment, CAA/Q6/80, 26 July 2013.

Figure D.2: The CAA's views²⁵

	At the CC and CAT (to 2009)²⁶	Working Paper (2011)	Initial Views (2012)	The Consultation
Product market Segmentation	Considered less important	Potentially segment	Segment O&D and connecting passengers	Bundle is the same regardless of user
Inclusion of regional airports	Airports in the south east of England	Potentially include	For O&D passengers	Not included
Inclusion of other hubs	Yes (February 2008 submission)	Potentially include	For connecting passenger	Not included

- D32 Much of the material that the CAA has produced on the airport market was undertaken a significant time ago under different legislation and a different regulatory regime. In particular, the de-designation assessment of Stansted in 2007 and comments made by the CAA in its initial considerations of the CC's investigation into BAA airports took place prior to the extensive level of work undertaken by the CC and the discussion of key issues during the course of the appeals that followed. The CAA considers that it would not be rational for it to ignore the CC's findings and approach as part of its assessment of the current market position of HAL.
- D33 With the exception of the geographic market definition where the CAA considers the market to be Heathrow. The CAA considers its treatment of the product market and other hubs is consistent with that of CC. The difference in the geographic market arises as a result of the question under investigation where the CAA has to consider the market position of the individual airport operators.
- D34 The MNa report focussed on a similar question to that faced by the CAA on the evidence available to them the MNa opted to define separate markets. However, within each of these markets the MNa assessed that the airport had SMP. The CAA considers that it is likely this assessment would have held regardless of the market definition framework imposed by the MNa on its considerations. The CAA does not consider there is sufficient evidence on which to segregate the market in which HAL operates. The MNa conclusions on SMP suggest that a more segregated market definition would not necessarily have altered the overall outcome of the CAA's decision on market power.

²⁵ HAL, Response to CAA's Market Power Assessment, CAA/Q6/80, 26 July 2013.

²⁶ CAT – The Competition Appeal Tribunal.

- D35 It is in any event widely accepted that market definition is a flexible tool that may alter depending on the question being asked. For example, the CC's BAA airports investigation considered a particularly wide question on the potential for the development of competition between the three BAA airports and sought to remove structural impediments to the development of potential competition. The CC was not looking into the much narrower question that the CAA must consider under Test A, which is whether an individual airport operator has SMP in a market for airport operation services provided at the airport in question. The CAA must also do so in a manner which complies with its duties under section 1 of the CA Act. These duties direct the CAA to focus on the interests of users of air transport services and to do so, where appropriate, by promoting competition while having regard to a wide range of (potentially) competing factors.
- D36 Likewise, with the merger case law highlighted by HAL, the investigating authority is seeking to determine whether a merger will weaken the current competitive landscape observed within a market. The decision maker in such cases is not considering the more focussed question that falls to the CAA under Test A.
- D37 Furthermore, market definition is a time-sensitive and context specific exercise. It is based on an analysis of the structure of the market and competition prevailing at a particular point in time,²⁷ therefore any assessment may change over time as market circumstances evolve.
- D38 In addition, a prior finding of dominance by the EC or a national competition authority or even and national court is not binding and even the EC has to start a fresh analysis of the condition of competition in the course of making subsequent decisions:²⁸
- in the course of any decision applying Article 86 of the Treaty the Commission must define the relevant market again and market a fresh analysis of the conditions of competition which will not necessarily be based on the same considerations as those underlying the previous finding of a dominant position.*
- D39 The CAA's view, therefore, is that while a significant amount of information can be drawn from the investigation on BAA airports, the CC was considering a different question under different legislation. Test A, the test that the CAA must consider, is concerned with individual airport operator's market position.

²⁷ Bellamy and Child EU law of Competition, paragraph 10.018.

²⁸ Case T-125/97 Coca-Cola v Commission [2000] ECR ii-1733, paragraph 82.

D40 It also does not follow that the divestment remedy imposed by the CC on BAA is tantamount to there being an immediate and effectively competitive market. In particular, although the potential for competition increased following divestment, this is coming from the position of effectively no competition as the airports were under joint ownership. (Indeed, under the CC investigation the potential for increased competition was assessed from the base of no competition between the airports under joint ownership.)

D41 The CC also expected competition to develop over time:²⁹

Even under separate ownership, moreover, as a result of capacity constraints, competition in the short term may focus on particular types of traffic, for example in off-peak periods, and therefore be unlikely to be sufficiently effective to substitute for regulation. Separate ownership would also give rise to competition to invest in new capacity; but there would be a period of time before there could be confidence that competition between separately-owned airports was sufficiently effective to substitute for regulation. Heathrow, however, may retain a strong market position as the main UK hub airport, requiring effective regulation for longer.

D42 In developing its views the CAA does not consider it appropriate to take as its starting presumption a view of the market which has been subject to extensive further evaluation and decision making by the CC and the CAT. In the 2011 working paper the CAA therefore set out a wider range of approaches to encourage similarly wide-ranging responses and allow the CAA to begin the development of a robust evidence base for the decision it had to take under section 7 of the CA Act. The Initial Views allowed the CAA to communicate its thinking on the limited evidence it had gained by that stage. Since the publication of the Initial Views the CAA has gathered further evidence on which to base its decision. This evidence and how the CAA has used it was outlined in the Consultation and is also outlined in this reasons document.

²⁹ CC's 2009 BAA Report, paragraph 6.87.

Section 3: CAA analysis

- D43 In light of stakeholders' representations to the Consultation, the CAA has re-evaluated its assessment of the evidence and has not altered its position on market definition. The CAA maintains its view that there is one market in which HAL operates, that being the provision of airport operation services for FSCs and associated feeder traffic market that is limited to Heathrow (the Heathrow market).
- D44 The evidence and reasons for this conclusion are set out in the next section on an issue-by-issue basis. The CAA also sets out its response to the arguments raised during the Consultation and why it has (or has not) changed its view on these issues.
- D45 The CAA received many responses to the Heathrow: Market Power Assessment, the CAA's Initial Views – February 2012 (the Initial Views) and the Consultation. It has carefully read and considered all the points made in each response. This final decision contains summaries of, and answers to the key points raised. However, consideration of space has meant that it has not been possible to respond in detail in this document to each point raised. Respondents should not assume, therefore, that the absence of detailed consideration of a point raised means that this point has not been carefully considered.
- D46 In defining the relevant market the CAA has used the current price as the basis for its analysis. While this issue is discussed below, HAL's pricing behaviour is examined in appendix F.
- D47 The issues examined in this section are:
- Section 3.1 considers analytical concepts.
 - Section 3.2 considers the product market definition.
 - Section 3.3 considers the geographic market definition.
 - Section 3.4 considers the temporal market definition.

Section 3.1: Analytical concepts

- D48 This section outlines a number of the analytical concepts considered when the CAA defined the relevant market:
- The SSNIP test.
 - Interdependence of demand from different user groups.
 - Vertical derived demand analysis.

- Air transport markets.

The SSNIP test

D49 As noted in the Guidelines, it is rarely possible to apply the SSNIP test in a precise manner due to evidence and data limitations.³⁰ One of the key difficulties associated with using this test is identifying the competitive price level for an airport operator.

Identifying the starting price

D50 Using too high a price as the starting point for a SSNIP analysis risks defining an overly wide market (the Cellophane Fallacy), while the use of too low a price risks defining an overly narrow market (the reverse Cellophane Fallacy).

D51 The difficulty in identifying the appropriate price from which to start a SSNIP test largely stems from:

- Heathrow representing a highly differentiated product. For example, some of the following features that, when considered together, contribute to Heathrow's uniqueness:
 - A significant share of airlines using the airport as a hub and the resultant network effects.
 - Proximity to London and connectivity to London (and other parts of the UK).
 - A recognised brand name and strong airline preference to fly to/from it.
 - Business and long-haul passenger preference to fly to and from it.
 - Heathrow primarily serving FSCs and associated feeder traffic rather than LCCs and cargo-only carriers.
 - Airport charges at Heathrow being significantly above the charges seen at other London airports and above comparable international hub airports.³¹
 - Evidence that HAL tends to act unilaterally in its pricing decisions and does not enter into genuine negotiations or consultations.

³⁰ The Guidelines, paragraph 3.13. See also the CC's 2009 BAA Report, paragraph 2.1.

³¹ See the Leigh Fisher (LF) studies available on the CAA's website: <http://www.caa.co.uk/default.aspx?catid=1350&pagetype=90&pageid=14395> and <http://www.caa.co.uk/default.aspx?catid=78&pagetype=90&pageid=14279>.

D52 These factors, together with the lack of data on the prices that would have resulted in the absence of regulation, make it difficult to identify an appropriate price from which to undertake a SSNIP test at Heathrow.

The use of regulated prices as the starting price

D53 These difficulties notwithstanding, the CAA considers that the appropriate starting point for its analysis is the prevailing (regulated) price.³² Regulated prices are an appropriate starting point as they:

- Are cost-based (on the basis of an acceptable cost standard) and are designed to prevent a regulated airport operator from pricing at levels exercising SMP (and potentially making supernormal profit). For example, HAL's Regulatory Asset Base (RAB)-based price caps allow for the recovery of efficient operating expenditure and capital expenditure plus a fair return on its RAB. As a result, the use of regulated prices provides the CAA with comfort that they are prices that reduce the risk of defining either overly wide (Cellophane Fallacy) or overly narrow (reverse Cellophane Fallacy) markets.
- Are the prices faced by airlines, groundhandlers and passengers. The use of the regulated prices therefore limits the risks associated with gathering evidence around or hypothesising about unknown price levels. The CAA considers that it would be difficult for the airlines to respond on how they would react to a 5 per cent SSNIP from a price that they do not observe in practice.
- Have been used in several cases of market definition for regulated sectors such as, telecommunications. In particular, for telecommunications, the EC considers that regulated prices should be taken as the starting point for conducting a SSNIP test:
- *In principle, the 'hypothetical monopolist test' is relevant only with regard to products or services, the price of which is freely determined and not subject to regulation. Thus, the working assumption will be that current prevailing prices are set at competitive levels. If, however, a service or product is offered at a regulated, cost-based price, then such price is presumed, in the absence of indications to the contrary, to be set at what would otherwise be a competitive level and should therefore be taken as the starting point for applying the 'hypothetical monopolist test.'*³³

³² In merger cases the hypothetical monopolist test is conducted from prevailing prices. OFT and CC, Merger Assessment Guidelines, A joint publication of the CC and the OFT, OFT1254/CC2(Revised), September 2010, paragraph 5.2.12.

D54 In addition, as per the Initial Views, the CAA:

has not found it necessary to undertake a detailed assessment of the prevailing price level at Heathrow in order to reach its initial views on the airport's market position, for a number of reasons. First, some reliance can be placed on the price cap at Heathrow, which ensures that prices are not significantly above competitive levels, and certainly not at levels reflecting monopoly pricing. Second, the CAA's conclusions for Heathrow, whilst drawing on switching evidence, do not rely on factors that would be affected – to a significant degree – by the prevailing price level differing from the competitive level. Finally, there is a degree of consistency in the overall evidence about [HAL's] market power that provides a degree of comfort that the conclusions have not been affected by any difference between the prevailing and competitive price levels.³⁴

D55 Connected with the first bullet of paragraph D53, the regulated price at HAL is determined through a cost-based approach and the process that it goes through to determine this is rigorous, consultative and lengthy. Importantly, the CAA's general duties require it (under Section 1 of the CA Act) to carry out its functions in a manner which it considers will further the interests of users of air transport services regarding the range, availability, continuity, cost and quality of airport operation services. As such, and as stated in the Consultation: *'the CAA considers that the current price as enforced by regulation is likely to represent a long-term pricing position that is reflective of cost plus a reasonable rate of return given the risk of the investment'* and that *'the CAA considers that it is appropriate to conduct the analysis based on current prices for the purposes of this assessment.'*³⁵

Alternative starting prices

D56 There are a range of other prices that could be considered as the starting point for its analysis, including:

- A market-clearing price that would result in the absence of regulation, given existing capacity constraints.
- A market-clearing price that would result in the absence of capacity constraints.

D57 With respect to using the market-clearing price that would result in the absence of regulation, given existing capacity constraints, this price would not reflect the competitive market price for the market it is seeking to define. In particular, given the existing capacity constraints, the market-

³⁴ Initial Views, paragraph 2.25.

³⁵ The Consultation, paragraph 4.22.

clearing price would be far above the competitive level and closer to the price that would be set by a dominant airport operator. As such, the use of market-clearing prices where there are capacity constraints and in the absence of regulation could lead to the definition of overly wide markets (the Cellophane Fallacy).

- D58 With respect to using the market-clearing price that would result in the absence of capacity constraints, the CAA recognises that the capacity constraints faced by Heathrow are due to public policy decisions and are therefore exogenous to HAL. While HAL could, in theory, vary runway capacity (as it deemed appropriate) if this constraint was removed, such a scenario is hypothetical.
- D59 Connected to the above, the costs (and the subsequent prices) that would be incurred in addressing this constraint are unknown and would require a number of assumptions to be made – including on timings, costs, passenger numbers – which could introduce a level of uncertainty and risk. Any price generated for HAL through such an exercise would therefore be difficult to rely on. That said, the Airports Commission is currently looking into capacity issues. However, any Government action on the findings from this report is unlikely to result in any substantial new capacity in south east of England until at least 2025.
- D60 HAL has also suggested, in its response to the Consultation, that the CAA has not taken account of forward-looking costs as part of its assessment. As part of this, it highlighted that a Full Allocated Cost with Current Cost Accounting type model may be appropriate.³⁶
- D61 However, HAL, early in the Q6 process, also highlighted concerns with using non-RAB-based regulatory approaches and the associated regulatory burden that this would bring. In particular, HAL noted:

[36]

³⁶ HAL, Response to CAA's Market Power Assessment, CAA/Q6/80 26 July 2013, p. 13.

Conclusion

- D62 As regulated prices are based on forward looking costs, and given HAL's concerns with minimising regulatory burden, the CAA considers that the approach it has adopted to determine the appropriate starting point for its analysis is not unreasonable.
- D63 The CAA has also considered a benchmarking study by Leigh Fisher (LF) to assess HAL's pricing behaviour and inform its market power assessment (see appendix F). The reasonable concurrence between the LF benchmarking and the RAB-based regulated charge provides further comfort that the regulated price is a reasonable starting point for a SSNIP test.
- D64 The CAA is therefore confident that conducting its analysis from current regulated prices is reasonable and will ensure robust analysis. It also considers that its conclusions on market definition would be unlikely to change were it to use an alternative approach to defining the market based on the assessment of the competitive conditions across airports.³⁷

Interdependence of demand from different user groups

- D65 The Guidelines state that airports can be viewed as platforms in a multi-sided market. The Guidelines also state that:³⁸
- Where there is good evidence, airport operators take account of the interdependent demands of different user groups and levy different charges for different services to different users.
 - Account should be taken of any interactions and interdependencies between the various activities that the airport operator undertakes.
 - The extent to which common (one-sided) market definition methods need amending will depend on the strength of the interrelationships

³⁷ In the presence of difficulties to identify a competitive price level, the European Regulators Group (ERG) developed a Common Position (the ERG geographic analysis CP) as an alternative approach to market definition assessing competitive conditions. This identifies three main steps in conducting a geographically differentiated approach to market analysis, once it has been established that a national market cannot be defined on the basis of common pricing constraints: first, the basic geographic unit needs to be selected, for example post codes or exchange areas; second, the homogeneity of competition needs to be judged according to factors such as barriers to entry, the number of significant suppliers in the market, distribution of market shares and price-cost margins and as such necessarily conflates the market definition and SMP analysis to some extent; and third, areas with similar competitive characteristics need to be aggregated in order to define the geographic areas over which to conduct the SMP analysis.

³⁸ The Guidelines, paragraphs 3.18 to 3.26.

between the various activities and whether these form a genuine platform that brings together consumers and other service providers as different 'sides' of the market.

- D66 As a result, determining whether the market definition for HAL can be carried out primarily using conventional market definition methods or as part of a two-sided market needs to be addressed. In particular, the CAA needs to determine which of the following two approaches is appropriate:
- Treating the relationship between airlines and their passengers and cargo as a vertical one.
 - Modifying the above methods, potentially significantly, to take into account the possible role of an airport as a multi-sided platform.
- D67 In determining which method to adopt, the CAA has been pragmatic and has adapted its approach where gains can be made with respect to the clarity and robustness of its analysis. A multi-sided approach to market definition has not, however, yet been adopted by competition authorities with respect to airports.³⁹
- D68 The CAA considers that a true multi-sided market is one where the demand interdependencies are reciprocal. The price charged on one side of the market affects the demand on the other side and vice versa. The CAA refers to this as reciprocal demand effects.
- D69 The key characteristics of a multi-sided market, in the context of airports, was set out in a paper prepared by independent consultants (Starkie & Yarrow (S&Y)) commissioned by the CAA in 2010 (referred to below as the SY criteria):⁴⁰
- The airport is the platform and it can be viewed as having multiple revenue (and associated cost) streams, some of which are highly inter-related, including via network effects.
 - Airlines and passengers are the two main groups that use the platform.
 - An airport is more attractive to passengers the greater the number of airline services (more routes, greater frequencies, better connections) offered to and from that airport.

³⁹ See for example, the CC's 2009 BAA Report and previous decisions by the EC: 95/364/EC, 1999/199/EC, 1999/198/EC; 98/513/EC; T-128/98; C-82/01 and 98/190/EC.

⁴⁰ David Starkie and George Yarrow, 'Market definition in the airports sector', 1 July 2010, available at: <http://www.caa.co.uk/docs/5/ergdocs/MarketDefAirports.pdf>, p. 13.

- An airport is more attractive to airlines the greater the number of passengers who might use that airport.
- In matching airlines to passengers, the airport takes account of the different demand conditions – on the one hand, the airlines' demand for access to the airport and its facilities and, on the other, the demand of the passengers for services from the airport.
- If the airport operator is itself the provider of commercial services to passengers (retailing, car parks etc.), or has revenue sharing agreements included in its leases with commercial service providers, then the airport operator has a revenue stream from each of these two groups, and has to consider two sets of prices.

D70 The arguments outlined above fall into three broad categories:

- The existence of reciprocal demand effects between the different customer groups
- Marketing activities carried out by the airport operator to attract passengers and airlines separately to the airport.
- The existence of a stream of commercial (non-aeronautical) revenue driven by passenger volumes.

D71 In the Consultation ⁴¹ the CAA recognised that there are complementarities between the airport operator's aeronautical and non-aeronautical revenue streams. Changes in aeronautical charges may affect passenger volumes and in turn the revenues that an airport operator can derive from commercial service. The CAA therefore considered that an airport operator may take this into account when setting charges.

D72 The CAA also highlighted that HAL was pricing to its regulatory price cap and it appeared that there was limited consideration of the impact on commercial income of its aeronautical pricing.⁴²

D73 The CAA drew this evidence together and concluded that HAL exhibited some of the characteristics of a multi-sided platform. However, it was also apparent that the main relationship was vertical in nature, as the airport, in the upstream market, provides a key input in the form to airlines operating in the downstream air transport markets. As such, the CAA did not significantly modify the standard approach to its market analysis.

⁴¹ The Consultation, paragraph 3.23.

⁴² The Consultation, paragraph 3.24.

Stakeholders' views

- D74 HAL considered that the CAA had selectively used the evidence presented to it and had not taken proper account of its marketing activities to passengers and that it is competing for passengers on non-price terms. By way of an example, it referred to the £900k advertising spend that it had incurred in direct marketing to passengers.⁴³
- D75 HAL expressed that given the capacity constraints it faces; its setting of aeronautical charges without much consideration of commercial income could be consistent with revenue-maximising across both aeronautical and non-aeronautical incomes. The CAA had failed to understand this point.⁴⁴
- D76 HAL considered that these concerns meant that treating the relationship between airports and their customers as a purely vertical relationship, rather than multi-sided, potentially placed too little emphasis on the constraints imposed by passengers.⁴⁵

CAA views

- D77 The CAA acknowledges the arguments put forward by HAL on the CAA's vertical approach to the market power assessment, but does not consider them to be sufficient to alter its position.⁴⁶
- D78 The CAA is encouraged to see that HAL is actively targeting passengers and that it is looking to provide relevant services for passengers. However, it is ultimately decision by airlines to offer services from Heathrow that drives passenger numbers at the airport. Noting the needs of their passengers while at the airport, the airlines demand a certain level of facilities and service.
- D79 In considering reciprocal demand interdependencies, the CAA concluded that the interdependencies were one way – from aeronautical to commercial revenues. That is, the pricing of the aeronautical services affects the overall passenger numbers at the airport, which in turn impacts on the commercial revenues gained. However, the reverse, which is the pricing of commercial services at the airport affects the overall demand level of either passengers or airlines for consumption of the aeronautical bundle, does not seem to be true.

⁴³ HAL, Response to CAA's Market Power Assessment, CAA/Q6/80 26 July 2013 paragraph 2.2.31.

⁴⁴ HAL, Response to CAA's Market Power Assessment, CAA/Q6/80 26 July 2013 paragraph 2.2.33.

⁴⁵ HAL, Response to CAA's Market Power Assessment, CAA/Q6/80 26 July 2013 paragraph 2.2.34.

⁴⁶ Gatwick Airport Limited (GAL) and Manchester Airport Group (MAG) raised similar concerns with the CAA's vertical approach to airports and a full discussion of these issues, as they relate to these specific airports are contained in the relevant market power determination.

- D80 The CAA therefore takes the view that commercial revenues are complementary to aeronautical revenues rather than exhibiting the extent of demand feedback that would be required to justify the extra complexity of analysing the airport as a genuine multi-sided market.
- D81 Not seeing further evidence on this issue, the CAA considers it appropriate to analyse the markets in which HAL operates in a vertical derived demand framework. In doing so, the CAA has taken into account the impact of commercial revenues within both the elasticity and critical loss analysis.

Vertical derived demand analysis

- D82 Airlines' demand for airport operation services is derived from passengers' demand for air transport services. To assess derived demand, the CAA has taken into account both direct and indirect effects on the demand for airport services. The derived demand process is illustrated as follows:
- Following an increase in airport charges, an airline initially responds by absorbing the cost increase, passing it onto its passengers, or switching some services to another airport, or a combination of these.
 - Should an airline remove some capacity, there will be a direct effect on the volume of passengers travelling through the airport, provided that the removal of this capacity does not trigger entry or expansion by another airline at the airport or a substitutable airport.
 - Assuming that the airline maintains the same level of capacity at the airport, and passes the price increase onto its passengers, the passengers become indirectly exposed to the airport operator's pricing decision.
 - To the extent that a similar flight is available at another airport, the passenger may then decide to switch to that airport in response to the price rise thus affecting the level of derived demand.
- D83 In terms of assessing the direct and indirect effects on the demand for airport operation services for HAL, the CAA notes that:
- It is primarily an airline that considers whether or not to operate from a particular airport. Therefore, the CAA's market definition analysis should start with the evaluation of the airlines' views on the substitutability of other airports for Heathrow and, where possible, evidence on airlines' actual switching behaviour.

- The airlines' requirements regarding the infrastructure at an airport are likely to differ according to their business model and services, which may dictate the type of aircraft used which might require special airport facilities.⁴⁷
- The Guidelines emphasise that the nature and magnitude of airlines' switching costs are an important aspect of the overall competition assessment and they will depend upon a number of factors.⁴⁸ An airline's ability to switch is therefore not just relevant for product market definition but also for geographic market definition.⁴⁹
- The geographic market definition will be affected by the ability and willingness of passengers to switch between airports. The ability of passengers to respond to a price increase imposed by an airport operator is conditioned by the airlines' reaction. The ability and willingness of passengers to switch will depend, in part, on the extent to which they regard services at different airports as reasonably close substitutes and the costs they face in switching demand to the next best alternative.⁵⁰

D84 The air transport market (for passengers) is therefore relevant to the consideration of the market for airport operation services (for airlines). Where passengers are clearly able to substitute in significant numbers between airports, this will reduce the costs involved in the switching for airlines. Where this is not the case, the airlines' costs of switching will likely be higher as there will be the addition of the opportunity cost for no longer serving that particular air transport market.

D85 In common with other authorities carrying out such analysis,⁵¹ the CAA has also sought to understand the propensity of marginal passengers' likelihood to switch in response to a price rise. It has done this using passenger surveys and catchment area analysis. However, as part of the analysis of derived demand, in making decisions as to whether to switch or discontinue a service in response to a price rise at an airport, an airline could be expected to have taken account of the likely behaviour of their passengers in the downstream market and, in particular, their willingness to use other airports.

⁴⁷ The Guidelines, paragraph 3.41.

⁴⁸ The Guidelines, paragraph 3.42.

⁴⁹ The Guidelines, paragraph 3.65.

⁵⁰ The Guidelines, paragraph 3.34.

⁵¹ See, for example, the CC's 2009 Report into BAA.

- D86 Therefore, it can be assumed that passengers' propensity to switch in response to a price rise by an airport operator has, to some extent, been internalised in the airline's decision-making process. However, where the airlines' decision-making processes are supported with primary evidence, e.g. the airports' and airlines' internal analyses of catchment overlaps, the CAA has attached weight to that evidence when delineating the boundaries of the geographic market. This evidence has been complemented with interviews with airlines and airport operators.
- D87 However, the airlines' propensity to switch may not be fully aligned with that of passengers, as they face different switching costs and constraints. Furthermore, relying solely on existing airlines' views and evidence may provide too static a view of the market. The CAA has therefore complemented airline and airport evidence with findings from its own research and analysis of passenger behaviour.
- D88 The CAA's analysis in the Initial Views on the cost structure of airlines suggested that for FSCs, airport charges made up around 10 per cent of their cost base,⁵² and therefore considers that a 5 to 10 per cent increase in airport charges, if passed on fully to passengers, may only translate, at most, into a 1 per cent increase in charges to a passenger.
- D89 In addition, as passengers' choice of airports is part of a wider decision-making process of air transport services, whether for business or leisure. The impact of airport pricing on passengers is therefore likely to be significantly lessened as it forms one component of a bundle of goods.⁵³ Passengers' responses to an airport operator's SSNIP are likely to be muted.
- D90 Given the derived demand approach that has been adopted, the CAA's has considered the downstream air transport markets that operate from Heathrow.⁵⁴ This would provide a view of the possible constraints that may arise for airline and passenger interactions at the air transport level.

⁵² Initial Views HAL, paragraph 2.78 Figure 4.

⁵³ In this context a list, by no means exhaustive, that may be purchased includes surface access charges, flights, and hotels.

⁵⁴ The CAA has not undertaken formal analysis of the retail markets but considers the implications drawn from case law. Furthermore, the CAA does not comment on the market position enjoyed by any airline operating within the retail markets.

Air transport markets

- D91 Merger case law suggests⁵⁵ that airline competition takes place on a city-pair basis, which means competition takes place between airlines on routes between two cities and their surrounding areas i.e. London to Milan as a city pair forms a different market from London to Rome or London to New York. Therefore a London Luton to Paris Charles De Gaulle flight may compete with a London City to Paris Orly flight as both flights are serving the London to Paris market. Neither of those flights would compete with a London Heathrow to New York JFK flight. For long-haul services, such as transatlantic routes, indirect routes for which a single ticket is purchased that increase the journey time by no more than 150 minutes may impose a competitive constraint on direct flights.
- D92 This implies that Heathrow (or indeed any airport) would be a wholesale input for a range of air transport markets that face varying degrees of competition. For example, on the London to Paris route there is a possibility to fly with three different airlines from three different airports,⁵⁶ plus on the London to Paris route it is possible that rail may provide a suitably close substitute. For London to New York, there is a choice of at least 13 airlines but from only one airport (Heathrow).⁵⁷
- D93 Case law⁵⁸ also suggests that passengers can be segmented between time-sensitive and non-time-sensitive passengers.
- Time-sensitive passengers tend to travel for business purposes, require significant flexibility with their tickets (such as cost-free cancellation and modification of the time of departure) and tend to pay higher prices for this flexibility.

⁵⁵ See COMP/M.5440 Lufthansa/Austrian Airlines; COMP/M.5335 Lufthansa/SN Airholding; COMP/M.5364 Iberia/Vueling/Clickair; COMP/M.3280 Air France/KLM; COMP/M.3770 Lufthansa/Swiss; COMP/M.5747 Iberia/British Airways; COMP/M.6447 IAG/BMI.

⁵⁶ Review of available direct return flights with one airline departing London 10 July and returning the same day from taken from skyscanner.com accessed 4 July 2013.

⁵⁷ Review of available direct return flights with one airline departing London 10 July and returning the 17 July taken from skyscanner.com accessed 4 July 2013.

⁵⁸ See COMP/M.5440 Lufthansa/Austrian Airlines; COMP/M.5335 Lufthansa/SN Airholding; COMP/M.5364-Iberia/Vueling/Clickair; COMP/M.3280 Air France/KLM; COMP/M.3770 Lufthansa/Swiss; COMP/M.5747 Iberia/British Airways.

- Non-time sensitive customers travel predominantly for leisure purposes or to visit friends and relatives, book a long time in advance, do not require flexibility with their booking and are generally more price-sensitive.⁵⁹

- D94 In the BA/AA/IB case⁶⁰, the EC expressed that passengers could be segmented by cabin class, with business and first class services (premium passengers) forming a separate product to economy class services (non-premium passengers).

- D95 As for airport substitution, the EC considered that:
 - In the BA/AA/IB case, for transatlantic routes, both supply- and demand-side substitution were insufficient to suggest that Heathrow belonged in the same market as the other four London airports.
 - In the Iberia/BA case, for routes between London and Barcelona and Madrid, that for non-time-sensitive passengers Heathrow, Gatwick and London City were considered to be substitutable.

- D96 In addition, for Iberia/BA, the EC stated that all five London airports may be substitutable due to surface access links and cheaper airfares than airports which are less conveniently located. The inclusion of Stansted and Luton was, however, left open as the EC did not consider that this would affect the analysis for the purposes of the case.

- D97 For time-sensitive passengers it is less clear whether Stansted and Luton should be included in any airport substitution analysis. For example:
 - In the IAG/BMI case the EC did not conclude on airport substitutability; it carried out its assessment at three levels: at the airport, at three airports, and at five airports.⁶¹
 - In the Ryanair/Aer Lingus case⁶² the EC considered that the five London airports were substitutable for services between Dublin and London.
 - The CC, in its recent consideration of Ryanair/Aer Lingus considered a similar substitutability.⁶³

⁵⁹ COMP/M.5747 Iberia/BA.

⁶⁰ COMP/39.596.

⁶¹ COMP/M.6447 IAG/BMI.

⁶² COMP/M.4439. Ryanair/Aer Lingus III case COMP M.6663 has recently been decided by the EC – case documentation not currently available.

⁶³ CC, Aer Lingus/Ryanair Provisional Findings Report, 3 June 2013.

- D98 Based on the case law outlined above, the CAA considers that in its assessment that it should consider that:
- Airlines compete for passengers on a city-pair basis.
 - Airports operate as a wholesale input to a number of air transport markets – the airport is either the origin or the destination.
 - There is some level of substitutability between all London airports depending on the air transport market in question.
 - Non-London airports are not substitutable for London airports at the downstream air transport level therefore by extension would not be at the upstream airport operation services level for passengers.
- D99 However, case law on airline competition is based on a 5 to 10 per cent increase from the competitive price in the downstream air transport market. A SSNIP on air transport fares would equate to a 17 to 100 per cent increase in upstream airport operational service charges.⁶⁴ At this level of price increase, substitutability between airports from a passenger perspective could be expected to be greater than that observed when passengers are exposed to a 5 to 10 per cent SSNIP on airport operation services alone.

Section 3.2: Product market definition

- D100 This section defines the product market in which HAL operates and includes:
- service bundle;
 - intermodal substitution;
 - retail, property and car parks;
 - market segmentation by inbound and based carriers;
 - market segmentation by passengers;
 - market segmentation by cargo; and
 - market segmentation by airline business models.

⁶⁴ This calculation assumes that charges levied by the airport account for 10 to 30 per cent of the airlines' cost base.

Service bundle

- D101 HAL provides a wide range of differentiated products and services (which may be interlinked) to airlines, passengers, freight operators and a range of other companies (groundhandlers, retail concessionaires etc) for the use of the infrastructure at Heathrow.
- D102 Given this complexity, it is important to identify the focal product or service for the market definition. In addition, it is appropriate to analyse the focal product market in terms of a service bundle rather than individual products or services.
- D103 The CA Act provides a logical starting point for defining the service bundle. In particular, section 3 of the CA Act prohibits an operator of a dominant airport area at a dominant airport from requiring the payment of charges in respect of airport operation services unless it has a licence. An airport area will be dominant if the CAA has made and published a determination that the market power test in section 6 of the CA Act is met in relation to that area.⁶⁵
- D104 Section 66 of the CA Act also states that an airport:
- means an aerodrome within the meaning of the Civil Aviation Act 1982⁶⁶ together with other land, buildings and structures used for the purposes of—*
- (a) the landing and taking off of aircraft at the aerodrome,*
- (b) the manoeuvring, parking or servicing of aircraft between landing and take-off at the aerodrome,*
- (c) the arrival or departure of persons carried or to be carried as passengers by air transport services operating to or from the aerodrome, together with their baggage,*
- (d) the arrival or departure of cargo carried or to be carried by such service(s),*

⁶⁵ Section 5(1) of the CA Act. An airport will be dominant if all or part of its 'core area' is a dominant area.

⁶⁶ At section 105 of the Civil Aviation Act 1982 aerodrome means any area of land or water designed, equipped, set apart or commonly used for affording facilities for the landing and departure of aircraft and includes any area or space, whether on the ground, on the roof of a building or elsewhere, which is designed, equipped or set apart for affording facilities for the landing and departure of aircraft capable of descending or climbing vertically. In its narrowest interpretation an aerodrome can be consider as the runway.

(e) the processing of such persons, baggage and cargo between their arrival and departure, and

(f) the arrival or departure of persons who work at the airport.⁶⁷

- D105 However, the definition of airport operation services does not include air transport services, air traffic services or services provided in shops and other retail businesses.⁶⁸
- D106 This definition feeds into section 6(1) of the CA Act which sets out the market power test that must be applied to the airport area. Under section 5(3) an airport area is defined as *'an area that consists of or forms part of an airport'*.
- D107 The market power test will be met in relation to the area if Tests A to C, are met by the relevant operator of the airport area at that time. In particular, section 6(3) sets out Test A, i.e. whether the relevant operator has, or is likely to acquire, SMP. Section 6(3), read in conjunction with sections 6(6) and 6(7), requires that that assessment must be made by reference to a market for one or more airport operation services which are provided in the airport area or, where appropriate, the core area.⁶⁹
- D108 The core area is defined in section 5(4) as follows:
- (a) the land, buildings and other structures used for the purposes of the landing, taking off, manoeuvring, parking and servicing of aircraft at the airport,*
- (b) the passenger terminals, and*
- (c) the cargo processing areas.*
- D109 Based on the above, the CAA considers that the initial focal product is likely to consist of one or more of the airport operation services supplied in the core area.

⁶⁷ The definition of airport specifically excludes hotels (except those situated in a passenger terminal that is part of an airport), bus, tram and railway stations.

⁶⁸ Section 68(4).

⁶⁹ Section 6(7) provides that, where the airport area includes all or part of the core area, subsection 6 has effect as if the references to the airport area were references to the core area.

- D110 As HAL's primary function is to provide access to the infrastructure of Heathrow for the landing, parking and departure of aircraft and the processing of passengers and cargo, the aeronautical services provided at Heathrow are likely to consist of at least:
- the use of the runway and taxiways;
 - aerodrome Air Traffic Control (ATC)⁷⁰;
 - aircraft parking;
 - the provision of access and infrastructure needed for the provision of other airside and landside groundhandling services;⁷¹
 - the provision of facilities for check-in;
 - the provision of facilities for baggage handling;
 - security screening;
 - facilities for holding passengers between arriving at the airport and departure (holding passenger facilities);
 - facilities for the processing of airline staff arriving and departing the airport⁷² (airline staff processing facilities); and
 - the transit of passengers to and from the aircraft (in the case of a passenger airline) (passenger transit facilities).

⁷⁰ Aircraft landing at Heathrow will only face charges from the airport operator for the aerodrome element of ATC. The approach service is provided by NATS (En Route) plc (NERL) as part of the London terminal manoeuvring area (LTMA) and charged directly to airlines operating in this space. At airports outside of the LTMA, the approach service would be included within this bundle of activities. However, the CA Act formally excludes ATS as defined in the Transport Act 2000 from airport operation services. The ability to land and manoeuvre aircraft at and around an airport is also a key service that airport operators are required to provide as part of its services to airlines. In the UK these services are currently contracted by the airport operator with an air navigation service provider in a liberalised market. It is then up to the airport operator how they recover this cost in a similar manner to any other costs incurred, it is not a 'pass through' cost.

⁷¹ Ramp handling services, fuel and oil handling, and aircraft maintenance are groundhandling services as defined in Directive 96/67/EC. Groundhandling services are often provided by the airlines or to the airlines by third parties. However, the groundhandlers pay fees to the airport operator relating to use and access to infrastructure. In these cases the airport charges would still affect the airline through the charges levied on the groundhandlers.

⁷² Given the legislative definitions, staff may never arrive at an airport if they do not enter a passenger terminal, pass the forecourt of such a terminal, or use a qualifying car park. Nevertheless, it is not unreasonable to consider that staff access costs would be considered as part of an airline's decision to operate from an airport.

- D111 For ease of reference, these services are referred to as Bundle A.
- D112 In addition, for certain airlines, airport operation services will also include:
- access to infrastructure and facilities for the provision of services such as lounges and priority security lanes for premium passengers (premium passenger facilities);
 - facilities to transfer connecting passengers and their baggage between aircraft without the passenger leaving the airport (integrated transfer facilities); and
 - access and infrastructure for the provision of facilities for the processing of cargo (in the case of an aircraft carrying cargo, either in bellyhold or as a cargo-only flight) (cargo processing facilities).
- D113 For ease of reference, this smaller bundle of services is referred to as Bundle B.
- D114 The services outlined in Bundle A and Bundle B should be treated as a single product because:
- These services are likely to form the key bundle of services that an airline would require to operate from an airport.
 - An airline would be required to bear the costs of all of these services to provide air transport services.⁷³
 - In deciding whether to land at an airport, an airline would take account of the total bundle of charges rather than focusing on any one charge in isolation (even though services may be priced individually by the airport operator to reflect different cost drivers).
- D115 While the airport operator may not directly supply each individual service it will have some degree of control or influence on pricing as the infrastructure operator. The CAA's approach to dealing with these services is consistent with that adopted by the CC in its consideration of market definition for the BAA airports market reference.⁷⁴

⁷³ Air transport services are defined in the CA Act as a service for the carriage by air of passengers or cargo to or from an airport.

⁷⁴ Indeed the CC's analysis highlights that where secondary products (i.e. aircraft parking fees and check-in) are constrained by the interaction with a primary product (i.e. landing of aircraft at the airport), it is generally accepted that they should be treated as a single product market. At this point the CAA does not consider that it is analytically necessary to define primary and secondary products, as the CC did. For clarity, the CAA considers them as a whole.

Stakeholders' views

- D116 HAL, in its response to the Consultation, indicated that it is inappropriate for the CAA to consider its market definition taking the legislation as basis for identifying the key product bundle. By doing so, HAL considered that the CAA has identified services which HAL does not provide nor has little control over.⁷⁵
- D117 HAL, in response to the CAA's request for further information, indicated that it does not provide the services connected with:^{76, 77}
- aerodrome ATC;
 - infrastructure for airside groundhandling services, including;
 - ramp handling services;
 - fuel and oil handling; and
 - aircraft maintenance facilities;
 - belly hold cargo processing facilities; and
 - premium passenger facilities.

CAA views

- D118 As explained above, the market power test is applied to the operator of an airport area, which is defined in section 9(1) of the CA Act as the person having overall responsibility for the management of all of the area. In determining overall responsibility, the CAA is directed to have regard to the extent that the person controls the matters listed in section 9(4) of the CA Act, which include the type, price and quality of services provided in the area as well as access to the area. Accordingly, a relevant operator may still have control or responsibility for those matters even if it does not provide the services directly itself.

⁷⁵ HAL, Response to CAA's Market Power Assessment, CAA/Q6/80, paragraphs 2.2.49 to 2.2.56.

⁷⁶ HAL, Response to CAA's letter of 6 August 2013 (Notice under section 50 of the Civil Aviation Act 2012), CAA-IR-31, 27 August 2013.

⁷⁷ Heathrow list the services as Aerodrome ATC, Ramp Handling Services, Fuel and Oil Handling, Aircraft Maintenance Facilities, Infrastructure for airside groundhandling services (excepting major automated baggage infrastructure which is provided on a cost recovery basis), Belly hold cargo processing facilities, and Premium passenger facilities (excepting VIP/Royal Passenger Suites). Noting on premium passenger facilities that: a distinction may be drawn between overall terminal infrastructure and facilities, and premium type lounge facilities and services (or similar), the latter service is supplied and managed by airlines.

D119 In relation to each of the (above) services that HAL has indicated it does not provide, the CAA has the following views:

- With respect to the aerodrome ATC, these services are provided at Heathrow by NATS Services Limited. These services are provided under a commercial contract with the airport operator. The airport operator then charges airlines for their ATC requirements at the airport. Therefore, through contract negotiation the airport operator is directly responsible for the provision of this service and has simply outsourced the provision.
- With respect to the infrastructure for airside groundhandling services, as noted above, these services are not necessarily provided directly by the airport operator. However, HAL has a degree of control over the costs of these services as a freeholder and infrastructure owner. While HAL has stated it does not charge groundhandlers for access to infrastructure, it does levy a small annual licence fee. HAL therefore maintains control over access to the infrastructure for groundhandling agents notwithstanding its decision not to charge the groundhandlers for access. The cost of this infrastructure is also remunerated through the aeronautical charges.
- With respect to premium passenger facilities, similar to the bullet point above, while these services are not necessarily provided directly by the airport operator HAL has a degree of control over the costs of these services. The cost of providing this infrastructure is also remunerated through the aeronautical charges.
- With respect specifically to the groundhandling facilities of fuel, cargo and facilities and infrastructure for maintenance, HAL may not necessarily provide those services directly but it does have a degree of control over access to and development of these facilities as landlord.
- In any event, these specifics are not determinate of market definition since there can be a number of service providers within the same market or indeed more than one relevant operator at any one time.

Competition with other modes of transport

- D120 As discussed in the consideration of air transport markets, other transport modes may compete with airlines for some services, particularly for non-time-sensitive passengers. That said, only 10 per cent⁷⁸ of passengers that fly from Heathrow do so on services that may be substitutable with surface journeys i.e. domestic routes and those European destinations served by high speed rail (Paris and Brussels).
- D121 The CC, in its BAA airports market investigation, did not consider that there was sufficient scope for surface substitutability between the London airports.⁷⁹
- D122 Based on the above, it is not expeditious to the current investigation to consider this issue further, as this would take additional time, increase complexity and hardly bring significant contribution to the overall findings of this investigation. The markets considered within this Determination reflect this thinking and are not widened to include surface journey alternatives.

Retail, property and car parks

- D123 This section briefly outlines the CAA's approach to the retail, property and car park activities (RCP activities) that are not included in the service bundle set out above. This includes the services outlined in section 68(3)(b)-(c) of the CA Act:
- (b) facilities for car parking, and*
- (c) facilities for shops and other retail businesses.*
- D124 Similar to the discussion on the multi-sided nature of airports, the CAA would need to be assured that the services in the airline product market and RCP services are interdependent⁸⁰ for them to be considered to be in the same market. In the Purple Parking case the judge considered parking as a separate market to aeronautical services.⁸¹

⁷⁸ Source: CAA analysis.

⁷⁹ CC's Report 2009, paragraph 2.11.

⁸⁰ In this context, the CAA defined interdependent such that an increase (decrease) in the price to one set of customers impacts on the demand from another set of customers and vice versa. It is not enough for the pricing on just one side of the market to impact on the other, that is, interdependence requires reciprocation.

⁸¹ [2011]EWCH 987(Ch).

- D125 Although retail services would not be offered if the airport operator did not provide services to commercial passenger airlines, in principle, an airport operator could operate without the provision of facilities for retail activities. To phrase it another way, 'all shoppers are fliers, but not all fliers shop'.
- D126 In practice, the price for retail activities is unlikely to affect passengers' choice of an airline or airport in a significant way.⁸² Furthermore, the RCP concessionaires' decisions in response to an increase in rent and/or change to other terms of their contracts are likely to be independent from the airlines' decisions in relation to aeronautical services. Likewise, the airlines' decision making and profitability are likely to be independent of that of RCP concessionaires.
- D127 The CAA has therefore concluded that it is more appropriate to define a separate market for the provision of facilities for retail activities and car parks that is distinct from that of the aeronautical product market. This approach is consistent with the approach adopted by the CC with respect to RCP.⁸³
- D128 Based on the above, the CAA does not consider, for the purpose of this determination, that it is necessary to define this distinct market in more detail.

Market segmentation by inbound and based operators

- D129 In the Consultation, the CAA considered it was not appropriate to segment the market between based and inbound carriers.⁸⁴
- D130 Stakeholders, in their response to the Consultation, did not raise this as an issue. The CAA has nonetheless reconsidered the evidence it outlined in the Consultation and has concluded that it would be inappropriate to segment the market by whether airlines operate based or inbound at the airport.

⁸² Understanding Airport Passenger Experience, Independent Social Research on behalf of DfT, March 2009: <http://webarchive.nationalarchives.gov.uk/+/http://www.dft.gov.uk/pgr/aviation/airports/reviueviewregulatioukairports/understandingexperience.pdf>; and Consumer Research, Accent for CAA, May 2011: <http://www.caa.co.uk/docs/2107/2131ConsumerResearch06122011.pdf>.

⁸³ CC's 2009 BAA Report, paragraph 2.41.

⁸⁴ The Consultation, paragraph 4.52.

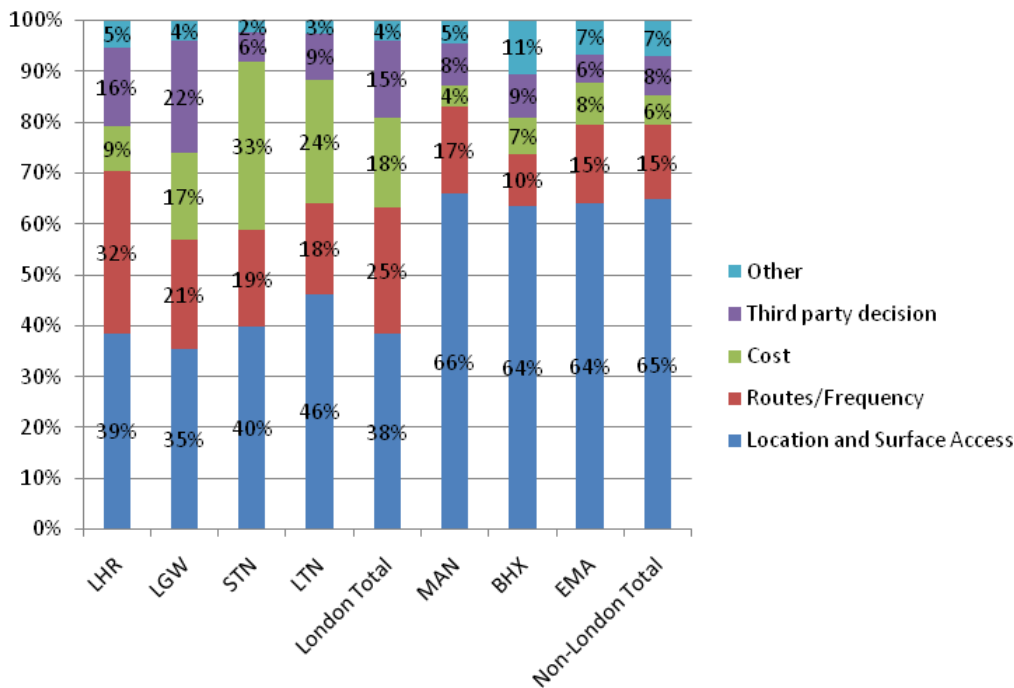
Market segmentation by passengers

D131 There are a number of segmentations of the passenger base that could be regarded as candidates for segmenting the product market for airport operation services, including:

- surface and transfer passengers; and
- passengers who travel on business, for leisure and for visiting and friends and relatives (VFR).

D132 Figure D.3 below shows passengers' reasons for their airport choice which could be considered as aspects of the airport product for passengers.

Figure D.3: Reasons for airport choice



Source: CAA, Passengers' airport preferences Results from the CAA Passenger Survey, Working paper November 2011

D133 Figure D.3 shows that 'location and surface access' is the primary driver. Routes/frequency, cost and third party decision (such as by an employer or other family member) were the other most cited reasons.

D134 The factors passengers cite as their reasons for airport choice are, in the main, outside of the influence of the airport operator over the short to medium term. For example, issues that influence choice include location and surface access.

- D135 While to some extent surface access can be altered, this can take a considerable time for any modifications to come on stream, (see, for example, the Crossrail project which will link into Heathrow⁸⁵). In addition, although the airport operator does have some influence on cost, through airport charges, these are a small part of the overall fare. Routes/frequency (and to a certain extent third-party decision where it is a business account) is only subject to change indirectly by an airport operator's engagement with airlines.
- D136 The CAA considers that it would not be possible for an airport operator to identify with accuracy different passenger groups. In the event that these groups could be identified, arbitrage by passengers would likely eliminate possibilities of price discrimination.
- D137 However, in aggregate, passengers' demand influences the services offered by airlines, which in turn affects the airline's demand for airport operation services. Through the purchase of an air ticket, passengers also self-select and reveal information about their preferences, on which an airport may be able to discriminate through charges on airlines. For example, via charges for segregated security searches.
- D138 In the Consultation, the CAA noted that airlines require access to facilities for both connecting and origin and destination (O&D) passengers from the airport. Given that airlines provide services to both passenger groups over the same facilities this limits the need for differentiating the product market for the current assessment.⁸⁶ The differentiating facilities being the provision of integrated transfer facilities and the transfer passengers themselves not making use of the airside facilities at the airport. An airline providing air transport services at for both types of passenger requires the provision of this infrastructure.

Stakeholders' views

- D139 HAL disagreed with the CAA's position and noted that previous competition authorities have sought to segregate the product market by connecting and O&D passengers.

⁸⁵ The development of Crossrail began in 2001 receiving full support from Parliament in 2008. When Crossrail opens in 2018, it is expected to bring four trains an hour to Heathrow. See: <http://www.crossrail.co.uk/> (accessed 2 April 2013).

⁸⁶ Paragraphs 4.57 to 4.60.

CAA views

- D140 The CAA considers that its position on connecting and O&D passengers is consistent with the relevant case law, which has not segregated the market by connecting and O&D passengers. In cases where segregation has been considered it has been left open. The CAA has also left open the possibility of further market segmentation, but does not consider this relevant for the purposes of this determination.⁸⁷
- D141 The CAA has acknowledged and continues to consider that connecting passengers may be more price sensitive and may face a different airport choice set. However, for the purposes of this determination, it maintains its position that it is not necessary to segregate the product market by passenger groups.

Market segmentation by cargo

- D142 In the Consultation, the CAA considered that it was unnecessary to define an independent product market for cargo at Heathrow.⁸⁸ This is because the high proportion of cargo transport services provided by passenger airlines.⁸⁹
- D143 The CAA received no further representations on its decision not to establish a separate cargo market at Heathrow. The CAA therefore concludes that for this analysis there remains no merit, at this time, in developing an independent definition for cargo services at Heathrow.
- D144 Consequently, the CAA does not consider cargo separately within the analysis presented within this document. Without defining a market for cargo at the airport the CAA is not able to define and specify the analysis for Tests B and C in relation to users of cargo services. As these users rely on the services provided to passengers as users of air transport services, the CAA considers that the analysis of Tests B and C for passengers provides adequate scope for assessing the risks envisioned under these tests.

⁸⁷ With respect to the work undertaken by NMa, which does not establish a precedent, the CAA considers that this provides significant evidence of differentiated markets for connecting and O&D passengers.

⁸⁸ Paragraph 4.63.

⁸⁹ Paragraph 4.62.

Market segmentation by airline business model

D145 In the Consultation, the CAA concluded that the product market could be defined by airline business model. Notably, at Heathrow it considered that there was only one product market, which is the market for airport operation services for FSCs and associated feeder traffic.⁹⁰ This has not been disputed by HAL or in the other responses to the Consultation.

Stakeholders' views

D146 The CAA received a number of responses on this issue in relation to the Consultations on Gatwick Airport Limited (GAL) and Stansted Airport Limited (STAL). These responses suggest that the CAA had:

- Misinterpreted the evidence and placed too much weight on differentiation in services between the two main carrier types.⁹¹
- Not given sufficient weight to the competition between the different types of carrier, especially on short-haul routes.⁹²
- as result of the above, led the CAA to reconsider its position in relation to the relevant product markets in which both GAL and STAL operate.⁹³

D147 BA presented evidence in response to the GAL Consultation on the similarities in their full-service operation and the easyJet low-cost operations at Gatwick. However, these representations have not been made in the context of Heathrow where BA operates a substantially different business model.

⁹⁰ Paragraph 4.79.

⁹¹ See for example: GAL, CAA's Gatwick Market Power Assessment: Response from Gatwick Airport Limited, easyJet response to CAA consultation on Gatwick airport market power, BA, Response to CAA consultation on Gatwick market power assessment of May 2013 and MAG, Interim response of MAG to the CAA's 'minded to' document. All these submissions are available on the CAA's website.

⁹² See for example: GAL, CAA's Gatwick Market Power Assessment: Response from Gatwick Airport Limited, easyJet response to CAA consultation on Gatwick airport market power, BA, Response to CAA consultation on Gatwick market power assessment of May 2013 and MAG, Interim response of MAG to the CAA's 'minded to' document.

⁹³ See the GAL Market Power Determination and STAL Market Power Determination which are available on the CAA's website.

CAA views

D148 With respect to HAL, the majority of operators listed as providing services at Heathrow operate a full-service business model.⁹⁴ Evidence from FSCs also suggests a demand for a higher quality product. For example, VAA put forward the following requirements for airport operation services to demonstrate its limited ability to operate from regional airports:⁹⁵

- Airside facilities for long-haul aircraft, notably runway length and the availability of airbridges to connect directly to the terminal.
- Terminal facilities capable of handling high passenger density, typically 451 seats per flight.
- Facilities to meet the differing service standards of its passenger base, differential queuing times, premium lounges and transfer facilities.

D149 Similarly, Cathay Pacific has described the broader service requirements for its FSC model to operate profitably. In particular, it noted that:

[redacted]⁹⁶

D150 Cathay Pacific, on transfer passengers, also indicated that:

*Connecting passengers do contribute to [Cathay Pacific's] load factors at LHR. Though the destinations of the connecting passengers vary, but as a hub carrier what works for [Cathay Pacific] at HKG also works at LHR. In terms of infrastructure for connecting passengers, [Cathay Pacific] notes that it is important to transfer passengers through an airport as quickly as possible, ideally within an hour. An effective baggage transfer mechanism between terminals is also required. Additional operations within a terminal itself can assist the flow of transfer passenger traffic. A hub partner airline would also be required at the airport.*⁹⁷

D151 Similar representations have been made by BA⁹⁸ and Delta.⁹⁹

⁹⁴ HAL's website lists the airlines that currently operate from the airport; of these German Wings (the low-cost arm of Lufthansa), and Vueling are the only airlines that the CAA would consider to be operating a more traditional low cost model. CAA analysis suggests that they account for less than 1 per cent of passengers. <http://www.heathrowairport.com/flight-information/destinations-and-airlines>.

⁹⁵ CAA, Consultation on Gatwick market power assessment (CAP 1052), paragraph 5.57 and VAA. [redacted].

⁹⁶ Source: Cathay Pacific [redacted].

⁹⁷ Source: Cathay Pacific [redacted].

⁹⁸ Source: BA [redacted].

⁹⁹ Source: Delta [redacted].

D152 The CAA, having deliberated on the possible market segregation by business model, continues to consider it appropriate to segregate the market by airline business model. In addition, the airlines at Heathrow generally demand a higher quality product than the CAA has observed at other airports being serviced predominately by airlines operating a FSC business model. Therefore, for the purposes of this determination, the CAA considers that the product for airlines operating from Heathrow is likely to consist of the full range of services available at Heathrow (both Bundles A and B). Although some airlines may be purchasing just Bundle A and operating a LCC business model, this is a minimal concern, and the CAA considers its analysis should focus on substitution opportunities for FSCs.

Market segmentation by supply side substitution

D153 As well as considering demand side substitution, the CAA needs to consider issues relating to the supply of services by airport operators. Supply side substitutability is the ability of an alternative airport operator to enter the market at short notice and provide services in competition with the current provider(s) without incurring substantial sunk costs.¹⁰⁰

D154 In addition to (or as an alternative to) new entry, an existing airport operator could expand or develop its current offering to compete with HAL. If alternative operators can effectively provide additional capacity in the short term (for example, less than one year), this would be reasonably likely to discipline HAL's pricing behaviour.

D155 There are a number of ways in which supply side substitution could occur, including:

- Conversion of a military airfield to civilian use.
- Investment in infrastructure at a current general aviation airport to allow the use of commercial passenger flights.
- A commercial airport improving its current infrastructure to accommodate larger aircraft.

D156 However, the amount of investment needed in any of these (and any other) scenarios will depend on a number of factors as there are many constraints on the type and volume of traffic that an airport can handle.

¹⁰⁰ The Guidelines, paragraphs 3.56 to 3.58; see also OFT 403, paragraphs 3.12 to 3.18 and EC Market Definition Notice, paragraphs 20 to 23. The CAA refers here to sunk costs specifically as costs incurred in entering the market that are not recoverable on market exit.

- D157 Investment in a runway extension (or other airport infrastructure) can be complex and resource-intensive. While the precise costs and practicalities of any such development are likely to depend on the location of an airport and the technical nature of the project, some of the challenges typically associated with such a project include:
- Significant capital and resource cost for the airport operator.
 - Local and possible national planning restrictions.¹⁰¹
 - Possible site-specific physical restrictions.
- D158 The substantial investment costs involved in supply side substitution would make it less likely to be a short-term response to direct airport competition. In addition, due to planning restrictions and other constraints, entry or expansion is not likely to occur within a reasonable time period. Furthermore, the airlines will also be unlikely to alter their fleets as a response to airport charges.

Conclusion on product market definition

- D159 For the purposes of this determination, the CAA does not consider it necessary to provide a definitive segregation of the product market, especially given the lack of firm evidence on either side however notes the focus of the FSC business model at Heathrow. There is likely to be a single product market at Heathrow that consists of at least the following airport operation services:
- the use of the runway and taxiways;
 - aerodrome ATC;
 - aircraft parking;
 - the provision of access and infrastructure needed for the provision of other airside and landside groundhandling services;¹⁰²
 - the provision of facilities for check-in;
 - baggage handling;

¹⁰¹ For example, there is currently a government moratorium on airport expansion at Heathrow, Gatwick and Stansted.

¹⁰² Ramp handling services, fuel and oil handling, and aircraft maintenance are groundhandling services as defined in Directive 96/67/EC. Groundhandling services are often provided by the airlines or to the airlines by third parties. However, the groundhandlers pay fees to the airport operator relating to use and access to infrastructure. In these cases the airport charges would still affect the airline through the charges levied on the groundhandlers.

- security screening;
- holding passenger facilities;
- airline staff processing facilities;
- passenger transit facilities;
- cargo processing facilities;
- premium passenger facilities; and
- integrated transfer facilities.

D160 Within this wider product market different types of airlines are likely to face different substitution possibilities. The CAA considers this issue more in its geographical market definition and its assessment of market power at the airport.

Section 3.3: Geographic market definition

D161 In the Consultation, the CAA considered that HAL operates in a single geographic market. This consisted of services provided from Heathrow.

D162 HAL stated similar concerns with regards to the CAA's proposed geographic market definition as with the CAA's product market definition (see earlier discussion). Other stakeholders did not provide specific comments on the CAA's proposed geographic market definition.

D163 This section sets out the evidence for the geographic market definition of the service provided by HAL and covers:

- Alternative hub airports.
- Airport operator views.
- Airline evidence.
- Passenger switching.

Alternative hub airports

- D164 This section discusses whether alternative hub airports should be included in the geographic market for HAL. In the Consultation, the CAA did not consider it appropriate to widen the market to include other hub airports.¹⁰³
- D165 HAL, in response to the Consultation, expressed concern with the CAA's analysis. In particular, it noted that:
- The CAA's route overlap analysis failed to consider long-haul city pairs using alternative hubs.¹⁰⁴
 - The CAA had not taken account of relevant precedent with regards to competition between hub airports. Notably, analysis conducted for the NMa on the market position of Schiphol and academic literature.¹⁰⁵
- D166 VAA, in its response to the Consultation, stated that for a UK-based long-haul airline, there is no restraint posed by hub airport competition. It also noted:
- Many of its long-haul routes are flown under bi-laterally negotiated contracts between the UK and other sovereign states.
 - These contracts have varying degrees of restriction and can dictate the airport from which the party must fly.¹⁰⁶
- D167 VAA also noted that air service agreements may limit the ability of carriers to switch the service of long-haul routes from their home country. However, the situation for air service agreements is not as clear cut as this:
- In some cases, such as the EU-US open skies agreement, there would be no limitations in place.
 - In other cases, there may be more restrictions. For example, VAA cannot fly from the UK to Russia, as it is not a designated airline.
 - The impact of such constraints will affect airlines differently, on a country-by-country basis.

¹⁰³ Paragraph 26.

¹⁰⁴ HAL, Response to CAA's Market Power Assessment, CAA/Q6/80, paragraph 2.2.40.

¹⁰⁵ HAL, Response to CAA's Market Power Assessment, CAA/Q6/80, paragraph 2.2.5 (c) and (d) and paragraphs 2.2.41 to 2.2.42.

¹⁰⁶ VAA, Response to CAA Consultation on Heathrow Market Power Assessment, 26 July 2013.

CAA's final position

- D168 The CAA does not consider it appropriate for the purposes of this determination to expand the geographic market definition to include other hub airports.
- D169 Thirty per cent of passengers at Heathrow are connecting passengers who are likely to face a different set of airport alternatives for the connecting stage of their journey than that faced by O&D passengers at Heathrow. Nevertheless, the CAA has concluded that it is not necessary to segregate the product market by passenger group. The CAA is therefore considering whether other hubs form a significant constraint based on a unified product market.
- D170 HAL, in support of its view on competition between hubs, submitted analysis on where passengers connect when flying from UK regional airports¹⁰⁷ to China, India and the USA. The analysis identifies Amsterdam Schiphol, Charles De Gaulle and Frankfurt as hubbing alternatives in both 2005 and 2009.¹⁰⁸ HAL has lost volume share to China and India but marginally gained passengers connecting to the USA. HAL observed that:
- ...the data clearly shows the scope for demand substitution by transfer (connecting) passengers (to the sampled destinations), such that the effective demand substitute for transfer passengers is very likely to be another European hub, not an alternative UK airport. [and] The overall picture is of a marked increase in the ability of all four hubs to compete effectively for the UK's transfer passengers. Heathrow is subject to competitive constraint from other European hubs.¹⁰⁹*
- D171 In its response to the Consultation, HAL raised concerns that the CAA had relied solely on indicative analysis.¹¹⁰ The CAA had conducted a similar analysis in preparation for its Consultation, but this provided limited additional insight and was subject to the same limitations as the illustrative evidence. Results of this analysis, as shown in Figures D.5 and D.6, are discussed below.

¹⁰⁷ The airports consisted of Manchester, Aberdeen, Edinburgh, Glasgow, Inverness, Newcastle and Prestwick.

¹⁰⁸ The structure of the CAA surveys is such that regional airports in the UK are sampled on a rolling basis for the set of airports used in HAL analysis they are sampled every four years. The latest data is therefore 2009, 2013 will be the next available data point for this analysis.

¹⁰⁹ HAL, Response to the CAA's consultation on the Initial Competition Assessment, March 2012.

¹¹⁰ HAL, Response to CAA's Market Power Assessment, CAA/Q6/80, July 2013.

- D172 Figure D.5 shows that high proportions of passengers travelling between the UK regions and destinations worldwide and connected at one of the main European hubs did so via Heathrow.
- D173 According to Figure D.5, the proportion of passengers connecting between UK regional airports to other destinations via Heathrow in 2005 and 2009 are broadly similar, except Central Asia and Russia (rising from 47 per cent to 61 per cent) and the Indian subcontinent (falling from 75 per cent to 62 per cent). This data suggests that Heathrow has a strong and stable share of connecting passengers from UK regional airports when compared to the other main European hubs.
- D174 Figure D.6 extends the analysis to take account of all possible connection points for passengers to reach their final destinations. The results of the analysis are quite different from those obtained when just observing the four major European hubs. In both 2005 and 2009, Heathrow had a significant share (higher than 30 per cent) of connections to four regions: Africa, Asia Pacific, Central Asia and Russia and North America. The shares of connections to Africa, Asia Pacific and Indian Sub-continent have fallen, whereas those to Central Asia and Russia and North America have risen.
- D175 Heathrow is shown to be the airport with the most connections from UK regional airports to all regions other than the Indian Sub-continent and Central and South America. The top airports by share of connections for these regions are Dubai and Gatwick respectively.
- D176 This data suggests that even taking account of all other stated connections Heathrow retains a significant proportion of connections from the UK regional airports.
- D177 The CAA considers that in the round the data suggests that, if a market was so defined, Heathrow would have a strong market position with a relatively disperse set of potential alternatives.

Figure D.5: Proportion of passengers travelling between UK regional airports and world geographic regions connected at Amsterdam, Paris, Frankfurt and Heathrow (%)

	Africa		Asia Pacific		Central Asia Russia		Indian Sub- Continent		North America		Central and South America	
	2005	2009	2005	2009	2005	2009	2005	2009	2005	2009	2005	2009
AMS	17	21	26	22	37	27	4	11	17	18	21	13
CDG	22	25	5	12	0	2	2	12	5	4	28	35
FRA	7	4	8	6	16	9	19	15	2	1	4	5
LHR	53	51	61	59	47	61	75	62	75	76	47	47

Source: CAA analysis

Note: due to rounding, the numbers in each column may not add to 100%.

Figure D.6: Proportion of passengers travelling between UK regional airports and world geographic regions connected at all possible airports (%)

	Africa		Asia Pacific		Central Asia Russia		Indian Sub- Continent		North America		Central and South America	
	2005	2009	2005	2009	2005	2009	2005	2009	2005	2009	2005	2009
AMS	14	15	15	12	24	24	1	4	7	10	11	11
CDG	17	18	3	6	0	2	1	4	2	2	14	14
FRA	5	3	5	3	10	9	7	5	1	1	2	2
LHR	42	36	36	31	31	56	28	21	33	43	24	24
Others	22	29	41	48	35	9	63	65	57	44	49	52

Source: CAA analysis

Note: due to rounding, the numbers in each column may not add to 100%.

D178 However, this analysis is insufficient for the CAA to draw conclusions about the geographical market. For example, some of the limitations of this analysis include:

- Connecting passengers from UK regional airports forms only a small proportion of total connecting traffic at Heathrow. The data available does not cover passengers that originate from non-UK airports and the connections that they make.
- The data only represents a limited set of data points (only two years).

- The analysis only considers volumes of passengers without taking account of the price, time, or airline route availability. which will be concerns for passengers substituting in the downstream air transport markets as indicated in the discussion at paragraph D93.
- Changes in Heathrow's share of passengers may be due to the severity of the capacity constraints it faces compared with the other airports. Lack of capacity may constitute an effective infinite price rise such that other products become substitutes.
- The analysis does not follow from any structured consideration of the appropriate scope of the market. The analysis is sensitive to the range of hubs included as demonstrated by the extension in the analysis to include other connection points outside of the major European hubs. It no more suggests that the market may extend to cover the near European hubs as it does any other airport connected over on a route that could be provided through Heathrow.

D179 Based on the evidence presented by the airlines, notably BA and VAA who operate hub operations from Heathrow,¹¹¹ it would not appear to be a rational decision for them to relocate their operations to an alternative hub airport in response to airport pricing rise, given the:

- Significant costs involved.
- Loss of access to the local catchment.
- Possibility of a competitor taking over the routes vacated.

D180 There are also possible constraints imposed by air service agreements reached with foreign governments which limit the scope for substitution of some routes.

D181 Given the CAA's view on the ability for a network airline to switch, competitive constraints between hubs would likely arise more directly through passenger choices. However, the following issues may affect the ability of connecting passengers to respond to changes in airport charges, which would limit the degree of competition:

- Airport charges are less likely to be directly passed through to the passengers in the overall fare:

¹¹¹ See paragraphs D.198 to D.205.

- As noted above, the effect of an SSNIP imposed by an airport in FSCs and associated feeder airline on air fares is likely be at most around one per cent. Air fares for connecting passengers involve airport charges of at least three airports. This would reduce the effect of the connecting airport performing a SSNIP on the overall fare on the connecting airport operator performing a SSNIP.
- BA, in deciding to pass through a price increase, has indicated that its ability to do so would depend, in part, on what the market could bear.¹¹² This suggests that FSCs tend to price to the market rather than on a simple cost plus basis.
- The airlines have the ability to price-discriminate across passenger groups.
- The presence of airline alliances is likely to limit the competition for passengers between connecting airports. The three alliances, Oneworld,¹¹³ SkyTeam¹¹⁴ and the Star Alliance,¹¹⁵ all have frequent flyer programs that can be operated in an integrated manner. As such, a passenger who is a member of such frequent flyer schemes may limit their airline choice and consequently the corresponding hubs which are available.
- The airlines specialise in serving specific markets to a certain extent. Often this is driven by history. For example, BA at Heathrow has strong connections to the United States and Hong Kong, both of which have strong historical ties to the UK. Similarly, Iberia, operating from Madrid has strong connections into South America. Some airlines, offering higher frequency and better connections to certain destinations, may make them more attractive than their competitors. This is likely to bias passenger choice.
- Geographical factor. Given the high proportion of the cost of fuel an airline's costs, an airline is hardly able to compete on routes where it would have to fly a significantly longer distance than its competitors. HAL has noted that Heathrow's geographical location gives it an advantage in connecting passenger at certain destinations, most notably Europe to North America and India to North America.¹¹⁶

¹¹² Source: BA [§<].

¹¹³ See: <http://www.oneworld.com/ffp/earning-and-redeeming-miles/> (accessed 18 March 2013).

¹¹⁴ See: <http://www.skyteam.com/en/Why-SkyTeam/Frequent-Flyer-Program/> (accessed 18 March 2013).

¹¹⁵ See: <http://www.staralliance.com/en/benefits/earn-and-redeem/> (accessed 18 March 2013).

¹¹⁶ Source: HAL; [§<].

- D182 Despite the apparent choices available to connecting passengers, i.e. the number of accessible hubs, the CAA has been unable to find significant evidence for it to consider a market that is wider than Heathrow based on competition from other hub airports.
- D183 The evidence that the CAA has obtained indicates that, at the airline level, there is likely to be a number of discrete markets for particular route pairs. These may involve connections over a number of hubs (and/or direct routes). Each of these hubs may compete with the other hubs providing such services to hub airlines to some degree. However, this falls short of the level of constraint necessary to suggest that such hubs constrain each other's pricing overall.
- D184 For the purposes of this determination the CAA does not consider it likely that there would be sufficient substitution to non-UK airports to defeat a SSNIP by HAL. However, the CAA remains open to the possibility that markets for airport operation services may develop in this direction in the future and will continue to monitor developments in this area. The remainder of this paper discusses the geographic market within the UK.

Airport operator views

- D185 This section outlines the views and evidence that the CAA has received from airport operators regarding geographic market definition.
- D186 HAL made a number of representations on what it considered was the geographic scope of its market. In general, there are two geographic markets:
- O&D passengers travelling at airports in London and beyond.
 - Connecting passengers connecting at the major European hubs and also other hub airports.¹¹⁷
- D187 For example, in its response to the CAA's Initial Views, HAL presented regression analysis for the determinants of demand for long-haul passengers which suggested that Heathrow's demand was different from that of Gatwick but similar to the European hub airports (Schiphol, Charles De Gaulle and Frankfurt). This analysis noted:
- The analysis clearly illustrates that, in terms of aggregate demand and demand drivers, Heathrow is similar to the other European hubs, and different to Gatwick (and very probably other UK airports). By definition, the demand curve facing Heathrow must be different to that of Gatwick. It is therefore reasonable to assume that, if the composition and shape of*

¹¹⁷ HAL, Response to the CAA's consultation on the Initial Competition Assessment, March 2012.

*the demand curve is different there cannot be effective or “perfect” substitution of demand (but perhaps potential scope for substitution at the margin for certain products and services).*¹¹⁸

- D188 HAL's regression analysis therefore suggests that Heathrow is not in the same market for long haul passengers as other UK airports.
- D189 HAL's representations also suggest that HAL considers that O&D and transfer passengers represent different markets for the purposes of airport operation services, highlighting its current practice in differentiated charging. For O&D passengers, HAL suggests that the market could include other airports in the south east of England, but does not appear to consider that this is the case. HAL clearly considers it competes with European hubs for transfer passengers; however, it is imprecise as to the geographic limits of the market.
- D190 Evidence submitted by HAL on its marketing to prospective inbound airlines also provides information on its view as to what it considers is its relevant geographic market.¹¹⁹ This material tends to focus on Heathrow's connection with London, describing London as a leading world city. There is also a strong focus on transfer opportunities at Heathrow. With respect to this particular issue, HAL compares the connectivity at Heathrow with that of Gatwick¹²⁰ (and Manchester for European connections).¹²¹ For example, with respect to Gatwick, HAL noted that:
- 99 per cent of air transport services from Heathrow are delivered by FSCs compared to 36 per cent at Gatwick.
 - The average fare at Heathrow is three times higher.
 - The yield at Heathrow is 30 per cent higher.
- D191 The evidence from HAL also tends to suggest that services offered from Heathrow are generally of a higher specification than at other airports in the south east of England or the European hubs, with a high proportion of air transport services provided by FSCs. For example, HAL's marketing to prospective airlines also states:
- Heathrow has the highest proportion of flag carriers and services provided by FSCs of Europe's major hubs.
 - The average fare is two times higher than at other European hubs.

¹¹⁸ HAL, Response to the CAA's consultation on the Initial Competition Assessment, March 2012.

¹¹⁹ Source: HAL[§<].

¹²⁰ Source: HAL[§<].

¹²¹ Source: HAL, [§<].

- Twice as many passengers travel in a premium cabin compared to other European hubs.
- D192 Importantly, HAL's marketing material does not present a detailed comparison between the Heathrow offer and that of other European hub airports.
- D193 Birmingham Airport Holding Limited (BAHL) considers that it competes with HAL. In BAHL's view, HAL currently charges below the competitive level, and BAHL would benefit in terms of long-haul development were HAL to charge a higher price. BAHL noted that the difference between the Birmingham and Heathrow offer was down to location, and that HAL's main selling point was proximity to London, which allows airlines to provide and fill a first-class cabin. BAHL also noted that there is sufficient demand at Birmingham to fill business class, but not first class.¹²²
- D194 GAL considers that it competes with a number of airports within the UK especially those in the south east of England, namely Heathrow, Luton, Stansted and London City.¹²³
- D195 Representations from BAHL and GAL also suggest that they compete with HAL for at least some traffic. It is possible that these airport operators face some level of constraint from HAL. However, evidence from the airlines (presented in the following section) suggests that any such constraints are likely to be asymmetric. Although HAL may act as a constraint to the pricing behaviour at other airports, these other airport operators, including BAHL and GAL, do not appear to constrain HAL's behaviour.
- D196 Evidence from airport operators suggests that the geographic market for Heathrow may be wider than that indicated by evidence from the airlines. However, the CAA considers that this evidence shows that Heathrow provides airlines with significant additional benefits over other airports. This is likely to increase the barriers of switching away from Heathrow for airlines currently operating from the airport.

Airline views and switching

- D197 This section summarises the views of airlines and observed switching. In particular, this section considers:
- The evidence from based and inbound carriers.
 - The switching observed in practice.

¹²² Source: Birmingham Airport (BAHL) [redacted].

¹²³ Source: GAL [redacted].

Based carriers

D198 BA considers that there are significant switching costs in their operation which may make the movement of marginal traffic between airports unfeasible.¹²⁴ For example, it noted that:

*It is clearly not viable to move our LHR operation, for a number of reasons, including the lack of sufficient hub capacity in the London market area. Similarly, our Gatwick operation has [redacted] short-haul aircraft and [redacted] long-haul aircraft. We do not believe that there is an airport suitable for our services and passengers with the capacity to absorb this size of operation in the London market area.*¹²⁵

D199 In addition, BA has indicated that the market is limited by its client base, and that it needs to offer services from airports that are closely located to its premium passengers. In particular, it noted:

Although British Airways regards the London area as a single market, our premium customers are not equally distributed across the south east.

Our analysis of [redacted].

Our analysis also shows that the further away from the three London Airports that BA serves these premium passengers are, the [redacted].... We see London area as a single market BUT [...] the areas extending to [redacted] have the greatest number of high value customers, this implies that were we to consider moving traffic away from LGW or LHR then we would have to rebase it one of the airports in the South or East of the South East or risk losing premium traffic. Or alternatively we could only move our non-premium traffic, which again would risk incurring heavy fixed costs for [redacted]

*In any event, the location of LHR and LGW and our established premium customers with their propensity to travel, severely limits our ability to move traffic from LHR and LGW.*¹²⁶

D200 Although BA states that it considers there is a London-wide market, its submissions/evidence seems to suggest that while GAL may compete with HAL for some of the routes operating at their airports, there is no substitutability between those airports and the other neighbouring London airports given the location of BA's passenger base.

¹²⁴ The CAA interprets this to mean the switching of marginal routes to airports at which BA does not currently operate.

¹²⁵ Source: BA [redacted].

¹²⁶ Source: BA [redacted].

- D201 The limited substitutability between Gatwick and Heathrow is also supported by VAA's response to the Initial Views, where it noted that:

*whilst [the CAA analysis] suggests that Gatwick appears to compete with Heathrow for long-haul leisure destinations, this competition will in reality be limited by available capacity at Heathrow which acts as a barrier to entry.*¹²⁷

- D202 In further submissions, in response to questions on the substitutability of Heathrow for Gatwick, VAA has noted that:

It is Virgin Atlantic's experience that Gatwick fails to act as a suitable substitute for Heathrow, but to a large extent Heathrow may be a competitor to Gatwick. Particularly amongst business passengers, Heathrow acts as an appropriate substitute for Gatwick due to its demographic profile, greater access, convenience, timesaving and route availability. For leisure passengers there is evidence that a degree of competition exists between the airports, however this should not be exaggerated.

... it is Virgin Atlantic's belief that if we were able to move all services that we currently operate from Gatwick to Heathrow virtually all current passenger traffic would transfer with these services i.e. Heathrow is almost a 100% substitute for Gatwick traffic.

...If Virgin Atlantic were able to move services from Gatwick to Heathrow, the services would retain current levels of transfer traffic. Indeed, Virgin Atlantic would expect that the number of transfer passengers of any services moved to Heathrow would increase, due to its greater transfer potential. This further exemplifies the ability of Heathrow to act as a commercially appropriate substitute for Gatwick. When Virgin Atlantic has previously switched services from Gatwick to Heathrow, it experienced a positive effect on yields

*Capacity constraints are a key limitation on substitution. Virgin Atlantic would want to move more of its services to Heathrow, but has been unable to do so because of a lack of runway slots.*¹²⁸

- D203 VAA also supplied the CAA with quantitative analysis which suggests that [§<].¹²⁹ This supports the CAA's analysis that Heathrow provides an asymmetric constraint to Gatwick.

¹²⁷ VAA, Response to Initial Views, 22 March 2012.

¹²⁸ Source: VAA [§<].

¹²⁹ Source: VAA [§<].

*Further, Virgin has noted that it operates effectively separate fleets for its business operations at Heathrow and its leisure routes (flights from Gatwick, Manchester and Glasgow). The Heathrow fleet consists of aircraft with between 33 and 45 Upper Class seats, whereas the leisure fleet uses aircraft with around 14 Upper Class seats.*¹³⁰

D204 VAA evidence also shows more segregation in the operations between Heathrow and the rest of the airline's operations. For instance, VAA would face additional costs in refitting aircraft to serve routes from the differing airports. This suggests that Gatwick is not a substitute for Heathrow as the financial performance of services out of Gatwick is inferior to those out of Heathrow.

D205 The CAA therefore considers that the evidence from the based airlines indicates that the geographic market for HAL is no wider than Heathrow.

Inbound carriers

D206 Aer Lingus operates 43 movements into Heathrow per day and 10 movements per day into Gatwick. Aer Lingus has also acknowledged that London is an important part of its demand profile and that London has many airports.¹³¹

D207 In addition, Aer Lingus has noted that:

- Heathrow is effectively the hub airport and Gatwick is a point-to-point and leisure airport.
- Heathrow's hub status is important to Aer Lingus for connectivity, whereas this is less of a concern at Gatwick.
- Its decision to operate from both Heathrow and Gatwick is based on a number of criteria, including:¹³²
 - the need to extract the widest coverage into the London area in terms of the deployment of aircraft to satisfy point-to-point traffic and to keep up with demand; and
 - the need to recognise and cater for its respective catchments and unique demand profiles due to geographic location.

D208 Air Malta, an unaligned airline that flies from Heathrow, Gatwick and Manchester has stated that it initially '*operated exclusively from Heathrow,*

¹³⁰ Source: VAA [redacted].

¹³¹ Source: Aer Lingus [redacted].

¹³² Source: Aer Lingus [redacted].

but due to limited availability of slots, which meant it could not grow further, it commenced operations from Gatwick. Air Malta also noted that if there was a significant expansion of capacity at Heathrow, it would add capacity, however at this stage it was not sure whether this would be at the expense of Gatwick (i.e. removing its frequency from Gatwick altogether).¹³³

D209 In addition, Air Malta indicated *'that the main difference between Heathrow and Gatwick is the level of connectivity'¹³⁴* and that:

- The level of connectivity at Gatwick is much more limited than at Heathrow (i.e. far fewer transatlantic flights).
- If it uses Heathrow, not only can it connect to the UK but internationally as well (to important markets in the US, Canada, Australia, Japan etc.).
- Its passengers prefer Heathrow.

D210 Cathay Pacific, which operates daily services from Heathrow to Hong Kong has stated that:

It is the hub airport of the UK. Cathay Pacific works with its 'hub partner' BA in the One World Alliance, to allow passengers flying to Heathrow not only to reach London but also to reach other destinations in the UK and in Europe using its hub partner British Airways. From a Cathay Pacific perspective, in the UK, Heathrow is very much the obvious and only place to which to fly due to the proper hub-and-spoke operation at the airport. Although Gatwick has recently improved, Heathrow remains the preferred airport for passengers flying out of London. Heathrow is well-connected into the centre of London. It first started flying to London in the 1980s into Gatwick, but its passengers made it clear that they prefer Heathrow and Cathay Pacific switched when they got the opportunity.¹³⁵

D211 Emirates, which operates services from Dubai to the UK out of Heathrow, Birmingham, Gatwick, Glasgow, Manchester and Newcastle¹³⁶ has noted *that its regional operations are not substitutable with those in London. In considering the substitution of Heathrow for Gatwick, Emirates has suggested that:¹³⁷*

¹³³ Source: Air Malta [redacted].

¹³⁴ Source: Air Malta [redacted].

¹³⁵ Source: Cathay Pacific [redacted].

¹³⁶ Rout Map Emirates.com (accessed 13 February 2013).

¹³⁷ Source: Emirates [redacted].

- *Heathrow and Gatwick appeal to separate markets but to the extent that they are substitutes, this appears to be one-way.*
- *There is a geographic and market distinction between Gatwick and Heathrow in that they serve different catchments and markets.*
- *There is a huge catchment overlap between Gatwick and Heathrow (i.e. areas such as Guildford), but Gatwick serves a separate market: serving the south coast is its “winning card” as this is where Emirates consider that the core population resides.*
- *Heathrow has significant inbound carrier traffic feed and is business-focused. Heathrow has higher yields due to the better concentration of business passengers and better connectivity to the USA, Canada and Europe. On the other hand, Gatwick is a UK originating airport for Emirates (with 65 to 70 per cent of its passengers connecting onwards at Dubai) and is leisure-focused.*

D212 Lufthansa, which operates from Heathrow and provides limited services from Gatwick, considered that each airport is a market in itself for the airport's core catchment. With respect to its Heathrow operations, Lufthansa noted that London is seen as '*the place to be*' for its customers and that London and Heathrow are synonymous.

D213 Lufthansa also noted that it would not move away from Heathrow due to:¹³⁸

- The considerable switching costs involved and the presence of the Star Alliance at Heathrow.
- Heathrow's advantages, including the convenience of its access links into central London and the rest of the UK (the inter-modality), which is preferred by both business and leisure passengers.
- The high frequency of operations is to provide feeder traffic to its hubs at Frankfurt and Munich, as well as to serve the significant point-to-point demand available from Heathrow.

D214 The evidence from inbound operators suggests that the geographic market should be no wider than Heathrow. A number of airlines also attach importance to Heathrow being the UK's hub airport.

D215 Although a number of airlines have indicated that they operate from Gatwick and other UK airports, it appears that Heathrow has a particularly

¹³⁸ Source: Lufthansa [3<].

strong brand for business travel and a network of airlines that drives connectivity (advantages which would be lost in a move from Heathrow).

Airline switching from Gatwick to Heathrow

D216 The following airlines have switched from Gatwick to Heathrow:

- In October 2009, BA closed a number of services from Gatwick and switched some further services back to Heathrow.
- In May 2011, Qatar Airways pulls out of Gatwick for Heathrow.
- In April 2012, Delta pulls out of Gatwick for Heathrow.¹³⁹

D217 Where possible, the CAA has sought to understand the motivations behind the observed switching behaviour. It has, however, only been able to obtain this explicitly with respect to Delta and BA.

D218 When questioned about the move Delta indicated:

Many corporate companies are in the central London area and Heathrow is better placed to serve these pax due to the good transport links (such as the Heathrow Express), hotels and other facilities etc. Heathrow is the preferred London airport; it is where business passengers are. Gatwick is a great airport with great facilities and good links with the Gatwick Express, but Heathrow is closer and perceived to be the London airport.¹⁴⁰

D219 Furthermore, Delta has indicated that:

There is a long history of competition evaluation between Heathrow and Gatwick in ascertaining whether they are substitutable, and this has found that they are not. The overwhelming conclusion is that business travellers prefer Heathrow which is why it is prepared to absorb large leasing costs in order to operate from there. Furthermore, as it has a relatively small footprint, it would be quite awkward to operate from two airports.¹⁴¹

D220 BA has provided the CAA with information relating to changes within its routes at Gatwick and Heathrow between 2010 and 2012. There have been six routes moved. According to the business cases supporting the decision to undertake route switching, it appeared that switching routes to Heathrow was for network benefit (i.e. adding connecting passengers), and switching routes from Heathrow was for maintaining leisure point-to-

¹³⁹ Source: GAL [§<].

¹⁴⁰ Source: Delta [§<].

¹⁴¹ Source: Delta [§<].

point travel without a requirement for connecting passengers.¹⁴² For all the route switches observed no assets have been moved and all switches out have been backfilled.

- D221 The evidence shows that switching from Gatwick to Heathrow but not vice versa, which is consistent with the existence of asymmetric constraints between Gatwick and Heathrow. In other words, although Heathrow may be a substitute for Gatwick, Gatwick appears to impose little constraint on Heathrow. The route switching by BA appears to be taking place based around contribution to the BA's hub network at Heathrow. The observed switching evidence is supportive of the evidence presented by airlines.

Summary of airline evidence

- D222 The evidence from based and inbound carriers suggests Heathrow is a market in its own right, differentiated by brand and its hub status. In addition, Heathrow is a preferred product to that offered at other UK airports.
- D223 The switching that the CAA has observed supports the view that Heathrow is a preferred product to Gatwick, which suggests that there is an asymmetric constraint – Gatwick is not a constraint on Heathrow. In coming to this view, the CAA accepts that route changes by BA suggest a greater degree of substitutability between the airports. However, these changes do appear to be led by the development of the hub product.
- D224 The CAA therefore considers that the evidence suggests that it is unlikely that carriers would substitute operations from Heathrow to Gatwick or to other UK airports with sufficient volume to render a SSNIP by HAL unprofitable. Furthermore, where routes are removed from Heathrow, as evidence by BA, there would be sufficient opportunities for profitable backfill such that the airport operator's behaviour is unlikely to be disciplined.

Passenger switching

- D225 In this section, the CAA reviews the evidence available on passengers' choice of airport to assess whether independent passenger analysis supports airlines' evidence on the geographical market. In particular, this section considers:
- Catchment area analysis.
 - Passenger preferences.
 - Analysis of price elasticity of demand (PED).

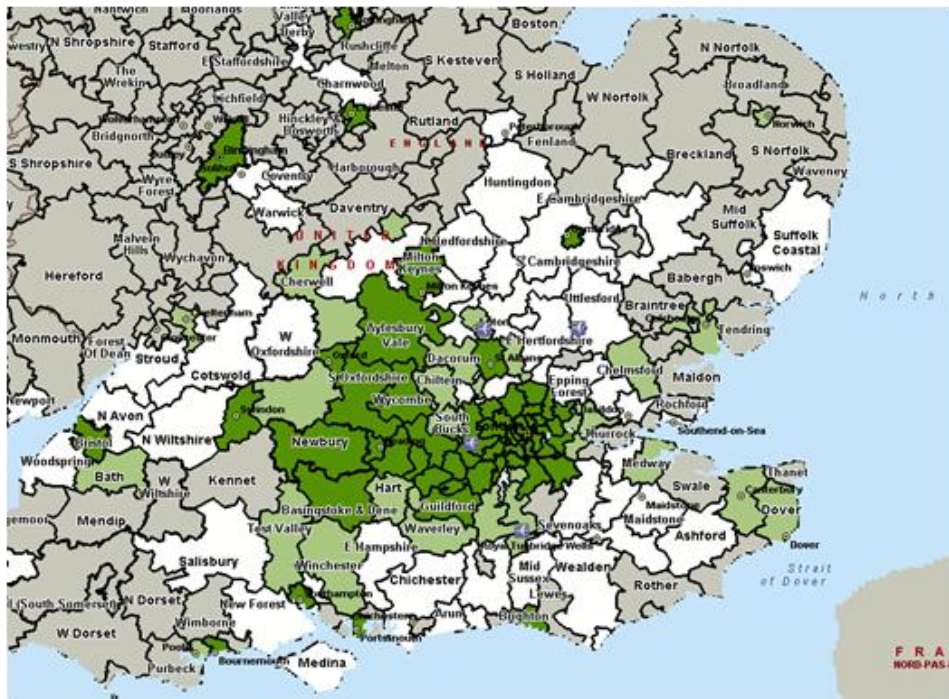
¹⁴² Source: BA [3<].

*Catchment area analysis*¹⁴³

- D226 Catchment area analysis can provide useful evidence regarding an airport's passenger base. It is a way of estimating the geographic area from which a large proportion of an airport's outbound passengers originate. The size of catchment areas and overlaps between catchment areas of neighbouring airports could provide useful evidence of the potential competition (if any) between the various airports. It is, therefore, a useful tool in aiding the understanding of possible geographic markets.
- D227 However, catchment area analysis does not provide price sensitivities of the passenger base as it only considers the location of passengers and the travel times that they may face. As such, it may overestimate the competitive constraint arising from passengers' ability to switch.
- D228 Those concerns notwithstanding, the CAA's catchment analysis for Heathrow is outlined in Figure D.7. This figure illustrates that Heathrow's catchment is focused on central London and the regions to the west of London, but also extends to a wide area, including much of the south east of England, East Anglia, the Midlands and the West.

¹⁴³ The analysis outlined in this section draws on the 2011 CAA working paper on catchments. This working paper is available at:
<http://www.caa.co.uk/docs/5/Catchment%20area%20analysis%20working%20paper%20-%20FINAL.pdf>.

Figure D.7: Heathrow overall historical usage catchment area



Notes: shading shows cumulative proportion of passengers; Dark green – 70%; Light green – 80%; White – 90% of passengers

Source: CAA Catchment area analysis working paper, October 2011

Figure D.8: Heathrow historical catchment area overlap

Airport catchment areas considered	Number of UK planning districts in the catchment area	Proportion of total passengers at Heathrow?
LHR only	17	6%
LHR/LGW	21	10%
LHR/STN	1	0%
LHR/LTN	5	2%
LHR/LGW/STN	7	2%
LHR/LGW/LTN	8	7%
LHR/STN/LTN	7	4%
LHR/LGW/STN/LTN	28	48%
Out of LHR catchment		21%
Total		100%

Source: CAA Catchment area analysis working paper October 2011

Notes: Districts refer to UK planning districts; they are ranked by reference to the amount of passengers that used the airport(s) and originated from or visited the district. An upper limit of 80 per cent of the airports' passengers was taken

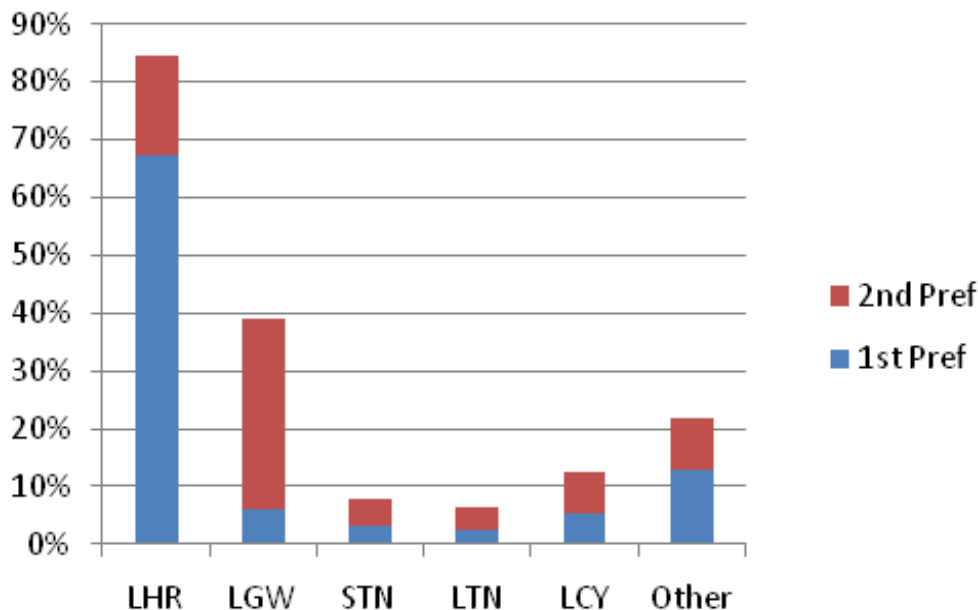
D229 The catchment area analysis in Figures D.7 and D.8 shows the potential for competition amongst airports. Only 6 per cent of passengers originated from a district served only by Heathrow; the majority of passengers at Heathrow have historically come from areas that are served by at least one other London airport. Heathrow draws a number of passengers from Birmingham, Bristol, Norwich and Southampton, where there are airports that are not included in this analysis. The inclusion of these airports would therefore increase the overlap observed. The catchment analysis indicates that the market could be as wide as all the airports analysed, equally with the inclusion of the other airports mentioned the analysis would suggest that the market could be wider still. Given the limitations of this analysis and its sensitivity to the group of airports selected the CAA is disinclined to weight it heavily in its overall analysis.

Passenger preferences

D230 Passenger preferences are clearly relevant to the potential for competition between airports. As noted above, passengers' responses to an airport operator's pricing are likely to be muted as airport charges form a low proportion of the overall airfare. Also, it is difficult to disentangle the degree to which the reflection of airport choice in the data is actually driven by passengers' airline preference. For example, a stated preference to travel from Heathrow may be a result of a preference to fly with BA; similarly, a preference to travel from Stansted may be the result of a preference to fly with Ryanair.

D231 In late 2011, the CAA produced a working paper on passenger preferences for airports within the south east of England. The CAA considers that certain insights can be drawn on passenger behaviour from this working paper.

Figure D.9: First and second preference airports for short-haul passengers flying from Heathrow

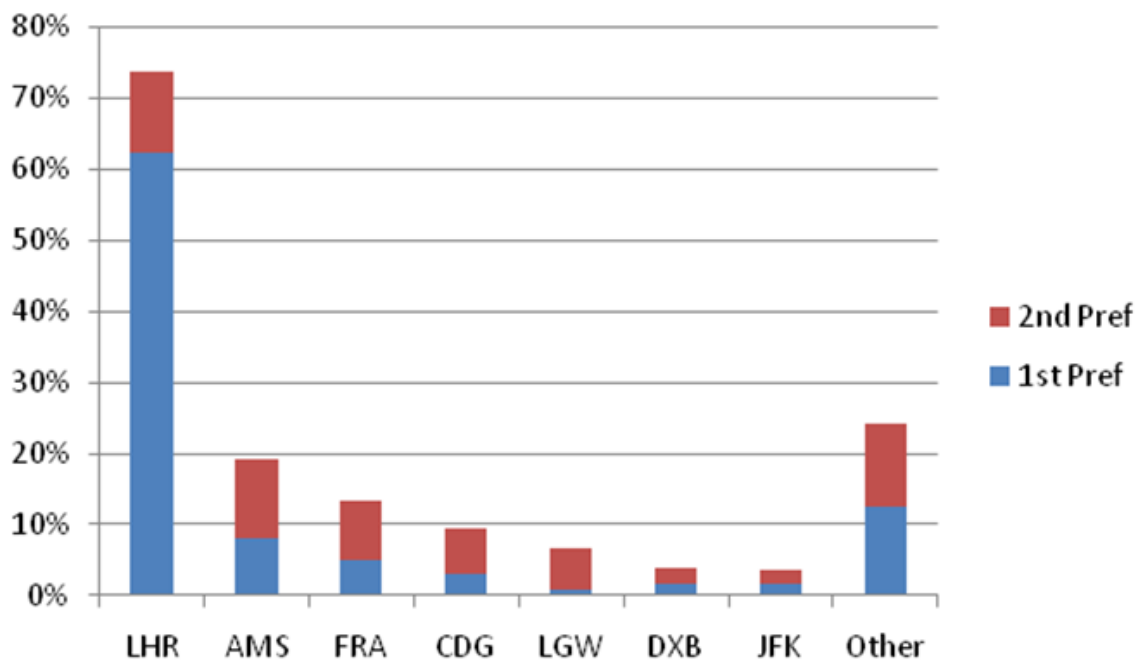


Source: CAA Passenger Survey Working paper November 2011

D232 Figure D.9 shows passengers' stated preference for airport use for short-haul flights at Heathrow. The figure shows that passengers flying from Heathrow have a strong first preference for flying from Heathrow, with 67 per cent of respondents stating this. Six per cent of passengers flying from Heathrow cited Gatwick as their most preferred airport. Each of the remaining London airports as a first preference is below 5 per cent. Gatwick is cited as second preference by around 35 per cent of Heathrow's short-haul passengers, while around 15 per cent stated that they were using Heathrow as their second preference.

D233 The passenger surveys treat connecting passengers at Heathrow as a separate passenger group. Figure D.10 below shows a strong (62 per cent) first preference for connecting passengers at Heathrow to transfer at Heathrow. Amsterdam Schiphol airport is the next most preferred airport for passengers connecting at Heathrow, at a little under 10 per cent, with each of the remaining named airports having less than five per cent of passengers reporting them as their first preference.

Figure D.10: First and second preference airports for Heathrow connecting passengers



Source: CAA Passenger Survey Working paper November 2011

D234 The passenger preference evidence suggests that passengers value the location of the airport and route availability, as both of these issues factor highly in the reasons for airport choice. Likewise, passengers appear to have a strong preference for the airport from which they are flying. For example, the vast majority of those flying from Heathrow appear to have it as their airport of preference. While passengers may, in theory, choose to fly from a number of the London airports, they show clear preferences for particular airports, especially for Heathrow.

Analysis of price elasticity of demand (PED)

D235 The CAA has been unable to obtain credible evidence to establish representative price elasticity of demand (PED) for the passengers at Heathrow. This is in contrast to the situation for GAL and STAL, where it was able to use DfT's NAPALM modelling and other sources to provide PED estimates.

D236 The PED for Gatwick and Stansted was estimated by increasing surface access costs to these airports as a proxy for an increase in airport charges. However, in the case of Heathrow, where there is a relatively high level of connecting passengers, the same approach was not suitable.

- D237 In appendix E, the CAA has, however, conducted a critical loss assessment and has sought to ascertain the likely number of airlines and associated passengers that could be considered marginal at Heathrow. From its critical loss analysis, HAL would need to lose 2.6 to 2.9 million passengers to make a 5 per cent increase in airport charges unprofitable and 5 to 5.7 million passengers if faced with a 10 per cent price rise.
- D238 Given the excess demand for slot capacity at Heathrow, these figures are likely to be lower bound estimates of the required level of switching, as new entrants or expansion from other incumbent airlines are likely to backfill any capacity that becomes available. Backfilling of vacated slots will reduce the impact of switching by any particular airline.
- D239 Against the critical loss, the CAA has selected a number of criteria which are likely to indicate lower switching costs for airlines. The cumulative criteria considered were:
- An airline operating inbound services, due to the small infrastructure costs at the airport.
 - Its services carry less than 10 per cent connecting passengers on their services, which suggests that the services could be sustainable from a point-to-point airport
 - The airline is not aligned to a particular airline alliance, which should reduce the level of switching costs resulting from the presence of strategic partners.
- D240 The estimate of marginal airlines suggests that only 1.9 million passengers would likely be induced to switch. Therefore, HAL would be able to profitably sustain a 5 to 10 per cent SSNIP for its services. This analysis suggests that Heathrow is a market in itself.

Summary of passenger analysis

- D241 The catchment area analysis shows that there is potential for passenger choice between airports with the majority of customers coming from areas in reach of Heathrow and one of the other three main London airports.
- D242 Similarly, the passenger preference analysis illustrates that passengers have a particular choice of airport. Only a small (but significant), proportion of passengers at Heathrow have expressed a preference for another airport both domestically and further afield.
- D243 Both of these analyses have their limitation and although they suggest choice for passengers that CAA does not consider that it is conclusive for the purposes of geographic market definition. Furthermore, the CAA has

been unable to carry out an appropriate PED analysis for passengers at Heathrow.

- D244 The CAA has considered on objective criteria a critical loss analysis at the airline level. This suggests that there would be insufficient switching from Heathrow as a result of a SSNIP.

Supply side substitution

- D245 As noted in the section on supply side substitution on the product market, competition for airport operational services will only take place on the currently available infrastructure. Planned infrastructure development and those in the process of construction are only going to be of relevance to competition if they are to be operational over the medium term. The majority of airport developments will impact on the long-term competitive potential.

- D246 With respect to supply side substitution on the geographical market, the CAA has considered the ability of airport operators to supply services to airlines in response to SSNIP, and in turn the ability of airlines to substitute to that new supply.

- D247 VAA, has highlighted a number of supply side issues that it considers have limited substitutability in terms of operating long-haul services from regional airports including that of runway length:

Many regional airports do not have runways that can accommodate long-haul aircraft. ...which means that, we could not operate services using our current fleet without altering the passenger payload and/or the cargo carrying capabilities.

Many regional airports do not have the terminal capacity or suitable facilities to operate regular long-haul services. For example, due to the high passenger density, check-in desks and immigration services need to be designed for the high volume of passengers which need to be processed in a condensed space of time. We operate our aircraft in a high density configuration of up to 451 seats. To compete effectively as a full-service airline, we require airport facilities to accommodate particular service standards including separate designated, differential queue standards and the use of business class lounges, as well as facilities for transfer passengers. Many regional airports have insufficient airside facilities to handle wide-body aircraft used for long haul routes. For

*example, we prefer to use contact stands with direct airbridge access on to the aircraft.*¹⁴⁴

D248 With one runway at 3,316 metres in length, HAL can offer services to all currently available commercial passenger aircraft. STAL and GAL are also capable to offer similar services. However, nearby airports, such as Luton and London City, are restricted in the type of operations they can support due to runway length.

D249 The CAA notes HAL representation on competition with alternative hub airports. Each of the main European hubs has facilities such that it could offer the same range of services to airlines currently operating out of Heathrow. There is also significant spare capacity present at these airports. HAL in its submission to the Airports Commission has estimated that Charles De Gaulle, Frankfurt, Schiphol, and Madrid have between 54 to 71 per cent spare capacity.¹⁴⁵ As noted these airports would not however be able to directly service local demand for transport services.

D250 London City Airport Limited's website states the limited range of aircraft over which it can offer services to airlines:

All aircraft using the Airport must be of an approved type. To qualify for approval an aircraft must meet specific noise criteria and be capable of making an approach at 5.5 degrees or steeper (this compares with 3 degrees at most other airports). Helicopters and other vertical takeoff and landing (VTOL) aircraft, and single-engined aircraft, are prohibited. Flying for club or leisure purposes is not permitted. Type approval is given by the Airport's Operations and Control Department:

*Main scheduled aircraft currently approved for LCY: Avro RJ's; EMB 135/170/190; DH-8 Q100,200,300,400; F50/70; ATR42/72; S2000; D328.*¹⁴⁶

D251 Given the fleets in operation at Heathrow or indeed the other London airports, from a supply side perspective, London City would not be able to compete across a sufficient range of aircraft sizes to provide an effective constraint on pricing at other London airports. The fleets currently operating at London City carry less than 100 passengers, where the fleets

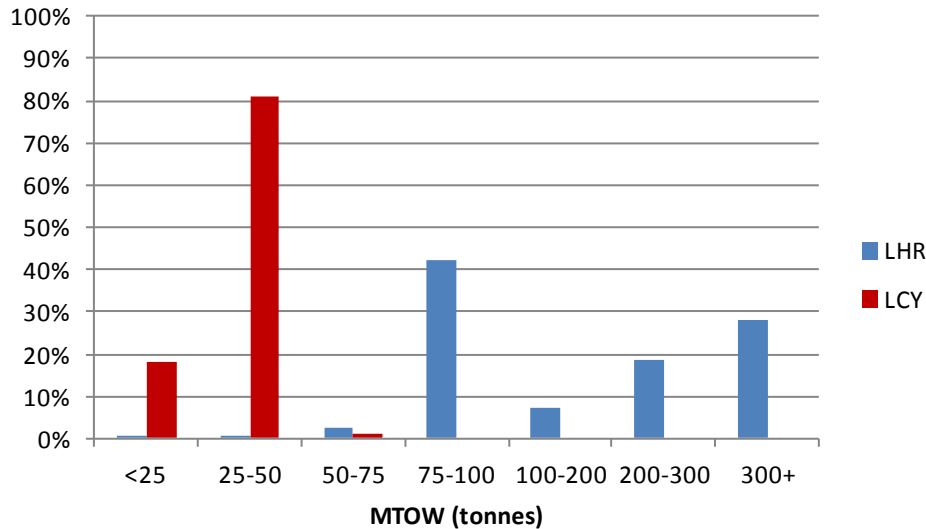
¹⁴⁴ Source: VAA, [3<].

¹⁴⁵ See: http://www.heathrowairport.com/static/Heathrow/Downloads/PDF/a-new-approach_LHR.pdf p. 11.

¹⁴⁶ London City Airport Limited, Permitted aircraft, available at: <http://www.londoncityairport.com/AboutAndCorporate/page/AirlinePartnersFacilities> (accessed 11 July 2013).

employed by airlines at Heathrow have capacity in excess of 100 seats.¹⁴⁷
The difference in operating fleets is illustrated in Figure D.11 below.

Figure D.11: Proportion of passengers by maximum takeoff weight of aircraft arrived and departed at London airports in 2012



Source: CAA analysis

D252 According to the chart, less than three per cent of passengers using Heathrow fly on aircraft that are similar to those on which passengers fly from London City. It also shows that the other passengers at the other London airport fly on similarly size aircraft.

D253 Luton has a runway of 2,160 meters in length and over 95 per cent of its traffic is currently narrow bodied aircraft. Although this means that it can compete with around 40 per cent of current airline traffic at Heathrow, it may not be suitable for the requirement of both long-haul and short-haul operations. London Luton Airport Operations Limited (LLAOL) told the CAA that:

The [Luton] runway of approximately 2 km in length largely precludes long-haul traffic from operating.¹⁴⁸ The model is based on high frequency; short sector (mostly 2 hours and a couple of 5/6 hours).

D254 Additionally, with respect to Luton:¹⁴⁹

¹⁴⁷ BA's Cityflyer fleet from London City Airport consists of Embraer 170 and 190 aircraft with 76 to 98 seats. BA's Heathrow operation flies the A320 family of aircraft up to the A380 with 469 seats. http://www.britishairways.com/travel/bafleet/public/en_gb# (accessed 8 October 2013).

¹⁴⁸ Source: LLAOL. Luton has since stated that aircraft technology has improved recently. New aircraft with shorter takeoff distances, such as the B787, could potentially operate at Luton.

¹⁴⁹ CAA, STAL Minded to consultation, Annex 4, paragraphs 3.29.

- It is likely to have sufficient capacity for inbound aircraft to substitute to Luton in the morning peak period;
 - There is insufficient capacity for the substitution of based aircraft from Heathrow due to binding stand capacity constraints.
 - It is near terminal capacity at peak times.
- D255 It is unlikely that Southend would be a substitute for a sufficient proportion of the operators at Heathrow. With a runway of less than 2,000 meters it suffers from the same issues as Luton but may be even more limited in the aircraft for which it can cater. For example, the airport operator at Southend has noted that it can only take narrow bodied aircraft up to the size of a B757; this includes most of the A320 and B737 families.¹⁵⁰ Ryanair has indicated that it cannot operate its fleet from Southend while easyJet appears to operating only the smaller A319s from the airport and not its larger A320s.¹⁵¹
- D256 As Gatwick has a runway of 3,316 meters, it is possible for the majority of commercial aircraft to land and take off from its runway. In addition, there appears to be capacity at Gatwick during the off-peak period and that there are no capacity issue with respect to the terminal or aircraft stands at Gatwick. However, there appears to be very little availability at Gatwick during the early morning period to accommodate additional base aircraft.¹⁵²
- D257 The lack of capacity in the morning peak at Gatwick may limit the ability for some short-haul operations from Heathrow to switch to Gatwick, as they require access throughout the day. This may also affect the ability of airlines serving certain long-haul destinations, such as early flights from North America, to move from Heathrow to Gatwick.
- D258 However, spare capacity at Gatwick during the off-peak periods is likely to allow GAL to provide services to some operators, especially those flying long-haul from China, Japan and South Korea. Given the significant presence of long-haul traffic at Heathrow, it may be possible for sufficient routes for certain destination to switch to Gatwick to take advantage of its spare off-peak capacity.

¹⁵⁰ London Southend Airport Company Limited, <http://www.southendairport.com/airport-facilities/operational-information/aviation-services/aircraft-noise-restriction-amp-maximum-size/> (accessed 13 November 2013).

¹⁵¹ Ryanair, Ryanair's reply to the CAA's 'minded-to' decision on STAL's market power, section 2, paragraph 9.

¹⁵² CAA, STAL Minded to consultation, Annex 4, paragraphs 3.50 to 3.51.

- D259 Stansted has a runway that is 3,048 meters long and 46 meters wide¹⁵³ and it is therefore possible for the majority of commercial aircraft to land and take off from its runway. Stansted is also relatively unconstrained in its ability to accept new services. Given the infrastructure at Stansted and its current spare capacity¹⁵⁴, the CAA considers that it is likely that airlines from a range of different business models would be able to substitute to it. Under new ownership separated from its former owner BAA, the airport operator of Stansted will also have a direct incentive to compete for new traffic.
- D260 In summary, there are a number of airports which have suitable infrastructure to compete with the facilities that HAL offers at Heathrow, notably the domestic airports Gatwick and Stansted. Given the current capacity constraints at both these airports it is also likely that some services could switch away from Heathrow. As a result, in the event of a 5 to 10 per cent price increase by HAL, both GAL and STAL could readily supply airlines with facilities to support their operations.
- D261 London City, Luton, and Southend do not, however, presently have the requisite infrastructure to compete across a sufficient range of aircraft. Additionally, capacity at Luton is a further limiting factor. As a result, in the event of a 5 to 10 per cent price increase by HAL, the CAA does not consider that London City, Luton, and/or Southend could, within an appropriate timescale, alter their facilities to be an alternative supplier for airlines operating at Heathrow.

Conclusion on geographic markets

- D262 Both the supply side and passenger analyses suggest that there is level of substitutability between all the London airports, especially those with sufficient infrastructure to compete over the aircraft in the range of 75 to 100 tonnes maximum takeoff weight. In addition, capacity is, in general, tight across the London airports, although at Stansted there is sufficient capacity that could allow services to be easily switched from Heathrow.
- D263 However, demand side analysis shows the product that HAL offers at Heathrow to be highly differentiated from that of the other London airports. In particular, evidence presented by HAL shows that the demand it faces is distinct from the demand faced by GAL at Gatwick. For example, HAL contends strongly that its demand is more akin to that of other European hubs with which it considers it competes. Although there

¹⁵³ STAL, <http://www.stanstedairport.com/about-us/stansted-facts-and-figures> (accessed 15 October 2013).

¹⁵⁴ CAA, STAL Minded to consultation, Annex 4, paragraphs 2.35 to 2.41.

is some level of competition between HAL and the other European hubs for the purposes of this determination, the level of competition does not seem to be sufficient to widen the market.

- D264 Evidence from airlines also suggests a differentiated product at Heathrow, due to its brand and hub status. For example, the airlines demonstrated to the CAA a clear preference for operations from Heathrow, with a number stating superior performance of routes in a number of areas and an expectation that if they could switch from Gatwick to Heathrow they would. This is supported by the evidence of observed airline switching between airports.
- D265 Based on the evidence outlined above, it is therefore unlikely that a carrier operating at Heathrow would switch sufficient volume to make a SSNIP by HAL unprofitable. The CAA therefore considers that Heathrow is likely to be in a market by itself.

Section 3.4: Temporal markets

- D266 In the Consultation, the CAA considered it was not appropriate to segment the market by time of day or season.¹⁵⁵ While the declared capacity at Heathrow varied with both the time of day and the season¹⁵⁶, these changes did not seem to affect the inherent competitive structure of the market between the seasons to the extent that the analysis would benefit from segmenting the market in this way. The CAA also noted that it had not seen any evidence to suggest that passengers become more price-sensitive between seasons.
- D267 The CAA received no further representations on its intention not to segment the market by time of day or season. It therefore concludes that it would be inappropriate to segment the market by time of day or season.

Section 4: CAA's conclusion on market definition

- D268 The CAA considers that there is a single market for the provision of airport operation services to airlines at Heathrow; this market is limited to the services provided to airlines at Heathrow. The particular services provided at Heathrow consists of at least the following airport operation services:
- the use of the runway and taxiways;
 - aerodrome ATC;

¹⁵⁵ The Consultation, paragraph 4.166 to 4.172.

¹⁵⁶ Source: HAL, [3<].

- aircraft parking;
- the provision of access and infrastructure needed for the provision of other airside and landside groundhandling services;
- the provision of facilities for check-in;
- baggage handling;
- security screening;
- holding passenger facilities;
- airline staff processing facilities;
- passenger transit facilities;
- cargo processing facilities;
- premium passenger facilities; and
- integrated transfer facilities.

D269 In coming to this view, the CAA notes that, with respect to the product market, the predominant airline business model at Heathrow is FSC. In addition, the CAA does not consider it necessary to define a separate market for cargo operations at Heathrow.

D270 With respect to the geographic market, there is insufficient evidence to widen the market to include alternative hub airports. Also the CAA does not consider that other domestic airports, even where similar facilities are available (such as at Gatwick and Stansted), provide a substitute for the service offered at Heathrow. This is driven by the superior nature of the HAL product and the lack of observed switching away from Heathrow.