Chris Smith Aviation Consultancy Limited

Biggin Hill Airport: Extended Opening Hours

London Borough of Bromley

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Contents

1 Introduction

Purpose

1.1 CSACL was appointed by the London Borough of Bromley (LBB) to advise on the request made by London Biggin Hill Airport Ltd. (LBHA) to vary its lease in relation to the opening hours of the airport: LBB owns the airport but in 1994 granted a 125 year lease to BHAL for its operation. CSACL was asked to review issues associated with the potential payment of additional sums to LBB in recognition of the increase in disturbance that would be caused to some residents of the Borough by an extension of opening hours.

Background to Biggin Hill Airport

1.2 The lease granted to LBHA allows the airport to handle up to 125,000 aircraft movements each year, although in 2014 operations were just under 45,500 movements. This represents a significant reduction from the levels of 80,000 to 90,000 per annum during the first ten years of the lease, albeit three quarters of the movements then were aero-club flights.

1.3 The lease also specifies the operating hours of the airport, and these vary between weekdays, Saturdays and Sundays. There is also some dispensation for aircraft which are normally based at Biggin Hill:

Table 1.1: Current Opening Hours London Biggin Hill Airport

Day of Week	Opening Hours	Comments
Monday to Friday	07:30 to 21:00	Aircraft normally based at the airport may depart from 06:30, and may land up until 22:00
Saturday, Sunday	09:00 to 20:00	Three movements permitted between 08:15 and 09:00 for a scheduled service to France
Public Holidays	09:00 to 20:00	As Saturday

1.4 The annual Lease payment to LBB has two components:

- An annual index-linked base rent (£89,444 in 2014/15); and
- The higher of the amount by which 3% of turnover (net of fuel sales) or 12.5% of net profits exceeds the base rent (£119,084 in 2014/15).

Contents

1.5 Following an Executive Summary (Chapter 2), there is a brief description of the Business Aviation segment (Chapter 3). The report then considers the proposals for extended hours put forward by LBHA, and examines the commercial aspects of a Supplementary Community Payment.

2 Summary

The Business Aviation Market

2.1 The level of Business Aviation movements in the London area has recovered from the trough seen after the 2008 financial crisis, but is still below the peak of 2007.

2.2 The five most important airports in the London area for Business Aviation are London Luton, Farnborough, Biggin Hill, London City and Northolt. The major commercial airports of Heathrow and Gatwick handle minimal numbers of Business Aviation flights. Although the numbers are greater at Stansted, it is still a minor participant in the market and this role is likely to diminish over time as commercial operations increase. Southend Airport also participates in the Business Aviation market and offers further competition, particularly as it is open 24 hours a day.

2.3 The two busiest Business Aviation airports (viz. London Luton and Farnborough) saw some increase in aircraft movements in 2014, but movement levels at Biggin Hill fell in both 2013 and 2014 after the Olympics. There may well be increasing difficulties for Business Aviation to gain access to both London Luton and London City thereby driving more activity to the other airports, but this is likely to be in the longer term and it may be a decade before Biggin Hill benefits from a material number of Business Aviation movements unable to use the two commercial airports. The overall growth of Business Aviation activity in the London area does not appear strong so that individual airports may need to increase market share to grow their business.

2.4 London City seems the most expensive airport for Business Aviation, and London Luton the cheapest. Biggin Hill is probably slightly more expensive for users than Farnborough, but cheaper than Northolt. BHAL has a lower turnover than Farnborough, and is materially less profitable.

2.5 There is competition for the Business Aviation market in the London area. Biggin Hill offers a reasonably priced product with an average level of accessibility in terms of both proximity to central London and its opening hours.

2.6 The Business Aviation market is small and in operational respects quite heterogeneous. These is also a limited availability of statistics and financial information about the sector. These problems mean that the application of many aspects of quantitative analysis that inherently rely on 'average' or 'median' reactions and behaviours may be less valid and/or easy.

Extended Opening Hours Proposals

2.7 LBHA has applied for a relatively modest extension to operating hours which would open limited new markets for the airport. LBHA views the extension as providing useful flexibility for its clients rather than a feature that they would use regularly. Consequently, the number of additional movements in the extended hours is expected to be relatively small.

2.8 LBHA would incur additional operating costs if opening hours were to be extended. Additionally, it has agreed to finance a Noise Action Plan estimated to cost some £3.1 million over the next 15 years, considerably enhanced from initial proposals. At the same time, irrespective of the outcome of discussions on Extended Hours, it has a capital plan for some £25 million over the next 15 years, with some of the projects being essential for the airport's continued operation.

2.9 Overall, there is commercial risk for LBHA in seeking the extension of its operating hours, as it would be committed to increased expenditure without a guaranteed increase in demand. LBHA is planning some increase in its airport charges to finance its different investment needs, and the reaction of Business Aviation users to these increases cannot be predicted with complete certainty.

2.10 Biggin Hill exists in a very competitive market serving the needs of the Business Aviation community in the London area, and while extended opening hours would certainly improve its attractiveness, it would by no means place the airport as the clear first choice airport for Business Aviation users in the London area.

2.11 The commercial environment is challenging and LBB should be cautious about placing excessive financial pressure on a major component of the local economy and a material contributor to the Authority's revenue budget.

2.12 It would be reasonable, therefore, for LBB to accept the Noise Action Plan, as it meets the mitigation requirements associated with the application, subject to:

- The conditions identified by Cole Jarman Consultants in its final report to the Council dated 3 September 2015;
- LBHA agreeing to meet LBB's legitimate and reasonable costs associated with LBB's on-going monitoring of the Noise Action Plan (estimated by LBB to cost c. £50,000 per annum); and
- Any penalties incurred by aircraft operators as a result of improved monitoring of aircraft flight paths (tracks) and other noise violations to be distributed to the community on the basis of decisions made by an independent committee appointed for the task, consistent with normal practice at UK airports.

2.13 In view of the legal position on a Supplementary Community Payment and the uses to which it might be put, under current proposals LBHA would be contributing greater sums to the Noise Action Plan, which are equivalent to a payment of £190 per additional movement had the costs of the Noise Action Plan remained unchanged. This would be an improvement from the Payment averaging £100 per additional movement originally discussed.

2.14 As with all airports, the profitability of LBHA would be improved with greater activity allowing the high fixed costs of operation to be spread over more users. LBB should encourage LBHA to make greater use of its facilities from existing and new segments of demand, during both the proposed extended periods and its existing hours of operation within acceptable environmental limits. In this way the financial contribution of LBHA to LBB's income stream and of the airport more generally to the local economy could be increased.

3 Business Aviation

Introduction

3.1 This chapter gives a basic description of Business Aviation, and provides information on the key airports in the London area serving the Business Aviation industry. This outline is intended to give the information necessary for a better appreciation of the request made by LBHA and should not be regarded as a comprehensive assessment of the segment.

Nature of Business Aviation

3.2 The term 'Business Aviation' is generally interpreted as referring to aircraft operations involving relative small number of passengers. The aircraft operations are specially tailored to meet the needs of each group of passengers. The operation may be by aircraft owned by an organisation ('Corporate' aircraft), high net-worth individuals ('Private' aircraft), or specialist companies that charter the aircraft as needed to private groups or businesses ('Air Taxi'). Operations by fractional ownership firms (e.g. NetJets), where several individuals or companies buys shares in an aircraft in exchange for an annual amount of flying, also fall within this category.

3.3 Aircraft in this segment of the market range from turbo-props with perhaps half a dozen seats, up to Boeing B737 and Airbus A319 size aircraft often fitted out to a very high standard sometimes with bedrooms (and also bathrooms) and able to carry perhaps 30 passengers (rather than the normal 150+). The bulk of the operations though are with twin-engine jets carrying 20 or so passengers in comfortable though not necessarily luxurious surroundings. Many of the types have the capability to fly intercontinentally non-stop.

3.4 Reasons for using Business Aviation are typically time-savings over standard scheduled flights; greater comfort and exclusivity on the ground (including the avoidance of mixing with the general public for celebrity travellers); more secure journeys for those worried about kidnap or terrorist threats; and the ability to reach obscure destinations more easily or visit more than one location in the same day. For some companies, Business Aviation provides an ability to 'shuttle' employees between different sites very efficiently (e.g. BAE Systems has daily shuttles between Farnborough and Chester and other plants).

3.5 The nature of the flights conducted by Business Aviation aircraft is such that there are often long periods of inactivity, while they await the return flight of their passengers. It may often be financially advantageous to fly these aircraft empty to other airports to then perform other passenger-carrying flights. Such empty flights are generally referred to as 'positioning' flights, and are believed to represent some 40% of all Business Aviation flights.

3.6 Ground arrangements are normally handled by FBOs, Fixed Base Operators. An FBO will provide a comfortable waiting area, to at least airline business class lounge standard, personalised check-in and baggage handling and transport to the aircraft door, sometimes without even passing through the terminal area.

3.7 The precise size of the Business Aviation market is difficult to determine, certainly in relation to the number of passengers it carries. Many of the airports or airfields used do not report activity to regulatory authorities in the same way as airports handling commercial (airline) operations are required to. For example, in the London area, while Biggin Hill does provide aircraft movement statistics to the UK Civil Aviation Authority (CAA), Farnborough and Northolt do not, and London Luton and London City only do so as part of their reporting of normal commercial operations.

3.8 The most comprehensive data on Business Aviation comes from Eurocontrol, the organisation which co-ordinates air traffic control over European airspace. Some of these statistics are published on a regular basis by the European Business Aviation Association (EBAA), including the busiest airports in Europe for this segment (Table 3.1). As may be seen, the level of Business Aviation activity is low, with only a handful of departures each hour, even at the busiest airports.

Table 3.1: Europe's Busiest Business Aviation Airports, 2014

Airport	Average Daily Departures
Paris Le Bourget	65.0
Geneva	45.7
London Luton	35.0
Nice	39.8
Zurich	28.5
Farnborough	28.4
Milan Linate	26.6
Vienna	20.1
Rome Ciampino	22.4
Munich	17.9

Source: EBAA Traffic Tracker Europe December 2014

3.9 The EBAA statistics also show the busiest country pairs for Business Aviation. In 2014, the eight busiest 'pairs' were all domestic, and included flights within the UK as the third busiest after domestic operations within France and Germany. In 2008, some 45% of departures from UK airports were to UK domestic destinations.

Business Aviation Airports in the London Area

3.10 Although the major commercial airports of Heathrow, Gatwick and Stansted do handle some Business Aviation operations, they are very few, certainly at the first two and only about 5% of flights at Stansted (and likely to decrease with growing commercial pressure there in the coming years). The bulk of Business Aviation activity in the London Area is handled by five airports: London Luton, Farnborough, Biggin Hill, Northolt and London City. Indeed, it was these airports that were investigated in more detail in a study of the segment by the CAA published in 2011. London Oxford was not considered in this grouping, perhaps because of distance from London and perhaps because of scale of activity there.

3.11 Only two of these five London area airports serving Business Aviation feature in Table 3.1. Partial but historic data for 2008 are available on all five airports, in the one-off study prepared by the CAA. The data in this study are given as daily average movements. In order to provide some more up-to-date data, as a first step, the 2008 data given in the CAA study has been compared to the data reported in CAA statistics in that year for Air Taxi operations and Business Aviation[1] at the three airports that do report activity to the CAA (Table 3.2) and from Farnborough's Noise Action Plan.

Table 3.2: Business Aviation Activity at London Area Airports in 2008

Airport	2008	2008	2008
	Daily departures	Annual Derived	Annual Reported
London Luton	38.1	27,810	25,130
Farnborough	29.4	21,460	27,946
Biggin Hill	17.2	12,560	13,970
London City	13.2	9,640	6,475
Northolt	9.5	6,940	-

Source: UK CAA report on Business Aviation (CAP 796), CAA 2008 Annual Airport Statistics, and TAG Farnborough Airport Noise Action Plan 2012

3.12 It may be seen that for the two commercial airports (i.e. Luton and City), the reported figures are lower than the derived figures. This is possibly because positioning flights have not been included in the reported total (since it is not possible to determine their division between airline and Air Taxi operations) or that the survey data do not include all Business Aviation movements. The self-reported annual data for Farnborough also shows a similar picture. The position is reversed though for Biggin Hill, which reported more air taxi and Business Aviation movements than were derived from the survey data: indeed, if positioning flights were included the reported total would be 14,439, some 15% higher than in the survey. The CAA survey does though note that there are other (unspecified) movements at Biggin Hill which scale to an annual level of 14,600. This provides some confidence in the consistency between the survey and annual statistics, and allows CAA statistics for 2014 to be used as a guide of Business Aviation activity at three London airports (Table 3.3). For convenience, Table 3.3 also shows comparable data for 2008, as well as the movement data for Farnborough from Eurocontrol statistics. Activity was lower in 2014 than in 2008.

[1] CAA Airport Statistics report Air Taxi and Business Aviation as separate categories

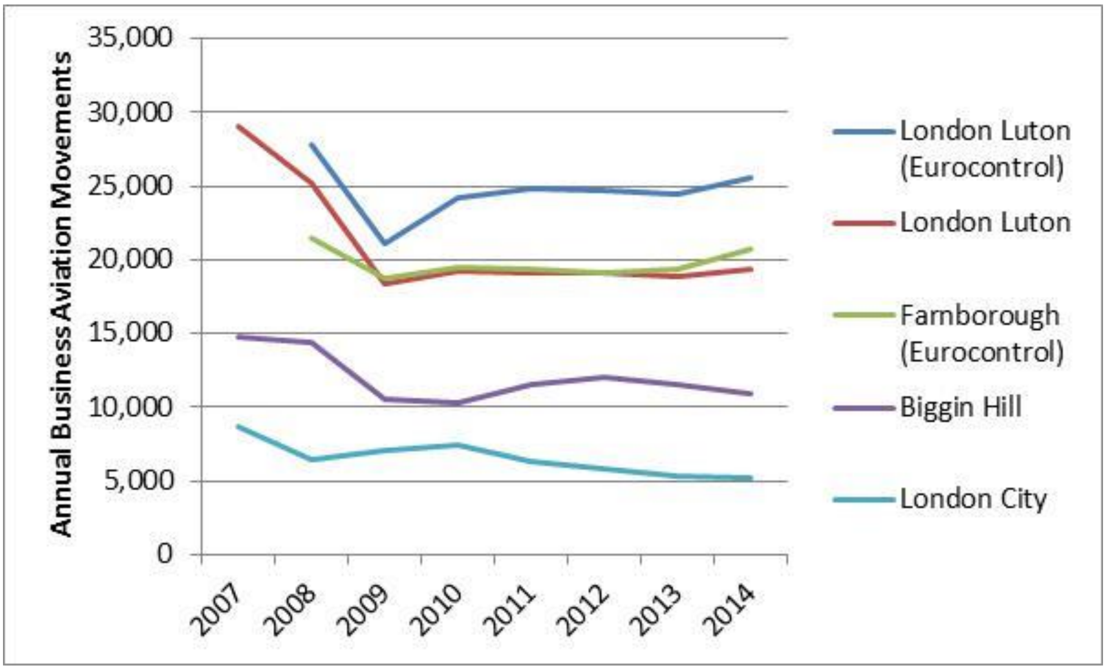
Table 3.3: Business Aviation Activity at London Area Airports in 2008 and 2014

Airport	2008	2014
London Luton (Eurocontrol)	27,813	25,550
London Luton	25,130	19,398
Farnborough (Eurocontrol)	21,462	20,732
Biggin Hill	14,439	10,953
London City	6,475	5,169

Source: EBAA and CAA Airport Statistics

3.13 In fact, 2007 was the high-water mark for Business Aviation in the London area, and demand had already begun to fall in 2008 (Figure 3.1). The financial crisis which developed in that year led to a significant further reduction in activity. While there has been some recovery since 2009, in 2014 flight volumes were still below historic highs.

Figure 3.1: Development of Business Aviation Movements at Selected London Area Airports



Source: EBAA Traffic (from Eurocontrol) and UK CAA Airport Statistics

3.14 It may be appreciated that Business Aviation in the London area is not obviously growing strongly, although there appears to have been a slight upswing in 2014 at both London Luton and Farnborough.

London Business Aviation Airports

London Luton Airport

3.15 London Luton Airport is the busiest Business Aviation airport in the London area. It is also one of the five commercial airports serving the capital. Its site is quite constrained with very limited space for material expansion, so that its Business Aviation facilities are 'squeezed' in around the needs of its commercial airline users, particularly easyJet. Despite this, the airport has three FBOs. The FBOs do though have the benefit of having landside access without having to use the very congested central road system serving the commercial passenger terminal.

3.16 Although it is open 24 hours a day, the airport is schedule co-ordinated and under the terms of EC Regulation 793/2004, and all aircraft movements legally require a slot before they may operate. The initial allocation of slots is done twice a year, some five months before the start of the air transport industry's winter and summer seasons. Clearly, for most Business Aviation operations such advance planning is not feasible, so Business Aviation operators must operate with whatever slots are still available when they know their requirements. As Luton becomes busier, the availability of acceptable slot timings will reduce and London Luton will become less attractive for resident Business Aviation operators. In practice, though, this is likely to be a slowly developing trend since it is the early morning departure slots from 06:00 to around 08:00 that are in shortest supply, and these are not always the most desired take-off times for Business Aviation users.

3.17 As a major base for Low Cost Carriers (LCCs), London Luton tends to have price agreements with individual airline users. Published schedules of charges for operators without such agreements, indicated (in 2013) a minimum landing charge of £180, with aircraft over some 36 tonnes of MTOW (Maximum Take-Off Weight) paying an additional £1.75 per tonne over this. Strangely, charges for night operations (23:00 to 06:00) are cheaper, at £129 per movement plus £1.43 per tonne.

Farnborough

3.18 Farnborough is almost exclusively a Business Aviation airport with modern facilities designed specifically for this segment. It has a 2,000 metre runway which is adequate for aircraft up to the Boeing Business Jet (based on the commercial B737), and can support non-stop transatlantic operations. The airport operator, TAG, is also the only FBO at the airport. As it is only a few miles from the M3 motorway, surface access to London is reasonably good. Corporate and state B737s and A319s from the Gulf states are regular users of the airport.

3.19 Farnborough is open between 07:00 and 22:00 every weekday, and between 08:00 and 20:00 at weekends and on public holidays. The number of aircraft movements is restricted, with the annual number rising to a limit of 50,000 movements in 2019. Of these, no more than 8,890 may be at weekends.

3.20 Farnborough does not publish details of its landing charges or FBO fees. Its latest filed annual accounts for 2013 indicates that the average landing charge was £489 per movement (i.e. £978 per landing), and a comment associated with this implies that landing fees are weight-related and higher at weekends.

3.21 In 2013, TAG Farnborough Airport Limited reported an operating profit of £12.9 million, and a post-tax profit of £7.9 million on turnover of £53.9 million. Much of the turnover is likely to relate the sale of fuel, and cost of sales was £34.5 million. The operating margin (defined by TAG as operating profit as a percentage of turnover) was 23.9%. The company is a subsidiary of Farnborough Airport Holdings Limited, and Directors' remuneration is taken by the ultimate parent company.

London City

3.22 London City, like Luton, is a commercial airport, drawing significant numbers of passengers from Canary Wharf. It has one of the shorter runways in the London area at some 1,500 m. It also has steep approaches for aircraft to avoid obstacles which requires aircraft to be specifically approved by the CAA before being allowed to operate to the airport. The approved list does though include many popular types of Business Aviation aircraft. The airport owner provides the only FBO facility at London City, The Jet Centre.

3.23 The airport is also slot co-ordinated like Luton, and the operating environment for Business Aviation is likely to deteriorate over time, particularly as there is also an annual limit on the number of aircraft movements allowed by the planning permission granted. A recent planning application to provide additional facilities for commercial operations (with the same number of annual aircraft movements) forecast that Business Aviation movements would fall from a level of 5,700 in 2012[2] to some 3,900 by 2023. However, Business Aviation movements were forecast to increase to 9,000 per annum in 2023 if the development did not go ahead. Although the application was initially approved by the London Borough of Newham in February 2015, the London Mayor instructed the Council to reverse this decision. London City Airport has appealed this intervention and the matter will go to a Planning Inquiry in 2016.

3.24 London City has limited opening times, particularly at weekends. On weekdays, it is open from 06:30 to 22:30[3], and while on Saturday, it also opens at 06:30, it closes at 13:00[4]. On Sunday, it does not open until 12:00 (noon) and closes at 22:30[3]. These restrictions are imposed for noise limitation reasons.

3.25 London City has a reputation for having high airport charges. Business Aviation users are charged an all inclusive tariff covering landing and parking charge, handling fees and for passengers' use of the Jet Centre. There are three different tariffs for smaller aircraft (£1,995 per operation); for medium sized aircraft of about 20 tonnes Maximum Take-Off Weight (MTOW) (£2,260), and for the largest aircraft (£2,960). Depending on the time of day, the normal commercial airline landing charge would generally be no more 30% to 40% of these inclusive tariffs.

Northolt

3.26 Northolt is an RAF base owned by the Ministry of Defence. The Business Aviation services (FBO) are provided by the Jet Centre, which is owned by London City Airport. The runway at some 1,684 metres, is adequate for most Business Aviation operations. There is

[2] LCY Master Plan: Need Statement of London City Airport
[3] The Jet Centre closes at 21:30
[4] 12:30 for the Jet Centre

though some controversy that the MoD ownership allows the airport to function to military and not civilian standards, giving Northolt some advantage. Movements are limited to 12,000 aircraft operations each year, increased recently from 7,000 per annum. Adjacent to the A40, Northolt also has good access to west and central London.

3.27 Northolt is open for civil operations from 08:00 to 20:00 on weekdays; between 08:00 and 15:00 on Saturdays (and public holidays falling on a Friday); and from 12:00 until 19:00 on Sundays (and Monday public holidays). Flights at weekends are subject to a 75% surcharge to the weekday charge. Operation outside these hours may be permitted by the RAF Station Commander, and are subject to a surcharge of 150% of normal fees.

3.28 Landing fees payable to the RAF vary with aircraft weight but are approximately £42.50 per tonne for a weekday operation. Parking charges are in addition to this and again vary with aircraft weight. For a 20 tonne Business Aviation jet, the landing charge would be £845 (with a weekend surcharge of £634 and an out of hours surcharge of £1,268), plus a parking charge of £20 per hour after two hours. Various aircraft handling charges could apply depending on additional services used.

3.29 Passenger handling provided by the FBO is extra and also charged on an aircraft weight-basis with, for example, an aircraft of 20 tonnes being charged £380 plus a security fee of £75 for up to six passengers (plus £10 per extra passenger). There is also a 100% surcharge for operations at the weekend or before 8 am or after 8 pm.

Biggin Hill Airport

3.30 Biggin Hill Airport is operated under lease by London Biggin Hill Airport Limited (LBHA), and has one operational runway for use by Business Aviation aircraft. This is of sufficient length to allow most aircraft to operate from there without payload or range restrictions. Transatlantic flights can operate non-stop from there. LBHA also acts as an FBO, although there are two other FBOs at the airport. The LBHA facility is perhaps marginally better located in relation to both the runway and surface access to central London.

3.31 LBHA publishes a full schedule of its landing, parking and handling charges.

3.32 The latest filed annual accounts for LBHA for the year to 31 March 2014 show an operating profit of £0.8 million, and a post-tax profit of £0.6 million on turnover of £12.4 million. Cost of sales was £5.6 million. The operating margin may be calculated using the same definition as applied at Farnborough as 6.5%. LBHA is thus a much smaller and less profitable company than the operator of Farnborough. This could be a consequence of the other FBOs being allowed to sell fuel.

3.33 Although its profitability is low, LBHA has identified a substantial need for capital investment over the next 15 years of almost £25 million. While some areas are essential for the continued operation of the airport (e.g. runway resurfacing) and some are linked to the improvement of the noise environment (e.g. introduction of new Instrument Approach Procedures on Runway 03), others are more discretionary in nature (e.g. an hotel development). The replacement of the terminal building is likely to become an increasing commercial necessity to remain competitive with both the other FBOs at the airport and with other Business Aviation airports serving the London area.

Table 3.4: LBHA Proposed Capital Investment, 2015 to 2030

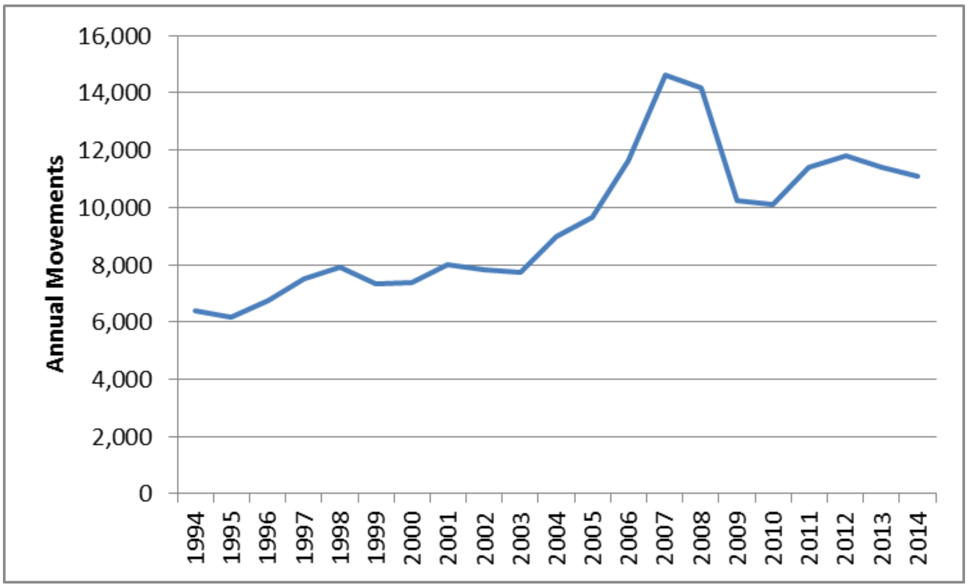
Investment Items	Cost
Runway 03 Instrument Approach Procedures: design installation, implementation	£280,000
Runway 03 Instrument Approach Procedures: Approach Lighting System	£380,000
Taxiway & Taxiway Lighting Improvements	£3,602,000
New Taxiway Link (Noise reduction at SW end)	£338,000
Runway Overlay and Upgrades (inc. new lighting system by 2020)	£5,644,000
Replacement of Terminal Building (expected by 2020)	£2,500,000*
Construct Additional Hangar & Ramp Spaces	£8,000,000*
Hotel Partnership Investment	£4,000,000*
Anticipated Total Capital Expenditure	£24,744,000

* Initial estimate – not yet fully costed

Source: LBHA

3.34 LBHA reported 11,070 Business Aviation movements in 2014, slightly higher than the figure shown in the CAA's statistics. These latter statistics also showed some 27,000 movements by aero-club and private fliers. LBHA management has indicated that 56 Business Aviation jets are based at the airport, but that about 50% of its movements are generated by visiting aircraft. Aero-club movements have declined significantly over the last 20 years, while Business Aviation movements fell with the 2008 financial crisis, and after a boost in 2012 during the Olympic period have fallen subsequently.

Figure 3.2: Development of Business Aviation Movements at Biggin Hill



Source: LBHA

3.35 The opening hours, both current and potentially in the future, are discussed in more detail in the following chapter.

Comparison of Business Aviation Airports in London Area

3.36 It may be appreciated that there are both similarities and differences between these five airports serving the Business Aviation segment in the London Area. Some high level comparisons are given in the following paragraphs.

Table 3.5: Accessibility of Business Aviation Airports

Airport	Average Journey Time to Square Mile by Car (mins)	Opening Hours (Weekdays)	Total Weekend Hours
London Luton	56 mins.	24 hours	48 hours
Farnborough	65 mins.	07:00 to 22:00	24 hours
Biggin Hill	48 mins.	06:30 to 22:00*	22 hours
London City	22 mins.	06:30 to 21:30	15.5 hours
Northolt	63 mins.	08:00 to 20:00	14 hours

* Based aircraft

Source: Corporatejetinvestor website, airport websites

3.37 Price comparisons between the airports are difficult to make because (a) not all tariffs at each airport are published, and (b) the price will generally depend on the aircraft type and the duration of its stay at the airport. A website aimed at the Business Aviation community published a comparison in 2013 based on requesting quotations from the airports surveyed. The operation considered was for a Bombardier Global Express jet, a very long range and relatively heavy aircraft (some 40 tonnes MTOW), and assumed 24 hours parking at the airport (Table 3.6).

Table 3.6: Price Comparison of Global Express Operation (2013)

Airport	Landing and Handling	Parking	Total
London Luton	£745	£874	£1,619
Farnborough	£1,160	£680	£1,840
Biggin Hill	£1,710	£300	£2,010
London City	£1,880	£2,370	£4,250

Source: Corporatejetinvestor website

3.38 Unfortunately, Northolt was not included in the airports surveyed. Table 3.7 below has been developed for those airports for which tariffs are available. It is based on a weekday operation by a 20 tonne corporate jet (a typical mid-size weight of several of the most popular variants) with parking of 10 hours.

Table 3.7: Price Comparison 20 Tonne Business Jet (2015)

Airport	Landing	Parking	Handling	Total
London Luton	£204	£763	n/a	n/a
Farnborough	-	£163	£855*	£1,018
Biggin Hill	£777	£179	£236	£1,192
London City	-	£1,580	£2,260*	£3,840
Northolt	£845	£400	£411	£1,656

* Landing and handling combined

Source: Derived by CSACL from airport websites

3.39 It may be seen that on the basis of these limited comparisons, London City is more expensive than the other airports, although its high (aircraft) parking charges exaggerate the difference. London Luton is the cheapest (and also the busiest, although this does not necessarily mean that there is a correlation between these two features). Biggin Hill appears to slightly more expensive than both Luton and Farnborough, but cheaper than Northolt.

Conclusions

3.40 The level of Business Aviation movements in the London area has recovered from the trough after the 2008 financial crisis, but is still below the peak of 2007. The two busiest airports saw some increase in 2014, but movement levels at Biggin Hill fell in both 2013 and 2014 after the Olympics. There may well be increasing difficulties for Business Aviation to gain access to both London Luton and London City thereby driving more activity to the other airports, but this is likely to be in the longer term and it may be a decade before Biggin Hill benefits from a material number of Business Aviation movements unable to use the two commercial airports. The overall growth of Business Aviation activity in the London area does not appear strong so that individual airports may need to increase market share to grow their business, and this inevitably will increase price competition between them.

3.41 To the extent that there is competition for some element of the Business Aviation market in the London area, Biggin Hill offers a reasonably priced although not the cheapest product with an average level of accessibility in terms of both proximity to central London and its opening hours. It is though more expensive than Farnborough, possibly its greatest rival. It also faces substantial capital expenditure which it must fund based on a relatively weak financial performance, a competitive environment and a weakly recovering Business Aviation market.

3.42 The Business Aviation market is small and in operational respects quite heterogeneous. These is also a limited availability of statistics and financial information about the sector. These problems mean that the application of many aspects of quantitative analysis that inherently rely on 'average' or 'median' reactions and behaviours may be less valid.

4 LBHA Proposal

Introduction

4.1 This chapter reviews the proposals made by LBHA for extending the hours of operation of the airport.

Operating Hour Proposals

4.2 LBHA requested relatively modest extensions to its hours of operation. These are detailed below in Table 4.1.

Table 4.1: LBHA Initial Proposed Operating Hours

Day	Proposed Hours	Comments
Weekdays	06:30 to 23:00	Cap of 8 movements between 06:30 and 07:00, and a further cap of 8 movements between 22:00 and 23:00
Saturday	As above	As above
Sunday	08:00 to 23:00	Cap of 8 movements between 22:00 and 23:00
Public Holidays	As above	As above

N.B. The proposed weekend hours have subsequently been amended. Please see Paragraph 4.5.
Source: Original Application

4.3 Additionally, piston engine light aircraft would not be permitted before 07:00 and after 22:00, and no training flights would be permitted at weekends before 09:00 or after 17:00.

4.4 For noise evaluation purposes, LBHA's consultants, Bickerdike Allen Partners (BAP) set out its estimates of 'indicative' aircraft movements in 2030 during the extra opening hours (Table 4.2). It may be appreciated that the periods for the additional hours do not coincide precisely with those proposed. There would therefore be more additional movements if the original extended hours were agreed than are shown in this table. These data from BAP come from an annual forecast of 25,000 Business Aviation movements.

Table 4.2: Original Indicative Additional Aircraft Movements during Extended Hours, 2030

Day of Week	Time Period	Indicative 2030 Annual Movements
Monday to Friday	06:30 to 07:00	730*
Monday to Friday	22:00 to 23:00	520
Saturday	07:00 to 09:00	208
Saturday	20:00 to 23:00	312
Sunday	08:00 to 09:00	104
Sunday	20:00 to 23:00	312
Total	-	2,186

* These are not necessarily all additional movements as some may be departures by based aircraft which are already allowed
Source: BAP memos A9780-N04-DC (10 March 2015) and A9780-N03-NW (5 March 2015)

4.5 Following the original application and as a result of discussions between LBHA and LBB and their respective advisors, a Noise Action Plan has been developed. This is based on slightly shorter operating hours at the weekend than originally proposed by LBHA, with Saturday and Sunday having the same hours of operation, namely between 08:00 and 22:00, in total three and a half hours less each week than was original proposed. There have also been revisions to the forecasts of future aircraft movements, and these now extend only to 2020. Therefore, much of the analysis which follows is based on the original proposition from LBHA.

Assessment

4.6 The requested increase in operating hours is relatively modest, particularly during weekdays. For based aircraft, the request would allow slightly later return landings in the evening, as well as earlier returns in the morning when aircraft have 'night-stopped' away from Biggin Hill, possibly elsewhere in the UK but more likely in Europe or further afield in the Middle East or North America. While based operators could also benefit from later departures in the evening, such operations might be limited by night curfews at the destination airport, a problem exacerbated by the time difference between UK and most of continental Europe. Visiting aircraft are more likely to take advantage of an ability to arrive earlier in the morning to accommodate day visits to London.

Table 4.3: Summary of Opportunities created by Extended Hours

	Morning Departures	Morning Arrivals	Evening Departures	Evening Arrivals
Normally Based Aircraft	No change	New opportunity	Allowed but to which destinations?	New opportunity
Visiting Aircraft	New opportunity	New opportunity	Allowed, but to which destinations?	New opportunity

Source: CSACL assessment

4.7 LBHA appears to consider that rather than opening new operating possibilities, the extension of opening hours would be more important in providing greater flexibility for users and increase its competitiveness relative to other London airports. LBHA also believes that the additional hours would be very important to attract various support companies to locate at Biggin Hill: three major multinational business aircraft manufacturers are interested in basing their London/Northern European service facilities at Biggin Hill. If all three located to Biggin, then approximately 50% of intended 2,300 new jobs by 2030 would be created.

4.8 As the operational rationale for extended hours is one of flexibility and opportunity, LBHA's forecasts of operations in the extra ('shoulder') hours are very modest: for example, in the first half hour of the day the indicative movements were in the original forecasts (exactly) equivalent to one additional departure and one additional landing per day by 2030. Indeed, the original indicative movements for 2030 (Table 4.2) highlight the relatively simple nature of these future projections: all the other projections for the individual periods are effectively two additional movements per hour. The difficulty of forecasting Business

Aviation so far in the future is recognised and this feature is noted not as a criticism of the projections, but rather to point out that actual movements in 2030 may well be different to those used in the noise assessment since the forecasting approach is not particularly scientific.

4.9 Extended hours as now proposed would give Biggin Hill a competitive advantage over other business aviation airports serving London, particularly Farnborough: during weekdays, Biggin Hill would be open for 1.5 hours per day more, and a total of four hours longer each weekend than Farnborough.

4.10 The proposed extension would impose additional costs on LBHA. In the main this would arise from the need to recruit additional air traffic controllers: current staff would not be legally permitted by the CAA to work longer hours on over-time. There would also be additional utility costs. The Noise Action Plan would also impose a cost burden on LBHA. The original proposals from LBHA set out a number of detailed steps that would be undertaken. Many of these steps involved consultation with users, residents, LBB and the Air Traffic Service Providers, NATS, and as such would incur additional management effort. In the main, the Noise Action Plan would involve consultation and some additional administration work. Noise monitoring was to be the responsibility of LBB, and LBHA argued that this should be funded from a Supplementary Community Payment (discussed further in Paragraph 4.12).

4.11 Overall, there is commercial risk for LBHA in seeking the extension of its operating hours, as it would be committed to increased expenditure without a guaranteed increase in demand.

4.12 LBHA also indicated in November 2014 that it would be prepared to make Supplementary Community Payments to LBB in recognition of the increase in noise that would be experienced by some residents. Specifically, it would pay £100 per movement[5] for additional flights between 06:30 and 07:00, and £200[5] per movement for flights between 22:00 and 23:00. LBHA estimated this payment would be some £43,500 in 2016, rising to £219,000 in 2030. It will be noted that these payments did not cover all the extended hour periods and hence not all the additional movements: about half of the indicative additional flights would be covered. The suggested figure was equivalent to £100 per movement for each additional movement. LBHA has suggested that total Supplementary Community Payments might have amounted to an aggregate of £1.65 million over the period to 2030[6]. Revenue is likely to be greatest in the later years of the period. The estimates are also based on the original proposed extended hours, and LBHA considers that the reduced number of hours sought would lower this figure by some 20%.

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[5] These figures have been imputed by CSACL on the basis of additional payments and additional movements in 2030, as given in LBB Notice and Agenda for the Special Council Meeting on 25 March 2015 (Vol 51, No. 6)

[6] These figures are believed to be in nominal (2014/15) terms with no discount factor applied to the cash flow.

4.13 In addition to such direct Supplementary Community Payments, LBB would also benefit from any increase in turnover or profitability as provided for in the lease, as well as additional rates from new companies attracted to the site. LBHA has estimated that this might produce revenue for LBB of £12.6 million over the period to 2030[6].

4.14 Economic benefits would also be generated: for example, BHAL estimates that eight direct jobs are created for every additional Business Aviation aircraft based at the airport.

4.15 Discussions between the two parties in 2015 have led to significant improvements in the Noise Action Plan proposed by LBHA. These improvements have been accompanied, however, by material increases in LBHA's costs to implement them. These are set out in Table 4.4. While some of these costs are annual, there would be significant investment in the early years.

Table 4.4: LBHA's Current Estimates of Implementing Noise Action Plan

Item	Cost	Comments
NMTKS purchase and installation	£250,000	15 year service life assumed
Sound Insulation Scheme (SIGS)	£225,000	£15k per annum for 15 years and beyond
Ground Noise Plan	£180,000	Noise bunds, engine running bay, additional taxiway holds, signage
NATS ATM Contracted Radar Feed	£495,000	NMTKS & higher flight paths - £33k per annum
ATM System Hardware	£110,000	Initial purchase and installation
Annual Calibration Costs	£225,000	£15k per annum
Staff Costs	£1,125,000	Tels. Dept./ATC/Noise Desk & NAP admin/Ground Services/Finance & Admin
Noise Consultants Fees	£120,000	Annual contours, 5 yearly NPR reports, Ground Noise Plan design advice
Equipment Finance Costs	£405,000	
Total Cost to LBHA	£3,135,000	Over 15 years

Source: LBHA

Assessment

4.16 It is clear that LBHA would incur a substantial increase in its operating and capital costs if it were to extend its opening hours, bearing in mind that the figures in Table 4.4 relate only to the costs of implementing and operating the Noise Action Plan: additional staff and utility costs in addition to these amounts would be needed for airport operations. It is LBHA's intention to raise additional revenue to cover these costs by increasing landing charges.

4.17 The scale of the additional charge at Biggin Hill is likely to be very small in relation to the operating costs of a Business Aviation jet which could easily be in the range of £8,000 to £10,000 per flight hour for a typical operation. However, the major issue is not the price elasticity of demand of the Business Aviation community, but rather the cross-elasticity relative to alternative airports in the London area.

4.18 The levels of the implied additional charges if limited to operations in the extended hours at Biggin Hill as noted above (Paragraph 4.11), would be modest in relation to the surcharges at Northolt, the only one of the five airports to publish its policy on out-of-hours operations. A 20 tonne jet operating in the late evening would pay £200 at Biggin Hill, but would face a surcharge of £1,268 at Northolt, in addition to the FBO surcharge. This assumes that LBHA applies either a flat charge of £200 on all operations or that the charge for a 20 tonne jet happens to be the average figure used in LBHA's offer to LBB.

4.19 The figure of £200 per movement becomes more material though when compared with Farnborough's average fee per movement of £489 (in 2013), albeit for an operation during a period when Farnborough is closed.

4.20 The key question for LBB though is whether the Business Aviation market could sustain higher charges than those evaluated by LBHA. A higher payment could probably be sustained during those hours when Biggin Hill were the only airport open and that could be used for as a diversion facility for late arriving aircraft (a role that might continue to be provided by Southend Airport which is open for 24 hours a day and levies a night surcharge to cover increased operating costs of £400 per movement for aircraft of 20 tonnes or more). A decision made in relation to a diversion is though very different to one made in relation to basing an aircraft or locating a business. Farnborough is probably the main competitor to consider in this regard given its facilities, location and likely level of charges. It is clear though that despite the gain in competitive advantage that an extension in operating hours would give Biggin Hill, it would still be far from the 'only show in town' for the Business Aviation community in the London area.

4.21 Application of standard techniques of quantitative analysis to the Business Aviation segment is very difficult given (a) the small numbers involved, (b) the very heterogeneous nature of the demand, and (c) the poor and opaque data available. In such situations, judgement becomes of considerable importance. It should be acknowledged that BHAL management is best placed to assess price sensitivity of the market and the likely behaviour of its various customers.

4.22 It would be reasonable for LBB not seek to set terms that would require LBHA to set higher charges than it has been considering: the competition between several London area airports is such that this could outweigh the advantages gained by extended hours and it is far from clear that the Business Aviation market is sufficiently robust in the short to medium term to accept higher additional charges than have been considered by LBHA. The financial performance of LBHA is not strong and it is facing substantial investment requirements in the medium term aside from that associated with an extension in hours: the airport makes, both directly and indirectly, a substantial contribution to the finances of LBB and the economy of the Borough and surrounding areas.

4.23 The original proposals made by LBHA in late 2014 were associated with costs for the Noise Action Plan which included only the Supplementary Community Payments of some £1.65 million over the next 15 years, equivalent to £100 per additional movement.

Following the discussions between LBHA and LBB and their respective advisors, these costs have now increased to £3.135 million, albeit without provision for a specific Supplementary Community Payment. This is as a result of the increase in costs of the noise monitoring system that would be used and the related costs of staff and services to support it. This higher cost would be equivalent to approximately £190 per movement in the extended period, an increase from the £100 per movement suggested in late 2014.

4.24 Furthermore, it is understood that a legal analysis by LBB and LBHA has concluded that monies from any Supplementary Community Payments may only be used for purposes that are related to the relief of the disturbance caused by the extended opening hours.

4.25 However, any penalties levied on aircraft that do not keep to prescribed landing and take-off tracks and other noise violations do need to be distributed to those affected by these deviations. It would be normal practice at UK airports for an independent committee to determine the distribution of these monies.

4.26 Additionally, it is likely that LBB would incur some additional costs associated with enhanced monitoring of the extended opening hours.

Conclusions

4.27 The requests made by LBHA for an extension of operating hours are relatively modest and would open upper relatively few additional markets, in line with the small number of additional movements forecast. The extension would though improve the attractiveness of the airport for Business Aviation movements and the many support companies upon which the segment relies. LBHA would incur substantial additional costs with this venture, including those associated with establishment of a Noise Action Plan, and as such moving to longer opening hours is a commercial risk for LBHA.

4.28 Biggin Hill exists in a very competitive market serving the needs of the Business Aviation community in the London area, and while extended opening hours would certainly improve its attractiveness, it would by no means place the airport as the clear first choice airport for Business Aviation users in the London area.

4.29 As noted in this report, the financial performance of LBHA is weaker than that of its major competitor, Farnborough. LBHA also needs to finance a £25 million capital investment programme over the next 15 years excluding the costs of extended hours. An increase in airport charges is probable, despite the competitive market in which it functions. The commercial environment is challenging and LBB should be cautious about placing excessive financial pressure on a major component of the local economy and a material contributor to the Authority's revenue budget.

4.30 It would be reasonable, therefore, for LBB to accept the Noise Action Plan, as it meets the mitigation requirements associated with the application, subject to:

- The conditions identified by Cole Jarman Consultants in its final report to the Council dated 3 September 2015;

- LBHA agreeing to meet LBB's legitimate and reasonable costs associated with LBB's on-going monitoring of the Noise Action Plan (estimated by LBB to cost c. £50,000 per annum); and

- Any penalties incurred by aircraft operators as a result of improved monitoring of aircraft flight paths (tracks) and other noise violations to be distributed to the community on the basis of decisions made by an independent committee appointed for the task, consistent with normal practice at UK airports.

4.31 In view of the legal position on a Supplementary Community Payment and the uses to which it might be put, LBHA would be contributing greater sums to the Noise Action Plan, which are equivalent to a payment of £190 per additional movement had the costs of the Noise Action Plan remained unchanged. This would be an improvement from the Payment averaging £100 per additional movement originally discussed.

4.32 As with all airports, the profitability of LBHA would be improved with greater activity allowing the high fixed costs of operation to be spread over more users. LBB should encourage LBHA to make greater use of its facilities from existing and new segments of demand, during both the proposed extended periods and its existing hours of operation within acceptable environmental limits. In this way the financial contribution of LBHA to LBB's income stream and of the airport more generally to the local economy could be increased.