

Appeal by BAA Ltd and Stansted Airport Ltd following the refusal by Uttlesford District Council of planning application UTT/0717/06/FUL

Proof of Evidence on behalf of Stop Stansted Expansion

Surface Access: Rail

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1 INTRODUCTION

1.1 Personal details

- 1.1.1 My name is John Andrew Rhodes and I appear at the Public Inquiry on behalf of Stop Stansted Expansion ('SSE') of which I am a member.

1.2 Qualifications and experience

- 1.2.1 I have a first class honours degree in Modern History from the University of Oxford in 1970. I am a Fellow of the Chartered Institute of Logistics and Transport and a Fellow of the Royal Society of Arts.
- 1.2.2 Since 1999 I have been an independent public transport consultant, specialising mainly in strategies, organisational structures and regulatory aspects of railways. From 1993-99 I was Passenger Services Director at the Office of the Rail Regulator. For the year before that, I was a senior executive at the British Railways Board, with responsibilities for business planning and the oversight of BR's internal market. I was Director General of West Yorkshire Passenger Transport Executive from 1988-92, during which time I led the PTE's successful bid for Government funding for the electrification of the local rail network.
- 1.2.3 For the earlier part of my working life I was a career civil servant, working mainly in the Departments of the Environment and Transport where my responsibilities included financial oversight of the British Railways Board. I therefore have extensive experience of the railways from the perspectives of financial sponsorship at the Department, as a purchaser of services at the PTE, as a senior executive within the industry, as a regulator of the privatised railway, as a consultant and not least as a former regular commuter on the West Anglia route.
- 1.2.4 I have also been Chairman of the Bishop's Stortford Civic Society (now the Civic Federation) from 2000 to 2007 and I am now the Vice-Chairman. I shall be appearing separately on their behalf.

2 SCOPE OF EVIDENCE

2.1 Core evidence

- 2.1.1 SSE's evidence on the surface access effects of the proposed development was originally set out in Volume 1, Chapter 10, of SSE's response to UDC in July 2006 [CD/201] and in Volume 3¹ of the SSE response to UDC [CD/203] which dealt with the additional information provided by BAA in September 2006 [CD/22].
- 2.1.2 That evidence is superseded by proofs of evidence SSE/13/a (road) and SSE/14/a (rail) and supplemented by SSE/15/a (a report from an independent consultant). These proofs all incorporate more recent information and contain further analysis.
- 2.1.3 On 12 April 2007 BAA published an Addendum to its Transport Assessment [CD/14.1]. There has been insufficient time to fully digest and analyse this document, so comments within our proofs and are somewhat cursory.
- 2.1.4 On 18 April 2007 Network Rail published a draft Route Utilisation Strategy ('RUS') for Greater Anglia [CD/312], which covers the West Anglia route. It is the most up to

¹ paras 2.8 and 2.9.

date source of objective factual information about the condition and operation of the route and likely future investment requirements. Comments on this too are limited because of the lack of time available in which to analyse it.

2.2 Further evidence

- 2.2.1 We therefore wish to reserve the right to comment further during the Inquiry once we have fully considered the implications of the Addendum and the draft RUS.

3 BAA'S PLANNING ASSUMPTIONS

3.1 BAA's forecasts and rail capacity constraints

- 3.1.1 BAA's evidence in support of its application assumes the operation of the current timetable, with a Stansted Express (STEX) train every 15 minutes and up to 1 train per hour (tph) to and from Stratford and 1 tph to and from Cambridge and points north. STEX services include intermediate stops at Bishop's Stortford and/or Harlow Town. Frequencies and stopping patterns for non-airport Cambridge services are also those in the current timetable.²
- 3.1.2 BAA has modelled increasing STEX from 8 to 12 cars for 25mppa, 35mppa and 40mppa. It assumes that train formations for non-airport services remain unchanged.³
- 3.1.3 The results indicate, on BAA's assumptions about market share, that some peak STEX services would be overloaded on all three passenger throughputs with eight car trains but increasing capacity to 12 cars would provide a surplus of seats over passengers even at 40mppa. However, non-airport Stratford slow and Cambridge services would be severely overcrowded.⁴
- 3.1.4 BAA argues that lengthening STEX trains has little impact on loadings on trains not serving the airport, an assertion which the updated assessment by BAA/Halcrow appears to confirm.⁵
- 3.1.5 BAA recognises that, in addition to the airport station, Stansted Mountfitchet station would need platform lengthening to accommodate 12 car trains, but BAA makes no mention of other stations on the route such as Broxbourne where, at present, it is not scheduled to stop.⁶ It argues that overcrowding on other services is not its problem because those trains do not call at the airport.⁷
- 3.1.6 BAA does not volunteer any funding for extending Stansted Mountfitchet station and explicitly assumes that DfT will fund the additional rolling stock to run 12 car trains.⁸

² BAA Generation 1 Environmental Statement, Vol 11 [CD/14] Paras 9.2.1 to 9.2.4.

³ Ibid.

⁴ Ibid, Figures 9.1 to 9.8 show peak loadings on some 8-car STEX trains exceeding seating capacity, but with capacity to spare on 12 car STEX trains on all three assumptions about passenger throughput. Tables 9.5 and 9.6 show *average* loadings in the 3-hour peaks on Cambridge and Stratford services ranging between 96% and 110% of seating capacity. Such high average load factors over a three hour period imply that many individual services would be grossly overcrowded.

⁵ TA Addendum, Tables 4.1 to 4.3 and para 4.2.2.

⁶ BAA Op Cit, paras 9.6.1 to 9.6.3.

⁷ Ibid, para 9.4.3 and summary on p140.

⁸ Ibid, p140.

3.1.7 The maximum capacity of the single track airport tunnel is 12 tph, so the current services are the maximum frequency which can be operated through it.⁹ In addition the rest of the Lea Valley route is operating at full capacity in the peaks, so the current timetable would not allow more frequent services to operate to other destinations. The lack of passing loops and number of flat junctions are a considerable constraint on route capacity.¹⁰ Only Liverpool Street, Tottenham Hale, Harlow Town, Bishop's Stortford, Audley End and Cambridge have platforms long enough for 12 coach trains. Since all non-airport services stop at other stations too, longer trains to those destinations would not deal with overcrowding unless they too had their platforms extended.

3.2 Shortcomings in BAA's planning assumptions

3.2.1 There are a number of flaws in BAA's claim that running longer STEX trains and altering the airport station to accommodate them is all that is needed:

- All the train loading data was based on surveys carried out before the December 2005 timetable change¹¹ and will not reflect the current state of crowding on either airport services or non-airport services. For many destinations non-airport services have suffered reduced service levels and/or extended journey times since that timetable change.
- The train loading data preceded the increased level of security at the airport with the requirement for longer check-in times. This means that previous assumptions about the peaks in airport demand falling outside the commuter peaks need to be revisited.¹²
- Performance in delivering the current timetable has been poor, and initial service cuts to reduce unreliability were only reinstated in December 2006 to restore service levels to those originally planned. Longer or overcrowded trains carrying more passengers will lead to increased station dwell times and further impede the ability of the operator to deliver the timetable.
- The relevant services should be resurveyed so that reliability and levels of crowding arising from the current timetable can properly be taken into account.¹³
- The GB origin and destination assumptions and those for transfer passengers for an enlarged airport are suspect.¹⁴
- The assumption that rail's market share will not increase is dependent on the suspect assumptions about origins and destinations.¹⁵

⁹ Network Rail Business Plan, 2006, Route 5: West Anglia, p4.

¹⁰ Ibid, p4.

¹¹ BAA, Op Cit, paras 5.5.3 and 5.5.17 imply that all the passenger surveys were carried out in 2003 and 2004. Since then there has been significant growth in airport use and in rail patronage and the December 2005 timetable will have changed the distribution of demand across services.

¹² This will apply particularly to evening peak services from London to Stansted.

¹³ The RUS provides some more up to date passenger loading data for Stansted Express services (Table 3.9 and 3.10) not on a basis which is readily comparable with that provided by BAA. The RUS load factor data also treats capacity as seating plus 'permitted' standing – generally 35% of seating capacity. Trains are only treated as overloaded if this higher definition of passengers in excess of capacity (PIXC) is exceeded for more than 20 minutes on a journey.

¹⁴ See SSE/13/a and SSE/15/a.

¹⁵ Ibid.

- Rail's modal share of passenger travel to and from the airport has been declining: 27.2% in 2001 to 25.3% in 2005.¹⁶ This application appears to have no ambition to reverse this. Indeed the BAA/Halcrow updated transport assessment appears to contemplate a further decline in rail's market share.¹⁷
- The claim that overcrowding on non-airport services is nothing to do with Stansted expansion is misleading. The projections show that over the route as a whole, seating capacity will be misallocated, with Stansted trains having more than enough to meet demand while other services will have too little. The reason for this is that the timetable as a whole is driven by the aim to provide four fast services per hour to and from the airport at regular 15 minute intervals. These services are clearly treated as 'first on the graph' for timetable planning purposes and effectively determine what other slots are available for services to other destinations which have to be fitted in around them. Both the network (very few passing places) and the stations (most not long enough for twelve coaches) are constrained, so the excess demand for non-airport services cannot be satisfied by running longer trains, and more frequent trains to other destinations could only be provided by curtailing the airport service in the peaks.
- To retain the current service pattern to the airport and provide an adequate service to other destinations, additional passing loops would need to be built between Tottenham Hale and Broxbourne (most of this was originally a four track railway and there is room to reinstate the tracks). Alternatively platforms could be lengthened so that 12 coach trains could call at all of them.¹⁸
- The assumption that the response to overcrowding on airport services would be for DfT or the train operator to fund additional rolling stock to run 12 car STEX trains is contrary to past experience. Unless prevented from doing so by franchise commitments, the first response of the train operator would be to cut out intermediate stops at Bishop's Stortford and Harlow Town thus worsening the service to those destinations.¹⁹ By 2014, 'One's' franchise will be coming to an end, and the current rolling stock will then be between 30 and 40 years old. It is not clear that 'One' is able to have enough stock regularly in service even to meet current levels of demand.
- Given the expected growth elsewhere on the Greater Anglia network it is not obvious where additional rolling stock, compatible with the infrastructure and signalling system, could be procured from to enable longer trains to be operated.²⁰
- In addition to lack of track and train capacity, handling additional passengers may raise safety questions about the adequacy of the passenger circulation areas at Liverpool Street, Tottenham Hale and Seven Sisters.²¹ It may well be the case that extra traffic from Stansted could only be contemplated when Crossrail has

¹⁶ BAA, Op Cit, Volume 11, Table 4.1.

¹⁷ TA Addendum [CD/14.1], Tables 3.1 to 3.2 and para 3.2.2.

¹⁸ The RUS examines both these options – see section 4 below.

¹⁹ British Rail removed intermediate stops from STEX services as airport traffic increased in the 1990's. It is also the policy of the airports alliance, of which BAA and National Express the owners of train operator 'One' are members, to advocate the operation of dedicated airport services.

²⁰ Network Rail Business Plan, 2006, Route 5, West Anglia, see especially 'opportunities and challenges', p8.

²¹ Ibid, p4. Although not referred to here, the passenger concourse at Liverpool Street is small and rapidly becomes congested if there is service disruption in the evening peak.

been completed, enabling Great Eastern inner suburban services to be removed from the station.

4 DRAFT ROUTE UTILISATION STRATEGY

4.1 Preliminary comments

4.1.1 The draft RUS [CD/312] appears to confirm many of our reservations expressed above about the ability of the network and the existing train timetable to support additional airport traffic simultaneously with the other growth pressures on the corridor. The following points made in the draft RUS are particularly relevant:

- *'The West Anglia Route carries a mixture of traffic types with significant variations in speed, acceleration and stopping pattern. There are serious issues with capacity because of this mix of services and stopping patterns... The two track section on the Lea Valley and the mix of trains causes a performance risk throughout much of the day.'* (para 3.7.2)
- 'Liverpool Street to Broxbourne' and 'Broxbourne to Cambridge' are identified as two of the five route sections in Greater Anglia on which the highest levels of delay occur. (para 3.8.7)
- Table 5.3 shows that by 2016, 2,900 trips in the morning peak would be 'crowded off' – i.e. that level of demand would be suppressed by overcrowding – in the morning peak on West Anglia services with the figure rising to 4,000 trips by 2021 under the 'do minimum' option. This is essentially the timetable option on which BAA has based its forecasts.
- Table 5.5 shows West Anglia outer (including Stansted Express) services rising from 3% of morning peak trains being over PIXC (passengers in excess of capacity) limits in the base year to 15% in 2016 and 19% in 2021 under the 'do minimum' option.
- Table 5.9 includes not only BAA's forecasts of airport boarders at Stansted in 2016 (which appears to be broadly consistent with the Table 9.1 projection at 35mppa in CD/14) but also a 15% higher figure supplied by the DfT, which suggests that they too may be sceptical about the quality of BAA's input data.

4.1.2 To deal with these problems Network Rail proposes two possible solutions:

- The first option ('Option 8') would involve lengthening all the shorter stations to enable Cambridge or Stansted Airport trains to be lengthened to 12 cars to call at them. This would provide enough peak capacity to maintain current average peak load factors (which include significant standing) during the morning peak until 2016, but with too much capacity north of Stansted Mountfitchet and not enough further south. This would have a capital cost of £100m (2002 prices) and an estimated benefit to cost ratio of 1.4.
- The second option ('Option 12') would also involve station lengthening (though perhaps not at Broxbourne) and the reinstatement of one or two additional tracks between Tottenham Hale and Broxbourne to enable a more frequent service to be run as well as longer trains. This would eliminate overcrowding in the morning

peak beyond 2021 and eliminate standing up to 2016. There are two variants proposed, one with a capital cost of £253m (2002 prices) and a benefit to cost ratio of 2.3 and a second with a capital cost of £608m (2002 prices) and a benefit to cost ratio of 4.2.

- 4.1.3 None of these schemes has been worked up in detail or secured funding from any source. It must be open to question as to how far any of these proposals could or would be delivered by 2016. The more likely prospect for users of West Anglia services is unfortunately that described in tables 5.3 and 5.9 referred to above, unless the airport is capped at its present 25mppa limit and the timetable rearranged to provide more capacity for commuters.

5 CONCLUSIONS

- 5.1 When British Airports Authority sought planning permission in 1981 for expansion to handle 15mppa it said:
- 'BAA and British Rail are at present considering how this service can be provided. BR's plans envisage a direct service running largely on new tracks between the airport and London's St Pancras Station.'*²²
- 5.2 Instead, BAA has continued to squeeze more of its passengers onto the existing and already heavily used line to Liverpool Street, whilst reaping the income from airport parking.
- 5.3 Even on the basis of BAA's own assumptions about origins, destinations and transfers of airport passengers and airport throughput, a strategy which relies solely on the existing timetable, minimal infrastructure enhancements and longer STEX trains cannot be relied upon to meet the demands of both airport and non airport users on the West Anglia route. The precedence given to STEX trains in planning the timetable determines the capacity available to serve the non-airport market, and so service frequencies and loadings on those trains are a consequence of the service provided to the airport.
- 5.4 However, the train loading data is seriously out of date, the assumptions on origins, destinations and transfers of airport passengers appear to be suspect, and the strategy will make no contribution towards reducing car use by airport users.
- 5.5 No increase in permitted use of Stansted Airport should be allowed on the basis of so inadequate and poorly evidenced a strategy.

²² 'British Airports: More facts about developing Stansted', May 1981 [CD/271].