

Inner Thames Estuary Feasibility Studies

Study 4 – Surface access impacts

Comments from Kent County Council

On the whole, Kent County Council (KCC) welcomes the study, which broadly concludes that a Thames Estuary airport will require substantial new rail and road infrastructure not only into the new airport site itself, but also significant upgrades and additional capacity on the existing road and rail networks across the South East in order to accommodate airport demand. Provision of the essential surface access infrastructure is costly and will also have a detrimental environmental impact that is in addition to the impacts of the airport site itself.

However, there are some data points, including factual errors, and comments on the analysis, which are highlighted below. Comments on pages 1 to 7 of the study relate to the information in the Executive Summary; however, these comments can also be applied to the relevant sections in the main parts of the report.

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The assumption that a High Speed One (HS1) service from St Pancras to the airport would take approximately 26 minutes is optimistic. HS1 from St Pancras to Ebbsfleet is 18 minutes and a further five minutes to Gravesend (23 minutes), therefore with Grain an additional 27 km from Ebbsfleet (or 24 km from Gravesend) in a straight line (likely to be longer with the alignment of the new rail line), at a maximum speed of 225 km/hr would take an additional 7.2 minutes from Ebbsfleet. Although this is within the 26 minute estimated journey time from St Pancras, it is unlikely that this maximum speed would be achievable with the indicative rail alignment proposed, the increased distance from the alignment, i.e. not a straight line as measured above, and the need for trains to slow down on approach to the airport. These factors considered, it is more likely that quickest rail journey from central London to the estuary airport would be over half an hour.

The assumption that the Crossrail extension from Abbey Wood to airport would provide a journey time from Tottenham Court Road to Airport of approximately 51 minutes is also questionable. The Crossrail estimated journey time from Tottenham Court Road to Abbey Wood is 23 minutes, however, Abbey Wood is only about a third of the way from central London to the proposed airport site on the Isle of Grain, and therefore it is likely that journey times on Crossrail would be in excess of an hour from central London.

According to a recent survey conducted by ComRes¹, the average acceptable journey time to an airport from central London is under an hour at 59 minutes. 44% of people would expect to be able to travel to an airport near London in 45 minutes or less. Based on the estimated potential journey time from central London to an Isle of Grain airport, it can be seen inferred that the Thames Estuary would not be a suitable location for a new hub airport due to journey times exceeding those which are acceptable to the travelling public. Journey times on Crossrail from central London to Heathrow will half the travel time to the Isle of Grain at an estimated 28 minutes.

The assumption of a semi-fast service from Waterloo to a Thames Estuary Airport via Bromley South and Swanley at approximately 42 minutes is also unrealistic. Currently journeys on mainline to North Kent are slow – Gravesend 57 minutes and Rochester 73 minutes from Charing Cross. Gravesend to Grain is still a further 24 km; therefore it is highly unlikely that a journey time of 42 minutes from central London to an airport on the Isle of Grain by mainline rail is achievable without providing new tracks so that the semi-fast airport services can overtake the stopping services. It should also be noted that Network Rail has highlighted the lack of capacity on the existing route via Bromley South and Swanley, as well as the problems of the flat junction at Herne Hill, which together would exclude this proposal as a realistic option

The Mayor of London's proposal for a new express service from Waterloo to the airport via London Bridge, Canary Wharf and Barking Riverside assumed to take 28 minutes from Waterloo is also an optimistic journey time. As described above, with the presence of slow stopping services, the only way to achieve this journey time is to provide a new dedicated line.

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The 'Rail Assessment' – Option 1 - shuttle from Strood would require a complete re-building of Strood station. Strood is currently a very limited station with inadequate platform capacity and passenger interchange facilities, i.e. a narrow pedestrian tunnel connecting the two platforms (a pedestrian bridge to alleviate crowding is currently under construction). Strood station only serves the North Kent Line; it does not have platforms on the line to Bromley South (Chatham mainline). A feasibility study is needed to establish whether it is technically possible to expand the station into the facility needed to provide interchange for the airport shuttle service and the estimated cost of the station redevelopment.

¹ ComRes: Headline Findings, Airport Expansion in the South East, April 2014, on behalf of Medway Council - ComRes interviewed 2,034 GB adults online between 4th and 6th April 2014. Data were weighted to be demographically representative of all British adults aged 18+. Data tables are available on the ComRes website, www.comres.co.uk

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States that by 2030, loadings of just under 50% are predicted on HS1 with much of the loadings being non-airport related background growth. Current loadings on HS1 are already greater than 50% on existing services in the peaks. Southeastern Railway as the Train Operating Company (TOC) should be able to provide up to date passenger numbers for High Speed Services.

It also states that loadings will be *“between 25% - 110% on the North Kent lines (with the one line section which is over-capacity – Swanley – Strood) – predicted to be close to capacity in 2020 without the ITE option”*. However, this is then contradicted with the next sentence stating that *“This option would provide passenger choice between a premium, uncrowded, HS1 service to St Pancras and generally uncrowded local services to Kent”*

The statement that *“..... there appears to be little difference when compared with the current situation experienced by rail passengers travelling to and from Heathrow”*; brings into question the logic of spending vast amounts of money on rail surface access to an Isle of Grain airport so that on opening in 2030, it will be only a comparable experience to that which currently exists for accessing Heathrow. Therefore Option 1 provides no scope for growth of the airport beyond its opening; therefore by 2050 even further investment in rail is needed. This is confirmed by the study which states, *“In 2050, while the predicted loadings on HS1 are between 61-67% in option 1, this option does not provide sufficient capacity for background demand plus airport related demand on other key links.”*

Acknowledgment of the capacity limitations on mainline rail is welcomed, e.g. the statement that *“The loading due to background demand on the key London-bound section of the Chatham mainline (Rochester – Swanley) is also predicted to be overloaded (at up to 125%) and the addition of the ITE airport demand is predicted to increase this loading to 133%.”* This point is particularly important in respect of the existing Rochester Bridge junction, which is currently at full capacity during peak periods where the London – Chatham via Bromley South and London - Chatham via Strood lines intersect.

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States that; *“Thus in 2050, we would recommend that option 4 is the best solution. Loadings are between 38-42% are predicted on HS1the Rochester – Swanley section of the Chatham mainline is also predicted to be overloaded (at up to 130%), primarily due to growth in background demand as London grows as a city.”* Whilst the loadings on mainline are likely to be overloaded, the spare capacity on HS1 by 2050 is questionable.

It is stated that; *“Thus in summary, while rail option 1 would accommodate predicted demand in 2030, it is dependent on 4 rail paths per hour being available on HS1 and a significant proportion of ITE passengers (around 45%) would experience crush capacity loadings of above 90% on the central*

sections of Crossrail. The rail elements of this option would cost around £5bn, rising to around £10bn with rail optimism bias included.” Clearly this is not an acceptable situation for accessing the national hub airport.

The statement that; *“By 2050, rail option 4 is the only credible option, due to the predicted growth of London, and even then some capacity issues still remain”*; demonstrates the immense challenges and costs in providing surface access to a new hub airport located on the Isle of Grain.

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States that; *“The feasibility of the HS spur is dependent on securing 4 train paths on the line (which has been identified as unfeasible by HS1 Ltd although consultation elsewhere in the rail industry suggests it could be achieved) and would require the construction of an additional platform at St Pancras.”* This issue of whether capacity is available on HS1 needs to be formally established. KCC is of the view, similar to HS1 Ltd, that there is not sufficient capacity on the Ebbsfleet to St Pancras section of HS1 with the current and forecast non-airport background growth demands for domestic and international services.

Furthermore, KCC is committed to developing, in partnership with the DfT and the TOC, future plans for the expansion of the existing HS domestic rail service, with options for additional services via Ashford to Hastings and Bexhill beyond 2019 if further electrification investment is delivered by Network Rail. It is therefore essential that whatever very limited spare capacity exists on HS1 between Ebbsfleet and St Pancras is preserved for such future expansion of domestic services. It should also be noted that there is no capacity whatsoever to create an additional platform at St Pancras, regardless of finance available.

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Describes how HS1 Ltd has stated that 4 trains per hour (tph) may not be available for an airport service, based in the assumption of a practical line capacity of 12-13 tph. It also states that there are already 7 tph. However, on the section between Ebbsfleet and St Pancras there are currently 11 tph (8 tph domestic and 3 tph Eurostar) in the critical high peak hours, i.e. arrivals at St Pancras between 0800 and 0900 and departures from there between 1700 and 1800.

Therefore, although there is some limited spare capacity in the high peaks,, with growth in commuter and international demand there is little available capacity left to cater for airport demand. Given that HS1 Ltd is the infrastructure manager of the UK's only existing high speed line, their assessment of the capacity limits of a high speed line carries more weight than the consultation with *“other contacts in the rail industry”* which the report cites as stating that the capacity of HS1 could be increased to 16-18 tph.

This discrepancy in opinion in respect of the capacity of HS1 is almost certainly explained by a lack of understanding by “other contacts in the rail industry” of the effect of variable train speeds on capacity on any given railway route. It is impossible to operate 18tph on HS1 if different services are travelling at variable speeds – as is the case today. While Eurostar trains can operate at 186mph, the maximum possible for domestic HS trains is 140mph – and this is reached only on long stretches of the route without stops, i.e. not until the trains are well beyond Ebbsfleet (when travelling from London).

This section also states that it is assumed that the airport is located in Zone 9 and Crossrail passengers were assumed to pay for standard tickets the same as tube passengers. The assumption that the airport would be located in Zone 9 would require a re-zoning of the London Travelcard system. An Isle of Grain airport is further than Maidstone and the Medway towns, implying that the London travel zone system would extend into mid-Kent. Other London airports such as Gatwick and Stansted are not included in the London Travelcard zone, therefore it is an incorrect assumption that an airport even further from London on the Isle of Grain would be part of that system. Premium fares would also be needed to help recoup the massive public investment in rail to provide access to the airport and this also needs to include the substantial extension of Crossrail from Abbey Wood.

In addition, the assumption that a ticket on the airport shuttle from Strood would cost the equivalent of a Zone 7-9 Oyster ticket at a cost of a peak single of £1.70 is completely underpriced. The equivalent journey in terms of distance from Strood in the other direction is to Maidstone on the Medway Valley Line, for which a single costs £5.30. The assumption that a newly constructed line to the airport, a redeveloped Strood station and new rolling stock would also come with heavily subsidised fares of the London Oyster card system, while equivalent journeys across the other parts of Kent on existing lines with ageing rolling stock pay fares several orders of magnitude higher, is unrealistic and unjust.

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States that the modelling does not take account of background growth or demand from airport related (indirect or induced) employment. Clearly both of these factors generate significant levels of demand and should be included in the assessment of the surface transport needs of the airport.

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Assesses capacity and demand on all sections of HS1; however, the Ebbsfleet to St Pancras section is the capacity limiting section (as opposed to Ebbsfleet to Ashford/Channel Tunnel). For example, in the high peak periods identified above, the domestic services diverge at Ebbsfleet so that only 4tph (out of the 8tph on the core section) operate east of Ebbsfleet on the North

Kent route via Strood. Any assessment of capacity therefore only makes sense in respect of the London St Pancras – Ebbsfleet section of HS1, as that is the section with the most limited spare capacity.

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The presumed capacity requirements for the various dedicated airport rail service options cannot be met by the existing peak period spare capacity on the routes indicated. The various routes via Strood / Rochester, regardless of the route chosen between London and the Medway Towns, are incapable of providing 4tph in addition to the existing services. Similarly, the proposed service of 2tph via Bromley South and Swanley could not be provided in addition to the existing services using this route, which serves both the Maidstone East line and the Chatham line.

The issue therefore is not that the presumptions of required capacity by Jacobs are wrong, but rather that there is not the capacity on the existing Mainline network to provide for these presumptions.

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Assumes “a one-way current fare equivalent of £17.25 based on current 2012 values and prices, similar to the current cost per minute of a Gatwick Express ticket”; however, a single on HS1 to Ebbsfleet is £15.70; therefore an additional £1.55 for the extended HS1 journey from Ebbsfleet to the Isle of Grain (at least an additional 27km) is an underestimation of the likely cost of a high speed airport express ticket. This is further supported by the need to recoup some of the substantial public investment in the new dedicated airport surface access infrastructure. Existing high speed tickets currently include a 30% supplement for that portion of the journey undertaken on High Speed; this needs to be factored into airport express services that use HS1.

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The environmental impacts of the proposed surface access infrastructure will be significant. KCC has made comments on Study 1 of the Inner Thames Estuary Feasibility Studies which focuses on the environmental impacts of the proposed airport.

Roads Assessment

Although the study has assessed the impacts on the Strategic Road Network (which is very much dependent on the assumptions of the highway models used), there is no consideration of the impacts on local roads and the subsequent improvements that will be needed including an estimation of costs. It can be assumed that a significant number of airport workers would live locally in Medway and Kent and therefore would need to use local roads to

access the airport by private car. In parallel, investment in high quality bus services is needed in order to achieve a significant public transport modal share for airport staff. In most cases for local workers, rail will not be the most convenient way to access the airport or may be cost prohibitive for the lowest paid employees.

KCC and Medway Council in response to the Call for Evidence for the Inner Thames Estuary Feasibility Studies by 23 May 2014, submitted evidence in relation to local surface access impacts; and further assessment by the Airports Commission is needed for a thorough evaluation of the impact of the proposed new hub airport on the Isle of Grain.

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