Pinsent Masons

BY E-MAIL AND POST

FOR THE ATTENTION OF GARETH LEIGH
Infrastructure Planning Lead
The Planning Inspectorate
3/18 Eagle Wing
Temple Quay House
2 The Square
Bristol, BS1 6PN

Our Ref 89253130.7\rg7\671983.07000

DDI +44 20 7490 6981

E richard.griffiths@pinsentmasons.com

13 November 2017

Dear Sirs,

THE FORMER MANSTON AIRPORT SITE PROPOSED DCO APPLICATION
PROPOSED DCO APPLICANT: RIVEROAK STRATEGIC PARTNERS LIMITED

We write further to our previous letters of 11 October 2017 and 26 October 2017 sent on behalf of our client, Stone Hill Park Limited ("**SHP**"), the owner of the former Manston Airport Site. As you are aware, the former Manston Airport Site is allocated in the draft Local Plan and is the subject of a submitted major mixed-use planning application.

As indicated in those letters, SHP has engaged expert aviation consultancy, York Aviation, to review the reports prepared by RiverOak Strategic Partners Limited's ("**RSP**") consultants, Azimuth Associates (Dr Dixon) ("**Azimuth/Dixon**"), upon which RSP relies to support its case for its proposed application for a Development Consent Order ("**DCO**") in respect of proposed alterations to Manston Airport. York Aviation's review is enclosed with this letter in the form of a summary report (the "**York Aviation Report**"). Azimuth/Dixon heavily rely on work previously undertaken by York Aviation and, as part of its review, York Aviation explains why Azimuth/Dixon have misrepresented their work, which brings into question the whole evidence base upon which RSP has prepared its proposals and consulted with the public (see section 1.3 of this letter). York Aviation has also considered and calculated the capability of Manston Airport and reviewed Azimuth/Dixon's freight forecasts, concluding that Azimuth/Dixon's forecasts lack credibility (see sections 1.4 and 1.5 of this letter). Capability must be demonstrated by an applicant who seeks to promote a project under section 23(4)(b) and section 23(5)(b) of the Planning Act 2008 (as amended) (the "**2008 Act**").

This letter also deals with Bircham Dyson Bell's letter sent to you on 27 October 2017 (the "**BDB Letter**") with their comments on behalf of RSP in response to our letter of 11 October 2017.

The York Aviation Report, along with this letter and our previous correspondence, further demonstrates why the points that we have raised need to be carefully considered and dealt with pre-submission and, should RSP submit its application, during the acceptance stage assessed against the statutory tests. For the reasons expressed in this letter and the factual and analytical information now provided, we consider that the points are so fundamental that RSP's

proposed application cannot proceed. Should RSP submit its DCO application, we consider that the consultation carried out to date, the latest meeting note between the Planning Inspectorate and RSP dated 26 September 2017, and the BDB Letter all demonstrate that the application cannot lawfully be accepted. Accordingly, we would be grateful if you could review both this letter and the York Aviation Report in the course of dealing with the concerns of SHP and we ask for a response from the Planning Inspectorate as soon as reasonably practicable.

We deal firstly with the BDB Letter. The overriding observation on the contents of the BDB Letter is that it does not answer any of the fundamental points made in our letter of 11 October 2017. Absent any answers, it must be concluded that they have no answers.

Moreover, as well as the BDB Letter providing no substantive response and being evasive, in some cases it even seeks to try and suggest that the onus is on our client, SHP, to demonstrate the relevant matters, when the onus is quite clearly on the applicant of the proposed DCO application. This is a position and approach which the Planning Inspectorate should note.

The table below illustrates a number of these points further:

Concern raised in Pinsent Masons' letter of 11 October 2017	**Any substantive response provided in BDB Letter?**	**Comments**
Section 23 of the Planning Act 2008 is not engaged.	No – the BDB Letter accepts our point that capability is the test in section 23, but provides no actual response whatsoever on the capability of Manston Airport and how the requisite test is met.	Please see section 2 of this letter, and the information in the York Aviation Report on the capability of Manston Airport and forecasting regarding anticipated freight throughput of a re-opened Manston Airport (briefly summarised in section 1 of this letter). The BDB Letter seeks to place the onus on SHP to evidence the Airport's capability, when it is clearly the applicant that is required to set out the capability of Manston Airport in order to demonstrate that the requirements of section 23 are met, which is an acceptance test issue under section 55(3)(c). Failing to identify the capability of the Airport also means that the consultation is inadequate. RSP needs to explain what the actual increase would be to the capability of the Airport as a result of its proposed alteration so that stakeholders and the public understand the new capability (not just the projected use). This is an acceptance test issue under section 55(3)(e) and must be addressed now.
RSP's failure to justify proposed associated development	No - the response does not provide any coherent or logical response.	See section 3 of this letter. In summary, the BDB Letter seeks to deflect the issue with reference to "sports pitches" authorised in the Hinkley Point C (Nuclear Generating Station) Order 2013 in an attempt to provide the Planning Inspectorate with some sort of precedent.

Concern raised in Pinsent Masons' letter of 11 October 2017	Any substantive response provided in BDB Letter?	Comments
		However: (1) the BDB Letter provides no explanation of how the requirements of the statutory tests and guidance are met in relation to RSP's proposals, which is relevant to whether a proposed project has met the acceptance test set out in section 55(3)(e) (and section 55(4) is important in this regard); (2) reference to "sports pitches" for Hinkley Point C is clearly not a comparable example as in that case there was a direct link between the need for construction worker campuses and welfare facilities (including sports pitches) for the construction of that NSIP given the nature and proposed scale of that project, whilst in this case a direct link between a "flight training school" to a freight cargo hub has not been demonstrated or evidenced to be necessary for the construction, operation or mitigation of impacts of what is claimed to be an NSIP; (3) in addition, this point is significantly larger than a "flight training school." For example, RSP is proposing an extensive unspecified development of c.119,000 square metres of warehouse, office and business units on the "Northern Grass" area without explanation. This is an acceptance test issue under sections 55(3)(c) and (e) and must be addressed now.
Identity of the Applicant	No - no attempt is made in the BDB Letter to explain how the change of the applicant was appropriately publicised in the pre-application consultation (which it was not).	Please see section 4 of this letter. In summary, the identity of the applicant is of fundamental importance to determining whether the applicant can properly take advantage of the transitional provisions in Regulation 37 of the EIA Regulations 2017, and as to the adequacy of pre-application consultation. This is an acceptance test issue under section 55(3)(e) and must be addressed now.

Concern raised in Pinsent Masons' letter of 11 October 2017	Any substantive response provided in BDB Letter?	Comments
RSP's attempt to circumvent the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017	No - the response does not address the transitional provisions in Regulation 37 at all.	Please see section 5 of this letter. In summary, the BDB Letter fails to answer any of the fundamental legal concerns, simply providing a response that: (1) seeks to confuse the basic point; (2) ignores the relevant legislation; and (3) refers to an irrelevant (and incorrect) example as a supposed precedent. Simply complying with the 2017 EIA Regulations "*where practicable*" whilst asserting that RSP is able to take the benefit of the transitional provisions so only has to comply with the 2009 EIA Regulations (as recorded in the note of a meeting held between the Inspectorate and RSP on 26 September 2017), is not satisfactory – where an applicant cannot take the benefit of the transitional provisions, as in RSP's case, then it has to fully comply with the 2017 EIA Regulations. There is no discretion. This is an acceptance test issue under section 55(3)(e) and, assuming the application is made under the 2009 EIA Regulations, section 55(3)(f).
Inadequacy of consultation	No - the BDB Letter offers no substantive response to the adequacy of its consultation.	See section 6 of this letter. In summary, without setting out the capability of Manston Airport, the consultation and the PEIR have simply not informed the public of what the "new" capability of the Airport would be and thus what likely significant environmental effects could arise as a result of the "new" capability (based on a preliminary view). RSP has only looked at its own forecast and has not assessed the "new" capability that it is applying for. Furthermore, the consultation has failed to take into account SHP's submitted major planning application (which is a Tier 1 project in EIA cumulative terms) and the evidence base of the emerging local plan. Defects relating to the 2017 EIA Regulations are already set out above, but

Concern raised in Pinsent Masons' letter of 11 October 2017	Any substantive response provided in BDB Letter?	Comments
		equally apply to statutory tests on adequacy of consultation. Adequacy of consultation is specifically a test which is relevant at acceptance under section 55(3)(e). This must be addressed now.
Failure to comply with compulsory acquisition legislative and guidance requirements	No - the BDB Letter offers no response to the concerns, other than to say that RSP remains open to any approach by SHP.	Please see section 7 of this letter. In summary, the Guidance related to procedures for the compulsory acquisition of land is not being followed. This is a matter to which the Secretary of State is obliged to properly consider under section 55(4)(c) when reaching a conclusion under section 55(3)(e). The onus and duties are clearly on the applicant and not SHP.

Contrary to what the BDB Letter seems to want to suggest, the purpose of our 11 October 2017 letter is very clear. Where the Planning Inspectorate receives information highlighting concerns that go to the heart of the lawful acceptability of a proposed application for a DCO, it is clearly incumbent on the Inspectorate to properly and thoroughly consider that information, take appropriate advice as necessary, and advise the Secretary of State accordingly so the Secretary of State may exercise his duties properly under section 55 of the 2008 Act.

It was for this reason that we copied Bircham Dyson Bell into our letter, to give RSP a full and proper opportunity to respond in full.

It is clearly very disappointing and very telling that RSP has not done so. It is not reasonable in these circumstances to fail to respond to the serious issues related to a proposed DCO application.

The points raised in our 11 October 2017 letter are fundamental points that have to be dealt with now and are all acceptance issues if the application is to be made. They are points that need addressing to ascertain:

1. whether section 23 of the 2008 Act is engaged;

2. whether the proposed application will properly contain development that can be included in an application for a DCO, which links into section 55(4)(c) of the 2008 Act (in respect of the extent to which RSP has had regard to DCLG Guidance on associated development and compulsory acquisition) and section 115 of the 2008 Act;

3. whether the Preliminary Environmental Information Report ("**PEIR**") and, ultimately, the Environmental Impact Assessment have been prepared and consulted on under the correct Environmental Impact Assessment Regulations;

4. whether the consultation carried out has made clear what the proposed application is actually for and provided the public with sufficient information to make an informed and meaningful consultation response; and

5. in summary, whether the requirements in section 55(3) of the 2008 Act are met.

It is against this backdrop that we met with you on 27 September 2017, seeking section 51 advice about the process of applying for development consent and making representations about a proposed application, and wrote to you on 11 October 2017. This was to ensure that, when the Inspectorate is providing section 51 advice to the potential applicant on draft documentation, these matters are fully and properly addressed and that any subsequent acceptance process (if any) is carried out with the Planning Inspectorate advising the Secretary of State fully and appropriately of these issues.

If this does not happen, as we have made clear, SHP will have no option but to seek all necessary legal recourse.

1. YORK AVIATION'S CRITICISM OF AZIMUTH/DIXON'S USE OF THEIR WORK AND SUMMARY REPORT PREPARED BY YORK AVIATION

1.1 As referred to above, we enclose with this letter a summary report by York Aviation that reviews the reports prepared by RSP's consultants, Azimuth/Dixon, and upon which RSP relies to support its case for the proposed application for a DCO for the redevelopment and re-opening of Manston Airport as a hub for international air freight services, which also offers passenger, executive travel and aircraft engineering services.

1.2 In summary, the York Aviation Report covers the following:

1.3 Misinterpretation of York Aviation research – relevant for section 55 of the 2008 Act

1.3.1 The York Aviation Report explains why Azimuth/Dixon have misinterpreted two pieces of research undertaken by York Aviation during the Airports Commission process - an unpublished note for Transport for London and a detailed piece of research undertaken for the Freight Transport Association in conjunction with Transport for London (the "**TfL and FTA Notes**").

1.3.2 Azimuth/Dixon heavily rely on the TfL and FTA Notes; indeed they form the backbone of Azimuth/Dixon's case. However, as author of those TfL and FTA Notes, York Aviation makes it clear in the enclosed York Aviation Report that the TfL and FTA Notes cannot be used in the manner applied by Azimuth/Dixon and accordingly the way Azimuth/Dixon and RSP have relied upon them is wrong. It is clear that the Planning Inspectorate and the Secretary of State must take that into account when considering whether the RSP proposals are capable of being accepted given the degree of reliance placed by Azimuth/Dixon on the TfL and FTA Notes. Without reliance on the TfL and FTA Notes, RSP has no statistical data at all upon which to base its proposed application and therefore the consultation carried out is flawed and misleading. Accordingly, the consultation is inadequate and any proposed application cannot be considered "satisfactory".

1.4 Azimuth/Dixon forecasts entirely theoretical and lacking in credibility – relevant for section 23 of the 2008 Act

1.4.1 The York Aviation Report highlights that Azimuth/Dixon's attempted analysis of the air freight market is focused on:

(a) the existence of a theoretical opportunity based on estimates of spill from London in the event of the third runway at Heathrow not being built or being delayed;

(b) a clearly unsupported hypothesis that there is a trend away from belly-hold freight;

(c) a small sample of interviews with largely marginal players in the UK air freight sector and/or local interests; and

(d) inappropriate global forecasts rather than UK specific data.

1.4.2 The York Aviation Report highlights that Azimuth/Dixon do not, at any point, provide any substantive evidence or analysis as to whether Manston Airport can effectively, viably and sustainably compete in the air freight market. For example, Azimuth/Dixon do not explain how Manston Airport will:

(a) be able to price effectively against the belly-hold rates offered by growing established and operational UK regional airports or the continental hubs; and

(b) compete against the range of destinations offered by the long haul passenger networks (which provide significant belly-hold capacity for freight) of the continental hubs or the much greater freighter network offering of East Midlands or Stansted Airports.

1.4.3 In overall terms, the York Aviation Report highlights that the forecasts presented by Azimuth/Dixon at Table 1 of Volume III are simply not credible and do not provide any robust basis for a DCO application to progress. For example, to illustrate this lack of credibility, in Year 2 (the first operational year), a cargo throughput of nearly 100,000 tonnes is forecast by Azimuth/Dixon. This would make Manston the fifth largest freight airport in the UK in its first year of re-opening (compared to 2016 actual throughput at the other airports), placing it close to the scale of freight at Manchester Airport which includes a substantial belly-hold component. This is simply not credible, with no demonstration as to how this could be achieved.

1.4.4 Indeed, the Azimuth/Dixon forecasting goes against the Department for Transport's UK Aviation Forecast released in October 2017 (covering the period to 2050), which notes in section 2.56 that "*at the airport level the number of freighter movements has been volatile with some evidence of overall national decline in recent decades. In the absence of clear trends for individual airports, the modelling now assumes that the number of such movements will remain unchanged from 2016 levels at airport level across the system.*" The DfT report goes on further to explain recent trends in sections 4.4 and 4.5. The credibility of the Azimuth/Dixon is further undermined by the fact that it does not take account of the existence of the definitive 'official' UK forecast for freighter movements over the period to 2050.

1.4.5 The York Aviation Report highlights that, historically, Manston was not able to attract a sufficient share of the UK air cargo market to sustain viable operations, despite investment and significant efforts. This history is ignored by Azimuth/Dixon. In basic terms, Manston is simply too peripheral for the kind of operations envisaged by RSP. Any realistic forecast figures would clearly not be enough to sustain a commercially viable operation at Manston Airport as the York Aviation Report makes clear.

1.4.6 The significance of this analysis at this stage of the proposed DCO process is to address the critical questions as to whether RSP's proposals:

(a) provide a credible forecast to justify its proposed alteration and on which to consult with the public; and

(b) provide a robust evidence base to demonstrate a compelling case in the public interest to compulsory acquire Manston Airport.

On the basis of the York Aviation evidence, the answer to both is "no", meaning that the damaging blighting effect of RSP's proposals should be stopped.

1.5 **York Aviation's calculation of Manston Airport's capability – relevant for section 23 of the 2008 Act**

1.5.1 The York Aviation Report demonstrates that the capability of the Airport is at least 21,000[1] annual Air Transport Movements ("**ATMs**") by cargo aircraft with reference to the existing permitted use and infrastructure at Manston Airport.

1.5.2 Whilst it is not for SHP to provide information on the capability of Manston Airport, it has done so because, tellingly, RSP has not. As the proposed applicant, RSP has to provide this information in its consultation material, which it has failed to do. "Capability" is a key component of engaging section 23 of the 2008 Act, as we discuss further below, and the application cannot be properly made without this being clearly established.

1.6 **York Aviation's calculation of land required for RSP's proposals – relevant for section 55 of the 2008 Act**

1.6.1 York Aviation has examined whether the land sought by RSP is, in fact, all required to accommodate RSP's forecasts of demand (notwithstanding that we disagree with those forecasts). The conclusion is that RSP does not require significant areas of the land it currently seeks for inclusion in its proposed application, including the "Northern Grass" area. Indeed, the land area sought for commercial development is much larger than that utilised by other, mature airports. A plan is included in the York Aviation Report that shows these land areas that are not necessary for RSP's proposals.

1.6.2 There is a serious lack of detail in RSP's consultation material justifying the extent of land proposed to be acquired. It has not been demonstrated why the whole of our client's freehold ownership is required by RSP for its proposals, and the BDB Letter provides no answer.

1.7 **Flawed socio-economic case - relevant for section 55 of the 2008 Act**

1.7.1 York Aviation explains why RSP's socio-economic case is flawed because Azimuth/Dixon have, inter alia:

(a) wrongly assessed the impact at a national level and failed to take into account the indirect negative effect of RSP's proposals on other UK airport operations (displacement);

(b) the direct negative effect of losing the economic and housing benefits from SHP's submitted planning application which is supported by the draft Local Plan; and

[1] Based on an 18-hour operational day. Should a night time noise policy be agreed with Thanet District Council pursuant to the existing planning agreement that enabled a longer operational day and/or a number of scheduled night movements, then the capability could, in theory, be higher than 21,000 annual cargo aircraft movements.

(c) the direct negative effect of removing the largest strategic and brownfield site in Thanet District for housing.

These are not marginal or peripheral issues and should all have been included in the assessments at consultation in order to fairly inform consultees in relation to the impacts of the proposal.

1.8 York Aviation has also reviewed the proposed passenger element of RSP's proposals and is clear that there can be no confidence in the forecasting carried out by Azimuth/Dixon. However, as RSP's proposals are primarily for a freight airport, this work has not been finalised at this time given the desire to avoid further unnecessary wasted costs.

1.9 It is clear from the York Aviation Report that fundamental questions arise with regard to:

1.9.1 the approach RSP has taken in relation to the starting position in terms of Manston Airport's "capability" for the purposes of section 23 of the 2008 Act. Without this information, the Secretary of State is simply unable to consider whether RSP's proposals constitute a Nationally Significant Infrastructure Project ("**NSIP**") under section 23;

1.9.2 the actual alteration being applied for - no detail is provided as to the effect of the proposals on capability, meaning that the public and the Secretary of State do not have before them either the capability of the Airport before the proposed alteration or the capability of the Airport with the proposed alteration, detail that is required for section 23 and section 55 of the 2008 Act;

1.9.3 whether the proposed application has any realistic prospect of demonstrating, with a robust evidence base (including without being able to rely on the incorrect use of the TfL and FTA Notes which form the backbone of the Azimuth/Dixon assessment), that RSP's proposals are credible in any way thereby providing the case for why the "new" capability being applied for is required;

1.9.4 whether a compelling case in the public interest to require compulsory acquisition is even credibly arguable; and

1.9.5 the inadequacy of the consultation undertaken by RSP, including the misleading and selective nature of the material consulted on, e.g.

(a) the misinterpretation of the TfL and FTA Notes that are crucial in RSP's case and indeed so crucial that in presentations given by RSP, freight movement numbers cited are attributed to York Aviation's TfL and FTA Notes. Given the enclosed York Aviation Report, this reliance is wrong and with it, the public have been given the impression that York Aviation supports RSP's proposals;

(b) the failure to define the current capability of Manston Airport and the consequential failure to properly assess the proposals based on the "new" capability of Manston – you cannot do the latter without first doing the former; and

(c) the failure to therefore inform the public of the true consequences of RSP's proposals (see later in this letter), including the failure to properly assess the socio-economic effects of the proposals amongst other failings in the environmental assessment.

2. SECTION 23 OF THE 2008 ACT AND THE NEED TO SHOW "CAPABILITY" OF THE AIRPORT IN QUESTION

Summary

2.1 It is clearly not acceptable for RSP to seek to postpone to the date of submission of the application itself to "*demonstrate why the project is an NSIP.*"

2.2 It is fundamental for the consultation exercise required under Chapter 2 of Part 5 to the 2008 Act for an applicant to make clear why its proposals fall within section 14 of the 2008 Act (and, in this case, section 23 of the 2008 Act). This must be established clearly before the application is made.

2.3 RSP has provided no explanation as to what the capability of Manston Airport is. Capability is a key element of section 23(5)(b). Without an explanation of capability, section 23 is not engaged.

2.4 Should an applicant provide this information, supported by evidence, and pass the section 23(4) and section 23(5) tests, the applicant then needs to explain what the actual increase would be to the capability of the airport as a result of the proposed alteration. In other words, would the extent of the proposed alteration result in the capability being increased by the minimum of 10,000 ATMs or, for example, 50,000 ATMs? The proposed alteration itself has a capability.

2.5 It is not possible for the public and stakeholders to understand the basis upon which the RSP proposals are being made when the consultation material fails to identify the capability of Manston Airport, being the point from which the increase in capability is to be calculated, and the proposed new capability (not projected use). This not only results in a failure to engage section 23, but also in inadequate consultation and inadequate assessment and thus a failure to satisfy section 55 of the 2008 Act.

Detail

2.6 As is well known, the Secretary of State can only accept RSP's proposed application if he is satisfied that "*development consent is required for any of the development to which the application relates*" (section 55(3)(c) of the 2008 Act). In order to do this, he must identify whether the application contains an NSIP. In respect of this case, he must conclude that the proposals fall within one of the categories of "airport-related development" set out in section 23(1) of the 2008 Act.

2.7 Paragraphs 1.1.6 and 1.1.7 of the PEIR confirm that RSP's proposals fall within the "alteration" category of "airport-related development" (section 23(1)(b) of the 2008 Act). Therefore, the Planning Inspectorate, and ultimately the Secretary of State, need to be satisfied that subsections (4) and (5) of section 23 are met. This can only be done by understanding the capability of Manston Airport of providing air cargo transport services. If this did not need to be understood, then there would be no need for the words "*for which the airport is capable of providing air cargo transport services*" in section 23(5)(b) and the test would have mirrored that in section 23(3)(b) instead.

2.8 It is obvious why a clear statement of the capability of an airport is required where an alteration is proposed. Section 23(5)(b) requires there to be an increase of at least 10,000 per year in the number of ATMs of cargo aircraft. To determine the effect of that increase, then one needs to understand the capability of the airport before the alteration to understand the extent of and true effects of the alteration.

2.9 In simple language, RSP suggests its proposals will add onto the capability of Manston Airport at least 10,000 ATMs of cargo aircraft annually but it does so without addressing what the current capability is and uses figures which do not allow anyone

to see and compare current capability with proposed capability. In this respect, it is not SHP that is confusing capability with projected use as claimed in the BDB Letter, but RSP. RSP's consultation material does not refer anywhere to the current capability of Manston Airport, and RSP's PEIR only assesses the projected use based on Azimuth/Dixon's erroneous conclusions. This is a fundamental error.

2.12 Instead, what is required under section 23(5)(b) is for the consultation material to be clear on:

2.12.1 the capability of Manston Airport of providing air cargo transport services;

2.12.2 an explanation as to why the proposed development would increase that capability by at least 10,000 ATMs of cargo aircraft annually;

2.12.3 an explanation as to what the proposed "new" capability (not projected use) would be as a result of the proposed alteration; and

2.12.4 for the PEIR to provide the preliminary assessment of that increase (i.e. the effect of the "new" capability).

This has simply not been done by RSP.

2.13 All of this can be explained in a simple formula - effectively, what the public requires in the consultation material and what the Secretary of State requires in order to consider the proposed application at acceptance is the following information, without which the consultation and application are deficient:

capability of airport + increase in the capability of the airport resulting from proposed alteration[2] *= new total capability.*

2.14 The word "capable" clearly means the capability of the airport derived from its lawful use/planning status, having regard to any relevant planning permissions (including any restrictions that apply) and the existing infrastructure.

2.15 Manston Airport's permitted use, evidenced by means of a certificate of lawfulness, is for civil aerodrome use. There are no conditions limiting either passenger numbers or ATMs other than in the section 106 legal agreement that sets out limitations on night-time flying until such time that a night-time flying noise policy is in place. The built development and infrastructure at the Airport includes the runway, air traffic control, fire station, navigational aids, aprons, stands, and taxiways.

2.16 As explained above and in the York Aviation Report enclosed, York Aviation calculates, by reference to the existing permitted use and existing infrastructure at Manston Airport, that the capability of the Airport is at least 21,000 annual ATMs. York Aviation recognises that there are operational patterns at every airport which may mean that, practically, the maximum capability is not reached. However, this is no different to a generating station that has a maximum "capacity" of X MW but in practice it normally operates at Y MW, being below its maximum "capacity". It is the maximum "capability" of an airport which must be used for the purposes of section 23 of the 2008 Act to achieve the requisite amount of certainty required to decide whether a project meets the NSIP thresholds for a legal Act of Parliament.

2.17 Any assertion by RSP that the capability of Manston Airport is zero would fly in the face of paragraphs 1.1.6 and 1.1.7 of the PEIR, which confirms that RSP's proposals amount to an "alteration" of an airport. Indeed, the BDB Letter does not challenge this point and nor can it, given that previous presentations on behalf of RSP state that the

[2] Not projected use, but the maximum number of new ATMs that the proposed alteration would give rise to.

10,000 cargo aircraft movement threshold could be met through the provision of 14 aircraft arrivals and 14 aircraft departures each day. It is clear that RSP itself has accepted already that the proposals amount to an "alteration" of an airport and that the Airport has a significant capability. Unfortunately, however, RSP does not explain what that capability is. Accordingly, the only evidence before the Inspectorate and the Secretary of State on the capability of Manston Airport, and which is proposed to be altered by the proposed DCO application, is from our client.

2.18 As RSP has not provided this information, the matters set out below consequently follow:

2.18.1 the public and stakeholders have not been informed, and therefore are not aware, of the prospect that RSP's proposals (assuming for these purposes they are achievable), with the expected increase to the airport's capability of at least 10,000 ATMs of cargo aircraft annually, would see the Airport's capability increase to at least 31,000 ATMs of cargo aircraft annually. This is the minimum "new" capability, and RSP actually needs to explain what the proposed "new" capability (not projected use) would be as a result of its proposals; and

2.18.2 the PEIR is manifestly inadequate and not fit for purpose as it has not undertaken any environmental assessment of at least 31,000 ATMs of cargo aircraft annually, being the minimum consequence if RSP's proposed application is an NSIP based on the current capability of Manston Airport. Instead, it has only ever assessed the projected use, not the increase in airport "capability". It is the "new" capability that must be consulted upon and environmentally assessed (under the 2017 EIA Regulations), which as we say would be, at a minimum, 31,000 ATMs of cargo aircraft annually.

2.19 As explained in our letter of 11 October 2017, it is clear that RSP is trying to use the 2008 Act as a tool to inappropriately obtain compulsory acquisition powers. In summary, RSP's failure to set out what the capability of Manston Airport is, with reasoned evidence, prevents the application from proceeding for the following reasons:

2.19.1 the Secretary of State cannot consider the proposed application under section 23(5)(b) as a fundamental piece of information is missing. Therefore, the test in section 55(3)(c) is not met;

2.19.2 the public and stakeholders have not been properly consulted as to the true consequences of the proposals. RSP only discusses in its consultation material its projected use, it does not tackle the point that legally it is seeking to increase the capability of the Airport. As referred to above, this is best explained in the formula: *capability of airport + increase in the capability of the airport resulting from proposed alteration*[3] *= new total capability.* Therefore, the consultation is inadequate and the test in section 55(3)(e) is not met.

2.19.3 the environmental impact of the new capability has not been assessed in the PEIR. Again this means that the consultation is inadequate and the test in section 55(3)(e) is not met; and

2.19.4 any Environmental Impact Assessment progressed on this basis will not be of a satisfactory standard and will not have complied with the appropriate Environmental Impact Assessment Regulations in assessing the direct

[3] Not projected use, but the maximum number of new ATMs that the proposed alteration would give rise to.

impacts of the proposals. Accordingly, the test in section 55(3)(f) cannot be met.

3. RSP'S FAILURE TO JUSTIFY ASSOCIATED DEVELOPMENT

3.1 The response contained in the BDB Letter to the concerns in our letter of 11 October 2017 regarding a failure by RSP to explain which components of its proposals it considers to be part of the NSIP and which it considers to be associated development, is not a coherent or logical response.

3.2 Instead, the BDB Letter seems to seek to deflect the issue with reference to the Hinkley Point C (Nuclear Generating Station) Order 2013 in an attempt to provide the Planning Inspectorate with some sort of precedent. This inappropriate comparison only, in fact, serves to reinforce the concerns raised in our 11 October 2017 letter. The example provided in the BDB Letter is that "sports pitches" were accepted as associated development in the Hinkley Point C project, with the suggestion that these are analogous to a "flight training school" at an airport. The BDB Letter fails to provide any form of justification or reasoning for this comparison but we set out below why the comparison is an inappropriate one.

3.3 As the Inspectorate will know, the size of the Hinkley Point C project necessitates the accommodation of a large construction workforce in self-contained construction campuses. As these campuses are where the workers would live for prolonged periods of time, it is necessary that they contain appropriate construction worker welfare facilities, including canteens, amenity facilities and sports pitches for fitness - basic human rights requirements for workers. In addition, the sports pitches were required for mitigation purposes, to ensure that an influx of workers did not affect the amenity use of existing facilities for the local population. As the Examining Authority noted in its Report to the Secretary of State dated 19 December 2012 (see, as an example, paragraph 4.369), the campuses "*are an integral part of the Applicant's proposals for housing the workforce required to construct Hinkley Point C.*" This is consistent with the first principle of associated development (as per the DCLG Guidance on associated development) that there should be a direct relationship between associated development and the principal development, which means the associated development should either support the construction or the operation of the principal development or help address its impacts. Without construction welfare facilities, you would not have a construction workforce to construct the Hinkley Point C project. A direct relationship clearly exists.

3.4 A "flight training school" is clearly not required to increase the number of ATMs of cargo aircraft at Manston Airport, whether in construction or in operation, neither is it demonstrated to be required as mitigation for the impacts of development. There is no direct relationship. The only "relationship" is that RSP is seeking an opportunity to obtain an additional source of revenue.

3.5 It is pertinent that the BDB Letter does not even try to demonstrate why a "flight training school" has a direct relationship with RSP's alleged proposed "NSIP" and it is pertinent that the BDB Letter does not tackle what the direct relationship is between the alleged proposed "NSIP" and the other elements of its proposal, such as the extent of the proposed commercial development on the land known as the Northern Grass area. This is because there is no direct relationship – it is plain that they are free standing businesses providing additional sources of revenue and therefore cannot be accepted as associated development.

3.6 As stated in our 11 October 2017 letter at section 4, these are matters that require resolution now, at the pre-application and acceptance stage, given the blighting effect on land included for such uses for intended compulsory acquisition and the

importance of a clear description of development vis a vis the statutory tests and relevant guidance.

3.7 The Secretary of State, when reaching a conclusion in section 55(3)(e) of the 2008 Act must have regard to the extent to which the applicant has had regard to any guidance issued under section 50 of the 2008 Act. This includes DCLG's Guidance on associated development applications for major infrastructure projects (April 2013). Accordingly, the points that we have raised cannot be put to one side and left to the examination stage. The Planning Inspectorate and the Secretary of State must be satisfied that the application has undertaken appropriate pre-application requirements and contains the necessary justification and explanation at the acceptance stage.

4. IDENTITY OF THE APPLICANT

4.1 We have now seen the email submitted to the Planning Inspectorate on 14 March 2017, which was issued following the uncovering at our client's planning appeal process (on an application unconnected to this matter) that RSP was the new applicant for the proposed DCO application at Manston Airport.

4.2 The email, which seems to be portrayed as a confirmatory email, is another example of imprecision and lack of clarity – an all too common theme surrounding this proposed application. The email simply states "*[t]he personnel of Tony Freudmann, Niall Lawlor and George Yerrall remain the same, as do the consultants previously instructed by RiverOak Investment Corporation Inc.*" This simply means that the named personnel remain on the project as do the consultants. There is no explanation whatsoever about the new UK entity or that the previous applicant, RiverOak Investment Corporation LLC, no longer has any involvement or interest in the proposed alteration to Manston Airport. Simply using some of the same personnel and consultants does not alter the fact that a new, and completely unconnected, legal entity has become the new applicant for the proposed DCO application.

4.3 We would emphasise our concern set out in paragraph 5.9 of our 11 October 2017 letter that the 2017 consultation materials have misled the public and stakeholders. It would appear that RSP has simply treated the change in legal entity as if it were an immaterial change of name, when clearly it is not. This has serious ramifications, not least for those who may be subject to compulsory acquisition, blight and nuisance and who may therefore wish to seek compensation, as well as others affected and the general public. These are serious points that have not been dealt with properly or transparently in the consultation material. Nowhere in the 2017 consultation material does RSP clearly explain the change in applicant that took place in December 2016. Rather the documents define "RiverOak Strategic Partners Limited" as "RiverOak", and then refer to RiverOak's consultation of 2016, which is misleading and factually incorrect (see, for example, paragraph 1.1 and section 2 of the Interim Consultation Report on RSP's website).

4.4 Our concerns at Section 5 of our 11 October 2017 letter need to be properly dealt with and the disclosure of the email of 14 March 2017 re-confirms the issue.

5. RSP'S ATTEMPT TO CIRCUMVENT THE INFRASTRUCTURE PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2017

5.1 Again, the BDB Letter fails to answer our concerns, providing a response that confuses the basic point, ignores the legislation and which refers to an irrelevant (and incorrect) example in an attempt to provide the Planning Inspectorate with a supposed precedent. Our concerns set out in section 6 of our 11 October 2017 letter remain to be dealt with.

5.2 First, the response tries to make a point that any new scoping request would be for the same project and would have a cost to the public purse.

5.3 This, again, is an attempt to confuse the point as our letter of 11 October 2017 was not suggesting that a new scoping opinion must be sought by RSP (in any event, scoping opinions are voluntary). Rather, the point is that:

5.3.1 the scoping opinion for the proposed DCO application was requested in June 2016 by RiverOak Investment Corporation LLC (as is clear from the front cover and paragraph 1.1.1 of the scoping request and as acknowledged by the Secretary of State in paragraph 1.1 of the scoping opinion where RiverOak Investment Corporation LLC is referred to as "the Applicant"), and

5.3.2 the "Applicant" changed in December 2016 to RSP,

so RSP cannot take advantage of the transitional arrangements in Regulation 37 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the "**2017 EIA Regulations**").

5.4 This does not mean that RSP should obtain a new scoping opinion, rather that its statutory consultation carried out between 12 June and 23 July 2017 has been carried out under the incorrect Environmental Impact Assessment Regulations, which means the consultation, notification and PEIR are all deficient and the pre-application procedure under the 2008 Act has simply not been complied with.

5.5 Given the 2017 EIA Regulations were laid before Parliament in April 2017, RSP could have rectified this issue. Indeed, RSP could have taken action earlier when the Government consulted on the draft of the 2017 EIA Regulations between December 2016 and February 2017 given the transitional arrangements in the draft would also have meant that RSP would have to comply with the 2017 EIA Regulations and not the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (the "**2009 EIA Regulations**"). RSP is clearly in error.

5.6 There is no discretion on the part of the Secretary of State with regards to this issue. Regulation 37 of the 2017 EIA Regulations is clear. If it was intended to refer to a scoping opinion requested for a particular project, then the 2017 EIA Regulations would have been drafted so that it referred to the 2009 EIA Regulations continuing to apply where a scoping opinion for a proposed development has been obtained prior to the commencement of the 2017 EIA Regulations. Instead, Parliament chose to restrict the transitional arrangements to where "the applicant" has requested a scoping opinion prior to the commencement date.

5.7 This leads to only one conclusion for the Secretary of State, should RSP seek to submit a DCO application: that the application cannot be accepted on the grounds that:

5.7.1 section 55(3)(e) has not been satisfied for the reasons expressed above; and

5.7.2 section 55(3)(f) has not been satisfied given the Environmental Impact Assessment has been publicised and prepared by reference to the 2009 EIA Regulations rather than the 2017 EIA Regulations.

5.8 We would also note that simply complying with the 2017 EIA Regulations "*where practicable*" whilst asserting that RSP benefits from the transitional provisions so only has to comply with the 2009 EIA Regulations (as recorded in the note of a meeting held between the Inspectorate and RSP on 26 September 2017), is not satisfactory – where an applicant does not benefit from the transitional provisions, as in RSP's case,

then it has to fully comply with the 2017 EIA Regulations, there is no discretion to be applied.

5.9 With respect to the East Anglia ONE offshore wind farm project, the example is totally irrelevant and misleading, including for the following reasons:

5.9.1 the scoping opinions were requested in July 2010 and July 2011 with the application submitted in November 2012 and the DCO granted in June 2014. Accordingly, the example clearly does not act as a precedent given the 2009 EIA Regulations applied from inception to DCO grant. Therefore, there was no requirement to demonstrate that the applicant for the DCO application was the same as the applicant that requested the Secretary of State to adopt a scoping opinion; and

5.9.2 the example is not comparable in any way as:

(a) East Anglia Offshore Wind Limited requested the scoping opinions in 2010 and 2011. By the time the application was submitted in November 2012, the applicant had changed to East Anglia One Limited, a wholly owned subsidiary of East Anglia Offshore Wind Limited.

(b) The same approach was taken on East Anglia THREE, where East Anglia Offshore Wind Limited applied for the scoping opinion in November 2012, with the application then submitted in November 2015 in the name of East Anglia Three Limited. The reason for this approach is that East Anglia Offshore Wind Limited has been awarded the licence by The Crown Estate to develop approximately 7.2GW of wind capacity off the coast of East Anglia. The East Anglia Zone will be developed as a number of individual generating stations, and hence wholly owned subsidiaries have been set up to submit the DCO applications.

(c) This is in no-way comparable to RSP, whose shareholder is not the entity that submitted the request for a scoping opinion in June 2016. As we stated in section 5 of our 11 October 2017 letter, the shareholders of RSP are RiverOak Manston Limited and M.I.O Investments Limited (a Belize registered entity with anonymous shareholders and directors) and the original applicant, RiverOak Investment Corporation LLC, has expressly and publicly confirmed in March 2017 that RSP "*is not affiliated with RiverOak Investment Corp., LLC.*" The comparison with East Anglia Offshore Wind is clearly wrong.

6. INADEQUACY OF CONSULTATION

6.1 The adequacy of consultation is a matter for the acceptance stage, not for the examination, and so our concerns set out in section 7 of our 11 October 2017 letter must be addressed.

6.2 We do not repeat the points raised in our letter of 11 October 2017, but would take the opportunity to highlight the following:

6.2.1 the consultation carried out to date is inadequate, and not in accordance with either the 2009 EIA Regulations or the 2017 EIA Regulations on the basis that the PEIR has failed to provide a preliminary assessment of the proposed development, being *Current capability of airport + increase in the capability*

of the airport resulting from proposed alteration[4] *= new total capability.* The legal effect of RSP's proposed application would be to increase the capability of Manston Airport and it must environmentally assess that increase and not just its projected forecast;

6.2.2 the consultation carried out to date is inadequate, and not in accordance with either the 2009 EIA Regulations or the 2017 EIA Regulations on the basis that the PEIR has failed to assess SHP's major planning application for a phase on the Manston Airport site comprising 2,500 homes, Advanced Manufacturing Park, a village centre, sports and leisure village and major country park. This application is submitted, and therefore there is no justification for not including it in the assessment (indeed, the application is classed as a Tier 1 project in the Inspectorate's Advice Note Seventeen on Cumulative Effects Assessment, December 2015). Of course, as RSP's proposals are incompatible with SHP's planning application, the effect would be the total loss of the SHP's proposed development. Accordingly, the effect of that loss on housing within the District needs to be assessed;

6.2.3 the proposed development on the "Northern Grass" area is extensive, at c.119,000 square metres of warehouse, office and business units. We have already made the point in our 11 October 2017 letter that SHP's aviation experts consider that there are a number of components of RSP's proposals that do not form part of any NSIP (even if there was one) and do not satisfy the tests of associated development. The Northern Grass area is one of those components. In addition, given the extent of development proposed, the public should be able to understand the impact of c.119,000 square metres of warehousing and office/business units floorspace, yet the PEIR does not provide sufficient information to understand/assess how this element of the floorspace will affect traffic in the area. This simply emphasises that the PEIR does not enable consultees (both specialist and non-specialist) to understand the likely environmental effects of the proposed development and does not help to inform their consultation response (which is what a "good" PEIR document should do according to the Inspectorate's own Advice Note Seven dated March 2015); and

6.2.4 as explained in section 5 of this letter, the consultation itself has not been carried out in accordance with the correct Environmental Impact Assessment Regulations – the 2017 EIA Regulations are the correct Regulations.

7. RSP'S FAILURE TO COMPLY WITH COMPULSORY ACQUISITION LEGISLATIVE AND GUIDANCE REQUIREMENTS

7.1 The points raised in our letter of 11 October 2017 are clearly matters for the acceptance stage for the reasons set out in section 8 of that letter.

7.2 We note that there is no response to the point that RSP has not, as the new applicant of the proposed DCO application, made any offers to acquire Manston Airport by agreement or otherwise deliver RSP's proposals by agreement. This just demonstrates that RSP, as the current applicant, has not been resorting to compulsory acquisition as a measure of last resort.

7.3 It cannot be right that an application which will contain a request to acquire by compulsion the whole application site and in which the applicant has no interest, can be considered for acceptance where the applicant has made no offer to acquire by agreement from the affected landowner.

[4] Not projected use, but the maximum number of new ATMs that the proposed alteration would give rise to.

7.4 Furthermore, given the evidence contained in the York Aviation Report that RSP does not require significant areas of land for its proposals, notably the "Northern Grass" area amongst other areas as shown on the plan in the York Aviation Report, there is no justification for RSP to seek compulsory acquisition powers over the whole of the Manston Airport site. This is especially the case when the consultation material is silent on why all of the land is required and no explanation provided directly to SHP through offers of voluntary agreement. Indeed, the land area sought for commercial development is much larger than that utilised by other, mature airports.

7.5 Under these circumstances, we cannot see how, with any degree of reasonableness, the application could possibly be considered for acceptance. Not least, the *Guidance related to procedures for the compulsory acquisition of land* would not have been followed. The Secretary of State is obliged to have regard to this fact under section 55(4)(c) of the 2008 Act when reaching a conclusion under section 55(3)(e).

7.6 Furthermore, compliance with the pre-application guidance under the 2008 Act is one of the safeguards designed to protect landowners against breach of their rights under Article 1 of the First Protocol of the ECHR to peaceful enjoyment of their land, and should therefore be taken very seriously by both promoters and the Planning Inspectorate. In circumstances where the expropriation of land is contemplated in a scenario where one commercial entity is to be dispossessed in favour of another (as would be the case here were RSP to be granted powers of acquisition), the approach to be taken to compliance with the safeguards should be all the stricter. This view was endorsed by Lord Walker in R (on the application of Sainsbury's Supermarkets Ltd) v Wolverhampton CC[5], who noted that "*the exercise of powers of compulsory acquisition, especially in a 'private to private' acquisition, amounts to a serious invasion of the current owner's proprietary rights…A stricter approach is therefore called for*".

7.7 We find it surprising and disappointing that the BDB Letter seeks to place the onus on our client to make an approach to RSP. This just supports the fact that RSP is simply using the 2008 Act to inappropriately obtain compulsory acquisition powers.

8. COSTS

8.1 Given our client's concerns over RSP's misuse of the 2008 Act process, it is only right that we should be transparent and place RSP and the Secretary of State on notice that our client will pursue all necessary avenues to defend its interests and will be seeking to recover all of its costs incurred in the entire DCO process. Once again, we place RSP and the Secretary of State on notice, for the same reasons as explained in section 9 of our 11 October 2017 letter. The BDB Letter re-emphasises the unreasonable conduct of the proposed applicant in this process.

9. SHP'S PLANNING APPLICATION AND TDC'S LOCAL PLAN

9.1 We make three brief points in response to the last paragraph of the BDB Letter:

9.1.1 Firstly, it is very common for developers to submit refinements to, or subsequent iterations of, a major submitted planning application during the determination process. SHP is no different, and that is precisely what it is doing. This is standard practice. Furthermore, on 30 October 2017, our client submitted to Thanet District Council revisions to its submitted planning application for a phase comprising 2,500 homes, Advanced Manufacturing Park, a village centre, sports and leisure village and major country park. These revisions reflect the on-going discussions that have taken place over the course of the past several months with the Council and various statutory

[5] [2010] UKSC 20 at paragraph 84

consultees. Accordingly, there is no "*state of flux*" over our client's planning application as claimed.

9.1.2 Secondly, and as we informed you on 26 October 2017, on 25 October 2017 Thanet District Council's cabinet approved the publication of the draft Local Plan and its submission to the Planning Inspectorate for Examination. The draft Plan includes Policy SP05 supporting a new settlement for at least 2,500 homes on the Manston Airport site. The planning policy position has moved on since the appeal decision referenced, and the weight to be attached to the Plan is more substantial now than it was then. Whilst the emerging local plan cannot yet attract full weight in policy terms as it has not yet been examined and adopted, neither can it, nor should it, be ignored as advocated by BDB for RSP. In addition to the draft Plan policies, there is a substantial evidence base produced independently by the Council which demonstrates that the continued operation of Manston Airport is not considered by the relevant local planning authority (advised by independent expert advisers) to be a viable proposition. The up to date evidence base upon which the emerging local plan is being promoted is a highly relevant factor.

9.1.3 Thirdly, RSP's failure to assess the effect of its proposals on the District's housing numbers and emerging development plan is a major and unacceptable omission, especially when the Manston Airport site is the largest strategic site allocation within the District, is the largest brownfield site and accounts for at least 14% of total housing provision in the next Plan Period based on the Council's current projections. It is only right and proper for the Council, the public and other stakeholders to understand the effect on the availability of housing and the socio-economic consequences should the Manston Airport site be lost as a strategic housing site. This needs to be covered in public consultation, the PEIR and ultimately any DCO application.

For the reasons expressed in our letter of 11 October 2017 and above, we consider that any application to be submitted as currently proposed by RSP to the Secretary of State for Manston Airport would be manifestly incapable of acceptance under section 55 of the 2008 Act.

We would be grateful if you could review both this letter and the York Aviation Report in the course of dealing with the concerns of SHP and we ask for a response from the Planning Inspectorate as soon as reasonably practicable to avoid any further wasted time.

Yours faithfully

Pinsent Masons LLP

Pinsent Masons LLP

Enclosures: York Aviation Report dated November 2017

cc. Bircham Dyson Bell for RSP

York Aviation

STONE HILL PARK LIMITED

SUMMARY REPORT ANALYSING USE OF YORK AVIATION MATERIAL BY RIVEROAK STRATEGIC PARTNERS LIMITED AND ASSESSMENT OF CAPABILITY OF MANSTON AIRPORT

NOVEMBER 2017

York Aviation

Originated by: Louise Congdon/James Brass/Niall Gunn/Richard Connelly

Dated: 10th November 2017

Reviewed by: Richard Kaberry

Dated: 13th November 2017

STONE HILL PARK LIMITED

SUMMARY REPORT ANALYSING USE OF YORK AVIATION MATERIAL BY RIVEROAK STRATEGIC PARTNERS LIMITED AND ASSESSMENT OF CAPABILITY OF MANSTON AIRPORT

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EXECUTIVE SUMMARY

1. York Aviation was appointed by Stone Hill Park Limited (SHP) in September 2017 to review the evidence presented by RiverOak Strategic Partners Limited (RSP) in connection with RSP's prospective application for a Development Consent Order (DCO) for the redevelopment and re-opening of Manston Airport as a hub for international air freight services, which also offers passenger, executive travel and aircraft engineering services.

2. We were the authors of two specific reports upon which RSP seek to rely in making their case, namely a report for the Freight Transport Association (FTA) and Transport for London (TfL) in 2015 and a note on Freight Connectivity for TfL in 2013. The first of these documents was used by RSP in its public consultation and this may have led respondents to believe that we were supporting the re-opening of Manston, which is not true and, as we go onto explain in this report, our analysis in these documents for the FTA and TfL does not support RSP's conclusion that there would be a substantive or sustainable role for Manston in the UK air freight industry.

3. The RSP case is principally based on circumstantial evidence presented in the Volumes I to IV of *Manston – A Regional and National Asset* prepared by Dr Sally Dixon of Azimuth Associates (June 2017 consultation version). Much of the material upon which Azimuth seek to rely as the basis of RSP's case relates to the economic costs to the UK if additional passenger hub capacity is not provided in the South East of England by 2050. This is not relevant to the specific question as to whether there would be sufficient demand for pure freighter movements to be operated to/from Manston in the foreseeable future or by their assessment year 2040.

4. The analysis presented by Azimuth shows a lack of understanding of the economics of the air freight market. This leads to a misinterpretation of our work, upon which Azimuth seek to rely to support RSP's case. Just because there could be excess air freight demand in 2050, compared to the bellyhold capacity available in the absence of further runway capacity at the UK's main hub, it does not follow that displaced bellyhold freight will seek a more expensive pure freighter service from a relatively nearby airport over the use of available bellyhold capacity from a more distant airport which can be provided at a lower cost to the shipper with only a marginal penalty in terms of the overall shipment time.

5. Fundamentally, Manston's past operation was economically inefficient due to the inherent lack of viability. Hence, reopening the Airport, in the face of a very limited niche market, has the potential to damage the productivity of the UK aviation sector overall, particularly, as we have demonstrated in our own assessment of cargo demand for Manston in Section 3 of this report, that there are more economically efficient alternatives available for any freight displaced due to specific capacity constraints at Heathrow both now and in the future.

6. Manston is too peripheral for integrator operations serving the UK. Integrators have a strong preference for locations more centrally located in the UK with good road access to all of the major markets. The availability of land for warehouses, for example as suggested in terms of the use of the 'Northern Grasslands' part of the overall Airport site, is far less important than a location central to the market and the availability of good road access, neither of which are characteristics of Manston. It is simply in the wrong place to serve the market being located at the far south east at the end of a peninsular, away from the main centres of population and distribution in the UK.

7. In the absence of hard market evidence of the need for Manston Airport, Azimuth undertook an interview survey to supplement RSP's case and to inform the forecasts. However, the list of interviewees was small, dominated by mainly local companies with something of a vested interest in seeing Manston re-opened. Even so, if anything, the views of those interviewed by Azimuth suggest that there would, at best, be a limited role for Manston. The one airline interviewed made clear that *"success at Manston depended upon identifying a niche market and becoming known for excellence. In particular, suggestions included a perishables centre, handling of live animals, easy access for charter flights, and handling cargo that is not necessarily straightforward"*. The scale of this opportunity was never quantified by Azimuth. It is clear, however, that the realistic expectation for Manston is for a small niche operation rather than as a general 'overspill' cargo airport for London.

8. The outputs from these interviews are then used by Azimuth as a basis for postulating a number of cargo aircraft movements that might operate at Manston. However, it is not possible to relate the proposed services to be operated with the responses by the interviewees. There is simply no explanation for, or justification for, the services postulated by Azimuth. At the very least, there is a lack of transparency in the approach adopted.

9. In our view, the Azimuth cargo movement forecasts simply lack credibility. To illustrate this lack of credibility of the forecasts, in Year 2 (the first operational year), a cargo throughput of nearly 100,000 tonnes is forecast by Azimuth. This would make Manston the 5th largest freight airport in the UK in its first year after re-opening (compared to 2016 actual throughput at the other airports). This would place it close to the scale of freight operations at Manchester Airport, which includes a substantial amount of bellyhold freight. It would make Manston the 3rd busiest airport in the UK in terms of tonnage carried on dedicated freighter aircraft. This is simply not a credible proposition. This lack of credibility is important in reaching any decision under section 23 of the Planning Act 2008 (as amended).

10. We have updated and further developed our analysis of the UK air freight market from that previously undertaken in 2013 and 2015 for TfL and for the FTA and TfL (RSP seek to rely on our 2013 and 2015 work as corroboration of their own cargo movement forecasts). When properly interpreted, our forecasts of air freight demand and capacity across the UK as a whole, taking the role of bellyhold fully into account, show that, to the extent that there is any need for additional pure freighter movements, there is plenty of freighter capacity at Stansted and East Midlands to accommodate any growth. These airports are better located relative to the market and the key locations for distribution within the UK. Overall, we conclude from this analysis that there will be no shortage of freighter capacity in the UK in the period up 2040 (RSP's assessment end date) and that overspill from other airports would not provide a rationale for re-opening Manston.

11. Taking the most optimistic basis for assessing its potential role, we have estimated that Manston might be able to achieve at most 4,470 annual air transport movements by cargo aircraft by 2040, but this is highly unlikely given its location and the clear market trend away from the use of dedicated freighter aircraft. Our more likely projection is that it might attain 2,000 annual air cargo aircraft movements by 2040 and it is equally plausible that it might not achieve more than 750 such movements annually. These are all far below Azimuth's projection, upon which RSP rely, of 17,171 annual cargo aircraft movements.

12. Our initial assessment of the passenger market is that the throughput might, at best, be around half of that projected by RSP and, hence, given the dependence on passenger related income for the financial viability of airport operations, this will impact substantially on the viability of the proposal. The other activities suggested by RSP, such as business aviation, maintenance, repair and overhaul, and aircraft dismantling are highly competitive markets and, to the extent that Manston might attract any such operations, these are unlikely to contribute substantially to the overall viability of the Airport.

13. The existing infrastructure at Manston Airport, if made good, is capable of handling 21,000 annual air cargo aircraft movements[1]. The actual usage of that capability would depend on the pattern of operation and how the infrastructure was used on a day by day basis. Our assessment, therefore, provides essential missing information from RSP's materials to date which is necessary for the purposes of section 23 of the Planning Act 2008 (as amended), for assessment purposes under the Environmental Impact Assessment Regulations and for consultation purposes.

14. Without prejudice to our view that demand to use Manston is not likely to be anything like 17,171 cargo aircraft movements a year, we have considered the land required to accommodate such a number of movements. Our assessment is that the land required would be substantially less than shown on the RSP Master Plan and that the proposed land take is excessive and without justification in terms of the compulsory acquisition of the land. Any development required to handle 17,171 annual movements by air cargo aircraft can all be accommodated to the south of the B2050 and, even allowing for passenger operations and other activities, would not require all of the airfield land to the south of the road. Obviously, on the basis of more realistic forecasts of future demand, the area required to support the ongoing operation of the Airport would be materially smaller.

15. We can see no justification for the inclusion of the 'Northern Grasslands' area within the DCO on the basis of it being for associated development. There will be little requirement for or likelihood of the relocation of freight forwarding activity from adjacent to the UK's main cargo hub at Heathrow to Manston, as suggested by RSP, and any requirement for such activity specifically to support the proposed level of freight activity at Manston could easily be accommodated on land to the south of the B2050. The development on the 'Northern Grasslands' site appears to be speculative commercial development which, based on the precedent at East Midlands Airport – the UK's principal airport for pure freighter operations – would be expected to be largely for non-aviation related uses.

[1] Based on an 18-hour operational day. Should a night time noise policy be agreed with Thanet District Council pursuant to the existing planning agreement that enabled a longer operational day and/or a number of scheduled night movements, then the capability could, in theory, be higher than 21,000 annual cargo aircraft movements.

16. In terms of the socio-economic implications of the proposed development, Azimuth have shown a lack of understanding of how such impacts should properly be calculated. Leaving aside the use of inappropriate multipliers, the impacts have been assessed at a national scale and should have taken displacement of activity from other airports fully into account, reducing the impacts well below those stated. Furthermore, the assessment should have considered the impact on alternative uses of the site, including SHP's proposed mixed use development and the socio-economic benefits deriving therefrom. We have set out a more realistic and robust assessment, which shows that the local impacts within Kent, even on Azimuth's forecasts, would be substantially less than claimed and it is these lower order effects which would need to be balanced with the environmental and other impacts in assessing the acceptability of the proposed development against the alternatives.

17. Unsurprisingly, the socio-economic impacts associated with the Airport are lower still on the basis of more realistic forecasts of likely usage if it re-opened. The operation is simply of a much smaller scale such that, in Year 2, it would generate only 452 jobs, 17% of Azimuth's estimate of 2,654. By Year 20, the differential is even larger, with the Azimuth estimates reaching over 30,000 jobs compared to our estimate of just over 1,000 jobs. Once again, the evidence presented by Azimuth on behalf of RSP cannot be relied upon. It is infected with the flaws in the traffic forecasting methodology identified previously but also the approach to identifying socio-economic impacts is, in itself, badly flawed. The socio-economic impacts are, as a result, massively overstated. In any event, these benefits would not be realised if the Airport ceases operation again due to it not being commercially viable.

18. As well as the Azimuth reports which form the basis of RSP's case, we have also reviewed a number of other reports on the potential for Manston. In overall terms, we agree with Aviasolutions for Thanet District Council that there is little realistic prospect of the re-opening of Manston Airport being a commercially viable proposition. We have reviewed their original report and the more recent reports and concur with their views on the overall structure of the UK air cargo market, noting that they, unlike Azimuth, have correctly understood the implications of our 2015 work for the FTA. We do not accept Northpoint's rebuttal of the Aviasolutions work. Like Azimuth, Northpoint's work is largely aspirational without any robust evidence or analysis of the market. Northpoint, too, misinterpret our previous work for the FTA and TfL.

19. In overall terms, we do not consider that the case that the re-opening of Manston Airport would constitute a Nationally Significant Infrastructure Project has been robustly made or substantiated. In any event, given that the baseline capability of Manston Airport is at least 21,000 annual cargo air transport movements (see section 4), this means that RSP must, effectively, be seeking to increase the capability of Manston Airport from 21,000 annual air transport movements by cargo aircraft to at least 31,000 such movements each year, a level of activity which has not been consulted on or assessed in RSP's Preliminary Environmental Information Report (PEIR). Indeed, RSP's consultation material does not provide any detail as to what the increase in capability would be as a result of its proposals (i.e. the increase in capability as a result of its proposed alteration to Manston Airport). As a minimum, the increase in capability would be to 31,000 annual air transport movements by cargo aircraft, but in our view their proposals would result in a significantly higher 'new' capability which is not revealed or assessed by RSP.

20. Our overall assessment is that RSP have failed to provide their own evidence of the capability of Manston Airport and the amount by which their proposals would increase that capability by. Rather, the only information that they present is a forecast of future freight demand, which has no credibility as explained in this report. There are, hence, major omissions in RSP's consultation material. This failure means that, in our opinion, the requirements in section 23 of the Planning Act 2008 (as amended) have not been satisfied. In essence, we would have expected RSP to be able to show:

- the capability of Manston Airport of providing air cargo transport services;
- the amount by which RSP is proposing to increase that capability by and thus the "new" capability; and
- a credible forecast for why that 'new' capability is required.

None of this information is provided by RSP.

1 INTRODUCTION

1.1 York Aviation was appointed by Stone Hill Park Limited (SHP) in September 2017 to review the evidence presented by RiverOak Strategic Partners Limited (RSP) in connection with RSP's prospective application for a Development Consent Order (DCO) for the redevelopment and re-opening of Manston Airport as a hub for international air freight services, which also offers passenger, executive travel and aircraft engineering services.

1.2 York Aviation is a specialist air transport consultancy that focusses on airport planning, demand forecasting, strategy, operation and management. The company was established in 2002. We offer a broad range of services to airports, airlines, governments, economic development organisations and other parties with an interest in air transport. Our team is a mixture of experienced air transport professionals and economists. Key members of the team have substantial experience of airport operations and development gained through working for Manchester Airports Group. Our core services include:

- business planning and strategy;
- capacity and facilities planning;
- master planning and planning application support;
- demand forecasting;
- economic impact assessment and economic appraisal;
- policy and regulatory advice;
- route development;
- transaction support.

1.3 Our clients include:

- Transport for London;
- Transport for the North;
- Department for Transport;
- Scottish Enterprise;
- Northern Ireland Government;
- Manchester Airports Group;
- Birmingham Airport;
- London City Airport;
- London Luton Airport;
- Ryanair;
- Freight Transport Association.

As well as numerous investors in airports and other parties with an interest in the development, operation and management of airports in the UK and abroad.

1.4 Louise Congdon, Managing Partner of York Aviation has provided evidence in relation to the need for and economic impact of airport development at several airport public inquiries, including Manchester Runway 2, Liverpool Airport, Doncaster Sheffield Airport, Stansted Generation 1, London Ashford Airport (Lydd) and London City Airport.

1.5 We were the authors of two specific reports upon which RSP seek to rely in making their case, namely a report for the Freight Transport Association (FTA) and Transport for London (TfL) in 2015 and a note on Freight Connectivity for TfL in 2013. The first of these documents was used by RSP in its public consultation and this may have led respondents to believe that we were supporting the re-opening of Manston, which is not true and, as we go onto explain in this report, our analysis in these documents for the FTA and TfL does not support RSP's conclusion that there would be a substantive and sustainable role for Manston in the UK air freight industry.

Historical Position

1.6 Manston Airport closed to commercial operations in May 2014, following several unsuccessful attempts to attain commercially viable operations. In the decade prior to closure, the Airport did manage to attract some cargo and passenger activity but not to levels that could ensure financial and commercial viability for its owners. The historic traffic performance is set out in **Table 1.1**. The Airport's cargo traffic peak was in 2003.

Table 1.1: Historic Commercial Traffic at Manston Airport

	Passengers	Cargo (tonnes)	Air Transport Movements[2] (excl. Air Taxis)	of which, Cargo Aircraft Movements[3]	Total Aircraft Movements
2003	3,256	43,026	1,106	1,081	24,934
2004	101,328	26,626	3,333	730	23,324
2005	204,016	7,612	4,631	177	21,358
2006	9,845	20,841	461	322	16,687
2007	15,556	28,371	608	444	21,521
2008	11,625	25,673	540	412	19,269
2009	5,335	30,038	583	485	18,902
2010	25,692	28,103	1,151	491	16,260
2011	37,169	27,495	1,472	419	18,695
2012	8,262	31,078	687	432	14,688
2013	40,143	29,306	1,640	511	17,504
Source: CAA Airport Statistics					

[2] Air Transport Movements (ATMs) are those services sold to the public as distinct from private flights or those operated on behalf of individual companies using their own aircraft. All substantive cargo operations in the UK would be treated as air transport movements. Aircraft movements are all aircraft movements at an airport, including 'touch and go' landings by flying school aircraft.

[3] Based on more detailed records maintained by the former airport operator, it would appear that CAA data may not record all empty cargo positioning flights. However, we do not have complete data. The total number of cargo flights could, hence, be somewhat greater than shown.

1.7 Table 1.1 shows that the number of air cargo movements and the tonnage carried was fairly consistent over the last 10 years of the Airport's operation, but these operations were not sufficient to support a commercially viable operation at the Airport.

1.8 We address the realistic levels of freight demand that Manston Airport might attract if re-opened in **Section 3** of this report.

The Application

1.9 RSP's prospective DCO application is predicated on its proposed alterations to the Airport's infrastructure, the effect of which is expected to increase by at least 10,000 a year the number of cargo air transport movements (CATMs) a year that the Airport is capable of accommodating. In practice, the case set out in the consultation documents produced by RSP and used in the Preliminary Environmental Information Report (PEIR) are predicated on it being able to attract and handle a forecast of 17,171 CATMs and 1.4 million passengers per annum (mppa) by 2039 and all of the assessments are made on this basis.

1.10 In order for RSP's proposals to be considered a Nationally Significant Infrastructure Project (NSIP), which can be taken forward using the DCO procedure under the Planning Act 2008 (as amended), it must comprise of an alteration to an airport which would *"increase by at least 10 million per year the number of passengers for whom the airport is capable of providing air passenger services"* or *"increase by at least 10,000 a year the number of air transport movements of cargo aircraft for which the airport is capable of providing air cargo transport services."*[4] [5] In this case, the relevant criterion relates to air transport movements for cargo aircraft. It is clear, therefore, that validating the capability of Manston Airport of providing air cargo transport services is vital to determining the legitimacy of a DCO.

1.11 RSP's prospective DCO application does not provide any explanation or understanding of the capability of the Airport before its proposed alteration is made. The capability of the Airport is a necessary component of Section 23(5) of the Planning Act 2008 (as amended), as it is from that figure that a prospective applicant must consider the effect of its proposed alteration, which must be expected to have the effect of an increase of at least 10,000 annual air transport movements by cargo aircraft. Without identifying the capability of Manston Airport, one does not have all of the components required under section 23 of the Planning Act 2008 (as amended) for a decision to be made as to whether the proposed alteration falls within section 23. In addition, an applicant must then explain what the 'new' capability would be following its proposed alteration in order to then assess the effects of the proposed alteration. We consider this further in **Section 4**.

[4] Section 23(5) of the Planning Act 2008 (as amended).

[5] It is noted that the Planning Act 2008 (as amended) also refers to an increase in permitted use as a relevant criterion. In this case, the existing planning consent under which Manston operated contained no limit on the number of annual aircraft movements permitted although there was a prohibition on night movement of aircraft between 23.00 and 07.00 in force, pending agreement to a night movement policy with the local planning authority, Thanet District Council. In any event, the increase would still need to be at least 10,000 per year in the number of air transport movements of cargo aircraft for which the airport is permitted to provide air cargo transport services.

1.12 A further consideration is the extent of development proposed in terms of its capability of supporting the projected number of movements but, more importantly, given that RSP is seeking to compulsory acquire the entirety of the Manston Airport site from SHP, whether the land area proposed is actually necessary in order to handle the projected number of aircraft movements and whether there is a *"compelling case in the public interest"* for its acquisition[6]. This requires consideration as to whether the case for the development and re-opening of Manston Airport is *"compelling"* and whether the full extent of land required has been fully justified. We consider this in Section 4 of this report.

1.13 We consider the socio-economic case for the development in **Section 5** of this report.

This Report

1.14 RSP sets out its strategic case and need for the re-opening of Manston Airport as a hub for international air freight in 4 volumes prepared by Dr. Sally Dixon of Azimuth Associates (Azimuth), namely '*Manston Airport - a Regional and National Asset, Volumes I-IV; an analysis of air freight capacity limitations and constraints in the South East and Manston's ability to address these and provide for future growth; June 2017'.* **Section 2** of this report reviews this analysis and the extent to which the analysis presented by Azimuth justifies the forecast cargo and passenger activity projected for Manston. This is important for the purposes of section 23 of the Planning Act 2008 (as amended) and whether the analysis presented by Azimuth provides a compelling case in the public interest for the acquisition of the site through compulsory acquisition procedures.

1.15 Within this report, we address, in particular, the use made by Azimuth of analysis that we undertook for Transport for London[7] and for the Freight Transport Association[8] in connection with the work of the Airports Commission and the need for new hub airport capacity for London. For reasons which will be made clear, the York Aviation work relied upon by RSP does not, and cannot be taken to, support RSP's proposed alteration to Manston Airport and, therefore, cannot be relied upon by RSP, the Planning Inspectorate, the Secretary of State and any future appointed Examining Authority (should RSP submit the application and the Secretary of State accepts the application). Given the errors in the interpretation and use of our work by Azimuth, we are concerned that the consultation carried out to date has not properly informed the public in respect of the valid interpretation of our work regarding the prospects for the viable operation of Manston as a freight airport.

1.16 We also review independent reports produced variously by Aviasolutions (Avia) for Thanet District Council in September 2016 and August 2017 and Northpoint Aviation Services (Northpoint) for RSP. This peer review of the other reports is at **Section 6** of this report. To the extent that we agree with these other reports, we do not repeat the detailed analysis in this report but reference the corroborating evidence as appropriate.

[6] Department for Communities and Local Government, *Guidance on compulsory purchase process*, October 2015, page 6.

[7] Referenced by Azimuth as Transport for London (TfL), *Note on Freight Connectivity*, unpublished paper 2013. For the avoidance of doubt, this note as made available by TfL under a Freedom of Information Request is appended to this report at **Appendix A**.

[8] York Aviation (2015), *Implications for the Air Freight Sector of Different Airport Capacity Options*.

1.17 Our conclusions are presented in **Section 7**.

2 CRITIQUE OF RSP APPROACH TO FORECASTING

2.1 In this section, we review the work of Azimuth that forms the justification for the DCO and was part of RSP's consultation documents in June and July 2017. The work is presented in 4 volumes:

- Volume I: Demand in the south east of the UK
- Volume II: A qualitative study of potential demand
- Volume III: The forecast
- Volume IV: The economic and social impact of airport operations

This section also addresses the basis of the demand forecasts for Manston as set out in Volumes I, II and III, focussing principally on air freight in this summary report. We address the socio-economic assessment in Volume IV in Section 5 of this report. Given the repetition of much of the material across the first three volumes of Azimuth's work, we have grouped issues broadly under the appropriate volume in this section.

2.2 We do not, in the main, dispute the accuracy of the factual detail, some relevant and some not, set out in the Azimuth reports or the veracity of the secondary evidence presented. We do, however, have serious and considerable issues in relation to the interpretation and the completeness of this evidence base, in particular relating to the use of previous York Aviation reports, and the inferences and conclusions drawn from it. Ultimately, we consider that the case put forward by Azimuth is weak and unsubstantiated as the extensive evidence base presented does not, in reality, support the conclusions drawn which, in many cases, go well beyond what can reasonably and sensibly be inferred from the information presented. Much of the information is effectively circumstantial and falls far short of making a compelling case, or indeed any case, that the demand forecasts would be capable of being realised.

2.3 Although Azimuth state at paragraph 1.2.1 of Volume 1 *"RiverOak, who specialise in identifying profitable market opportunities, has identified the substantial need for additional and specialised airport capacity for dedicated freighters in the southeast of England"*, we are unaware of any other research upon which RSP rely. All other documents produced in support of the prospective DCO appear to rely on the work of Azimuth.

2.4 In essence, the work of Azimuth sets out to address three key questions, which they assert provide the answer as to whether there is a compelling case in the public interest for the development of Manston Airport sufficient to meet the test for the inclusion of compulsory acquisition powers as part of the DCO. These are largely addressed in Volumes I and II, and lead on to the preparation of demand forecasts set out in Volume III. The three tests put forward by Azimuth are:

- *Does the UK require additional airport capacity in order to meet its political, economic, and social aims?*
- *Should this additional capacity be located in the South East of England?*
- *Can Manston Airport, with investment from RiverOak, relieve pressure on the UK network and meet the requirement of a nationally significant infrastructure project?*

2.5 At the outset, we query whether these are the correct questions to be addressed in terms of the case that RSP seek to make for the use of Manston as a major freighter hub. As is clear from the draft Airports National Policy Statement (NPS)[9], the first two questions relate to the requirement for more capacity at the UK's main passenger hub airport at Heathrow. The updated draft NPS makes clear at paragraph 1.30 that, in relation to the Government's preferred solution of a new northwest runway at Heathrow:

"Consideration has been given to alternative solutions to the preferred scheme, and the conclusion has been reached that there are no alternatives that would deliver the objectives of the Airports NPS in relation to increasing airport capacity in the South East and maintaining the UK's hub status."

2.6 Hence, these first two questions are not relevant to considering whether there is a need for dedicated freighter capacity at Manston sufficient to meet the tests for a DCO. Manston would make no contribution to meeting the identified requirement of passenger hub capacity for the UK or for the South East of England. Furthermore, the draft NPS makes clear, at paragraph 1.39 in relation to any other development consent application for airport development, that:

"Nevertheless, the Secretary of State considers that the contents of the Airports NPS will be both important and relevant considerations in the determination of such an application, particularly where it relates to London or the South East of England. Among the considerations that will be important and relevant are the findings in the Airports NPS as to the need for new airport capacity and that the preferred scheme is the most appropriate means of meeting that need."

2.7 This confirms that the proposed northwest runway at Heathrow addresses the identified need as set out by the Airports Commission for new airport capacity in the South East of England and that this provides a context against which any other DCO application would need to be assessed.

Demand in the South East of the UK (Volume I)

2.8 As has been noted above and in the most recent 2017 reports from Avia, much of the analysis presented by Azimuth relates to the evidence for a shortage of airport capacity overall in the South East of England and, specifically, the work of the Airports Commission relating to the need for additional hub airport capacity serving both the needs of passengers and of air freight. Much of the evidence presented by Azimuth to justify the existence of an airport capacity shortfall in the South East of England relates to the shortfall in capacity for passenger aircraft and, specifically, a shortage of capacity at the main aviation hub at Heathrow as noted above. This does not provide any underpinning justification for the specific development that RSP proposes at Manston, which comprises a specialist freight airport with a small number of low fare, regional and charter flights for passengers.

[9] Department for Transport, *Revised Draft Airports National Policy Statement: new runway capacity and infrastructure at airports in the South East of England*, October 2017. Note that the provisions referred to have not changed since the original draft as of February 2017, which pre-dated RSP's consultation.

2.9 Azimuth cite a number of reports which highlight the potential shortage of airport capacity, not just in the UK but across Europe, and the economic costs of not addressing these shortfalls. Azimuth then seek to imply that Manston could provide part of the solution and contribute to delivering these benefits. This is not justified and creates a false impression of the potential economic significance of RSP's proposals. A key point is that the reports relied on by Azimuth need to be seen in the context in which they were written, namely to set out the economic consequences of the failure to address the shortage of hub airport capacity principally for passengers but also providing bellyhold capacity for freight in the UK. All of the reports pre-date the Government's decision to promote an additional runway at Heathrow and were largely directed at ensuring that a positive decision was taken regarding the development of additional runway capacity.

2.10 Furthermore, the reference at paragraph 5.1.4 to concern expressed in the Aviation Policy Framework[10] regarding the implications of capacity shortfalls on the range of destinations served does not, as Azimuth infer, indicate a need for additional aircraft movements by dedicated freighter aircraft as these would require a concentration of freight flows to a specific destinations to fill a single aircraft at a time. Rather, the Aviation Policy Framework refers to the need for a wide range of global destinations being available at the UK's national hub airport, offering passenger and bellyhold capacity so as to maximise the choice and convenience for both passengers and shippers[11] of airfreight. It is this variety of destinations and, importantly, the high frequencies of service that lead the market to favour a bellyhold hub and spoke system so that freight can reach its end destination in the most efficient and cost effective way possible.

2.11 In the light of the Government's support for the provision of a third runway at Heathrow and the potential for further development of airport capacity beyond 2030[12], the use of these economic assessments of a constrained situation to 2050 is no longer relevant, if indeed it ever was, as a context for the potential re-opening of Manston as a freight airport. The use of this data by Azimuth to support RSP's proposals is disingenuous at the very least.

Reliance on York Aviation work

2.12 Ultimately, Azimuth rely heavily on two existing pieces of research undertaken by York Aviation during the Airports Commission process. The first an unpublished note for Transport for London (TfL) prepared in the early stages of that process (see Appendix A), and a later more detailed piece of research undertaken for the Freight Transport Association (FTA), in conjunction with TfL[13]. Both documents considered the overall position of the air freight market in the London system and what might be the circumstances of that market in 2050 under different assumptions regarding runway capacity development in the South East. Whilst we continue to believe that, in the very long term, there will be excess demand for air freight and that existing infrastructure in the London area will struggle to service this demand, more recent developments lessen the capacity pressure.

[10] Department for Transport, *Aviation Policy Framework*, 2013.
[11] Shippers are the originators of the airfreight, i.e. the exporters or importers.
[12] Department for Transport, *Beyond the Horizon The future of UK Aviation*, Call for Evidence, July 2017, paragraph 7.23.
[13] The FTA report being included explicitly in RSP's consultation documents on its website.

2.13 The key point, however, is that, to the extent that there is excess air freight demand in the long term, it does not follow that there will be a market for Manston, as asserted by Azimuth, as any excess demand at the Heathrow hub does not lend itself to being displaced onto dedicated freighter operations at Manston, for reasons we explain later in this section. To the extent that there is any role for additional freighter aircraft to accommodate some part of the displaced demand, there is ample spare capacity at other airports in the short to medium term at least. Thus, the York Aviation work relied upon by RSP does not, and cannot be taken to, support the need for a re-opened Manston Airport as a freight airport and cannot be so relied upon by RSP, the Secretary of State, the Planning Inspectorate and any appointed Examining Authority (should RSP submit its application and the Secretary of State accepts the application).

2.14 Specifically, Azimuth seek to rely on estimates presented in our reports of the number of freighter movements which might be required to carry the freight tonnage that could be displaced from the London airports in 2050 if there is no additional capacity provided by that date. It is important to note that our reports for TfL and the FTA went on to explain why there were other alternatives, such as regional airports or trucking to Europe, which would be favoured to meet demand ahead of any residual use of more dedicated freighters.

2.15 Despite the reports being very clear, when read in their entirety, that the solution to any shortage of capacity would not be extensive use of pure freighter aircraft, Azimuth rely on the freighter movement equivalents from our reports as justification for their projections of freighter movements at Manston both in the short to medium term and up to 2039. There are a number of problems with this approach:

- The analysis as at 2050 is not representative of the position at 2039 or any earlier date;
- The Government is committed to there being a third runway at Heathrow, with a major justification being the increase in bellyhold freight capability at the UK's principal freight hub;
- Gatwick has increased its effective hourly movement capacity, enabling more passenger aircraft and associated bellyhold capacity, particularly related to recent expansion of the long haul network;
- Stansted has 20,500 annual movements that are reserved for freighter aircraft, of which only around half are currently used. The Airport's Sustainable Development Plan[14] sets out an aspiration to grow cargo, including on dedicated freighter aircraft, to 400,000 tonnes annually;
- Regional airports have developed additional long haul services, providing additional bellyhold capacity, and have plenty of spare capacity to accommodate additional freighter aircraft movements to the extent that there is any need for more pure freighter capacity;
- The Government has not ruled out the provision of further additional airport capacity beyond 2030.

2.16 Fundamentally, the use of theoretical levels of excess air freight demand at 2050 cannot be used to underpin short to medium term forecasts for the expected usage at Manston or an assessment as to whether it could be viably developed in the meantime, regardless of the precise timing of the delivery of the third runway at Heathrow.

[14] Stansted Airport Ltd, *Sustainable Development Plan 2015*, Summary.

Transport for London

2.17 At the outset, it is important to note that our 2013 paper for TfL (referenced by Azimuth as an unpublished TfL note[15]) points out the UK did not then appear to be disadvantaged in terms of air freight capacity and that there was still substantial capacity for freighter movements remaining at Stansted. This is an important consideration in terms of short term forecasting and should have informed Azimuth's thinking.

2.18 In this paper for TfL, we estimated the excess air freight that could not be accommodated in bellyhold capacity on passenger aircraft under different scenarios of additional capacity at the London airports and converted that excess to an equivalent number of freighter movements. The 54,000 potential additional freighter movements that Azimuth (and Northpoint) cite at paragraph 3.4.5 are the additional freight carrying capacity required in the event of there being no further runway capacity at any of the London airports[16] (a severely constrained scenario) that is simply no longer realistic as we have set out above. Azimuth's (and Northpoint's) use of this figure as a potential market for Manston is misleading.

2.19 The note then goes on to set out how this requirement for additional freight capacity might be met and the economic consequences. In the first instance, we noted that around 14,000 additional freighter movements could be accommodated in the London system if no capacity expansion takes place, and this included the use of additional available freighter slots at Stansted. Azimuth appear to have taken our inclusion of Manston, as an example of a smaller airport in the South East that could accommodate some movements, as an indication that it could play a substantial role, wrongly stating in the Executive Summary and at paragraph 3.4.5 that we said that Manston was expected to handle 14,000 freighter movements. Manston was given simply as an example of an airport with freighter activity at the time of writing (2013) with the potential to accommodate some additional movements (as we set out in Section 4 of this report, the capability of Manston Airport is 21,000 annual cargo aircraft movements before allowing for any night operations).

2.20 In essence, our assumption was that, across the London airports (including Manston albeit on the periphery of the South East of England), it was plausible that, by 2050, double the number of existing freighter movements could be accommodated compared to 2012. If anything, the correct inference to draw from this is that we expected the number of freighter movements to double from 2012 levels, i.e. to around 1,000 movements a year at Manston.

2.21 Beyond this, the question of how excess freight demand in the London system in the future will be served is largely left open in our 2013 note but we made clear, at paragraph 26, that we believed the two most likely options would be greater use of bellyhold capacity and freighter operations at UK regional airports, noting Birmingham, East Midlands and Manchester particularly, or the trucking of freight to major European hub airports with substantial route networks and bellyhold capacity. This reflects the growing role of regional airports in serving their local freight markets (avoiding the need to truck to London), while balancing particularly the attractiveness of the substantial bellyhold capacity, lower air freight rates, and flexibility offered by the major continental hubs. We discuss this further below in relation to the economics of the air freight sector.

[15] See Appendix A.
[16] Based on the Airports Commission capacity assumptions.

2.22 Our TfL note also makes clear (paragraph 25) that, to the extent that there was a capacity constraint, the first consequence might well be less capacity for transit freight through the UK airports, prioritising freight to and from the UK. Ultimately, our TfL note concludes that:

"In the constrained, max use, case, there would be severe limitations of pure freighter movements at the London airports, which could amount to around 26% of the required air freight capacity to/from London. The extent to which this would act as a limitation on overall air freight volumes would depend on the extent to which the freight is still carried from regional airports or by truck. Clearly this would impact on the cost/efficiency of shipment, which in turn could impact on freight volumes carried. Again, it is outside the scope of the current exercise to assess these effects.

Overall, in assessing the economic value for air freight between the scenarios, the main difference is likely to lie in producer costs passed through to users and the impact that would have on business costs and hence output/freight generated. It would not be safe to assume that the reduction in cargo ATMs at the London airports necessarily translates to lost shipment value in its entirety."

2.23 Azimuth, at paragraph 3.3.2, incorrectly characterises our note to TfL as expressing a concern about the amount of trucking to Europe. Significantly, the last part of paragraph 9 is omitted by Azimuth. When looked at in its entirety, it is evident that we were noting that trucking is an inevitable part of the market, for reasons which we explain later in this section:

"However, the role of the low countries and Germany in acting as the major freight centre in western Europe is noticeable. In total, the main German freight airports handled almost 4.2 million tonnes of freight in 2012 which, when combined with the Netherlands and Benelux countries, amounted to 7.2 million tonnes of air freight flown. These airports have developed major and specialist air freight roles, with freight being trucked from all over Europe to feed these freight hubs. The integration of trucking with air freight should not be overlooked, even within the UK. In practice, it is unlikely that the UK could replicate this role, even with unconstrained airport capacity, due to its island location on the western edge of Europe."[17]

2.24 In other words, our assessment was that there would not, in effect, be a shortage of capacity for freight, albeit that there would be some loss of producer efficiency by way of increased trucking and time related costs, which would be small in the context of the overall cost of air freight transport. Our summary conclusion in this note makes this clear:

"The key difference between these two scenarios would be in terms of the efficiencies and economies of scale gained by the industry arising from the concentration of freight activity at a single hub. In both cases, the overall volume of air freight to and from the UK is expected to be broadly the same, although the actual freight carried including transit freight would be higher in the hub case. However, under the new hub scenario, savings from greater efficiency may be passed onto users, so reducing shipping costs and facilitating trade leading to higher freight volumes, but it is beyond the scope of the current exercise to assess this. "[18]

[17] See Reference 6, paragraph 9.
[18] Ibid, paragraph 30.

2.25 We were cautioning against the assumption that there would be a requirement for more capacity for dedicated freighter aircraft in a constrained scenario as there would be other more cost effective routes by which the freight would be carried, albeit at a higher cost than with the availability of more bellyhold capacity under a 4-runway hub scenario as being advocated by TfL at the time. Use of more dedicated freighter aircraft would represent a further increase in cost for shippers as we explain further later in this section.

Freight Transport Association

2.26 Our work for the FTA and TfL in 2015[19] again identified the potential for excess demand for air freight in the London system by 2050 and converted this number to freighter movements to demonstrate the point that a four runway hub could house this excess demand in one place. If this demand could not be served in the London system, the report makes clear our belief that it would then be trucked to alternate airports that offer significant options in terms of bellyhold freight or freighter operations. In this context, the bellyhold capacity and destinations offered by the continental hubs are a decisive factor in determining how the market will be served due to the range of destinations served and the lower costs inherent in using bellyhold freight. These continental airports act as freight consolidation hubs for the whole of Europe given their more central locations and, hence, offer consolidation advantages and more competitive freight rates.

2.27 Azimuth's interpretation of our work for FTA appears to erroneously assume that excess demand in the London system will need to be met by additional freighter movements from an airport in the vicinity of London. For instance, at para 4.2.3, they state that *"Even so and as York Aviation figures show, there will be a shortfall of slots for dedicated freighters, likely to be in the region of 45,000 by 2050"*. Whilst our report does estimate that the excess air freight demand with a third runway at Heathrow would be around 1.2 million tonnes by 2050, equivalent to 45,000 additional freighter movements, at no point does our report say that this is how the market could or should be served. Indeed, as we state on Page 20 of our FTA report *"we have assumed that freighter aircraft primarily act as a means to supplement bellyhold capacity where insufficient bellyhold capacity is available"* and our later analysis of how the market might react to this excess tonnage focusses on this assumption by considering the attractiveness of alternative airports in terms of both passenger and freight services on offer. We continue to be of the view that bellyhold capacity elsewhere will be the primary alternate given the price advantages, the flexibility offered by the long haul networks of major airports, including those on Continental Europe, and the low cost of trucking as our report for FTA makes clear.

2.28 By the time of this report for FTA, Manston had closed but, even if it had not and had been included within our modelling work, the lack of bellyhold capacity and limited overall market presence would have meant it could only be projected to capture a very small percentage of the excess demand. For instance, East Midlands, an airport with around 10 times the freight throughput of Manston, and only 1 hour further away from London than Manston (and substantially closer than Manston to many of the major regional markets and manufacturing centres) captured only 8% of the excess demand in our 2015 modelling. In the Heathrow 3rd runway scenario, this equates to around 100,000 tonnes in 2050. This would equate to around 3,600 additional freighter movements in 2050.

[19] See paragraph 1.14 above.

The Economics of the Air Freight Industry

2.29 Throughout the analysis, Azimuth appear to assume complete interchangeability between bellyhold freight, pure freighter operations and express/integrator operations without any analysis of the economic drivers for the use of each type of freight transport and the economics of trucking of air freight between the UK and Europe. This is a fundamentally unrealistic assumption and leads to a misrepresentation of the market opportunity for pure freighters.

2.30 In our work on international connectivity for Transport for the North (TfN) in 2016 (in conjunction with MDS Transmodal[20]), we identified the key characteristics of the air freight market. We identified that air freight can, in principle, be broken down into three main sectors:

(i) bellyhold, where cargo is carried principally in wide-body long-haul passenger jets[21]. Shippers are able to take advantage of flights to a wide variety of destinations from the main hub airports such as Heathrow and from other major European hubs, e.g. Frankfurt and Paris, similarly offering a wide range of global destinations on passenger flights;

(ii) freight only services, which are viable on only a handful of routes and/or for specialist commodities on an ad hoc basis. This is an increasingly limited sector in the UK due to the variety of bellyhold routes available and the strong presence of the integrators in the market;

(iii) express 'parcel' type services that operate on a hub and spoke network basis by 'integrators' (typically DHL, Fedex and UPS). These services increasingly carry larger consignments and East Midlands and Stansted Airports dominate the UK market, feeding bigger hubs located more centrally within Europe.

2.31 In general, air freight is seeking door to door journey times of the order of 4-5 days, which is possible using bellyhold through major hub airports, whilst integrator freight will generally seek a door to door journey time of no greater than 2 days.

2.32 The majority of tonnage moves by bellyhold as, in essence, this capacity is sold at marginal cost, with the majority of the airlines' operating costs covered by the passengers carried. The market is dominated by Heathrow and the other major European passenger hub airports because the sheer range and frequency of services provides a competitive environment which typically delivers the lowest freight rates and the greatest range of destinations served. There is high locational inertia in the air freight sector, which is likely to remain focussed around Heathrow for the foreseeable future as it is expected to remain by far the largest UK airport for cargo. In our TfN work, we estimated that around 70% of freight from the North of England in 2015 was trucked to or from other hubs for uploading, with some freight trucked to Heathrow for consolidation by the freight forwarders before being trucked back to Manchester to avail of bellyhold capacity there. Assuming similar proportions from other regions of the UK, it is clear that at least a part of any excess demand at the London airports is likely to be satisfied at regional airports, not least as airports such as Manchester, Birmingham and Edinburgh increase their range of direct long haul services offering bellyhold capacity.

[20] Transport for the North, *International Connectivity Evidence Report*, York Aviation/MDS Transmodal July 2016, Appendix C.

[21] Short haul flights provide small amounts of bellyhold capacity but, generally, low fares airlines do not carry cargo within their operating model.

2.33 The integrator sector carries more urgent parcel traffic based upon hub and spoke networks offering (typically) two day intercontinental transits. Spoke services from the UK from East Midlands and Stansted serve central European hubs at airports such as Brussels and Frankfurt. The need for frequency tends to mean that, typically, only one 'spoke' can be justified per integrator per country and these spoke services tend to be centrally located to maximise accessibility from all parts of Great Britain. East Midlands Airport is ideally placed in this regard. The integrators are increasingly using bellyhold capacity as well, essentially acting as freight forwarders in this regard.

2.34 A handful of freight only services complement bellyhold and integrator services where there is sufficient cargo to justify dedicated aircraft to a particular destination. There are a small number of scheduled freighter services which circumnavigate the globe, picking up and dropping off cargo at each point. More often, dedicated freighter services, other than those linking with major cargo hubs such as Hong Kong, Seoul or Dubai, operate on an ad hoc basis dealing with special consignments, such as large loads, or specific commodities where time is of the essence, such as the perishables trade, which was previously the principal cargo usage at Manston. Whilst there is some cascade from bellyhold to pure freighter operations where capacity is not available or time is critical, ultimately, it is the economics of the operation which is key. It does not follow that displaced bellyhold freight will seek a more expensive pure freighter service from a nearby airport over the use of available bellyhold capacity from a more distant airport.

2.35 In particular, we identified that the high cost of air freight leads to a pressure to be cost effective and the role of freight forwarders[22] in consolidating loads in order to secure the lowest possible freight rates. Cargo, other than integrator operations, tends to be assembled by specialist air freight forwarders, which cluster around the major hub airports so as to avail of the competitive freight rates on offer. As the road transport costs are very low compared to the value of the cargo and the air freight costs, air cargo is often trucked long distances to find capacity (at a lower freight rate). This forms an important driver in how freight moves from its origin to the actual airport of uploading and applies both within the UK and between the UK and Europe.

2.36 The charges levied per tonne of cargo for the long haul flight leg are high relative to inland haulage costs so that a relatively small difference in air freight rates between different airports will easily cover any additional costs for road haulage. It is for this reason that the majority of air freight will always gravitate towards bellyhold where there is capacity available, even if there is a substantial road haul as part of the journey. Given the wide range of bellyhold services available from the UK, which will increase following the development of a third runway at Heathrow and long haul service growth elsewhere, it is reasonable to expect that pure freighter operations will continue to make up a declining share of the market.

[22] A freight forwarder, forwarder, or forwarding agent is a person or company that organizes shipments for individuals or corporations to get goods from the manufacturer or producer to a market, customer or final point of distribution. For example, the freight forwarder may arrange to have cargo moved from a plant to an airport by truck, flown to the destination city, then moved from the airport to a customer's building by another truck.

2.37 Trucking of air freight is not a new phenomenon. The work by Steer Davies Gleave for the Department for Transport (DfT) in 2010[23] estimated that over 50% of air freight leaving the UK for Europe was trucked rather than using the bellyhold of passenger aircraft. In other words, airlines are using trucks rather than aircraft to distribute freight arriving on and connecting to their global passenger (bellyhold) and freighter operations. At the time of this analysis, Manston was still operational. If it was more economical to use a pure freighter service from Manston rather than trucking over the Channel, this would have been happening in 2010 but it was not. Other than the potential additional border checks as a consequence of Brexit, Azimuth advance no reasons why freight would switch from the cheaper trucking/bellyhold model to expensive pure freighter operations. We believe that the economics of air freight will continue to favour the use of bellyhold freight, other than for a minority of consignments, to and from the UK even if there is a lengthy trucking leg.

Manston in the context of the drivers of air freight

2.38 At Para 4.0.2, Azimuth suggest the reasons why cargo airlines choose airports. In reality, Manston does not fulfil a number of these key criteria meaning that, even in the most favourable circumstances, it can never be more than a niche player in the market. Specifically:

- It does not provide convenient access to the main markets;
- The drive time to Central London is nearly two hours[24];
- The great majority of the Airport's natural catchment is sea and there is very limited evidence of any local demand base;
- Competition is strong from the London airports, with already established freight forwarding and a wide range of bellyhold capacity;
- Given that the Airport is closed and staff dispersed, Manston would not provide any advantages in terms of experience of cargo handling and is likely to offer only marginal advantages in terms of the speed of transit through the Airport;
- Manston could potentially offer lower airport costs, albeit this would impact on the viability of the Airport, but these lower airport costs and any reduction in flying time would not offset the additional cost of freighter transport compared to bellyhold;
- It is also unclear as to what extent night time operations will be an option at Manston given the operating constraints under which the Airport formerly operated which prohibited scheduled night flying[25].

[23] Steer Davies Gleave, *Air Freight: Economic and Environmental Drivers and Impacts*, March 2010

[24] Based on Google maps standard driving speeds.

[25] Azimuth Vol 1 paragraph 7.1.6 quotes from a 2005 MORI survey that people were not impacted by night flights but this would reflect that there were no scheduled night flights when the airport was operational. Local resident support for re-opening (paragraph 7.1.1) needs to be seen in this context. We note that RSP's Consultation Overview Report states (on page 11) that *"Air freight operations would be predominantly during the daytime, in accordance with operations at other similar air freight airports. There may be a requirement for a small number of night-time flights, the details of which will be determined as part of the on-going project design, taking account of feedback from the Statutory Consultation, and presented with the DCO and assessed within the Environmental Statement. For the purpose of the PEIR assessment, and as a worst case, the working assumption is that there might be a maximum of eight (8) aircraft movements at night between the hours of 2300 and 0600."*

2.39 A key consideration is Manston's geographic position substantially away from the economic spine of the UK and with very limited local demand. It is remote from most markets with a journey time to the M25 of nearly 1 hour and accessibility beyond would be subject to the general levels of traffic congestion in the London area. Azimuths's suggestion (paragraph 1.2.2) that Manston might effectively serve as a 4th runway for Heathrow for air cargo flights is merely fanciful given the journey time of 1¾ hours, which is little shorter than the time from Heathrow to East Midlands Airport with an already well developed infrastructure for handling air freight and more likely to fulfil such a role in relation to freight overspill from Heathrow that is time critical or of such a special nature as to warrant the use of pure freighter aircraft.

2.40 Many of the other points raised by Azimuth regarding security, e-commerce and just-in-time delivery are all factors relating to the overall efficiency of the industry. If anything, what the analysis presented by Azimuth demonstrates is the importance of developing efficient freight networks serving the whole of the UK rather than the need for a re-opened freight focussed airport in the South East of England. Manston could only recapture economic benefits from cargo being trucked to the continent, as asserted at paragraph 4.8.4, to the extent that it provides a more economically efficient solution. Manston was not viable in the past and there do not appear to be significant changed circumstances that would make it viable in the future. This lack of inherent viability is indicative of the fact that it did not provide an economically efficient solution.

2.41 One of the key reasons that the UK aviation sector is so productive, as cited by Azimuth at paragraph 5.2.1, is that it allows the market to work. Inefficient and unnecessary actors in the market are allowed to fail. There is a strong argument to suggest that the closure of Manston is simply a part of the process of the market working and delivering more efficient solutions. The argument around the importance of the sector and Manston's role only applies if it is commercially viable (and makes an adequate return to shareholders) and represents an economically efficient allocation of resources. Otherwise, it will in fact damage the productivity of the UK aviation sector.

2.42 Azimuth asserts, paragraph 6.2.2, that the perceived lack of investment in Manston by the previous owners was an impediment to freight growth. However, this is at odds with previous statements by former operators of the Airport and comments by interviewees, in Azimuth's Volume I, on the quality of service received by customers at Manston. In its 2002 results, the Wiggins Group plc claimed that, following investment, Manston was capable of handling 200,000 tonnes of cargo a year[26]. The subsequent owners, Infratil, published a Master Plan in 2009[27] which identified triggers when there might need to be some increase in cargo aprons or warehousing at 100,000 tonnes and 200,000 tonnes of cargo annually. Given that peak tonnage was 43,000 tonnes, this does not suggest that lack of capacity or shortage of investment was an impediment to increasing cargo volumes at Manston in the past, rather the limitation was the market.

[26] https://www.investegate.co.uk/wiggins-group-plc---230-/rns/final-results/2002073007004526862/
[27] Manston, *Kent International Airport Master Plan*, November 2009, page 62.

2.43 The only specific impediment to increasing throughput cited by Azimuth is a limitation to 1 aircraft being handled at a time but we understand that this was not the case, albeit supervised taxi-ing procedures had to be put in place when there were 2 aircraft using the apron at the same time. In practice, it does not appear that lack of investment was an issue which impacted on freight throughput. Rather, it must be assumed that the previous owners did not believe there was a viable economic case for investment. Lack of investment does not necessarily mean constrained demand and it may simply be that there was not sufficient demand to justify investment and that the market was functioning properly.

Qualitative assessment of demand (Volume II)

Forecasting Methodology

2.44 Volume II of Azimuth's work begins with an assessment of different forecasting approaches for cargo, noting that forecasting of cargo is not as well developed as that for passenger activity. We agree that air freight forecasting is difficult and that there is a lack of hard data. However, we do not agree with Azimuth's assertion that quantitative methods are, therefore, not suitable and that qualitative methods are more appropriate. The evidence cited by Azimuth at Table 3 does not support this conclusion and suggests that causal methods (regression analysis) remain the most appropriate for forecasting demand for cargo and freighters. Such an approach is far more akin to the type of analysis undertaken by York Aviation in its work for TfL and FTA and upon which Azimuth seek to rely as a basis for the scale of activity that Manston might attract.

2.45 Whilst we understand the reason for Azimuth's assertion that it <u>may</u> not be appropriate to extrapolate Manston's future performance from its historic performance, this does not take away from the importance of grounding any future forecast in quantitative evidence of the drivers of the market and how these might change in the future. In any event, the assertion is at odds with the reliance placed by Azimuth on our quantitative assessments of 'spill' from the London airports at 2050, in the circumstances of no additional runway at Heathrow, as corroboration of their qualitative projections for Manston to 2039. To reiterate, reliance on these estimates is not appropriate for considering the potential role for Manston, not least as they relate to 2050 and cannot be applied to 2039, or any earlier year, without working through from first principles how any constraints in the London system might bite and the likely market reaction.

2.46 As well as reviewing forecasting methodologies, Azimuth sets out some air freight growth forecasts produced by others. At paragraph 3.6.1, Azimuth cite the DfT's assumption for growth in freighter movements in its 2013 UK Aviation Forecasts at 0.4% p.a[28]. The DfT makes clear that the growth in freighter flights is seen as a residual, representing the share of freight on pure freighter flights after allowance is made for bellyhold cargo being the primary mode. It is clear that the DfT is expecting the share of the market using pure freighters to and from the UK to continue to decline. Indeed, the most recent UK Aviation Forecasts published by the DfT[29] suggest that there is expected to be no growth in the number of pure freighter movements to and from the UK above 2016 levels in the period to 2050. Hence, any increase in freight movements at Manston would have to come at the expense of other airports. We discuss the ability of other airports to handle such movements in Section 3.

2.47 Given the existence of a definitive 'official' UK forecast for freighter movements over the period to 2050, it is not clear why Azimuth rely on global forecasts for air freight produced by the manufacturers Boeing and Airbus for the purpose of selling aircraft (paragraph 2.1.10) as a basis for the longer term projections of freighter movements at Manston in their Volume III (paragraph 2.3.2). The global growth rates cited by Azimuth are inappropriate for projecting growth in freighter movements at Manston for several reasons:

- They relate to RTKs (Revenue tonne kilometres) (Boeing[30]) and FTKs (Freight tonne kilometres) (Airbus[31]) and will reflect increased tonnage per aircraft, including freight carried in the bellyholds of passenger aircraft, and longer sector lengths as well as any growth in aircraft movements;
- The projections relate to growth in air cargo at the global level and lower growth is clearly shown as expected to/from and between more advanced economies such as the UK;
- In the case of Airbus, specific lower growth rates are cited for growth in freight tonne kilometres in freighter aircraft (2.6% p.a. compared to 3.8% per annum in their latest forecasts which are lower in any event than the previous forecasts used by Azimuth). Even then, this growth rate relates to FTKs not to freighter movements.

2.48 Taken together, these reports point to a declining market share for freighter aircraft in mature markets such as the UK, where there is a good supply of bellyhold capacity. It is, hence, not reasonable to use the Boeing and Airbus growth rates as a basis for projecting future growth in movements by pure freighter aircraft to and from the UK, particularly given the existence of DfT projections for such movements. Rather than being conservative, as suggested at paragraph 2.3.2 in Volume III, the use of a 4% per annum growth rate for years 10 to 20 at Manston is highly optimistic, and is certainly not supported by the DfT's analysis of the UK market.

[28] Department for Transport, *UK Aviation Forecasts 2013,* paragraph 3.49.
[29] Department for Transport, *UK Aviation Forecasts*, October 2017, paragraph 2.56. The decline in pure freight movements since 2001 is illustrated in Figure 4.5.
[30] Boeing, *World Air Cargo Forecast 2016-2017*, page 2.
[31] Airbus, *Growing Horizons – Global Market Outlook 2017/2036*, page 101. Note that the 2016 version to which Azimuth refer is no longer available on the Airbus website.

Interviews

2.49 Having rejected the recognised methodologies for forecasting freight demand at an airport, Azimuth rely on interviews with 24 individuals and/or organisations as set out in Table 4 of their report. To a large extent, these are people with past connections with Manston and who may not have a totally unbiased view on the desirability of it re-opening. It is notable that few cargo airlines or large scale air freight operators were interviewed, rather the list is dominated by local interested parties and logistics firms, not all of which are still in business. In some cases, throughout the remainder of Volume II, individuals are referred to who are not listed in Table 4 and, in other cases, individuals or organisations are referred to in different terms to those listed in the table. This does not suggest a very robust or rigorous approach to setting out the potential for Manston. Although the framework of questions is set out at paragraph 4.3.1, we are unable to identify any questions that would enable an assessment to be made of future passenger or freight volumes that would be likely to use Manston and which could be used as the basis for any forecast of future usage.

2.50 In the light of this, the remainder of Volume II is largely a qualitative description of current problems experienced in transporting cargo in general in the UK and in terms of past operations at Manston. These do not, however, provide any insight into the potential scale of demand for freight or passenger services at Manston. Essentially, it constitutes a speculative description of where there might be opportunities if Manston re-opens. We highlight the speculative nature of some of these comments relating to freight activity below. Taking Azimuth's categories in turn:

Process and Issues associated with airfreight

2.51 This analysis is generic and of no direct relevance to the potential for Manston. In particular, no linkage is drawn between the commodities which typically use air freight set out at paragraph 5.1.2 and the economic sectors active in Kent. Significantly, at paragraph 5.1.5, Azimuth cite a respondent that made clear that *"tendered"* prices determine how air freight moves. This is a powerful reason why bellyhold will in most instances win over pure freighter operations. Issues of price for pure freighter operations are reinforced at paragraph 5.1.10, particularly in relation to the risks associated with higher fuel prices.

2.52 There are then a number of comments regarding the current difficulties of operating at Heathrow at paragraph 5.1.6ff. It is recognised that there are few realistic slots available for additional freighter operations at Heathrow so unsurprisingly Coyne Airways cite a difficulty for them if they sought to fly to Heathrow on an ad hoc basis. However, in reality, this airline is not a major player in the UK or Europe, operating a small number of weekly flights from Amsterdam to feed its network of flights within the Caspian Sea region[32]. Comments from ACC Shipping and Active Transport need to be read in the context that they are local Kent shippers and transporters of cargo that have a vested interest in seeing Manston re-opened.

[32] http://www.coyneair.com/caspian_schedule.htm

Future trends in airfreight

2.53 To some extent, the issues highlighted here regarding security relate to the specific issues around Calais at the time when the interviews were carried out but the situation has now changed since October 2016. It is recognised that security of air freight is an increasing concern globally but this would apply at Manston as well as elsewhere.

2.54 Again, paragraph 5.1.15 highlights the dominance of bellyhold freight. Whilst noting that the A380 aircraft has more limited space for bellyhold cargo than B747s at paragraph 5.1.14, Azimuth neglect to point out that other new aircraft, such as B787 and A350 aircraft, do not suffer from similar reductions in space and capacity and continue to offer substantial bellyhold opportunities and capacity.

Motivation to use Manston

2.55 The response cited at paragraph 5.1.19 makes clear that the most important factor in considering freighter operations is *"cost, speed and access to road networks"*, which is not a condition which Manston can meet for the majority of the UK. The local transport firms (paragraph 5.1.21) clearly saw an advantage for them in Manston re-opening but it is far less clear that this was reflected by the broader industry. Significantly, paragraph 5.1.20 does not address the operational reasons why major freight forwarders seek to locate close to Heathrow, Stansted or East Midlands, except possibly for their city centre sales offices.

2.56 The response quoted at paragraph 5.1.23 makes clear that for Manston to be an attractive option to freighter operations, it would need to offer night operations. In the light of the past ban on scheduled night flying, this would be a major change to operating mode, with consequential environmental impacts. Furthermore, RSP's position in relation to whether scheduled night flights will be allowed or not is ambiguous (see paragraph 2.37 above) and we understand that some supporters of the re-opening have said that such operations would not be allowed. In the event that night flights are not allowed or heavily restricted, this would further diminish the attractiveness of Manston for pure freighter operations (comparisons with the major European freight hub at Frankfurt as included by Azimuth are simply not realistic).

Demand model and data for Manston Airport

2.57 This section does not, in fact, contain any data for Manston nor set out a view on how future demand might be modelled.

Freight focussed findings

2.58 The one airline interviewed made clear (paragraph 5.2.3) that *"success at Manston depended upon identifying a niche market and becoming known for excellence. In particular, suggestions included a perishables centre, handling of live animals, easy access for charter flights, and handling cargo that is not necessarily straightforward"*. We would have expected the remainder of the report to concentrate on quantifying the size of this niche market, including any Brexit implications for exports (paragraph 5.2.1). It is clear, however, that the realistic expectation for Manston is for a small niche operation rather than as a general 'overspill' airport for London.

2.59 The spurious suggestion that freight might be *"banned"* from Heathrow (paragraph 5.2.6) and Manston might benefit is clearly nonsense in the context of the Government's support for a third runway to provide capacity for freight in the bellyholds of passenger aircraft as much as for passengers.

2.60 Whilst the suggestion from Coyne Airways about the potential for Manston to offer fuel cost savings when flying south from the UK (paragraph 5.2.11) is interesting, it appears not to take any account of the locations where freight is generated in the UK or where it is consolidated into viable loads. It does not seem likely that Coyne Airways would itself relocate its one European feeder service from Amsterdam to Manston given this would increase rather than decrease fuel burn. As noted earlier, the real reason freight is trucked across the channel is to avail of cheaper freight rates available at the main European hub airports, which act as focal points for cargo for the whole of Europe.

2.61 Azimuth also claim that the bellyhold model is broken and that there is about to be a shift back to pure freighter operations at paragraph 5.2.25 but this is pure speculation and at odds with other industry commentators (see Airbus freighter forecasts which project an increasing share of bellyhold globally[33]) and the UK Government's view as expressed by the Department for Transport.

2.62 Whilst paragraph 5.2.24 says there was underinvestment in facilities by the previous owners, the quotation from Finlays at paragraph 5.2.26 makes clear that Manston previously offered a good level of service. Hence, there is little evidence to suggest that underinvestment was any impediment to Manston attaining its natural share of the market in the past. Although Finlays have now relocated their operation back to Stansted, we would accept that they might choose to return to Manston with a similar number of movements as previously if the facilities were re-instated and provided the cost of operating was competitive compared to Stansted. There may also be scope for some humanitarian and military flights (paragraph 5.2.48) but these will be small in number and not the basis for a viable operation of the Airport.

2.63 At paragraph 5.2.45, Fedex's criteria for an airport to be attractive to an integrator are set out and these seems to describe the characteristics of their main UK base at Stansted. There is then a discussion about some of the problems DHL perceive at Heathrow but, of course, DHL's principal UK operation is focussed at East Midlands where they have an extensive operation. From our work with the integrators and with the Freight Transport Association, we know that Manston is too peripheral for integrator operations serving the UK. Integrators have a strong preference for locations more centrally located in the UK with good road access to all of the major markets. The availability of land for warehouses (paragraph 6.2.6) is far less important than a location central to the market and the availability of good road access, neither of which are characteristics of Manston. This would apply equally to the suggestion that Amazon might locate there or that the Airport could become a base for drone operations (6.3.24-27). It is simply in the wrong place to serve the market being at the far south east at the end of the country on a peninsula.

[33] See Footnote 31.

2.64 The comparisons to Frankfurt Airport, in terms of the ability to sustain a freight operation without night movements, are simply irrelevant given that Frankfurt carries the second highest freight tonnage of any European airport and acts as a major cargo hub for air and road freight given its highly central location. Much of Frankfurt's cargo is carried in the bellyholds of passenger aircraft and this underpins the freight hub role. Given that Manston does not have anything like the overall market attractiveness of Frankfurt, for many reasons, any constraint on night operations would be a major impediment to freighter operations.

2.65 We do not discuss the passenger market in this report, albeit we have reviewed Azimuth's forecasts and disagree with their conclusions, which we can report upon should any application be made by RSP. The latter parts of Azimuth's Section 5 mention opportunities around ancillary activities such as MRO, aircraft recycling, flying schools and business aviation. We would simply highlight, at this stage, that these areas are highly competitive markets and it is not immediately obvious why Manston would provide an attractive option for operators in these markets when compared to what is often global competition. Nor is it evident that such activities would contribute substantially to the viability of Manston.

Analysis and Conclusions

2.66 Sections 6 and 7 of Azimuth's Volume II, go on to discuss what this means for Manston and draw conclusions. In general terms, Azimuth seek to draw conclusions about the cargo performance of Frankfurt, Heathrow and Stansted airports which are not consistent with the actual facts.

2.67 Again, there is reliance on our work for TfL and the FTA (paragraph 6.1.8) to justify the conclusions reached. As stated above this work does not support RSP's case.

2.68 Azimuth then identify that there are sectoral and geographic markets for which Manston has potential but there is no quantification of the scale of these markets. This is a fundamental gap if the scale of any potential opportunity is to be understood.

2.69 At paragraph 6.3.1, Azimuth set out 9 potential scenario drivers for Manston. However, it is not clear how these scenario drivers have been taken forward to the forecasts set out in Volume III, which do not set different potential scenarios for growth. If we take each of these drivers in turn:

1. *The UK's position in Europe* – Azimuth appear to assume that there will be an opportunity for multi-hop freighter services from Manston but it is far from clear that the traffic rights for such services will continue to be available post-Brexit.
2. *Changes to fuel prices* – in the face of the decline in the value of sterling, these are more likely to work against the operation of more freighter aircraft.
3. *The availability of more efficient aircraft* – the introduction of B787 and A350 aircraft will increase bellyhold capacity rather than reduce the capacity.
4. *Onshoring of manufacturing in the UK* – it is not clear how this is relevant given Kent does not have a strong manufacturing base.
5. *Changes to logistics and transport systems in Kent* – this is a circular argument as it relies on the re-opening of Manston driving a step change in the logistics and transport sector in Kent.

6. *Dramatic changes to economic performance* – it is noted that these are not factored into the forecasts but to the extent that there are Brexit effects on the economy, these would reduce trade and demand for air freight.

7. *Manston becomes a major integrator/forwarder base* -

8. *Manston becomes an Amazon base* -

9. *Manston becomes a hub for drone activity* –

for the reasons noted above, all three of these seem highly unlikely and are, at best, pure speculation with no evidence base whatsoever.

2.70 Section 7 sets out the conclusions from Volume II. According to Azimuth (paragraph 7.1.1), the key issues that are seen to favour Manston are:

- Lack of available slots at other South East airports;
- Bumping of freight from passenger aircraft;
- Security issues particularly with outsized cargo;
- Speed of turnaround.

However, our analysis of the factors would suggest that, other than perhaps the last two factors, there are few factors which would favour Manston and, in any event, these could be replicated by other airports closer to the main UK distribution centres, such as Doncaster Sheffield Airport, if these were deciding factors in the market.

2.71 Based on their analysis, Azimuth then set out (at paragraph 7.1.2), the markets which it believes that Manston could attract:

- Parcels and packages through an integrator;
- Perishables including fruit, vegetables, flowers, fish, and shellfish;
- Outsized freight;
- Formula One and luxury cars;
- Live animals;
- Time sensitive items such as aircraft [parts] and the oil and gas industry;
- Humanitarian and military flights.

In addition, some passenger operations along with a number of ancillary activities such as recycling, MRO[34] etc. are postulated for Manston.

[34] Maintenance, repair and overhaul of aircraft

2.72 Whilst, except for integrator operations, they are plausible markets for some potential operations from Manston, Azimuth make no assessment of the potential quantum of local demand as a basis for assessing how big a market there is. Whilst seeking to discredit analytical methods for projecting future demand at Manston, at the same time, Azimuth rely heavily on estimates made by us and using such methods that suggest there would be excess demand in the London system at 2050 if there is no new runway at all. Fundamentally, Azimuth make no assessment of the viability of what might be on offer or address any concerns as to why such operations have not secured a viable future for the Airport previously.

2.73 The key conclusion drawn by Azimuth is that *"This report demonstrates the potential demand for Manston Airport, indicating its viability and clearly showing that Manston Airport is a valuable local, regional and national asset, providing airport infrastructure badly needed by the UK."* (Paragraph 7.0.1) There is, quite frankly, no factual basis for Azimuth to make this claim. Azimuth claim that the capacity is *"badly needed by UK"* but this is linked to erroneous use of the economic costs of there being no further runway capacity in the UK (see paragraph 2.6 of this report) and a lack of understanding of the air freight market.

2.74 In summary, Azimuth's insistence that Manston's past market performance is not a relevant consideration in understanding how it might perform in the future is both erroneous and contradictory to the evidence put forward to support the qualitative market forecasting approach. The interview findings presented are clearly focussed towards operators that have used Manston in the past and would be pleased to be able to use it again but the evidence presented does not suggest that operators would do more than reinstate past operations. This did not result in an airport that was viable and certainly did not result in annual cargo air transport movements predicted by Azimuth. In our view, and having regard to the evidence, it is unlikely that circumstances have changed so dramatically in the intervening period since the Airport was last operational that there is likely to have been a fundamental change in its ability to capture market share. Its previous cargo performance remains the best starting point from which to consider its future.

2.75 In defence of their position, Azimuth cite lack of investment by the previous owners as being a key cause of Manston's inability to fulfil its potential previously but this is not borne out by the interview responses as the quality of service was noted as good. Fundamentally, the failure to consider the drivers of the Airport's previous performance effectively is a key error which infects the subsequent forecasts presented. The limited size of the market is perhaps the best explanation as to why there was not still further investment in developing the facilities as the operation was fundamentally not viable and it would have been imprudent to invest further.

Forecasting (Volume III)

2.76 The forecasts set out in Volume III draw extensively on the analysis in Volumes I and II. Although stated to be derived on a 'bottom up' basis (Executive Summary Page 1) and claimed to be more conservative than top down, econometrically driven, projections, reliance is still placed, at paragraph 1.1.1, on our quantitative work for TfL/FTA to justify/verify the overall quantum of movements projected, stating *"Rather than merely extrapolating past activity, studies that have focused on the 'lost' or suppressed demand include York Aviation's work (2015, p. 19)."* This work was itself fundamentally top down, based on examining past activity and its implications for the future. Azimuth rely on this as, effectively, the only quantitative evidence presented of a possible level of future demand which might be available to Manston. However, for the reasons set out earlier, Azimuth has incorrectly interpreted our findings and their use of our data to support RSP's case cannot be relied on.

2.77 Paragraph 2.1.2 again suggests that the literature review undertaken showed that *"a qualitative approach was the most appropriate method through which to gather data on the potential demand for an individual airport"*. Whilst we agree that freight forecasting is difficult, as Azimuth themselves note, at paragraph 2.1.4, qualitative forecasts still need to be based on *"market data"* and, at paragraph 2.1.6, Azimuth go on to refer to the anecdotal information collected in the interviews as primary market data. Overall, this anecdotal evidence does not provide a basis for the development of a forecast of future usage nor for the presentation of a business case of the proposed development.

2.78 To further justify the approach to forecasting, Azimuth claim that the Airports Commission recommended the use of a Delphic approach. This is not strictly true as what the Airports Commission actually said was:

> *"In cases where there is limited or no data available, judgement based forecasting, using techniques such as the 'Delphi Method' is applied. This approach involves experts in the field considering historical patterns to predict future trends and is often used in conjunction with both naïve and causal models to compare forecast trends. The Delphi method is considered especially useful for long term forecasting (20-30 years) and is effective in drawing on existing knowledge to identify areas of agreement and disagreement in forming the forecast. However, for complex themes the Delphi Method is not always considered appropriate as there is no way of testing different outcomes e.g. through scenario testing."*[35]

2.79 First of all, the Delphi Method involves a number of independent experts considering historic patterns of data and forming a judgement based forecast. Results are shared and refined until a consensus is reached amongst experts. This is not the same as a single judgemental based forecast as Azimuth have presented, based not on historic data but some unquantified estimate of 'lost' demand. In any event, we would question the appropriateness of this methodology, for the reasons that the Airports Commission cite, namely the importance of scenario testing in the context of a forecast to be used for a planning application, particularly one where the applicant is purporting to promote a NSIP under Section 23 of the Planning Act 2008 (as amended) and seeking to demonstrate that there is a compelling case in the public interest for the compulsory acquisition of the Airport site.

[35] Airports Commission, Discussion Paper 01, *Aviation Demand Forecasting*, February 2013, Paragraph 2.8

Freight Forecasts

Short to Medium Term (10 years)

2.80 Azimuth place reliance on both the overspill argument (paragraph 2.2.2) and that there will be a reversal away from the existing preference for bellyhold for most types of air freight, despite the overwhelming evidence that this is likely to remain the case in future due to the lower freight rates available. Azimuth's claim is not supported by the facts, current market trends or by other industry observers including the DfT and Airbus.

2.81 Furthermore, Azimuth appear to assume that, to the extent there is overspill seeking freighter capacity as an alternative, that Manston would be the only solution. This is not the case given available capacity for freighters at airports such as East Midlands (particularly well placed for the distribution of goods across the UK), Stansted and Doncaster Sheffield. These airports are already established and operational and, therefore, well placed to deal with any such requirements in the short to medium term using their existing infrastructure and without the need for any compulsory acquisition of land.

2.82 At paragraphs 2.2.6 and 2.2.7, Azimuth set out the methodology they have used for deriving freight movements and tonnage for Manston. In essence, these movement forecasts are entirely based on claimed confidential discussions with airlines, airports and others involved in the industry, which are then converted to freight tonnage based on the capacity of each aircraft and assumed load factors. These discussions would appear to be different from the list of interviewees reported in Volume II, which included only 1 airline (unlikely itself to relocate its single European operation to Manston) and no other airports. Although it is claimed (paragraph 2.2.9) that switching costs have been taken into account, there is no explanation as to how these costs have been factored into the assessment of what operations Manston might attract. It is likely that RSP would need to incentivise such a switch of activity and this would impact on the overall viability of the Airport, particularly in the early years. A further consequential issue arising from this is the economic cost of displacement of activity, which we discuss further in Section 5, as this needs to be accounted for in economic assessment of RSP's proposal.

2.83 A vague list of potential operations is set out at paragraph 3.2.3, albeit with specific assumptions then stated about the loadings on each. However, the basic information regarding the likely annual frequency of each operation is not given, which is essential to enable an understanding of the likelihood of such operations using Manston in the context of the UK air cargo market as a whole and taking into account ongoing operations at other airports. Paragraph 3.2.3 appears to set out simply a list of generic airlines that might offer services if Manston is re-opened. It provides no insight into whether the demand to fill those services will be there or whether the services could be operated viably by the airlines concerned and at what weekly or annual frequency. This is simply not an appropriate or robust basis for a forecast.

2.84 Whilst accepting that there may be confidentiality concerns in revealing the specific plans of any individual airline, this is all the more reason why there needs to be some underpinning analysis of the potential scale and viability of each specific market identified in the forecast in order to provide some basis for asserting that any of the airlines might operate to the destinations postulated. As presented, the aircraft movements and the consequential tonnage forecasts are entirely hypothetical with no obvious linkage back to any of the evidence presented in the earlier volumes. This is not acceptable given the implications and importance of any proposed application for a DCO and the requirement that a compelling case be demonstrated for the purpose of compulsory acquisition. At the very least, there is a lack of transparency in the approach that needs to be explained so that consultees can understand the forecast and in order to determine whether or not the proposed DCO application falls within Section 23 of the Planning Act 2008 (as amended).

2.85 To illustrate the lack of credibility of the forecasts, Table 1 shows for Year 2 (the first operational year), a throughput of nearly 100,000 tonnes. This would make Manston the 5th largest freight airport in the UK in its first year after re-opening (compared to 2016 actual throughput at the other airports). This would place it close to the scale of freight operations at Manchester Airport, including bellyhold freight. It would make Manston the 3rd busiest airport in the UK in terms of tonnage carried on dedicated freighter aircraft. This is simply not a credible proposition. It is simply at odds with the verifiable evidence and contrary to all experience there is of operations at Manston. If there is a short term market of that scale available for Manston, why did it historically not exceed 43,000 tonnes (2003)? Without full explanation of the scale of each of the markets and a reasoned justification for the number of movements assumed for each of the operations identified at paragraph 3.2.3, the forecasts as presented cannot be considered robust and substantial further evidence is required to validate the basis of the RSP DCO proposal.

Long Term (10-20 years)

2.86 As noted earlier in this section, the long term forecasts wrongly apply a 4% per annum growth rate as a basis for deriving the longer term freighter aircraft movement forecasts for Manston. To reiterate, this is inappropriate and unrealistic given that it is based on forecasts by Airbus for freight tonne kilometres at the global level[36]. Even if the short term forecasts were credible, which they are not, their extrapolation is on an unrealistic basis. At most, any extrapolation should more realistically have been based on the 2013 DfT freighter movement growth rate of 0.4% per annum and the latest DfT estimates[37] suggest that even this may be too high.

2.87 Table 6 then sets out the infrastructure requirements for cargo, which are based entirely on the forecasts put forward. However, even then, we are not told how these infrastructure requirements have been derived in terms of the operating pattern over the day, turnaround times, the number of night movements and other key assumptions for each aircraft type stated or indeed how they relate to the capability of Manston Airport with its existing infrastructure. Such information is critical to validate the infrastructure required (if indeed any is required given our assessment of the capability of Manston Airport), as well as to carry out the assessment of the environmental impacts.

[36] Now reduced to 3.8% in the latest Airbus forecasts.
[37] Department for Transport, UK Aviation Forecasts, October 2017, paragraph 2.56.

Passenger Forecasts

2.88 Although not the main focus of this summary report, we note that the passenger forecasts, set out by Azimuth in Section 2.4, suffer from many of the same problems as the freight forecasts. They appear to be based almost entirely on supposition and inferences that cannot be relied upon. There appears to be no consideration of what is known about market sizes, nature or previous performance, nor a recognition of the extent to which growth will need to be incentivised through discounting of airport charges and marketing support payments. Similarly to the freight forecasts, and for reasons that are not given, Boeing global growth rates appear to be used by Azimuth for passenger operations beyond year 10 rather than the UK specific forecasts produced by the DfT[38], which are substantially lower. This, once again, is a substantial overstatement of the potential for growth.

Overall Conclusions on Forecasts

2.89 Azimuth's entire analysis of the air freight market is focussed on the existence of a theoretical opportunity based on estimates of spill from London in the event of the third runway at Heathrow not being built or being delayed, an unsupported hypothesis that there is a trend away from bellyhold freight, and based on a small sample of interviews with largely marginal players in the UK air freight sector and/or local interests.

2.90 Azimuth's reports do not at any point provide any substantive evidence or analysis as to whether Manston Airport can effectively, viably and sustainably compete in that market. Azimuth's reports do not explain how Manston Airport will be able to price effectively against the bellyhold rates offered by growing established and operational UK regional airports or the continental hubs. Azimuth's reports do not explain how Manston Airport will compete against the range of destinations offered by the long haul passenger networks of the continental hubs or the much greater freighter network offers of East Midlands or Stansted airports. We agree that there may be a niche market for Manston, just as there was previously, and that this market will probably grow in the future in line with the pure freighter market overall (noting that the DfT does not see growth in this market to 2050), but we cannot see how Manston will provide a sufficiently attractive alternative in a broader freight market to attract a market share sufficiently large as to reach the volume and movement numbers envisaged by Azimuth and required to justify RSP's proposals to be considered under the Planning Act 2008 (as amended). Indeed, if we look at past history, it seems highly unlikely that commercially viable operations for the Airport would be attainable for the foreseeable future.

2.91 In overall terms, the forecasts presented by Azimuth at Table 1 of Volume III are simply not credible and do not provide a robust basis for promoting a DCO. We present analytically derived cargo movement forecasts in Section 3 of this report to evidence and support this conclusion that any future projected use of Manston Airport would be significantly lower than that asserted by RSP.

[38] Department for Transport, UK Aviation Forecasts 2013 and 2017.

2.92 In terms of Azimuth's key questions, as set out at paragraph 2.3 at the start of this section, the first two tests may well be met in terms of the need for more airport capacity in the South East of England. That is why the draft Airports National Policy Statement is promoting the development of a third runway at Heathrow as a solution in the period up to 2030. The first two questions are, therefore, irrelevant to RSP's proposals. However, in relation to the third test, the key point is that for Manston to be a long term solution to the UK's capacity problems, it must be a sustainable, commercial proposition, capable of attracting airlines, passengers and shippers to use it. Azimuth's analysis ignores the history at Manston and does not provide any evidence to conclude that any future projected use of Manston Airport would require an increase in the capability of the Airport.

2.93 Indeed, whilst we have provided in this report our assessment of the capability of Manston Airport (Section 4), we note that nowhere has RSP done the same exercise. The failure of RSP to provide their own evidence of the capability of Manston Airport and the amount by which the proposals would increase that capability by is a major omission in RSP's consultation material. Rather, the only information that they present is a forecast of future freight movement demand, which has no credibility as explained in this report. This failure means that, in our opinion, the requirements in Section 23 of the Planning Act 2008 (as amended) have not been satisfied. In essence, we would have expected RSP to be able to show:

- the capability of Manston Airport of providing air cargo transport services;
- the amount by which RSP is proposing to increase that capability by and thus the "new" capability; and
- a credible forecast for why that 'new' capability is required.

None of this information is provided by RSP.

3 FREIGHT FORECASTS

Introduction

3.1 In this section, we present our view of demand in the UK air cargo market at present and consider how this market will develop in the future, setting out a number of potential cargo forecast scenarios for Manston Airport specifically over the period to 2039/40 (RSP's assessment year). This is a more robust approach than the qualitative approach adopted by Azimuth and builds on the approach adopted in our work for TfL and the FTA, by updating this work and assessing Manston's potential share of the market. This is the correct way to use our earlier work to inform an assessment of the potential at Manston.

3.2 The analysis presented here builds on our previous work but supersedes it and extends it in terms of:

- considering changes in the market and circumstances since the time of the previous research, notably the decision to move forward with a third runway at Heathrow, the increasing long haul passenger operations at regional airports and the continued commitment from Stansted Airport to the freight market through its future plans;
- examining the demand and capacity position not only in London but across the UK as a whole;
- analysing potential cargo capacity growth in more detail using Airports Commission traffic forecast data, not available at the time of our previous work;
- more explicitly considering the nature of air cargo that might be affected by any form of constraint within the London airport system or in the UK;
- providing some indication of how cargo demand is spread geographically in the UK to aid consideration of how it might be served in the future.

3.3 Our previous work did not consider in detail the role that might be played by Manston Airport or indeed other UK regional airports. It considered, in broad terms, the effect of a constrained London system capacity on freight demand and how this demand might be met within the confines of the capacity position at the time, noting particularly the role that might be played by the major continental hub airports, given the price advantages that they might offer through the availability of bellyhold capacity.

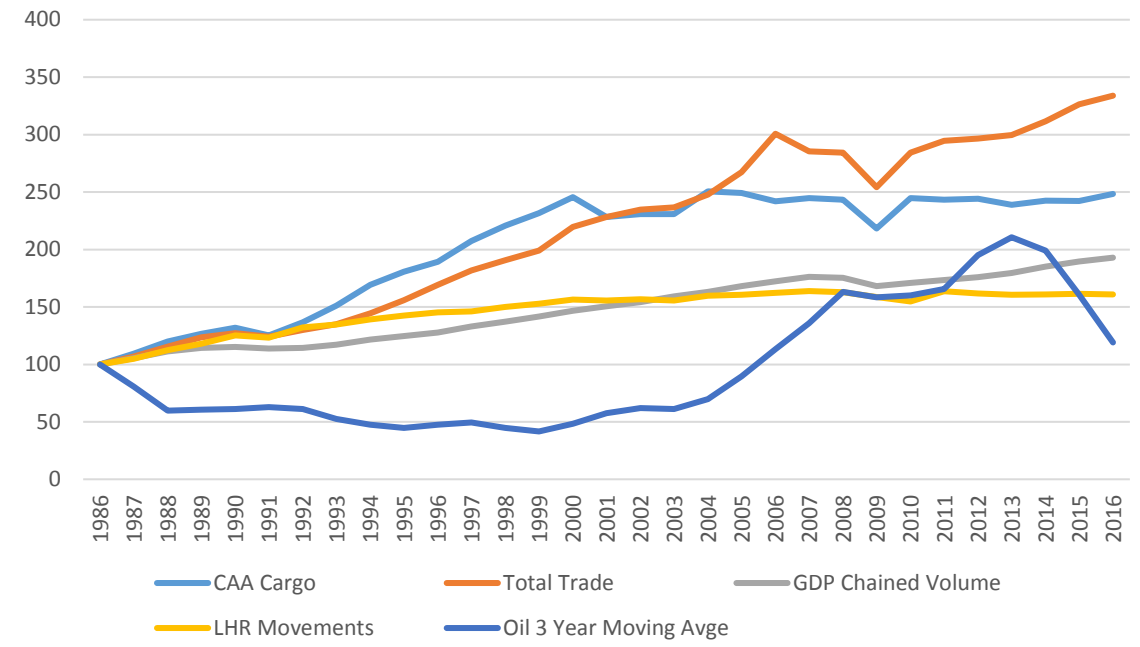
3.4 In this report, we now consider specifically the potential role for Manston by way of a scenario analysis that draws on the analysis of the overall market and the past performance of the Airport. The use of scenarios rather than a single forecast is intended to show a range of possible outcomes for Manston, allied to an assessment of the likelihood that the scenarios might be achieved in a manner which properly reflects the uncertainties identified in air freight forecasts.

Historic Performance of the UK Air Cargo Market

3.5 Our assessment of the quantum of air freight demand in the UK is fundamentally driven by analysis of the past performance of UK air cargo against a range of key economic and market indicators, notably UK trade in goods, GDP, oil price and ATM numbers at Heathrow. **Figure 3.1** shows the indices for these various metrics over time (with each indicator set to 100 in 1986).

3.6 This analysis reveals a number of interesting patterns. Until around 2000, UK air cargo was strongly related to UK trade in goods, with what would appear to be some stimulus provided by falling oil prices that would have made the cost of air cargo relatively more competitive with other cheaper modes. However, in around 2000, the market changed and this relationship appears to break. UK trade in goods continues to grow but growth in air cargo essentially stalls.

Figure 3.1: UK Air Cargo and Economic Metrics (Index: 1986 = 100)



Source: CAA Statistics, ONS

3.7 It is, therefore, helpful to look at why this might have happened. There are two main factors that need to be considered. The first is the oil price, which, through much of the late 80s and 90s, had been on a relatively benign downward trend. However, in around 2000, it started to rise again, accelerating through the mid-2000s and peaking in around 2013. The price of fuel is a key factor in the attractiveness of air cargo compared to other modes, particularly for pure freighter services, where the full direct operating costs of the flight must be borne by the cargo being shipped (as opposed to bellyhold freight where direct operating costs are largely covered by passenger operations, with cargo revenue essentially treated as a marginal benefit). This change in oil prices slowed demand for air freight globally and, in particular, drove users towards bellyhold rather than freighter options[39]. We set out the effect in the UK further below.

[39] Department for Transport, *UK Aviation Forecasts 2013*, paragraph 3.48, Steer Davies Gleave for Department for Transport, *Air Freight: Economic Drivers and Environmental Impacts*, 2010, Executive Summary.

3.8 The second point to note is the relationship to Heathrow ATMs. Up until around 2000, Heathrow was still growing its annual ATMs, which ultimately was driving the availability of bellyhold capacity in the UK air freight market. However, with runway capacity constraints biting, from around 2000, the rates of growth in ATMs at Heathrow initially slowed dramatically then stalled as it reached its consented limit.

3.9 When these two factors are combined, it is possible to understand what has happened in the UK air cargo market. It also has two key implications for considering the growth of the air cargo market moving forward and specifically in relation to Manston:

- ✈ it is reasonable to assume that the fundamental link between economic or trade growth and air cargo still exists and that, ultimately, with economic growth and increasing trade, demand for air cargo will grow. However, with oil prices remaining higher than seen in the past, it is likely that the growth path will be lower. We have assumed that it is likely to be more in line with the growth in real GDP over time;
- ✈ the capacity position at Heathrow is clearly a constraining issue for UK air freight demand but it is noticeable that this constraint has not resulted in significant gains being made by other airports in the London system. This suggests that, while there is probably a degree of constrained demand in the London system at present, this is affecting bellyhold air cargo and that is not translating through into substantially greater freighter growth at, for instance, Stansted or East Midlands. We examine this issue further below.

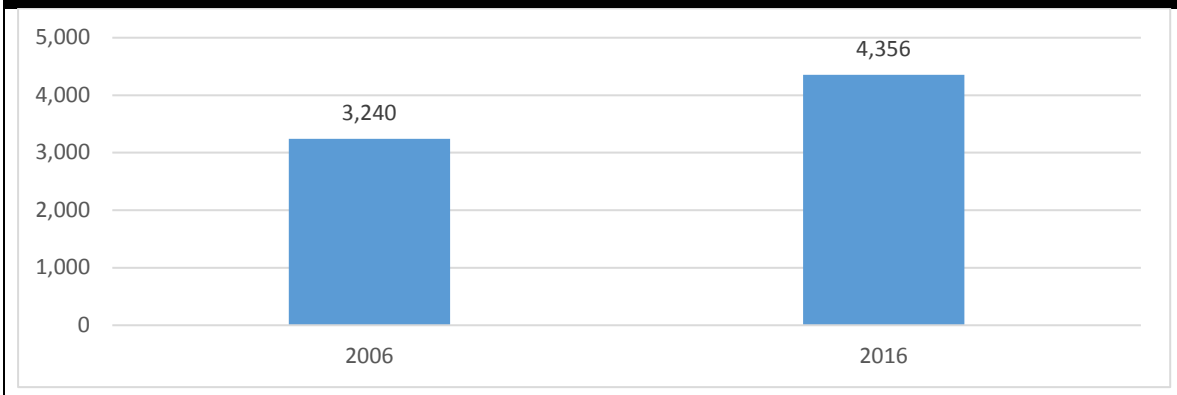
3.10 This is particularly important as it suggests that the market for bellyhold freight is different from that for pure freighter traffic. This is a function of price and urgency in relation to general air freight, as opposed to either express freight or niche products. For express freight or niche products, shippers are prepared to pay a premium which allows the use of freighters because either speed is of the essence or the destination is hard to reach or the cargo is difficult to handle in some way. For general air freight, these drivers are not the same. Accepting that all air cargo is to some degree sensitive to speed of delivery, it seems that what is likely to be being pushed from bellyhold capacity, in a capacity constrained environment, is less time sensitive and shippers' willingness to pay is lower. Hence, in the current market with relatively high fuel prices, freighter options are not an adequate substitute.

3.11 This is very important from the perspective of considering the potential role of Manston. It suggests that it will be very difficult for the Airport to compete effectively for any traffic displaced as a result of constraints in the London market as it cannot and will not be able to provide the price, frequency and breadth of destination advantages that bellyhold freight can offer. The airports competing for cargo traffic being pushed away from Heathrow, now and in the future, are the large UK regional airports with growing long haul passenger networks and the near European global hub airports, which offer the closest substitutes to Heathrow and are within easy trucking time of, certainly, the London and South East market. In any event, bellyhold capacity at Heathrow is expected to increase substantially once the third runway becomes operational so driving down the competitive prices in the market, making it even more difficult for freighters to compete. Even if there are delays to the provision of additional runway capacity at Heathrow, we would not expect a change to the pattern of behaviours observed since 2000, namely that cargo displaced from Heathrow will be trucked to other airports with available competitively prices bellyhold capacity.

3.12 Whilst the volume of air cargo flown to/from the UK's airports over the past 15 years has remained relatively static, there have been considerable changes in the way that demand has been serviced, which again reflect the drivers and constraints on demand described above. Essentially, the market has been consolidating to a small number of airports and bellyhold cargo has become more dominant.

3.13 The Herfindahl-Hirschman index (HHI) is a commonly accepted measure of market concentration[40]. **Figure 3.2** shows the HHI for the UK air cargo market in 2006 and in 2016. The change in the concentration level in the market over the last 10 years has been marked. The HHI for the UK air cargo market has increased by around 34%. The consolidation in the UK air cargo market in the last 10 years has resulted in an increase in the HHI of nearly 1,100. This continued concentration in the market can also be seen by examining the drivers of change in UK air cargo over the last decade. **Figure 3.3** sets out a bridge diagram between 2006 and 2016 showing the change in freight handled via bellyhold and pure freighter at major UK freight airports.

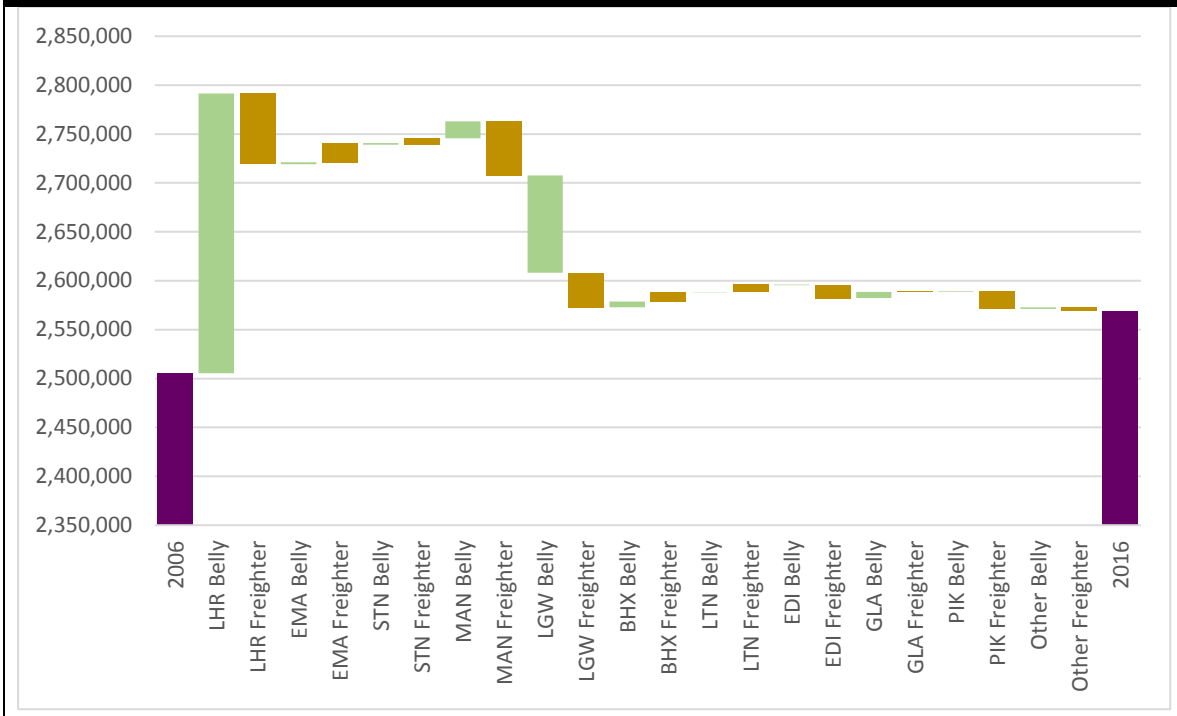
Figure 3.2: UK Air Cargo Market Herfindahl-Hirschman Index of Market Concentration



Source: York Aviation analysis of CAA Statistics

[40] It is calculated by squaring the market share of each firm competing in a market, and then summing the resulting numbers, and can range from close to zero to 10,000. The closer a market is to being a monopoly, the higher the market's concentration (and the lower its competition). If, for example, there were only one firm in an industry, that firm would have 100% market share, and the HHI would equal 10,000, indicating a monopoly. If there were thousands of firms competing, each would have nearly 0% market share, and the HHI would be close to zero, indicating nearly perfect competition.

Figure 3.3: Drivers of Change in the UK Air Cargo Market – 2006 to 2016



Source: York Aviation analysis of CAA Statistics

3.14 There are a number of key points to note:

- the market has continued to consolidate into Heathrow through increased bellyhold capacity due to the increasing focus on long haul destinations. These gains have been offset by significant erosion of freighter capacity;
- elsewhere in London, Gatwick has seen both bellyhold and freighter capacity significantly eroded as that airport has become more capacity constrained and it has focussed increasingly on short haul low fare passenger services, albeit this trend is starting to reverse as more long haul operations come on stream. Stansted and Luton have seen some growth in freighter tonnage but this does not come close to offsetting what has been lost from elsewhere with Stansted heavily focussed on the integrator and express services market;
- East Midlands, with major DHL and UPS bases, has been the only airport that has seen significant growth in pure freighter traffic, but again this has not offset losses in freighter traffic from elsewhere, suggesting that, for more general air cargo, bellyhold capacity is fundamentally more attractive, even potentially if this involves trucking to distant airports;
- this is reinforced by what has happened at Manchester, which has seen growth in its bellyhold market, relating to its growing long haul network, but with its freighter traffic falling away. The growth in bellyhold traffic at Birmingham is also probably reflective of its growing long haul passenger network;
- in general, there has been a noticeable switch towards the use of bellyhold capacity. Since 2006, pure freighter cargo's share of the UK market has dropped from 37% to 30%, while actual freighter tonnage has dropped by 17%;

- the performance of Prestwick (PIK) provides perhaps the most obvious direct comparator to Manston, with a similar sized freighter operation in 2006 to Manston at its peak. Freighter traffic at that airport has dropped by 64% since 2006. In the meantime, Prestwick was nationalised to maintain operations as it had been heavily loss making for a considerable period of time.

3.15 The implications for Manston are clear. Bellyhold is the preferred option for a significant proportion of the air cargo market and this preference has intensified in recent years. The only airports experiencing freighter growth are those with significant integrator activity. This suggests that Manston's likely niche freighter offer will struggle to penetrate the market. There has been consolidation into larger airports, which again suggests that Manston will struggle to establish market presence. Finally, the experience of Prestwick, its nearest comparator in many ways, is not encouraging for Manston. Prestwick's well established pure freighter operation has been heavily eroded and the airport has had to be nationalised to maintain its operation due to inherent lack of commercial viability.

The Geographic Distribution of UK Air Cargo Demand

3.16 At the outset, it should be made clear that there is very limited data on where air cargo originates from or is destined for within the UK. However, some indications are available from other research, notably recent work by MDS Transmodal, in conjunction with York Aviation, for TfN in relation to its International Connectivity Strategy[41]. MDS analysed a series of datasets on air freight and road haulage and estimated that around 14% of UK air freight demand originates in or is destined for the North of England. We also know that air cargo is often trucked a considerable distance before being loaded on to aircraft.

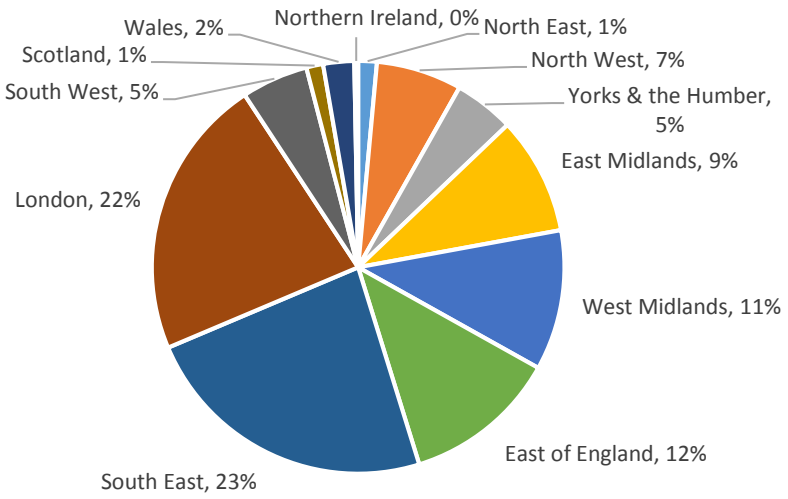
3.17 We have, therefore, developed a simple gravity model that distributes air cargo regionally across the UK based on:

- for exports, the distribution of manufacturing employment in the UK. This is intended to reflect that air cargo exports are likely to be primarily manufactured goods;
- for imports, the distribution of UK population. This is intended to reflect that imports are, in many cases, destined either for consumers directly or retailers. This is clearly a simplification but we believe a sensible one given the data available;
- a relatively low distance decay factor of 1.5, reflecting the relative insensitivity of air freight to trucking times. This has, in part, been calibrated based on observed distance decay factors using data available in the TfN work. This is generic and we have no reason to believe that the balance between trucking costs and the use of air freight would vary across the UK.

3.18 The resulting distribution of air cargo demand is shown in **Figure 3.4**. While there is a heavy concentration of demand in the Greater South East, there is significant demand located across the country. The issue for Manston is that it is poorly placed geographically to serve this demand, even for London and the South East, particularly once the location of distribution centres for import freight, which cluster around the M1 and M6, is taken into account.

[41] Transport for the North, *International Connectivity Evidence Report*, York Aviation/MDS Transmodal July 2016, Appendix C.

Figure 3.4: Modelled Regional Distribution of UK Air Cargo Demand



Source: York Aviation analysis of CAA Statistics, ONS and Google Maps Data

3.19 In the event of air cargo capacity constraints in London, this demand is likely to look initially for cargo capacity closer to home at the major regional airports, particularly those that are developing broader long haul passenger networks. Even if freighter aircraft are required for this demand, there are likely to be substantially better options than Manston. Not least the national freight hub at East Midlands, with its central location in the UK and excellent multimodal connectivity to a wide geographic area.

Future Demand for Air Cargo in the UK

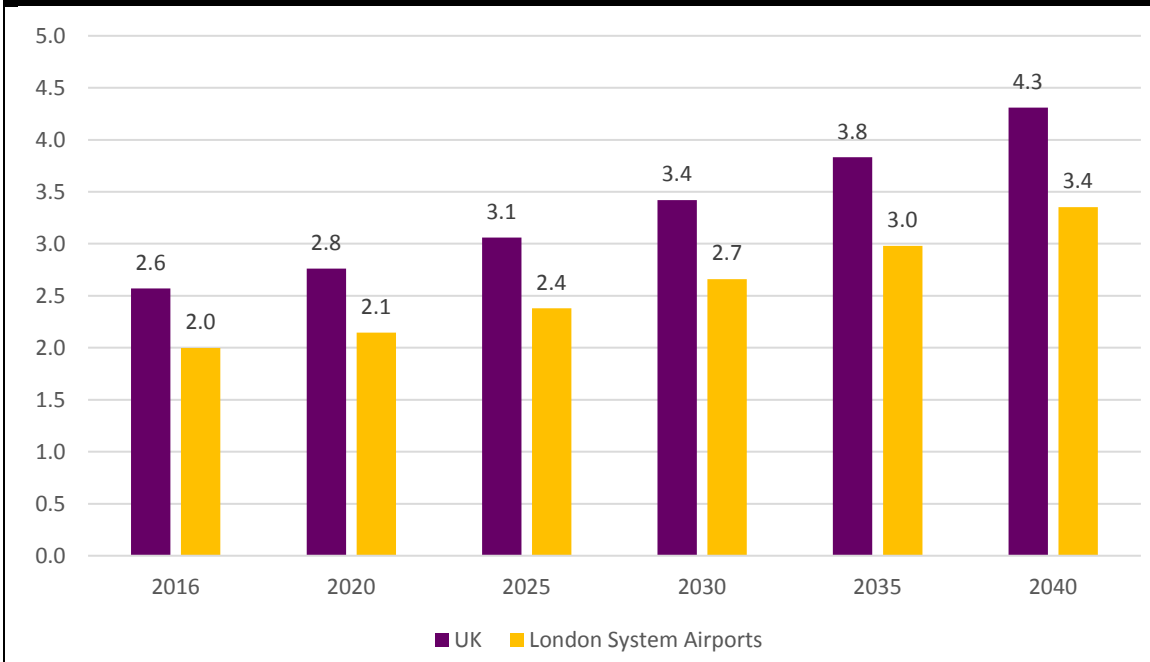
3.20 The initial step in producing our cargo forecasts for Manston is to consider the likely size of the London system and UK air cargo markets in the period to 2040. This is an unconstrained forecast and does not, at this stage, consider whether capacity will be available to deliver this demand.

3.21 In line with our analysis above and consistent with our 2015 report for the FTA, we adopted a relatively simple approach, growing existing air cargo demand forward in line with GDP projections for the UK economy. The GDP forecasts used are the latest forecasts produced by the Office for Budgetary Responsibility at the time of writing. These are taken from:

- Economic & Fiscal Outlook (March 2017), which provides short to medium term forecasts;
- Fiscal Sustainability Report (January 2017), which provides long term forecasts for the UK economy.

3.22 These forecasts suggest average real growth in UK GDP of around 2.2% over the period to 2040. The resulting projections of air cargo demand at the London system airports and across the UK are set out in **Figure 3.5**. This analysis sees total UK air cargo demand reach around 4.3 million tonnes by 2040 and demand in the London system[42] of around 3.4 million tonnes by 2040. At this stage, we have assumed that the split of tonnage between the London airports and the rest of the UK remains as currently, driven by the large concentration of freight forwarders in the vicinity of Heathrow in the light of its major air freight hub role. This may well overstate the scale of demand in London given increasing long haul networks at regional airports.

Figure 3.5: Air Cargo Tonnage Forecasts (million tonnes)



Source: York Aviation

Air Cargo Capacity at UK Airports

3.23 The second stage in our assessment is to consider the extent to which the demand identified above could be met by UK airports and the London system airports. This is, again, in line with our approach taken in our work for the FTA in 2015. However, the analysis undertaken for this research is more detailed, uses more up to date and detailed information on future passenger ATM forecasts and, specifically, considers Stansted's more recent statements in relation to continuing growth in the cargo market to around 400,000 tonnes[43] and removal of the existing 35 mppa passenger planning cap and extension to 43 mppa[44]. Had we been specifically asked, we would have advised Azimuth of the need to carry out such an assessment so as to understand the implications of our earlier work for TfL and the FTA.

[42] Based on the London airports current share of the national market.
[43] Sustainable Development Plan – Stansted Airport (March 2015).
[44] Press Release – Stansted Airport (17 October 2017).

3.24 In order to estimate the likely bellyhold capacity that will be available through the period to 2040, we have produced projections of passenger ATM demand for each of the top 10 freight airports in the UK in 2016, along with a residual forecast for Other UK airports. For Heathrow, Gatwick and Manchester, these forecasts have been split into domestic, EU and non-EU ATMs. The future years for each airport have been based on the ATM forecasts produced by the Airports Commission for which detailed data files have been released[45]. Years prior to the opening of Runway 3 at Heathrow, uses the Base ATMs scenario, while post opening uses the HAL ATMs scenario, which reflects the third runway.

3.25 The existing freight loads per passenger ATM for each airport have been estimated using CAA Statistics. These average loads have then increased by 1.0% per annum tapering to 0.5% per annum for Heathrow and 1.6% per annum tapering to 1.0% per annum for other airports. This reflects trends in average loads identified from CAA Statistics over the last five years.

3.26 In relation to pure freighter capacity, we have, in the first instance, considered what might be termed a business as usual view of capacity moving forward. This considers the likely number of freighter ATMs that might be flown rather than considering the actual movement capacity of individual airports, which may be greater. This is, ultimately, a more stringent view of capacity moving forward and is more likely to lead to a conclusion that there is a lack of freighter capacity to meet any demand than simply considering what any given airport could actually handle, especially given that Stansted is some distance from its freighter ATM cap and East Midlands is not close to any form of ATM limit. To enable this analysis, we have grown freighter ATMs at each airport by 0.4% per annum, in line with the expected growth rate from the DfT's Aviation Forecasts 2013[46]. However, we note that the most recent DfT forecasts[47] suggest that no growth in freighter movements to or from the UK is now expected. Hence, our use of the previous DfT growth rate may overstate the market for pure freighter operations but we have retained this approach so as not to understate the extent of any potential overspill market for Manston.

3.27 Once again, average loads per freighter ATM have been estimated for each airport from CAA Statistics. As with bellyhold cargo per ATM, there has been an upward trend in average loads on freighters in recent years of around 1.1% per annum (York Aviation analysis of CAA Statistics). This is assumed to continue over the period.

3.28 In addition to this business as usual view, we have also taken a view as to the likely total tonnage capacity over time of the two largest freighter airports in the UK, East Midlands and Stansted, based on those airports' development plans:

- the Stansted Sustainable Development Plan talks about developing cargo capacity to handle around 400,000 tonnes of cargo. We have assumed that current capacity is around 300,000 tonnes and that this grows steadily over time to 400,000 tonnes by 2040;

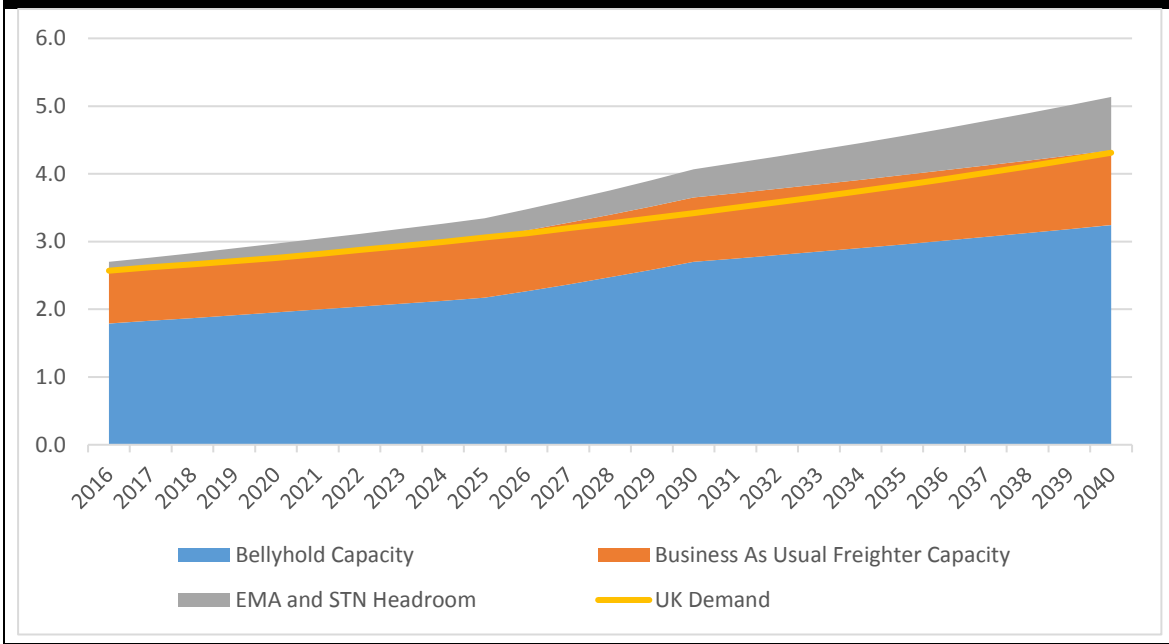
[45] https://www.gov.uk/government/publications/airports-commission-documents-and-data.
[46] The exception to this is the small number of freighter movements at Heathrow, which are not allowed to grow until the Third Runway is opened.
[47] Department for Transport, *UK Aviation Forecasts*, October 2017, paragraph 2.56.

- the East Midlands Sustainable Development Plan describes its runway capacity as able to support a 10 million passenger and 1.2 million tonne cargo airport[48]. We have assumed that this capacity could be developed over time to 2040 from a base capacity of 400,000 tonnes.

3.29 This assessment of the cargo capacity headroom at Stansted and East Midlands helps provide a view of how any excess demand identified could be handled by freighters in the UK if this were the response of the market to any shortage of bellyhold capacity, although it is important to note that we do not believe this would be the primary market response given the lower cost of bellyhold alternatives. It should, however, be recognised that the speed of build-up of this headroom is to a significant degree a matter of conjecture. There will be infrastructure developments required to enable capacity but, if demand were there, it is likely that these could be brought forward as they would be incremental expansion of existing facilities which could be phased in to meet demand more easily and cheaply than the substantial cost involved in re-opening Manston.

3.30 The resulting estimates for air cargo capacity for the UK as a whole and the London system over time are shown in **Figures 3.6** and **3.7**.

Figure 3.6: UK Air Cargo Capacity

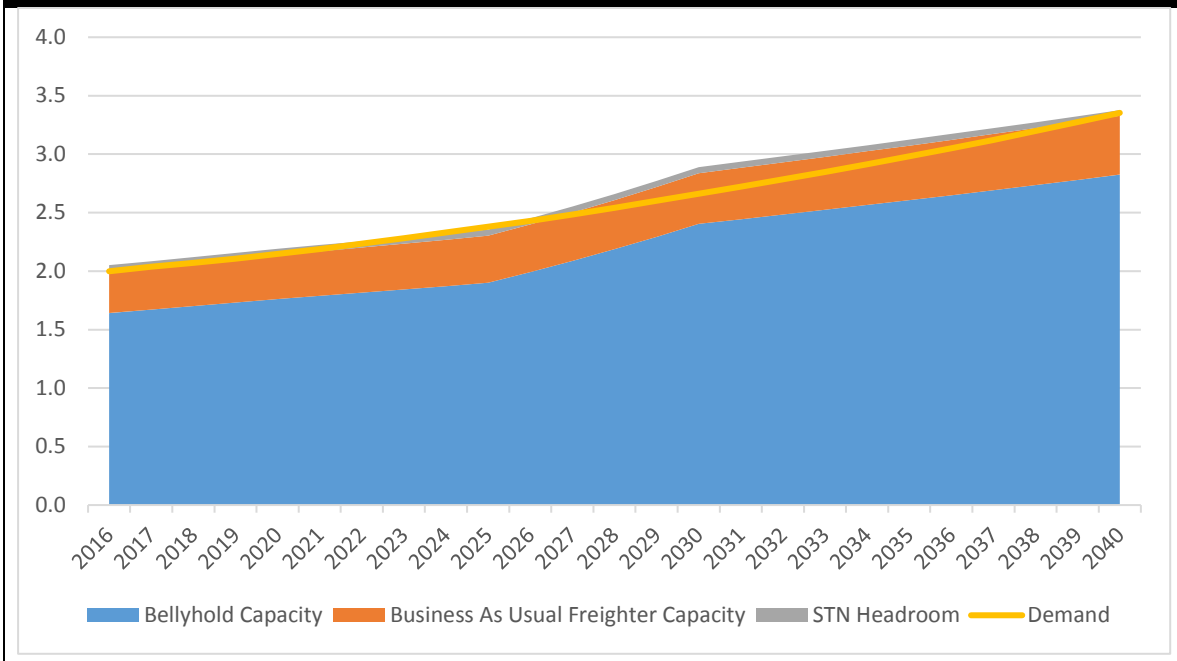


Source: York Aviation

[48] East Midlands Airport Sustainable Development Plan, 2015. Page 75.

3.31 At a UK level, our analysis suggests that there are unlikely to be capacity issues in the cargo market prior to 2040 even on a Business As Usual Freighter Capacity basis. Once the third runway is opened at Heathrow, there is in fact likely to be excess capacity in the market, which is likely to soften demand for supporting freighter capacity dedicated to general air freight (accepting that integrator/express freight is a separate market to a significant degree). It should, however, be noted that capacity on a Business As Usual Freighter Capacity basis is likely to become constrained shortly after 2040 but this can easily be addressed by exploiting the inherent airport capacity headroom still available at Stansted and East Midlands if it is appropriate to serve the market in that way. Overall, we can conclude from this analysis that there will be no shortage of freighter capacity in the UK before 2040 and overspill from other airports would not provide a rationale for re-opening Manston.

Figure 3.7: London System Air Cargo Capacity



Source: York Aviation

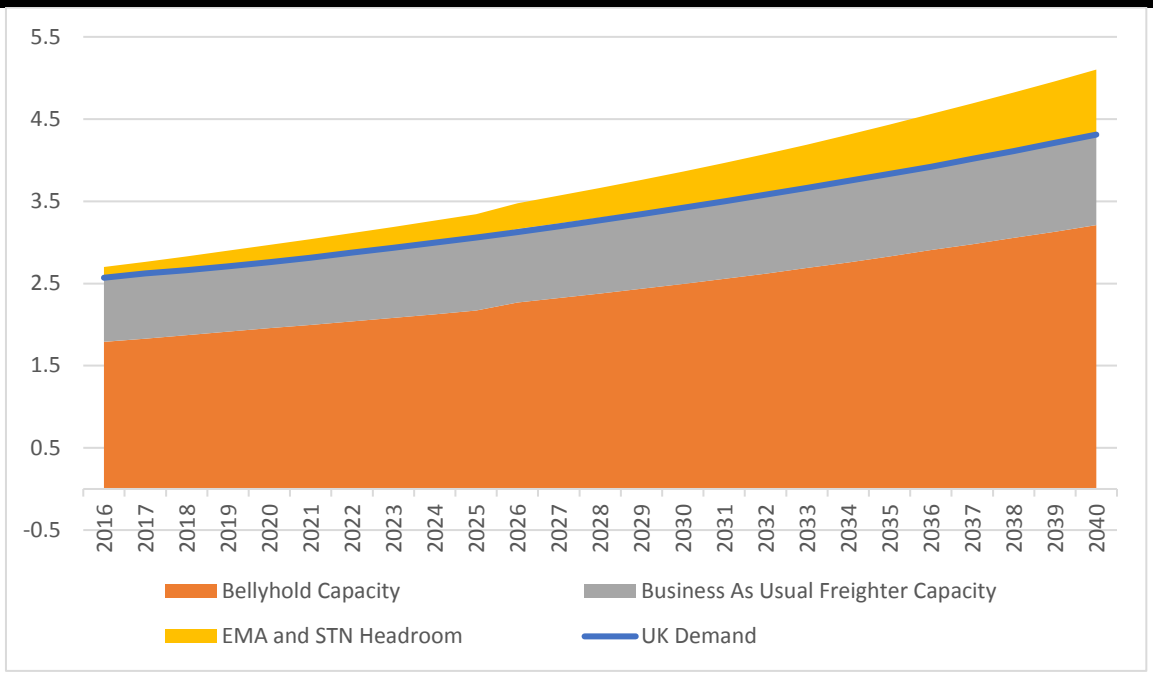
3.32 The situation at the London airports is slightly different if we assume that London maintains its market share of the overall market and there is no natural 'clawback' to the regions. With Heathrow's bellyhold growth relatively constrained, there are potentially some limited capacity constraints in the medium term before the third runway opens but, if there was demand, we would expect Stansted to develop additional freighter capacity sooner. Any constraint would be fleeting. Once the third runway is opened, excess capacity develops rapidly. Potential capacity issues do not then start to re-emerge until around 2040, when it appears that Heathrow is likely to become runway capacity constrained once more.

3.33 The implications for Manston Airport are that, even in pure volume terms, push factors from other airports in London are unlikely to provide opportunities for growth before 2040, and this is before any consideration is given to Manston's suitability to serve the markets in question. In the short to medium term, there is likely to be some limited constraint in the London system before the third runway at Heathrow is opened. However, this is largely a function of bellyhold constraints at Heathrow and it is highly questionable as to whether the type of cargo that is likely to be forced out will be suitable for Manston or indeed would switch from bellyhold to pure freighter operations at all.

3.34 Logic would suggest that what will be pushed out is relatively low yielding, general air cargo that is more sensitive to price and less sensitive to time. Essentially, this is akin to business passengers forcing leisure passengers out of Heathrow. This type of air cargo is not likely to see pure freighters as an effective alternate, given the higher prices involved. It is more likely to seek out alternative bellyhold capacity at UK regional airports (which might actually be closer to its point of origin given our analysis above) or travel via truck to the continental European airports.

3.35 Our analysis here has been predicated on the construction of a third runway at Heathrow, as this is clear stated Government policy. In the event that the third runway is delayed or does not happen at all, it is expected that there would be other adjustments in the UK air transport market, including the provision of more long haul services from other airports offering bellyhold capacity. In this case, whilst there could theoretically be a level of capacity shortfall at the London airports assuming that they maintain a constant market share, we would expect demand and capacity to keep pace at the UK level as growth at regional airports is accelerated. This is illustrated in **Figure 3.8**. We consider that analysis at the UK level remains the most relevant and this does not suggest that there will be a capacity shortfall before 2040.

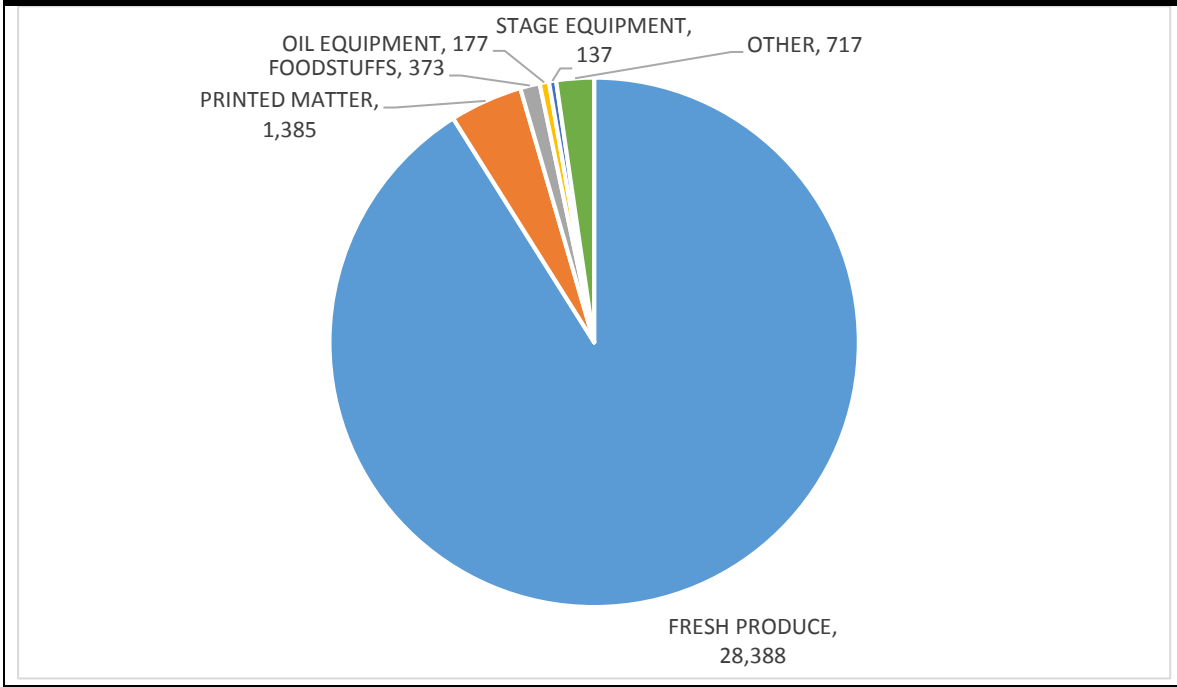
Figure 3.8: UK Air Cargo Capacity with No Third Runway at Heathrow



Source: York Aviation

3.36 An examination of the nature of cargo traffic that used Manston in the past also supports this assessment. Data provided to York Aviation by the current owner and set out in **Figure 3.9** shows that the Airport was essentially an import point for fresh produce (91% of total tonnage in 2012). This is a time critical market with associated high yields (hence allowing freighter operations) but also one that is dominated by Heathrow through its perishables hub and its bellyhold capacity to Africa. It is unlikely that Heathrow would shed significant amounts of this traffic with cargo constraints and certainly it would likely gain market share once the third runway is opened. Heathrow remains better located for the distribution of this produce to the core London market given its location inside the M25.

Figure 3.9: Air Cargo at Manston by Commodity Type in 2012 (tonnes)



Source: York Aviation analysis of Stone Hill Park data

3.37 It should also be remembered that this assessment assumes that Stansted does not accelerate its cargo development plans to meet any excess demand that is suitable for freighter activity. Indeed, we understand that the perishables activity that used to use Manston has shifted back to Stansted and that the operation at Manston was supported by low charges to the airline to compensate for the less attractive location.

Specific Air Cargo Market Forecasts for Manston Airport

3.38 Building on the analysis above, we have considered three scenarios for future cargo growth at Manston Airport. In each case, we have considered the likelihood of the scenario coming forward. It should be noted that, in the air transport market, demand is the driver of airport usage not capacity. Provision of capacity at Manston is no guarantee that airlines, shippers and passengers will use it unless there is demand and Manston represents the most efficient way for that demand to be met.

Scenario 1: Relief for Capacity Constraints in London (Highly Optimistic and very unlikely)

3.39 In this scenario, we have assumed that Manston is able to capture the excess demand that is seen in the London system in the medium term when only Freighter Business As Usual capacity is considered. It is then able to maintain its market share into the long term, even once the excess demand has disappeared with the appearance of the third runway.

3.40 We ultimately regard this scenario as highly optimistic and very unlikely to occur. We do not believe that the nature of excess demand is likely to suit freighter operations. This fits with the current market, where Heathrow is almost certainly constrained in terms of its ability to offer bellyhold capacity and yet there remains significant freighter capacity elsewhere and there has been no upturn in the demand for air freighter operations. We also feel it is highly unlikely that Manston could maintain market share in the context of the opening of a third runway at Heathrow. Even in the absence of a third runway, pure freighter capacity at Manston is not likely to be attractive for most of the freight displaced which would still choose cheaper bellyhold capacity available elsewhere in the UK and Europe.

3.41 We consider this scenario to be an upper bound to the envelope for Manston Airport. Even in this scenario, forecast tonnage only reaches around 105,000 tonnes by 2040 or around 4,470 cargo aircraft movements. The estimate of aircraft movements assumes loads similar to that of Manchester Airport's current freighter operations, growing by around 1.1% per annum. This appears to be a relatively low loading compared to Manston's previous operations[49] (hence providing a higher ATM number for any given tonnage and thus likely to overstate the number of movements).

3.42 We note that Azimuth have assumed an even lower tonnage per cargo air transport movement of under 20 tonnes, so leading to an overstatement of the number of aircraft movement at any predicted tonnage, but this does not appear realistic based on Manston's past operations nor tonnages seen elsewhere.

[49] We estimate that the number of tonnes per cargo ATM previously at Manston was 35-40 tonnes, taking into account empty aircraft backhauls.

Scenario 2: Manston Achieves Its Previous Market Share (More Likely but still with optimistic elements)

3.43 This scenario assumes that Manston essentially re-enters the market as a niche player in the key markets that it served previously, mainly fresh produce. This reflects the view that, in reality, very little has changed in the market compared to when Manston was last operational, not least that Heathrow was already suffering from runway capacity issues prior to 2014. There are no major changes that we would consider sufficient to alter Manston's attractiveness fundamentally compared to 2014. We note Azimuth's contention that Brexit will make trucking to Europe more difficult but would point out that the freight involved is most likely to be general air cargo heading for bellyhold capacity that is relatively less sensitive to time and that additional regulatory burdens are likely to be found at airports as well post Brexit. Hence, the impact on relative transit times may actually be comparatively limited. Furthermore, it is far from clear to us, from the evidence presented by Azimuth, that there were concerns regarding the quality of service offered at Manston historically sufficient to have constrained its share of the market in the past. Hence, it is not unreasonable to start from a position that its past market share was representative of what it might attain in future and that the provision of more infrastructure would not give rise to a change in the market or a higher level of underlying demand.

3.44 We regard this as the most likely of our three scenarios but it also has optimistic elements. Notably, it is highly optimistic to assume that Manston will be able to maintain market share in the face of expanded capacity at Heathrow. We would also note that the Airport was not viable at similar demand levels previously and would appear to have only been able to reach its recorded market share by 'buying' traffic through very low airport charges based on our discussions with SHP and its staff that worked at the Airport when operational. In this scenario, the Airport reaches around 47,000 tonnes by 2040 and around 2,000 cargo aircraft movements.

Scenario 3: Relief for Capacity Constraints in London (More Realistic but still with some optimism)

3.45 Scenario 3 is a variant of Scenario 1 that takes a more realistic view on how the limited excess demand in London in the medium term (allowing for pure freighter Business as Usual activities only) might be served. We would view this scenario as substantially more realistic than Scenario 1 but still with highly optimistic elements.

3.46 In this scenario, the excess demand is split as follows:

- 50% is assumed to be to diverted via truck to make use of bellyhold capacity at UK regional airports or at the continental hubs in Europe. This reflects the view that, in the majority of cases, this freight is likely to be relatively price sensitive, less time critical general air cargo for which pure freighters are not likely to be an appropriate substitute;
- the remainder is assumed to be split evenly between East Midlands, Stansted and Manston airports. This is, again, probably an optimistic assumption given the economies of scale and better proximity to markets overall offered by the other two airports compared with Manston.

3.47 Once the excess demand in London has peaked (just before the opening of a third runway), Manston is assumed to be able to maintain its market share into the future. This is again an optimistic assumption given what will be an excess of capacity in the market for much of the following period through to 2040. This scenario involves the lowest cargo throughput of the three options. By 2040, the Airport is handling only 17,500 tonnes of freight and handling around 750 aircraft movements each year.

Summary of Cargo Forecast Scenarios

3.48 The cargo tonnage and freighter ATMs associated with each of the three scenarios are set out below in **Table 3.1**.

Table 3.1: Summary of Manston Cargo Forecast Scenarios						
	Scenario 1: Relief for London (Highly Optimistic)		Scenario 2: Previous Market Share		Scenario 3: Relief for London (More Realistic)	
	Tonnes	ATMs	Tonnes	ATMs	Tonnes	ATMs
2020	7,608	402	30,359	1,605	1,268	67
2021	18,407	963	30,966	1,619	3,068	160
2022	31,758	1,643	31,616	1,635	5,293	274
2023	45,571	2,332	32,280	1,652	7,595	389
2024	59,860	3,029	32,958	1,668	9,977	505
2025	74,638	3,736	33,650	1,684	12,440	623
2026	76,205	3,773	34,357	1,701	12,701	629
2027	77,958	3,818	35,147	1,721	12,993	636
2028	79,751	3,863	35,956	1,742	13,292	644
2029	81,585	3,909	36,782	1,762	13,598	651
2030	83,462	3,955	37,628	1,783	13,910	659
2031	85,381	4,002	38,494	1,804	14,230	667
2032	87,345	4,050	39,379	1,826	14,557	675
2033	89,354	4,098	40,285	1,848	14,892	683
2034	91,409	4,147	41,212	1,869	15,235	691
2035	93,511	4,196	42,159	1,892	15,585	699
2036	95,662	4,246	43,129	1,914	15,944	708
2037	97,958	4,300	44,164	1,939	16,326	717
2038	100,309	4,355	45,224	1,964	16,718	726
2039	102,716	4,411	46,310	1,989	17,119	735
2040	105,182	4,468	47,421	2,014	17,530	745
Source: York Aviation						

3.49 Our updated analysis of the market and specific consideration of three potential scenarios for freighter growth at Manston Airport demonstrate that, even on the most optimistic assumptions, it is not likely to generate above 4,470 annual movements by air cargo aircraft. On a more realistic basis, it might attain similar levels of tonnage as seen in 2003 by 2040 but with a higher number of aircraft movements due to the assumption we have made that freighter loads would be similar to those seen elsewhere in the UK rather than the higher loads actually observed at Manston in the past. On past performance, the number of movements at Manston might well be lower. **None** of our scenarios suggest that there is a need to increase the capability of Manston Airport given our assessment in Section 4.

4 CAPABILITY OF THE SITE

4.1 Our start point for this assessment is the capability of the Airport site based on its historic and consented planning status and on the basis that the existing infrastructure could all be 'made good'. This assessment is based on the existing Lawful Use in planning terms. The existing Airport's permitted use is for civil aerodrome use, and there are no conditions limiting either passenger numbers or ATMs.

Capacity of Existing Facilities

4.2 In the first instance, it is important to highlight that Manston Airport did not operate under any form of restriction on the number of aircraft movements. The planning agreement between TDC and Manston Airport, which governed the permitted activity of the Airport, was entered into in 2000. In respect of night-time flying it sets out the limitations on such operations until a "Night-time Flying Noise Policy" is in place. Clause 1.1 of the Second Schedule states:

"The Owner agrees not to cause suffer or permit any Regular Night Flying Operations at any time (subject to Paragraph 1.4 below) before a Night-time Flying Noise Policy shall have been prepared and a copy lodged with the Council."

Further, it defines:

"Regular Night Flying Operation means Flight movements which are scheduled or programmed and which occur frequently or regularly to the same or similar patterns for the same operator during Night-time"

4.3 It is understood that the Night-time was defined as 23.00-07.00, though Manston Airport was also seeking a Night Quota Period which would have run from 23.30-06.00. In practice, there were a number of night movements which were deemed to be ad-hoc and often driven by technical delays but that were permitted to operate in any event.

4.4 We have assessed the capability of the existing infrastructure at Manston Airport assuming that the range of existing facilities, as at the time of its closure, are made good. There are three principal elements – runway, passenger and freight:

- **Runway:** for the handling of commercial passenger and freight aircraft, the runway would operate without a parallel taxiway. The current marked parallel taxiway is too close to the runway centreline to allow such aircraft to taxi independently of a runway movement. Landing and departing flights would then need to back track along the runway to and from the entry/exit taxiways. The achievable maximum runway rate with this operation might be around 20 to 24 flights per hour depending on the mix of aircraft types. This runway movement rate, even at 50% utilisation of available slots, would be capable of accommodating around 64,000 aircraft movements a year. However, we recognise that this is in excess of the capability of the passenger and freight handling facilities as existing.

- **Passenger:** the passenger apron has been designed to accommodate 4 E-Jet FK100 passenger aircraft. These aircraft types are now rare and have a wingspan that is much less, at 28 metres, than the typical low fares airline Code C type aircraft that Ryanair, easyJet and Wizzair, for example, use. These airlines typically use aircraft such as the B737-800 and A320, with wingspans of 36 metres. On this basis, the passenger apron would be able to accommodate up to 3 of these larger Code C aircraft simultaneously and could, in the alternative, be used for handling cargo flights. The terminal itself is quite compact and would have a maximum of 6 check-in desks and very small baggage make up area, and a departure lounge that could depart a maximum of 2 flights within the same 30 to 40-minute period, with an hourly capacity in total of around 250 passengers. There are more than 1,000 car parking spaces. We estimate that the passenger terminal at its current size could support around 0.7 to 0.9 mppa based on there being up to two based Code C aircraft with a reasonable number of other visiting flights across a typical day.
- **Freight:** the aircraft parking area close to the freight sheds can park up to 2 or 3 small to medium sized cargo aircraft or one large aircraft. There are two freight sheds that were originally organised to be used one for imported freight and one for export. Adjacent to these is an 'equine' handling facility for processing livestock. In practice Manston, when operational, normally handled one large freight aircraft at a time due to size and juxtaposition of the freight sheds and apron to each other and the single taxiway connecting to the runway. Whilst Manston handled up to 30,000 tonnes of freight at its peak, our understanding is that the freight facilities could have handled substantially more tonnage.

4.5 Our assessment into the capability of Manston Airport is based on the reinstatement of the runway, air traffic control, fire station, navigational aids, apron (stands) and taxiways. We have taken into account the use of both apron areas, one to the west adjacent to the cargo sheds and one to the east, adjacent to the passenger terminal. These could accommodate collectively up to 4 freight aircraft simultaneously. The assessment is also based on an 18-hour operational day (allowing for a small number of ad hoc night movements consistent with previous operations) and with a turnaround window of up to 2½ hours from the arrival to departure of each freight aircraft resulting in the capability of each stand to handle over 7 aircraft rotations a day, or over 14 cargo aircraft movements.

4.6 On this basis, across a year, this would equate to a capability for at least 21,000[50] annual air cargo aircraft movements with the existing consented infrastructure, subject only to reinstatement. This assessment is consistent with the assertion made in presentations on behalf of RSP[51], which stated that the 10,000 cargo aircraft movement threshold, necessary to pass the Section 23 test in the Planning Act 2008 (as amended), could be met by providing for 14 aircraft arrivals and 14 aircraft departures each day. As the existing infrastructure could provide for 4 cargo aircraft being handled simultaneously, this would equate to 20,440 annual air transport movements by cargo aircraft. This would be more than sufficient to accommodate any reasonable forecast of the cargo related movement demand that Manston might attract as we have set out in Section 3.

[50] Should a night time noise policy be agreed with Thanet District Council pursuant to the existing planning agreement that enabled a longer operational day and/or a number of scheduled night movements, then the capability could, in theory, be higher than 21,000 annual cargo aircraft movements.
[51] RSP, Presentations for Thanet District, Dover District, and Canterbury City Councils

4.7 We recognise that the actual usage of that capability will depend on how an airport is used in terms of the daily and seasonal pattern of movements but this does not, of itself, reduce the capability offered by the existing consented infrastructure for air transport movements. Our assessment, therefore, provides essential missing information from RSP's materials to date which is necessary for the purposes of section 23 of the Planning Act 2008 (as amended), for assessment purposes under the Environmental Impact Assessment Regulations and for consultation purposes.

Land Required to accommodate RSP's Forecasts

The RSP Master Plan

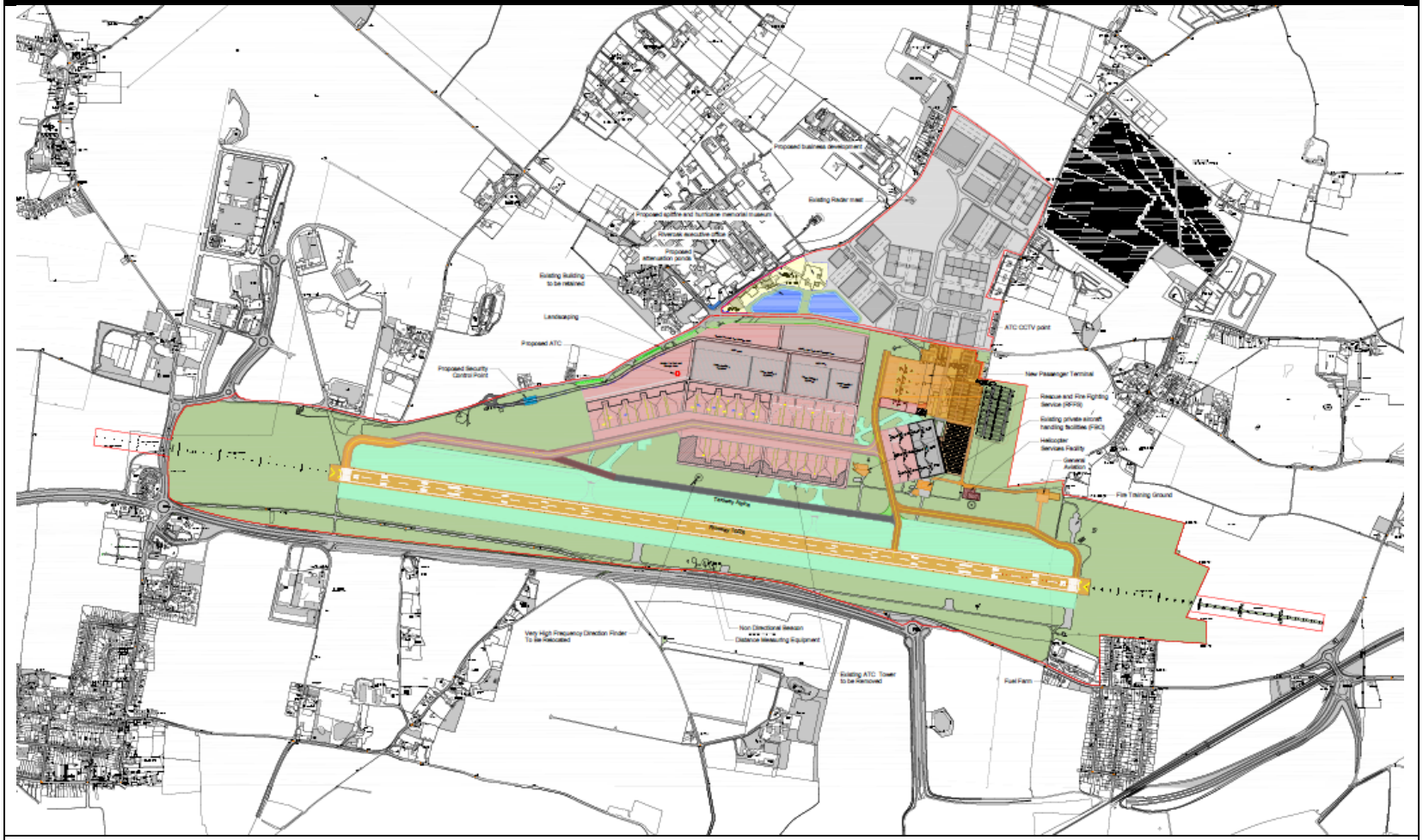
4.8 The Master Plan presented by RSP for the Manston Airport site is shown at **Figure 4.1**. It makes use of the full length of the runway and provides a full length parallel taxiway. The western side of the site is dedicated to freight handling activity and has 19 Code E aircraft stands for cargo flights and 4 large cargo sheds for the processing of freight supported by truck loading and parking areas. The eastern side of the site shows as a new passenger terminal and apron along with a MRO hangar and apron. The existing private aircraft handling facility (FBO) and fire station site is retained. We are not entirely clear how such works would be phased, although we understand that 4 phases of development are planned. RSP projects that Manston will need to be able to handle 17,171 cargo related ATMs and that 1.4 mppa of passengers will be handled by 2039. These represent the basis for the proposed DCO application and we assume, therefore, that these will be the limits on the number of movements and passengers which the site would be capable of accommodating as these form the basis for the assessment of environmental and other impacts. However, this is unclear from the consultation documentation.

4.9 We are unclear why 19 Code E stands are proposed given that the fleet mix at 2039[52] shows 85% of aircraft (at 17,171 annual cargo aircraft movements) being by aircraft smaller than Code E dimensions. Even allowing for some larger Code F types (<2% of movements), it would be possible to reduce the area of apron required for the fleet mix proposed, leaving aside whether 19 stands are required for the simultaneous parking of cargo aircraft at any one time, which we discuss further below.

4.10 To the north of the site, on the 'Northern Grasslands', a new development is shown, which appears to consist of commercial sheds and factory buildings with no obvious connection to the operation of the Airport being located entirely on the landside of the B2050. We assume that RSP's intention is to lease out these landside commercial buildings on this northern site so as to provide a rental income to cross subsidise the operation of the Airport. We discuss the need for this land further below.

[52] Azimuth Volume III, Table 2.

Figure 4.1: RSP Masterplan – Proposed Site Layout



Source: RSP

Land Required

4.11 Without prejudice to our position that we do not consider that RSP's proposals are credible in terms of the level of demand that might be attracted to Manston, we do not consider that the scale of development proposed by RSP for 17,171 cargo related movements is necessary, justifiable or reasonable, based on the principles set out at paragraph 4.5 above.

4.12 At **Figure 4.2**, we illustrate the justifiable and reasonable extent of land required at Manston Airport to support a cargo operation of 17,171 ATMs and passenger operation of 1.4 mppa (even though we do not accept that these ATMs and passenger numbers can be reached). This is based on our experience of airport operations around the world.

4.13 We recognise that there could be an opportunity for maintenance hangars for heavier aircraft maintenance activities but the need for these will not necessarily be triggered by the establishment of passenger operations. Depending on the nature of the freight and passenger carriers that set up services at Manston, the need for maintenance hangars cannot be ruled out and we have allowed for one twin bay hangar with a footprint of approximately 6,000m2 or two single bay hangars at 3,000m2 each.

4.14 It is also reasonable to expect that there will be some business and some general aviation activity. However, unless a bespoke FBO is set up, which we believe is unlikely given the distance from the main business aviation market in London and with Biggin Hill much closer to the core market, there would be very limited use by business aviation. Any small general aviation or flying school activity can be accommodated within the land area shown. These facilities, and any aircraft dismantling activity as also suggested in Azimuth's forecasts, would need to have direct airside access and so would need to be located to the south of the B2050. In other words, all of the operational facilities to support the operation of the Airport would require to be located to the south of the road and not on the 'Northern Grasslands' site.

4.15 We have clearly marked the area of land to the south of the B2050 that is not required for the defined airport operations in green on Figure 4.2. To the north of the Airport site, the 'Northern Grasslands' are marked in yellow and is not required for the scale of airport activity proposed by RSP. We discuss the potential use of this area further below. Figure 5.2 clearly shows that the extent of airport land needed to support the scale of freight and passenger activity proposed by RSP is significantly less than that proposed by the RSP. There are surplus areas of land within the core airport site as well as the 'Northern Grasslands' that are not required to support the throughput proposed.

Figure 4.2: Airport Land for 17,121 Freight ATMs and 1.4 mppa Operation – Surplus Land: Airport Land (Green), Northern Grasslands (Yellow)

Source: York Aviation

4.16 We summarise at **Table 4.2**, those facilities proposed by RSP in its Master Plan but are not, in fact, required to support essential airport operations.

Table 4.2: Classification of RSP Proposed Airport Facilities at Manston Airport

	RSP proposed airport-related development	Facilities not Essential for an Operational Cargo Airport
4	Retention & Extension of Passenger Apron	✓
11	New replacement Passenger Terminal building	✓
12	New and extended passenger car parking areas	✓
23	Relocation of the two existing museums	✓
24	Demolish old Control Tower in northern area	✓
25	Airport related businesses on Northern Grasslands	✓
26	New MRO aircraft maintenance hangars	✓
27	New FBO in refurbished business aviation terminal	✓

4.17 Although a replacement radar is shown by RSP re-using the old radar tower within the 'Northern Grasslands' area, it is not clear that a replacement radar would actually be required, although a radar service would be required. It is likely that a radar service could be procured more cheaply by buying in radar coverage from an alternative radar position rather than re-providing a radar on site. This is increasingly common practice at smaller airports. In the event that a replacement radar was required, this would not need to be located on the 'Northern Grasslands' but could be located within the airfield site to the south of the B2050.

4.18 In terms of the use of the 'Northern Grasslands', there is no particular requirement for extensive freight forwarding facilities on site as consolidation of loads is likely to continue to take place in and around Heathrow as currently. Any freight forwarding activity directly to support 17,171 cargo aircraft movements is likely to be containable within the area shown for freight warehousing within the airfield site.

4.19 No other justification is given for the extent of the commercial development shown on the 'Northern Grassland' part of the site. In our view, it is certainly not 'associated development' required to support the operational airport, other than in terms of providing a financial cross subsidy from rental income for general commercial buildings.

4.20 The need, then, for such an extensive development across the 'Northern Grasslands' cannot, in our opinion, be justified and is substantially in excess of what is seen elsewhere. The scale of supporting infrastructure proposed appears substantially greater than exists at the UK's main pure freight hub at East Midlands. We have seen no reasoned justification for the scale of facilities proposed. It appears to cover an area (c.48 hectares), which is more than double the size of the associated Pegasus Business Park area at East Midlands Airport (c.21 hectares), which currently handles virtually the same cargo tonnage as projected by Azimuth for Manston at 2039. Furthermore, it is significant that a substantial part of the East Midlands area is occupied by hotel development (3 hotels) in support of the much greater passenger throughput at that airport, a Regus office complex, and many of the other occupiers of sites within the Pegasus Business Park are not related to the activity at the Airport and include companies such as PwC, Laser Optical Engineering, Nikon Metrology UK, Medstrom Healthcare, Rail Vision and PKF Cooper Parry making use of an accessible location close to the M1. None of these activities would be essential in relation to freight activity at the airport and so would not meet the test for associated development required for inclusion with a DCO.

Realistic Requirements

4.21 Clearly, as is evident from earlier sections of this report, our opinion is that RSP's projections for the use of Manston Airport cannot be realised. Hence, the area of land required to accommodate lower levels of activity would be proportionately smaller, occupying a substantially smaller area of land to the south of the B2050 than shown on Figure 4.2.

Conclusions on Capability

4.22 The existing infrastructure at Manston Airport, if made good, would be capable of handling 21,000 annual air cargo transport movements[53]. However, the actual usage of that capability would depend on the pattern of operation and how the infrastructure was used on a day by day basis.

4.23 Without prejudice to our view that demand to use Manston is not likely to be anything like 17,171 cargo aircraft movements a year, we consider that the land required to accommodate such a number of movements would be substantially less than shown on the RSP Master Plan.

4.24 We can see no justification for the inclusion of the 'Northern Grasslands' within the DCO as associated development as there will be little requirement for the relocation of freight forwarding activity from adjacent to the UK's main cargo hub at Heathrow to Manston and any requirement could be accommodated south of the B2050. The development on the Northern Grasslands site appears to be speculative commercial development which, based on the precedent at East Midlands Airport – the UK's principal airport for pure freighter operations – would be expected to be largely for non-aviation related uses.

[53] Based on an 18-hour operational day. Should a night time noise policy be agreed with Thanet District Council pursuant to the existing planning agreement that enabled a longer operational day and/or a number of scheduled night movements, then the capability could, in theory, be higher than 21,000 annual cargo aircraft movements.

5 SOCIO-ECONOMIC IMPACT

Introduction

5.1 In this section, we examine the socio-economic benefits that are put forward by Azimuth and the flaws that are apparent in their approach. These render the socio-economic case put forward unreliable. We then move on to provide our own estimates of the socio-economic impacts of Azimuth's traffic forecasts based on more appropriate assumptions and also set out the socio-economic impacts associated with our own traffic forecasts to provide a more reasonable basis for considering the extent of the benefits that might realistically accrue from the re-opening of the Airport.

Comments on Azimuth Socio-Economic Assessment

5.2 Volume IV of the Azimuth's Report sets out the socio-economic case for the DCO for Manston. This assessment naturally relies on the traffic forecasts presented in Volume III. This means, of course, that the socio-economic assessment is rendered unreliable by the failings of the traffic forecasting approach and the incorrect inferences drawn from the assessment of the market. However, there are also substantial failings in relation to the methodology used for the socio-economic impact assessment itself, which result in significant over estimates of the impacts. We would also re-emphasise that the Airport must be commercially viable to be able to deliver these benefits, otherwise it will simply fail and no level of benefit will be delivered. RSP has not clearly demonstrated that the operation of the Airport would be viable at any level of throughput and, in the light of the conclusions of Aviasolutions in their advice to Thanet (see Section 6 of this report), viability must be in serious doubt based on our analysis of the likely usage as set out in Section 3. This renders any analysis of the socio-economic impacts to a large extent moot. Setting aside the issue that the Airport is highly unlikely to be viable and that the traffic forecasts set out are significantly overstated, we have identified below a number of key flaws in Azimuth's approach and analysis of the economic impacts.

5.3 At the outset, it is probably helpful to highlight the key area in which we agree with Azimuth's analysis and conclusions. We agree that the East Kent area is in need of regeneration. It is simply that we do not believe that Manston Airport can deliver the benefits set out. Any attempt to re-open the Airport is not likely to succeed as it is hard to see that viability could be attained with realistic forecasts of usage. Another failure of the Airport would be more likely to damage the image of Kent as a place to invest than enhance it.

5.4 Azimuth spend some time considering the appropriate employment density on which to base an assessment of direct employment. They ultimately conclude that East Midlands Airport provides an appropriate comparator (see paragraph 4.1.4 of Volume IV). This information is then used to drive large parts of the benefit calculations for Manston. York Aviation provides economic impact advice to MAG in relation to both its major freight airports, East Midlands and Stansted. From this knowledge, we would suggest that the job numbers quoted and used here are an incorrect base as they include substantial numbers of non-airport related jobs located on the business park at East Midlands Airport, discussed in the previous section. This means that the employment density used by Azimuth is far too high for genuine airport related activity. In any event, the employment at East Midlands is higher than might be anticipated anyway given the very significant employment supported at the site by DHL's UK main base of operations, which is not likely to be replicated at Manston.

5.5 We accept that it is difficult to identify an ideal comparator for a re-opened Manston in the UK but would suggest that an airport such as Glasgow Prestwick would be a much more appropriate comparator. The Airport has a low fares operation by Ryanair and has a reasonably significant pure freighter operation (although this has been substantially larger in the past). There is also detailed information on the economic impact of that airport in the public domain from work undertaken by both York Aviation[54] and SQW[55]. We have used information from this research later in this section to provide a more realistic base for assessing the economic impact of Manston.

5.6 The multipliers used by Azimuth for indirect and induced employment and economic activity in their assessment are simply inappropriate. Firstly, the multipliers adopted are for the impact at a national level. The study area for this economic assessment and the focus of Azimuth's comments is the sub-region around Manston Airport. Multipliers appropriate to this much smaller area should have been used and would have been substantially smaller. Secondly, the multiplier used (2.1) is a European average taken from research by InterVISTAS for ACI EUROPE[56]. The adoption of this Europe-wide multiplier is strange given that that the research does actually provide a specific multiplier for the UK[57], which is substantially smaller at 1.5. Use of the appropriate multiplier would, of course, have significantly reduced the job impacts suggested, even at a national scale.

5.7 There is a further issue in relation to the use of an inappropriate multiplier covering national level effects in that displacement of activity from other airports should have been taken into account. To the extent that any of the activity projected for Manston is displaced from other airports, as our analysis strongly suggests it will be, there will be a relative reduction in employment and economic activity in the vicinity of these other airports. So whilst, correctly calculated, the employment and economic effects local to Manston would be additional, the effect of displacement of activity would need to be netted off wider national or regional (South East) impact assessments.

[54] The Economic Impact of Glasgow Prestwick Airport – York Aviation (2012). http://www.evaluationsonline.org.uk/evaluations/Search.do?ui=basic&action=show&id=509
[55] Economic Impact of Glasgow Prestwick Airport – SQW (2008). http://www.sqw.co.uk/files/4413/8712/8925/99.pdf.
[56] The Economic Impact of European Airports – InterVISTAS for ACI Europe (2015).
[57] Ibid. Page 103.

5.8 As well as using a multiplier for indirect and induced impacts, a multiplier is used to assess the wider catalytic employment[58]. The multiplier used is taken from out of date research for ICAO[59] and it should be said that catalytic impacts remain a difficult area in terms of quantification. There is not sufficient detail in the ICAO report[60] that Azimuth rely on to understand how this catalytic multiplier has been derived. However, again, there are issues with the use of this multiplier. Firstly, it appears to be a global multiplier, which would again be completely inappropriate for use in considering sub-regional impacts around Manston and it has been wrongly applied to total job numbers rather than direct job numbers. In practice, the correct approach would have been to consider the specific additional connectivity that Manston Airport might provide for Kent and assess how this might relate to attracting additional business activity and tourism to the area.

5.9 In examining the employment projections presented (Section 5.1 of Volume IV), it appears that no allowance has been made for either productivity growth or returns to scale over time and as the Airport grows. While information on potential on-site productivity growth can be hard to come by, we would expect some allowance to have been made. A typical figure might be around 2% per annum based on our experience at other airports. The result of this omission is that future direct job numbers, in particular, are likely to be significantly overstated given the compounding effect of failing to account for productivity growth.

5.10 Section 7 of Volume IV discusses other socio-economic impacts. In particular, it talks about contributions to GDP. Para 7.1.1 describes GDP as *"a monetary measure of the state of a Region's or a Country's economy"*. This is not correct. It is a measure of the size of the economy. It does not comment on the state of the economy or the prosperity or wealth within it. The calculations of GDP impacts presented are based on the job numbers estimated earlier in the report. They are, therefore, likely to be significant overestimates given the flaws in the demand forecast method and the job density and multiplier assumptions.

5.11 The comments in Paragraph 7.1.7 describing how Manston could contribute significantly to Thanet's Economic Growth Strategy aspirations in terms of GVA per job and per capita are, in reality, unsupported. Given the methodology adopted, which essentially measures Manston's impact at a national level, it is actually very difficult to know what the effect might be on the Thanet economy. Undoubtedly, the Airport could support local jobs if it is re-opened but, in reality, the number of those jobs and their value has not been effectively calculated here. The aviation supply chain in the UK is heavily concentrated around the major airports, particularly in relation to air cargo. So, in practice, much of the economic benefit claimed would be realised in and around Heathrow rather than locally if Manston were to re-open. To the extent that any activity would be displaced to Manston, there would be negative economic implications elsewhere.

[58] Catalytic employment is related to additional economic activity generated in areas adjacent to an airport as a result of the additional connectivity offered by the airport.
[59] ICAO – International Civil Aviation Organisation, which is the inter-governmental body which regulates air transport globally.
[60] ICAO – Economic contribution of civil aviation: Ripples of prosperity, 2000.

The Socio-Economic Impact of the Azimuth Traffic Forecasts

5.12 Below, we have set out an estimate of the socio-economic impacts of the Azimuth traffic forecasts using more appropriate assumptions. We have retained the same basic analytical framework, which considers direct, indirect, induced and catalytic impacts, but we have used different basic assumptions in all areas:

- we have estimated the direct employment associated with the re-opening of the Airport based on employment densities observed at Glasgow Prestwick Airport during the production of our 2012 report for Scottish Enterprise[61]. This includes considering which elements of on-site employment are likely to be driven by passenger growth and which by cargo growth. Given the slightly differing approach, it is hard to provide a perfect comparison of job density. However, in Year 3, when both cargo and passenger operations begin, the York Aviation job density is around 650 jobs per million workload units, compared to around 890 assumed by Azimuth;
- we have used an indirect and induced multiplier for Kent of 0.4[62]. This is again taken from our work on Prestwick and reflects impacts of that airport in the Ayrshire economy, which would seem a sensible comparator. This multiplier is also in line with the benchmark multipliers set out in the Homes and Communities Agency Additionality Guide (2014)[63]. At this level, displacement affects do not need to be accounted for albeit they would still arise to the extent that activity at Manston displaces activity elsewhere;
- we have used catalytic multipliers for air freight taken from Steer Davies & Gleave's report on the UK Air Freight Industry for the DfT[64]. This identified national level catalytic multipliers for air freight of 3.46 and 3.76 (inclusive of the direct impact). There is no simple way to adjust these multipliers to the Kent economy. We have, therefore, reduced these multipliers by 75%. This is broadly akin the difference between sub-regional and national level multipliers for indirect and induced effects. As with all estimates of catalytic impacts, these should be regarded with some caution in the absence of a more detailed and specific assessment of the potential effects;
- we have assumed productivity growth at Manston Airport of around 2% per annum. This is typical of our experience of productivity growth rates at UK airports;
- in order to estimate the GVA impacts of the re-opening of the Airport, we have used GVA per job estimates from ONS for Kent. On-site jobs are assumed to generate GVA in line with the Transportation & Storage sector (£57,763), while jobs in the wider economy are assumed to reflect the average GVA per job for Kent (£52,623).

5.13 In **Tables 5.1** and **5.2**, we have set out our estimates of the socio-economic impact of the Azimuth traffic forecasts compared to the original estimates produced by Azimuth.

[61] *The Economic Impact of Glasgow Prestwick Airport* – York Aviation (2012).
[62] Note that this excludes the initial direct effect.
[63] See page 36.
[64] *AIR FREIGHT Economic and Environmental Drivers and Impacts* – Steer Davies and Gleave for DfT (2010). Page 106.

Table 5.1: Employment Impact of Manston Airport – YAL Socio-Economic Assumptions Comparison					
	Y2	**Y5**	**Y10**	**Y15**	**Y20**
Azimuth Impact Assumptions with Azimuth's freight + passenger forecast					
Direct	856	2,150	2,749	3,438	4,271
Indirect & Induced	1,798	4,515	5,773	7,220	8,970
Catalytic/Wider	0	8,601	10,996	13,753	17,085
Total	**2,654**	**15,266**	**19,518**	**24,411**	**30,326**
YAL Impact Assumptions with Azimuth's freight + passenger forecast					
Direct	688	1,555	1,791	2,033	2,291
Indirect & Induced	275	622	716	813	917
Catalytic/Wider	475	1,073	1,236	1,403	1,581
Total	**1,439**	**3,250**	**3,743**	**4,249**	**4,789**
YAL Total as % of Azimuth	**54%**	**21%**	**19%**	**17%**	**16%**
Source: York Aviation and Azimuth Associates					

Table 5.2: Gross Value Added Impact (£ million) – YAL Socio-Economic Assumptions Comparison					
	Y2	**Y5**	**Y10**	**Y15**	**Y20**
Azimuth Impact Assumptions with Azimuth's freight + passenger forecast					
Direct	£43	£108	£138	£173	£215
Indirect & Induced	£78	£195	£250	£312	£388
Catalytic/Wider	£0	£391	£499	£625	£776
Total	**£121**	**£694**	**£887**	**£1,110**	**£1,379**
YAL Impact Assumptions with Azimuth's freight + passenger forecast					
Direct	£41	£99	£126	£158	£197
Indirect & Induced	£15	£36	£46	£58	£72
Catalytic/Wider	£25	£61	£78	£97	£121
Total	**£82**	**£196**	**£250**	**£313**	**£389**
YAL Total as % of Azimuth	**68%**	**28%**	**28%**	**28%**	**28%**
Source: York Aviation and Azimuth Associates					

5.14 The differences between the two sets of estimates are marked. Our assumptions result in economic impacts being around a half to two thirds of those estimated by Azimuth initially. However, the gap widens over time as the impact of Azimuth's failure to allow for productivity growth and high multiplier assumptions feed through. In our view, the Azimuth estimates simply cannot be relied upon as a measure of the potential economic impacts of re-opening of Manston Airport. Not only are they infected by the errors in traffic forecasting, but the approach itself is highly flawed. A more realistic and robust assessment suggests that the local impacts within Kent, even on Azimuth's forecasts, would be substantially less than claimed and it is these lower order effects which would need to be balanced with the environmental and impacts in assessing the acceptability of the proposed development, including the loss of SHP's proposed mixed use development and the socio-economic benefits deriving therefrom.

A More Realistic View of the Socio-Economic Impacts of Manston

5.15 As we have described above, the socio-economic assessment undertaken by Azimuth was destined to fail before it started because of the failings in the traffic forecasts that feed the approach. We do not consider there is any realistic prospect of the Airport attaining 10,000 annual movements by cargo aircraft and the build up of traffic would be materially slower than Azimuth estimate.

5.16 We have, therefore, set out below an assessment of the socio-economic benefits that might be associated with re-opening Manston on the basis of York Aviation's most likely cargo forecast (that Manston is able to regain its previous market share) and our passenger forecasts, which are around half those assumed by Azimuth. Once again, we have used our socio-economic impact assumptions as described above. The resulting employment and GVA impacts are again set out compared to Azimuth's assessment of the economic impact of reopening Manston in **Tables 5.3** and **5.4**.

Table 5.3: Employment Impact of Manston Airport – YAL Forecasts Comparison

	Y2	Y5	Y10	Y15	Y20
Azimuth Impact Assumptions with Azimuth's freight + passenger forecast					
Direct	856	2,150	2,749	3,438	4,271
Indirect & Induced	1,798	4,515	5,773	7,220	8,970
Catalytic/Wider	0	8,601	10,996	13,753	17,085
Total	**2,654**	**15,266**	**19,518**	**24,411**	**30,326**
YAL Impact Assumptions with YAL's freight + passenger forecast					
Direct	216	391	409	442	486
Indirect & Induced	87	156	164	177	194
Catalytic/Wider	149	270	283	305	335
Total	**452**	**817**	**856**	**925**	**1,015**
YAL Total as % of Azimuth	**17%**	**5%**	**4%**	**4%**	**3%**
Source: York Aviation and Azimuth Associates					

Table 5.4: Gross Value Added Impact (£ million) – YAL Forecasts Comparison

	Y2	Y5	Y10	Y15	Y20
Azimuth Impact Assumptions with Azimuth's freight + passenger forecast					
Direct	£43	£108	£138	£173	£215
Indirect & Induced	£78	£195	£250	£312	£388
Catalytic/Wider	£0	£391	£499	£625	£776
Total	**£121**	**£694**	**£887**	**£1,110**	**£1,379**
YAL Impact Assumptions with YAL's freight + passenger forecast					
Direct	£13	£25	£29	£34	£42
Indirect & Induced	£5	£9	£11	£13	£15
Catalytic/Wider	£8	£15	£18	£21	£26
Total	**£26**	**£49**	**£57**	**£68**	**£83**
YAL Total as % of Azimuth	**21%**	**7%**	**6%**	**6%**	**6%**
Source: York Aviation and Azimuth Associates					

5.17 Unsurprisingly, the socio-economic impacts associated with the Airport are reduced even further on the basis of more realistic forecasts. The operation is simply of a much smaller scale. In Year 2, in generates 452 jobs, only 17% of the Azimuth estimate of 2,654. By Year 20, the differential is even larger, with the Azimuth estimates reaching over 30,000 jobs, but with our estimates at only just over 1,000. More likely, the Airport would cease operating again due to the inability to attain viable operations. In these circumstances, it becomes a moot point as there would be no jobs and economic impact over the medium to long term.

Conclusion

5.18 Once again, the evidence presented by Azimuth on behalf of RSP cannot be relied upon. It is infected with the flaws in the traffic forecasting methodology identified previously but the approach to identifying socio-economic impacts is, in itself, badly flawed. The socio-economic impacts are, as a result, massively overstated and, in any event, would not be realised if the operation of the Airport is not commercially and financially viable.

6 PEER REVIEW OF OTHER REPORTS

6.1 In this section, we set out a brief review of other reports produced on the potential for a re-opened Manston Airport.

Aviasolutions for Thanet

Commercial Viability of Manston Airport – September 2016

6.2 We note that this assessment was focussed on the likely viability of a re-opened Manston Airport. Hence the main focus was on scenarios for passenger growth as passenger operations make a significantly greater financial contribution to operating an airport given the ability to earn revenue from retail, catering and car parking as well as direct revenue from airport charges (landing, aircraft parking, passenger fees and any cargo handling fees). We note that Avia took a much more optimistic view than we do of the scope for passenger overspill from the main London airports to Manston but, to an extent, these scenarios were designed to assess whether re-opening Manston would be commercially viable rather than to assess a realistic level of demand.

6.3 Having assessed the historical performance of Manston, Avia assumed that it would be possible for the Airport to regain the broad level of cargo activity that is was handling before it closed. This is not dissimilar to our 'most likely' assumption. Significantly, Avia noted that:

"Our freight interviews indicated that the demand to use the airport for freight was very limited. This, in large parts, is due to two factors; the infrastructure investments that have already been made by the industry around Heathrow and Stansted, and the geographical location of the airport. Infrastructure, and the associated knowledge, skill and supporting industry at airports such as Heathrow and Stansted, as well as the major European hubs such as Frankfurt, and Paris, would be almost impossible for Manston to replicate. The geographic location of the airport, tucked into the corner of the UK, cannot compete with airports such as East Midlands for Integrator services that are sold as fast delivery, due to the increases in surface transportation times. The interviews did however indicate that charter services and ad-hoc freighter flights would certainly return, providing some revenue income for the airport"[65].

This accords with our view of the most likely prospects for Manston.

6.4 Overall, the Avia 2016 work concluded that Manston was not likely to be a commercially viable prospect if re-opened, certainly if it is assumed that another runway would be built at either Heathrow or Gatwick. We concur with this conclusion and, on the basis of our more realistic assessment of the level of passenger demand that the Airport might attract, commercial viability is even less likely to be attained.

[65] Aviasolutions, *Commercial Viability of Manston Airport*, September 2016, Section 8.3.

Local Plan Representations - Final Report – August 2017

6.5 This report largely deals with individual specific representations one at a time. Overall, Avia conclude that their *"opinion, based on updated market information since the publication of our previous study, is consistent with our earlier view that Manston Airport does not represent a financially viable investment opportunity under normal market conditions."*[66]

6.6 In relation to these representations, Avia state clearly that:

"The Local Plan Representations do not make a credible case, nor provide the evidence for AviaSolutions' to change its views on the financial viability of Manston Airport. We remain of the view that whilst Heathrow Airport continues to offer substantial freight capacity to a truly global network, and Stansted Airport utilises only around half of the statutory provision of air freighter movements, the London air freight market has capacity to grow without the re-introduction of capacity at Manston Airport. Freight Forwarders have invested heavily in infrastructure around these core airports, carriers have developed their networks as such, and without clear value drivers that support relocating services to Manston Airport, the case remains to be made that demand exists for a freight facility at Manston Airport. This view is reinforced by the empirical evidence of multiple failed attempts to develop profitable operations at the airport."[67]

6.7 Again, Avia's analysis concurs with our own in terms of the limited role that there would be for a re-opened Manston Airport given the evolution of the air freight market. We concur with Avia's analysis of the potential for other activities at Manston such as business aviation or aircraft dismantling and note that, in our experience, income generation from such activities would be low.

6.8 We note that, in this report, Avia correctly interpret our work for the FTA in terms of the potential for the equivalent of 80,000 air freighter movements to be accommodated away from the main London airports by 2050 in the event of no new runway being constructed. As Avia note, this demand is likely to be accommodated at a variety of other airports, including Manchester and East Midlands, with the former offering a substantial amount of bellyhold capacity by that date and the latter offering a dedicated freighter service. Displacement to regional airports is also a logical response given the amount of cargo from the regions which is currently trucked to the London airports. We have had no dialogue with Avia regarding the interpretation of our work but their interpretation of it confirms that Azimuth have simply misused headline figures from our work to support RSP's case without considering or understanding the broader meaning of our analysis in 2015 as Avia demonstrate.

[66] Aviasolutions, *Local Plan Representations - Final Report*, August 2017, Executive Summary.
[67] Ibid.

Review of Azimuth and Northpoint Forecasts for Manston – August 2017

6.9 In this report, Avia conclude that the Azimuth and Northpoint forecasts are *"highly ambitious"* and that *"the likelihood of these forecasts being realised is very low"*[68]. Avia do not, themselves present any updated forecasts of their own in this report. They make clear that neither report presents *"a credible case"* sufficient for Avia to change its view on the likelihood of viable commercial operations being attained at Manston Airport.

6.10 Avia conclude that:

"We remain of the view that whilst Heathrow Airport continues to offer substantial freight capacity to an extensive global network, and Stansted Airport offers capacity for air freighter movements, the London air freight market has capacity to grow without the re-introduction of capacity at Manston Airport. Freight Forwarders have invested heavily in infrastructure around the UK's core cargo airports and carriers have developed their networks as such. Without clear value drivers that support relocating services to Manston Airport, the case remains to be made that demand exists for a freight facility at Manston Airport.

Provision of capacity alone is no guarantee of financial success, a view reinforced by the empirical evidence of multiple failed attempts to develop profitable aviation operations at Manston Airport."[69]

This accords with our view.

6.11 Like ourselves, Avia point out[70] that provision of infrastructure is not of itself sufficient to ensure a financially viable airport at Manston and that this will depend on the demand that can be attracted. Avia conclude, like ourselves, that *"Azimuth's report does not provide sufficient evidence of demand at Manston Airport from air freight operators to support the required investment in facilities and profit generation potential to re-establish Manston Airport as a going concern."*[71] Avia, like ourselves, highlight that if there had been a market for Manston to accommodate any overflow from Heathrow, this would have been evident prior to the Airport's closure in 2014. Avia also conclude[72], in relation to the extensive interviews carried out by Azimuth, that they largely address the overall issues of airport capacity in the South East of England and do not effectively explain why Manston, at the tip of Kent, would be an attractive solution for the UK air freight sector.

6.12 Avia also note that the other activities that Manston might attract, as suggested by interviewees, such as maintenance, repair and overhaul, aircraft dismantling, a fixed based operator for business aviation and the establishment of an integrator base could have been attracted previously if there was demand at Manston but that such demand was not evident. We concur that the reports of interviews set out by Azimuth do not constitute real evidence of actual demand for such facilities or the likelihood of them locating at Manston.

[68] Aviasolutions, *Review of Azimuth and Northpoint Forecasts for Manston*, August 2017, Executive Summary
[69] Ibid.
[70] Ibid, page 9.
[71] Ibid.
[72] Ibid, page 11.

6.13 Like ourselves, Avia point out that Azimuth's freight forecasts would suggest that Manston would be a major presence in the UK air freight market from Year 2[73] and that by the end of the period would be on a par with the UK's main freight hub at East Midlands by 2039. They go on to note that the methodology adopted by Azimuth to forecast cargo movements could be acceptable, which we take to mean a 'bottom up' movement driven approach. However, they caution that the primary data used (from the interviews) *"has significant potential to exaggerate or overstate the market"*[74]. As Avia note, the aspirations of the interviewees, that as we have noted earlier were largely local interests in Kent, would need to be tempered by commercial realism and the risks attaching to the operations put forward. Avia conclude, in relation to Azimuth's freight forecasts, that *"the probability of such an outcome remains very low"*[75]. We concur.

6.14 In overall terms, Avia conclude that there is nothing in the Azimuth analysis which would give rise to them changing the conclusions set out in their earlier 2016 report.[76]

6.15 Avia then go on to consider the Northpoint report, discussed further below, which was prepared as a direct rebuttal of their 2016 report. In the first instance, they note that they do not accept that the benchmark airports[77] cited by Northpoint as comparators for what Manston could be are relevant:

There are clearly structural and geographical reasons as to why each of these airports is different to the proposal for Manston Airport. As such, suggesting these are comparable benchmarks is not realistic. In order for Manston Airport to acquire the status of these airports it would need to demonstrate key elements of development, namely; commitments from key express players (DHL / UPS / FedEx / Amazon / Alibaba); an ability to operate night operations with few regulatory restrictions; and geographical advantages from nearby cities, industrial parks, and population centres.

We agree. These benchmark airports serve different roles, principally based around their selection by large integrators/distributors as main distribution hubs for large urban conurbations. These are simply not comparable to Manston and it would be misleading to believe otherwise.

[73] Ibid, Section 2.3.2.
[74] Ibid, Section 2.3.3.
[75] Ibid.
[76] Ibid, page 15.
[77] Alliance Fort Worth in Texas, USA, Hamilton Airport in Ontario, Canada, Bergamo in Italy, Liege in Belgium and Leipzig in Germany.

6.16 In relation to air freight forecasts, Avia again note RSP's reliance on our work for the Freight Transport Association. Again, Avia correctly interpret this work as being based on the assumption that *"freight growth is bellyhold focussed"* going on to note that our *"report also questions Boeing and Airbus' forecast growth rates, which are utilised in the long term growth forecast by Dr Dixon."*[78] Avia go on to note Northpoint's use of the 55,000 air cargo movements figure from our earlier work for Transport for London (2013) and cite Northpoint's claim that we asserted that Manston was the only realistic opportunity to accommodate this level of freighter movements if they were displaced. As we have discussed at length in Section 2, this is simply a misapplication of our 2013 work. Unsurprisingly, Avia could not find these figures in the 2015 report for the FTA.

6.17 Avia also highlight Northpoint's misinterpretation of the interaction between bellyhold and pure freighter demand. We agree with their conclusions in this regard, which explain why the market for more pure freighter operations to/from the UK is limited:

"AviaSolutions' experience in the freight industry is that many bellyhold operators can, when supply exceeds demand, reduce rates to such a level as to cover the marginal cost of freight plus a margin. The business is often operated as an addition to the passenger service, and therefore its real marginal costs are low. It is simply impossible for a freighter operator to reduce its rate to match this marginal cost and operate at profitably [SIC]*. Therefore, freighters tend to operate on thick routes where the economies of scale of a freighter operation can be realised. These routes are also curtailed by a non-related market, that of passenger demand. Where large scale passenger demand exists e.g. UK to USA, a residual effect of this is large scale freight capacity, which is unmatched to demand. The reverse can be seen on routes to the East, where passenger demand is less, but freight demand, particularly inbound to the UK, is high. As such, many freighters operate on these routings."*[79]

We agree that the extensive passenger based route network and the availability of bellyhold capacity limits the need for a substantial pure freighter operation to/from the UK, in contrast with other parts of the world where passenger air route networks are less developed. This is why global data on the demand for air freighters is simply not relevant in the UK context.

Northpoint

6.18 We have largely addressed key points of Northpoint's rebuttal of the original Aviasolutions work above on the basis of Avia's most recent report. We highlight here a few other key observations on Northpoint's *"The Shortcomings of the Avia Solutions Report and an Overview of RSP's Proposals for Airport Operation at Manston"* prepared for RSP.

6.19 As with Azimuth's work, the key criticism of this work is that it is based on assertion rather than evidence or systematic analysis of the potential market for Manston. As noted above, benchmark airports in the middle of Continental Europe or adjacent to major conurbations in the US and Canada do not provide robust examples of how Manston might develop given its geographic position. Northpoint set out that:

[78] Ibid, page 17.
[79] Ibid, Section 3.1.6.

"RSP's plans are centred on a developing a strategically important air cargo operation focused dedicated freighters importing and exporting a range of perishable and high-value/time-critical goods to markets in London and across the wider south-east." [80]

And that these operations would be supplemented by a *"modest"* passenger offering, a variety of business and general aviation activities as well as maintenance, repair, overhaul and aircraft dismantling activities. However, the report does not, itself set out how the scale of such activity could be assessed and whether it would, in combination, secure a viable operation.

6.20 In terms of forecasting the volume of air freight that Manston might secure, Northpoint make an unsubstantiated leap from noting the reasons why Heathrow is dominant in the market to asserting that the key determinant for pure freighter operations is the infrastructure provided at an airport and supply driven factors, noting that it is important that these latter are *"transparent"*[81]. We have already noted the lack of transparency in relation to the air cargo forecasts produced by Azimuth upon which RSP rely. Nor are the projections set out in Northpoint's Appendix A any more transparent in terms of how the estimated tonnage to be accommodated by freighter movements at Manston has been derived.

6.21 Although lacking transparency, it would appear that Northpoint, like Azimuth, have relied on Boeing's global forecasts for freight revenue tonne kilometres as a basis for projecting UK air cargo tonnage[82]. For the reasons set out in Section 2, this is inappropriate and will lead to a material overstatement of the overall market.

6.22 Like Azimuth, Northpoint see cross channel movement of air cargo as an opportunity for pure freighter operations at Manston[83] rather than simply the natural economic response to shortage of bellyhold capacity at Heathrow. Northpoint then seek to rely on our assessment of displaced tonnage equivalent to 55,000 annual movements by air cargo aircraft in 2050 from our 2013 work for TfL as corroborating evidence of Manston's potential[84]. This is to misrepresent the conclusions from this work, which indicated clearly that, in practice, there was unlikely to be a problem even if Heathrow did not get a third runway, albeit that there might be some additional trucking costs to make use of bellyhold capacity in Europe. This would still be cheaper for shippers than the alternative use of pure freighter aircraft from Manston or elsewhere. Furthermore, in assessing the scope for airports to accommodate more freighter aircraft[85], we do not agree with their assessment in respect of Stansted for the foreseeable future and Northpoint appear to ignore the main pure freight hub at East Midlands.

[80] Northpoint, *The Shortcomings of the Avia Solutions Report and an Overview of RSP's Proposals for Airport Operation at Manston*, paragraph 1.3.
[81] Ibid, paragraph 2.4.
[82] Ibid, paragraph 2.18.
[83] Ibid, paragraph 2.21.
[84] Ibid, paragraph 2.24.
[85] Ibid, paragraph 2.30.

6.23 In dismissing the potential for these other, established airports, Northpoint seek to highlight the constraining effect of night movement restrictions on air cargo operations. By inference, then, Northpoint appear to assume that Manston will not suffer from such restrictions so making it more attractive. This appears to be corroborated at Appendix A[86] where it is claimed that the presence of a logistics centre at Manston without significant night movement restrictions would be one of the attractions and a factor in the forecasts being attainable. However, it is our understanding that night movements will at best be limited to 8 per night and could be limited further if the promises of no night movements are upheld.

6.24 In relation to the potential in the aircraft maintenance and dismantling/recycling market[87], we note that these are activities being 'chased' by many airports. There is no analysis of competition nor of the likelihood of Manston capturing any of these activities in Northpoint's report. In any event, the level of activity generated by such activities is unlikely to make the difference between the Airport being viable or not.

6.25 Overall, Northpoint present no real evidence in its Conclusions[88] to substantiate why the operation at Manston could be viable. Its forecasts of cargo movement and passenger demand are no more transparent nor based on market analysis than those set out by Azimuth and do not justify why the RSP application would meet the tests set out in Section 23 of the Planning Act 2008. In general, we agree with Avia's conclusions regarding the robustness of this report.

[86] Ibid, Appendix A, A.8.
[87] Ibid, Section 4.
[88] Ibid, Section 5.

7 CONCLUSIONS

7.1 In this report, we have examined the case for RSP's proposed development at Manston Airport. Our overall assessment is that RSP have failed to provide their own evidence of the capability of Manston Airport and the amount by which their proposals would increase that capability by (all we have are forecasts which have no credibility as explained in this report). This results in glairing omissions in RSP's consultation material. This failure means that, in our opinion, the requirements in section 23 of the Planning Act 2008 (as amended) have not been satisfied. In essence, we would have expected RSP to be able to show:

- the capability of Manston Airport of providing air cargo transport services;
- the amount by which RSP is proposing to increase that capability by and thus the "new" capability; and
- a credible forecast for why that 'new' capability is required.

None of this information is provided by RSP.

7.2 RSP's case is principally based on circumstantial evidence presented in the Volumes I to IV of *Manston – A Regional and National Asset* prepared by Azimuth Associates. Much of the material upon which Azimuth seek to rely as the basis for the case for Manston relates to the economic costs to the UK if additional passenger hub capacity is not provided in the South East of England by 2050. This is not relevant to the specific question as to whether there would be sufficient demand for pure freighter aircraft movements to be operated to/from Manston in the foreseeable future.

7.3 The analysis presented by Azimuth shows a lack of understanding of the economics of the air freight market. This leads to a misinterpretation of work by ourselves, upon which Azimuth seek to rely to support their case. Just because there could be excess freight demand in 2050 in the absence of further runway capacity at the UK's main hub, it does not follow that displaced bellyhold freight will seek a more expensive pure freighter service from a relatively nearby airport over the use of available bellyhold capacity from a more distant airport which can be provided at a lower cost to the shipper with only marginal penalty in terms of time. Our previous work simply cannot be relied on to support RSP's case.

7.4 Fundamentally, Manston's past operation was economically inefficient due to the inherent lack of viability. Hence, reopening the Airport, in the face of a limited market, has the potential to damage the productivity of the UK aviation sector overall, particularly, as we have demonstrated in our own assessment of cargo demand for Manston in Section 3 that there are more economically efficient alternatives available for any freight displaced due to specific capacity constraints at Heathrow both now and in the future.

7.5 Whilst there may be a role for Manston, on the margin, providing some niche specialist air freight operations, the market for such services is small and often ad hoc, which will impact on the prospects for a viable operation of the Airport.

7.6 Manston is too peripheral for integrator operations serving the UK. Integrators have a strong preference for locations more centrally located in the UK with good road access to all of the major markets. The availability of land for warehouses, for example as suggested in terms of the use of the 'Northern Grasslands' part of the overall airport site, is far less important than a location central to the market and the availability of good road access, neither of which are characteristics of Manston. This would apply equally to the suggestion that Amazon might locate there or that the Airport could become a base for drone operations. It is simply in the wrong place to serve the market being in the far south east at the end of a peninsular, away from the main centres of population and distribution in the UK.

7.7 In the absence of hard market evidence of the need for Manston Airport, Azimuth undertook an interview survey to supplement the need case and inform the forecasts. However, the list of interviews was small, with few national players interviewed compared to a large number of local companies with something of a vested interest in seeing Manston re-opened. Even so, if anything, the views of those interviewed by Azimuth suggest that there would, at best, be a limited role for Manston. The one airline interviewed made clear that *"success at Manston depended upon identifying a niche market and becoming known for excellence. In particular, suggestions included a perishables centre, handling of live animals, easy access for charter flights, and handling cargo that is not necessarily straightforward"*. The scale of this opportunity was never quantified by Azimuth. It is clear, however, that the realistic expectation for Manston is for a small niche operation rather than as a general 'overspill' airport for London.

7.8 The outputs from these interviews are then used by Azimuth as a basis for postulating a number of cargo aircraft movements that might operate at Manston. However, it is simply not possible to relate the proposed services to be operated with the responses by the interviewees. There is a complete absence of any explanation for or justification of the services postulated. At the very least, there is a lack of transparency in the approach that needs to be explained so that consultees can understand the basis of what is proposed and to ascertain whether there is a credible forecast for why an increase in Manston's capability is required.

7.9 In our view, the Azimuth forecasts simply lack credibility. To illustrate this lack of credibility of the forecasts, in Year 2 (the first operational year), a cargo throughput of nearly 100,000 tonnes is forecast by Azimuth. This would make Manston the 5th largest freight airport in the UK in its first year after re-opening (compared to 2016 actual throughput at the other airports). This would place it close to the scale of freight operations at Manchester Airport, which includes a substantial amount of bellyhold freight. It would make Manston the 3rd busiest airport in the UK in terms of tonnage carried on dedicated freighter aircraft. This is simply not a credible proposition. This lack of credibility is important in reaching any decision under Section 23 of the Planning Act 2008 (as amended).

7.10 We have updated and further developed our analysis of the UK air freight market from than previously undertaken for TfL and the FTA, and upon which RSP seek to rely as corroboration of their own cargo movement forecasts. When properly interpreted, our forecasts of air freight demand and capacity across the UK as a whole, taking the role of bellyhold fully into account, show that there is plenty of freighter capacity at Stansted and East Midlands to the extent that there is a need for more pure freighter capacity. Overall, we conclude from this analysis that there will be no shortage of freighter capacity in the UK before 2040 (RSP's forecast assessment year) and that overspill from other airports would not provide a rationale for re-opening Manston.

7.11 Our initial assessment of the passenger market is that the throughput might, at best, be around half of that projected by RSP and, hence, given the dependence on passenger related income for the financial viability of airport operations, this will impact substantially on the viability of the proposal. The other activities suggested by RSP, such as business aviation, maintenance, repair and overhaul, and aircraft dismantling are highly competitive markets and, to the extent that Manston might attract any such operations, this are unlikely to contribute substantially to the overall viability of the Airport.

7.12 The existing infrastructure at Manston Airport, if made good, is capable of handling 21,000 annual air cargo aircraft movements[89]. The actual usage of that capability would depend on the pattern of operation and how the infrastructure was used on a day by day basis. Our assessment, therefore, provides essential missing information from RSP's materials to date which is necessary for the purposes of Section 23 of the Planning Act 2008 (as amended), for assessment purposes under the Environmental Impact Assessment Regulations and for consultation purposes.

7.13 Without prejudice to our view that demand to use Manston is not likely to be anything like 17,171 cargo aircraft movements a year, we have considered that the land required to accommodate such a number of movements. Our assessment is that the land required would be substantially less than shown on the RSP Master Plan and that the proposed land take is excessive and without justification in terms of the compulsory acquisition of the land. Any development required to handle 17,171 annual movements by air cargo aircraft can all be accommodated to the south of the B2050 and, even allowing for passenger operations and other activities, would not require all of the airfield land to the south of the road. Obviously, on the basis of more realistic forecasts of future demand, the area required to support the ongoing operation of the Airport would be materially smaller.

7.14 We can see no justification for the inclusion of the 'Northern Grasslands' within the DCO on the basis of it being for associated development as there will be little or no requirement for the relocation of freight forwarding activity from adjacent to the UK's main cargo hub at Heathrow to Manston and any requirement to support Manston operations could be accommodated south of the B2050. The development on the 'Northern Grasslands' site appears to be speculative commercial development which, based on the precedent at East Midlands Airport – the UK's principal airport for pure freighter operations – would be expected to be largely for non-aviation related uses.

[89] Based on an 18-hour operational day. Should a night time noise policy be agreed with Thanet District Council pursuant to the existing planning agreement that enabled a longer operational day and/or a number of scheduled night movements, then the capability could, in theory, be higher than 21,000 annual cargo aircraft movements.

7.15 In terms of the socio-economic implications of the proposed development, Azimuth has shown a lack of understanding of how such impacts should properly be calculated. Leaving aside the use of inappropriate multipliers, the impacts have been assessed at a national scale and should have taken displacement of activity from other airports fully into account, reducing the impacts below those stated. Furthermore, the assessment should have considered the impact on alternative uses of the site, including SHP's proposed mixed use development and the socio-economic benefits deriving therefrom. We have set out a more realistic and robust assessment, which shows that the local impacts within Kent, even on Azimuth's forecasts would be substantially less than claimed and it is these lower order effects which would need to be balanced with the environmental and impacts in assessing the acceptability of the proposed development.

7.16 Unsurprisingly, the socio-economic impacts associated with the Airport are reduced even further on the basis of more realistic forecasts of likely usage if it re-opened. The operation is simply of a much smaller scale. In Year 2, in generates 452 jobs, only 17% of the Azimuth estimate of 2,654. By Year 20, the differential is even larger, with the Azimuth estimates reaching over 30,000 jobs, but with our estimates at only just over 1,000.

7.17 Once again, the evidence presented by Azimuth on behalf of RSP cannot be relied upon. It is infected with the flaws in the traffic forecasting methodology identified previously but the approach to identifying socio-economic impacts is, in itself, badly flawed. The socio-economic impacts are, as a result, massively overstated. In any event, these benefits would not be realised if the Airport ceases operation again due to it not being commercially viable.

7.18 As well as the Azimuth reports which form the basis of RSP's case, we have also reviewed a number of other reports on the potential for Manston. In overall terms, we agree with Aviasolutions for Thanet District Council that there is little realistic prospect of the re-opening of Manston Airport being a commercially viable proposition. We have reviewed their original report and the more recent reports and concur with their views on the overall structure of the UK air cargo market, noting that they, unlike Azimuth, have correctly understood the implications of our 2015 work for the FTA. We do not accept Northpoint's rebuttal of the Aviasolutions work. Like Azimuth, Northpoint's work is largely aspirational without any robust evidence or analysis of the market. Northpoint, too, misinterpret our previous work for the FTA and TfL.

7.19 **In overall terms, then, we do not consider that the case for the development of Manston Airport has been robustly substantiated. In any event, the capability of the existing infrastructure at the Airport, once made good in line with existing planning consents, is at least 21,000 annual air transport movements by air cargo aircraft. This means that, in practice, RSP are seeking permission to increase the number of cargo air transport movements that Manston Airport is capable of handling from 21,000 to at least 31,000 a year, well beyond the level assessed in the PEIR. Indeed, RSP's consultation material does not provide any detail as to what the increase in capability would be as a result of its proposals (i.e. the increase in capability as a result of its proposed alteration to Manston Airport). As a minimum, the increase in capability would be to 31,000 annual air transport movements by cargo aircraft, but in our view their proposals would result in a significantly higher 'new' capability which is not revealed or assessed by RSP.**

APPENDIX A

York Aviation

Transport for London

Note on Freight Connectivity

1. This note explains the approach taken to estimating the number of pure freighter air transport movements at the London airports in 2050 under three different scenarios of capacity growth:

   - ✈ Maximum use of existing capacity;
   - ✈ 2+2+2 – additional runways at each of Gatwick and Stansted;
   - ✈ New 4 runway hub.

2. The number of additional freighter movements required depends on the volume of passenger flights providing bellyhold capacity under the different scenarios. Under the constrained Max Use scenario, 48,000 pure freighter movements could be required, up from 14,000 at the London airports today. As there would be no spare runway capacity at the main London airports, this capacity would need to be provided from smaller airports serving the London area or from regional airports, with loss of economies of scale and producer efficiency, or through trucking to alternative hubs in Europe with implications for speed of transit.

3. With the provision of additional runways, increased bellyhold capacity reduces the number of additional freighter movements required to 28,000 and 21,000 respectively under the 2+2+2 and 4 runway hub scenarios. In both cases, we believe there will be sufficient runway capacity available to accommodate these freighter movements, albeit the 2+2+2 scenario will still result in dispersal of air freight capacity across a range of airports with the consequent loss of economies of scale and efficiency which could be attained at a single hub.

Freight Volumes

4. In 2012, the London airports handled 1,805,761 tonnes of freight[1]. Only 17% of this freight was flown on pure freighter aircraft. 83% was flown in the bellyhold of passenger aircraft. This may be as a result of limited capacity for freighter operations at Heathrow, where the bulk of air freight consolidation activity is concentrated. However, it may equally reflect the scale of bellyhold capacity offered at Heathrow, which reduces the need for pure freighter capacity to serve the London market as a whole.

5. Using data from ACI EUROPE[2], the volume of freight flown from the London airports is compared with that flown from other key European cities in Table 1.

[1] CAA Airport Statistics.
[2] The small discrepancy to CAA Statistics is noted but it is not considered to be material. The * against Hahn indicates estimated freight taken from airport's own website.

Table 1

	Tonnes
Heathrow	1,464,596
Gatwick	97,565
Stansted	214,904
Luton	29,637
London	**1,806,702**
Paris CDG	1,935,180
Paris Orly	94,700
Paris	**2,029,880**
Frankfurt	1,986,180
Frankfurt Hahn*	223,000
Frankfurt	**2,209,180**
Amsterdam	1,483,450
Milan MXP	405,858
Milan LIN	15,513
Milan BGY	116,733
Milan	**421,371**
Brussels	394,870
Luxembourg	614,906
Madrid	359,360
Zurich	281,683
Vienna	178,128
Dublin	102,717
Lisbon	90,264
Helsinki	176,987

6. There is no clear evidence that London is currently disadvantaged in terms of air freight capacity as the majority of freight is flown from Heathrow in the bellyhold of passenger aircraft rather than in pure freighter aircraft. To the extent that there is a need for freighter capacity, it can be provided at Stansted where there is ample spare capacity for additional movements and areas are set aside to increase aircraft parking and freight handling facilities if required. Although it is possible that limitations on bellyhold capacity at Heathrow may force greater trucking of freight to Europe, this is not evident from a comparison of overall air freight carried compared to other major European countries. In any event, the fact that freight is trucked rather than flown to Europe may have only a marginal impact on total transit times and, hence, limited economic detriment.

7. As well as the main city airports, there are a number of other specialist freight airports in both the UK and western Europe. Those handling over 75,000 tonnes in 2012 are shown in Table 2.

Table 2

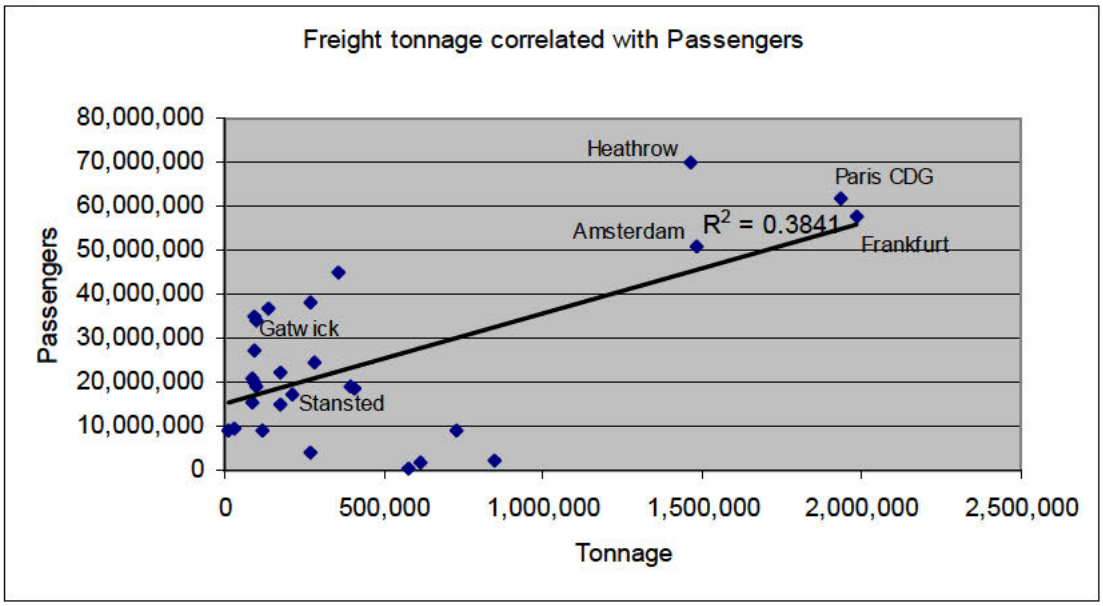
	Tonnes
Manchester	97,215
East Midlands	267,350
Cologne	730,040
Munich	272,203
Dusseldorf	86,729
Leipzig	846,086
Rome	135,777
Liege	577,226

8. Overall, on the basis of substantial air freight flows recorded by ACI EUROPE, the UK handled around 2.2 million tonnes of flown freight, France a similar amount, Italy around 600,000 tonnes and Spain around 500,000 tonnes. This does not suggest that the UK is disadvantaged in terms of freighter capacity overall currently.

9. However, the role of the low countries and Germany in acting as the major freight centre in western Europe is noticeable. In total, the main German freight airports handled almost 4.2 million tonnes of freight in 2012 which, when combined with the Netherlands and Benelux countries, amounted to 7.2 million tonnes of air freight flown. These airports have developed major and specialist air freight roles, with freight being trucked from all over Europe to feed these freight hubs. The integration of trucking with air freight should not be overlooked, even within the UK. In practice, it is unlikely that the UK could replicate this role, even with unconstrained airport capacity, due to its island location on the western edge of Europe.

10. There is some correlation between air freight flown to/from an airport and passengers carried as shown in Figure 1 below but this relates in large part to belly hold capacity. Figure 1 shows the correlation between flown freight and passengers across 29 European airports in 2012 as recorded by ACI EUROPE and which were either major airports in terms of freight handled or secondary airports serving the same cities.

Figure 1



Freighter Operations

11. The pattern of freighter operations is complex. As well as air freight carried in the bellyhold of passenger aircraft, there are freight charters for specialist and ad hoc consignments and large numbers of flights by the integrators (DHL, Fedex, UPS) etc. Obtaining detailed timetable information for freight operations is not possible as most do not publish timetables. Only scheduled freighter operations are shown in OAG and there is some uncertainty over whether this data is comprehensive.

12. Using OAG data for the week of 17th June 2013, the London airports have 49 scheduled freighter departures (98 freighter movements). According to CAA statistics for 2012, there were just over 14,000 freighter aircraft movements at the London airports or around 270 per week. This suggests that the OAG recorded movements account for only around 37% of total freighter aircraft movements to/from the London airports.

13. Similar data has been extracted for other western European airports. The table in Appendix A summarises the main pattern of freighter departures at airports with more than 30 freighter departures per week. This table also includes the principal UK freight airports and secondary airports serving major cities which in combination had more than 30 scheduled freighter departures per week in June 2013.

14. The number of scheduled freighter departures at the main freight airports is summarised in Table 3 along with the freight tonnage handled and passengers carried. It is evident that there is no clear correlation between freight tonnage handled and the weekly number of scheduled departures. This is illustrated in Figure 2. Amsterdam and Frankfurt have a high number of scheduled movements relative to the total volume of air freight whilst Paris and Heathrow handle similar volumes of air freight but with significantly fewer scheduled movements. We believe that the principal reason for these differences is in the relative importance of bellyhold freight but also the extent to which integrator activity is present; for example Fedex has its principal European hub in Paris and its movements are not recorded in OAG.

Figure 2

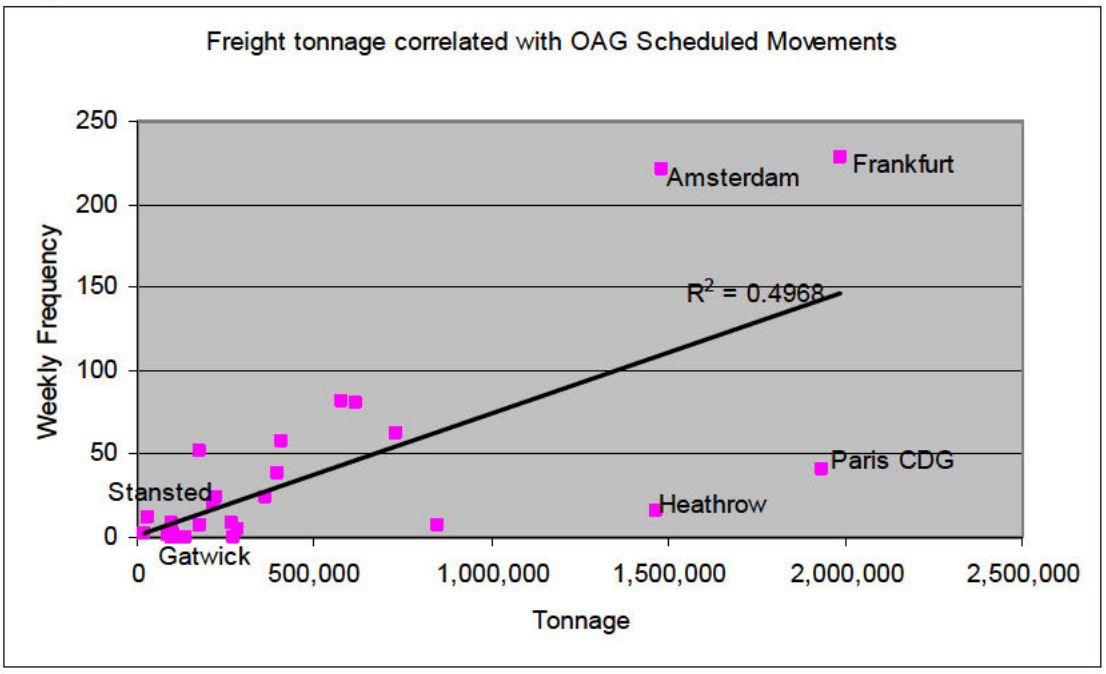


Table 3

	Freight tonnes	Pax	2013 wk freighters
Heathrow	1,464,596	70,038,804	16
Gatwick	97,565	34,222,405	0
Stansted	214,904	17,463,794	21
Luton	29,637	9,630,128	12
Manchester	97,215	19,841,747	8
East Midlands	267,350	4,086,849	9
Paris CDG	1,935,180	61,611,934	41
Paris Orly	94,700	27,232,263	0
Frankfurt	1,986,180	57,520,001	228
Frankfurt Hahn*	223,000		24
Cologne	730,040	9,280,070	62
Munich	272,203	38,360,604	0
Dusseldorf	86,729	20,833,246	1
Leipzig	846,086	2,279,221	7
Amsterdam	1,483,450	51,035,590	221
Milan MXP	405,858	18,522,760	58
Milan LIN	15,513	9,176,997	3
Milan BGY	116,733	8,888,017	0
Rome	135,777	36,980,161	0
Brussels	394,870	18,943,688	38
Liege	577,226	300,813	82
Luxembourg	614,906	1,912,806	81
Madrid	359,360	45,175,501	24
Barcelona	96,519	35,131,771	2
Zurich	281,683	24,751,649	5
Vienna	178,128	22,165,650	52
Dublin	102,717	19,096,572	1
Lisbon	90,264	15,301,236	1
Helsinki	176,987	14,859,981	7

*2011 data from airport website

15. Examination of the detailed information set out in Appendix A also shows how complex the pattern of freighter operations actually is. Few freighters, particularly those serving markets beyond Europe, operate on a strict point to point basis. Many transit more than one of the main European freight airports and a number of points overseas. Examination of arriving freighter patterns also reveals that the inbound pattern does not necessarily mirror the outbound pattern. Hence, there is already considerable flexibility to add new points if the market warrants.

16. Some freighters operate simple round trips. Others operate on a triangular basis, e.g. Lufthansa operating Frankfurt-Dallas-Detroit-Dallas-Manchester-Frankfurt. Inbound freight from the US to Manchester will be flown direct but outbound freight will transit Frankfurt. Other freighters operate effectively round the world journeys, e.g. British Airways operating Chicago-Houston-Stansted-Dammam-Dubai-Shanghai.

17. There is simply no way of knowing how much of the freight capacity on such aircraft is assigned to or used by freight originating in or destined for any airport, which may vary day by day. Freighter departures are, hence, not a reliable proxy for how much air freight capacity is available to uplift goods to and from any country or city.

18. Overall, our analysis of current freighter operations suggests that it is hard to distinguish a relationship between freighter movements and tonnage of freight carried.

19. Nor is it evident that the UK air freight capability is adversely affected today by shortage of capacity at Heathrow. There is ample spare airport capacity at Stansted for pure freight aircraft to the extent that there is demand for such aircraft operations given the amount of bellyhold capacity available at Heathrow. The volume of freight uplifted probably reasonably reflects the UK market, allowing for transit freight, and the limitations of the UK acting as a hub for freight trucked from continental Europe based on its geographic position. The principal issue is one of producer efficiency as a consequence of splitting locations, with the bulk of freight forwarding/consolidator activity being located around Heathrow and freight needing to be trucked to Stansted, Luton, or continental hubs. Whilst concentrating all freight activity at the main hub might make additional freighter flights viable by facilitating onward connections between bellyhold freight and pure freight operations, it is not clear the extent to which this would result in higher volumes of air freight being carried to/from the UK (as distinct from transit freight) as the UK does not appear to be significantly underperforming in aggregate terms compared to countries such as France, Spain or Italy.

Predicting Future Freighter Operations

20. In order to predict the volume of freighter activity in future at the London airports, we have developed a simple spreadsheet as set out in Table 4.

21. We have first projected forward total flown freight demand to and from London[3] on the assumption that it grows in line with overall passenger demand growth at 2.1% per annum in the absence of any specific forecasts of freight tonnage from DfT. We note that the DfT 2013 forecasts only give information for expected growth in pure freighter movements at 0.4% per annum but the basis of this is not clearly stated. Prima facie, this appears to understate unconstrained demand for pure freighter movements over the period to 2050.

22. In contrast, OE have identified that the expected average freight growth to and from Europe would be in the range 3.37% (Boeing) to 3.99% (Airbus). However, this would lead to substantially higher estimates of freight tonnage growth than passenger growth. Recent trends would suggest this to be unlikely so we have adopted the more cautious approach of using the same underlying growth as for passengers.

23. We have then estimated the bellyhold capacity offered at the London airports in 2050 based on the current average tonnage carried per international movement in 2012 at Heathrow, including both EU and non-EU flights, based on CAA Airport Statistics assuming average tonnes per movement increase by 0.5% per annum. This allows us to estimate the residual volume of freight under each scenario which would need to be accommodated on pure freighter aircraft.

[3] This is a simplifying assumption as it assumes the same proportion of UK regional air freight is trucked to London for uplift and the same proportion of freight is trucked to the continental freight hubs. On balance, this is likely to be a neutral assumption for the situation of unconstrained hub capacity as the proportion of regional freight flying direct from major regional airports might be expected to increase, particularly as more long haul flights develop, whilst the proportion being trucked from London to Europe might be expected to decrease with unrestricted capacity available.

Table 4

	2012	2050 Max Use	2050 2x2x2	2050 New Hub
Freighters 2012	14,123			
Freight in Freighters	310,022			
Total Freight	1,805,761	3,977,759	3,977,759	3,977,759
Tonnes per freighter	21.17	25.59	25.59	25.59
Tonnes per international bellyhold movement London	1.76	2.13	2.13	2.13
Forecast International Movements	834,725	1,051,034	1,298,981	1,375,452
Bellyhold Capacity	1,469,116	2,235,836	2,763,285	2,925,960
Freighter tonnage required		1,741,923	1,214,474	1,051,799
Freighter movement		68,077	47,463	41,106
Additional Freighters Required		53,954	33,340	26,983

24. We estimate that the number of freighters required to accommodate projected air freight demand would rise from 14,000 in 2012 to around 41,000 in the New Hub case, 47,000 in the 2+2+2 case and 68,000 in the Max Use case. In both the New Hub case and 2+2+2 case, we estimate there will be sufficient runway capacity available to accommodate these movements at 2050, at the New Hub and/or Stansted respectively. However, in the Max Use case, the London airports will, by definition, be full with passenger aircraft movements. Whilst we believe there will still be a small number of pure freighter operations accommodated in off-peak periods (as today at Heathrow), the number of freighter operations will be constrained.

25. It is reasonable to assume that around 14,000 freighters a year could still be accommodated in the vicinity of London by using capacity at airports such as Manston, which already handles some long haul freighters. However, capacity equivalent to an additional 54,000 freighter movements per year could be required to ensure demand is met, although this could be mitigated to an extent if the freighter capacity was prioritised for freight to and from the UK with less transit freight.

26. A key question is the extent to which such freighter capacity would be provided at airports such as East Midlands, Manchester and Birmingham. This could serve to reduce trucking movements from the regions to London, as take place today, with environmental benefits but it would reduce producer efficiency through split operations. In the absence of detailed data regarding freight trucking movements today, it is difficult to determine whether this would have positive or negative impacts overall..

27. In terms of the specific destinations of future freighter movements, our analysis of the existing patterns of service reveals the difficulty of defining market demand and aircraft routings. We do not believe it is sensible to attempt to determine the future geographic split by destination in either the constrained or unconstrained cases as a single freighter may serve a variety or markets as necessary. In the constrained case, it is likely that more freight would be trucked to the continental hubs as well as to UK regional points, which would potential add to shipment costs.

Conclusions

28. Overall, we have made a best estimate of the number of freighter aircraft movements likely to be using the London airports (or near London airports) under each of the capacity scenarios. These are as follows:

- ✈ Maximum use of existing capacity 14,000
- ✈ 2+2+2 – additional runways at each of Gatwick and Stansted 33,000
- ✈ New 4 runway hub 27,000

29. In the latter two cases, our assessment is that, across both bellyhold capacity and pure freighter activity, there would be sufficient capacity to meet expected demand for air freight to and from the UK. Our estimates for additional freighter capacity are substantially above those made by DfT. Hence, to the extent that our baseline is understated (although we do not believe this to be substantial) due to the current patterns of trucking freight to the continent, this will offset any overstatement as a consequence of assuming higher growth than DfT and by reductions in the amount of trucking to London from regional airports due to expected growth in their own freighter operations over the period to 2050.

30. The key difference between these two scenarios would be in terms of the efficiencies and economies of scale gained by the industry arising from the concentration of freight activity at a single hub. In both cases, the overall volume of air freight to and from the UK is expected to be broadly the same, although the actual freight carried including transit freight would be higher in the hub case. However, under the new hub scenario, savings from greater efficiency may be passed onto users, so reducing shipping costs and facilitating trade leading to higher freight volumes, but it is beyond the scope of the current exercise to assess this.

31. In the constrained, max use, case, there would be severe limitations of pure freighter movements at the London airports, which could amount to around 26% of the required air freight capacity to/from London. The extent to which this would act as a limitation on overall air freight volumes would depend on the extent to which the freight is still carried from regional airports or by truck. Clearly this would impact on the cost/efficiency of shipment, which in turn could impact on freight volumes carried. Again, it is outside the scope of the current exercise to assess these effects.

32. Overall, in assessing the economic value for air freight between the scenarios, the main difference is likely to lie in producer costs passed through to users and the impact that would have on business costs and hence output/freight generated. It would not be safe to assume that the reduction in cargo ATMs at the London airports necessarily translates to lost shipment value in its entirety.

23 May 2013

Appendix A

				Total Airport	Total City	Total Country
Heathrow	Amman	1				
	Amsterdam	1				
	Amsterdam	1	onwards to Sharjah and Singapore			
	Brussels	1				
	Copenhagen	1				
	Copenhagen	1	onwards to Sharjah and Singapore			
	Dubai	1				
	Frankfurt	1				
	Leipzig	1				
	Lisbon	1				
	Milan	1				
	Milan	2	onwards to Hong Kong			
	Paris	1	onwards to Delhi and Hong Kong			
	Seoul	2		16	49	71
Stansted	Amsterdam	1	originates in Bogota, Puerto Rico			
	Amsterdam	2	originates in Miami, Buenos Aires, Bogota and Puerto Rico			
	Cologne	1	onwards to Madrid and Johnannesburg			
	Cologne	1	onwards to Tbilisi			
	Cologne	1	onwards to Tbilisi and Delhi			
	Dammam	1	originates in Chicago and Houston, onwards to Dubai and Shanghai			
	Dubai	1	onwards to Hong Kong			
	Frankfurt	1	originates in Chicago and Atlanta, onwards to Shanghai			
	Frankfurt	2	onwards to			
	Frankfurt	1	Chicago			
	Frankfurt	1	onwards to Hong Kong			
	Frankfurt	2	originates in Seoul and Moscow			
	Frankfurt	1	originates in Atlanta, onwards to Delhi and Hong Kong			

	Frankfurt	2	originates in Moscow, onwards to Seoul			
	Luxembourg	2	originates in Hanoi and Hong Kong			
	Zaragoza	1	onwards to Bahrain and Hong Kong	21	49	71
London Luton	Frankfurt	3				
	Istanbul	1				
	Istanbul	2	originates in Paris			
	Istanbul	2	originates in Cologne			
	Milan	4		12	49	71
Manchester	Amsterdam	1	onwards to Dubai and Hong Kong			
	Brussels	1	onwards to Dubai and Hong Kong			
	Dubai	1	originates in Amsterdam, onwards to Hong Kong			
	Frankfurt	2	originates in Detroit and Dallas			
	Frankfurt	1	onwards to Dubai and Hong Kong			
	Frankfurt	1	originates in Toronto and Houston			
	Milan	1	onwards to Hong Kong	8	8	71
East Midlands	Frankfurt	1				
	Keflavik	2	originates in Liege			
	Keflavik	2				
	Liege	2	originates in Keflavik			
	Paris	1		8	8	71
Prestwick	Los Angeles	1	originates in Luxembourg, onwards to Seattle			
	Luxembourg	1	originates in New York and Houston			
	Luxembourg	1	orginates in Los Angeles and Seattle			
	Paris	2	originates in Chicago			
	Seattle	1	orginates in Luxembourg, onwards to Calgary	6	6	71
Amsterdam	Abu Dhabi	4				
	Abu Dhabi	1	onwards to Taipei			
	Almaty	2	onwards to Hong Kong, Delhi, Sharjah			
	Bahrain	1	onwards to Mongolia, Hong Kong, Chennai			
	Baku	2	onwards to Kuala Lumpur			

	Bangalore	1	onwards to Singapore
	Beijing	7	
	Beirut	2	
	Budapest	2	onwards to Moscow
	Chengdu	4	
	Chennai	1	originates Nairobi, onwards to Singapore
	Chennai	1	originates in Chicago and Atlanta, onwards to Singapore
	Chicago	2	originates in Doha
	Chicago	7	
	Chongqing	2	onwards to Shanghai
	Copenhagen	1	originates in Nairobi, onwards to Sharjah and Singapore
	Copenhagen	2	onwards to Sharjah and Singapore
	Curitiba (Br)	1	onwards to Sao Paulo
	Dacca	1	originates in Nairobi, onwards to Singapore
	Doha	1	originates in Chicago
	Doha	3	
	Dubai	2	
	Dubai	1	originates in Eldoret and Nairobi
	Dubai	1	originates in Nairobi
	Dubain	1	originates in Manchester, onwards to Hong Kong
	Entebbe	1	onwards to Nairobi
	Frankfurt	1	originates in Hong Kong
	Frankfurt	1	onwards to Mumbai and Hong Kong
	Gothenburg	3	onwards to Dubai
	Guangzhou	5	
	Harare	3	onwards to Nairobi
	Heathroiw	1	
	Hong Kong	7	
	Houston	7	

	Jeddah	2	
	Johannesburg	1	onwards to Dar-Es-Salaam and Nairobi
	Khartoum	2	onwards to Nairobi
	Kigali	1	onwards to Nairobi
	Kuala Lumpur	1	
	Los Angeles	4	
	Luxembourg	1	originates in Libreville, Brazzaville, Nairobi
	Manchester	1	onwards to Dubai and Hong Kong
	Mexico City	7	
	Miami	2	onwards to Buenos Aires, Bogota, Puerto Rico and Stansted
	Miami	1	onwards to Buenos Aires, Quito and Guayaquil
	Miami	2	onwards to Santiago, Quito, Bogota and Puerto Rico
	Miami	2	onwards to Santiago, Quitoand Guayaquil
	Milan	3	originates in Tokyo
	Milan	2	onwards to Moscow
	Milan	4	onwards to Tokyo
	Mongolia	2	onwards to Hong Kong and Chennai
	Moscow	2	
	Moscow	2	onwards to Shanghai
	Nairobi	1	
	New York	3	orginates in Bahrain
	New York	1	originates in Bahrain
	New York	7	
	Paris	1	onwards to Mumbai and Hong Kong
	Puerto Rico	1	onwards to Bogota
	Puerto Rico	2	onwards to Quito
	Riyadh	1	
	Riyadh	2	onwards to Sharjah, Singapore and Kuala Lumpur

	Santiago	1				
	Sao Paulo	2	onwards to Buenos Aires and Santiago			
	Sao Paulo	1	onwards to Curitiba and Santiago			
	Seattle	1				
	Seoul	7				
	Shanghai	21				
	Sharjah	1	originates in Heathrow, onwards to Singapore			
	Sharjah	2	onwards to Guangzhou			
	Sharjah	1	onwards to Muscat and Hong Kong			
	Stockholm	2	originates in Seoul			
	Stockholm	4	onwards to Seoul			
	Taipei	1				
	Tel Aviv	1				
	Tenerife	1	onwards to Sao Paulo, Quito and Bogota			
	Tenerife	3	onwards to Sao Paulo, Quito and Guayaquil			
	Tianjin	15	onwards to Shanghai			
	Tokyo	1	originates in Frankfurt Hahn			
	Tokyo	5				
	Toronto	4				
	Tripoli	1				
	Vienna	3	onwards to Shanghai	221	221	221
Brussels	Amman	1	onwards to Jeddah			
	Chennai	1	originates in Los Angeles and Dallas, onwards to Singapore			
	Dammam	1				
	Dubai	3	originates in New York			
	Dubai	1	originates in Frankfurt, onwards to Hong Kong			
	Dubai	1	originates in Manchester, onwards to Hong Kong			
	Heathrow	1				
	Istanbul	1	originates in Jeddah			
	Kolkata	1	originates in Los Angeles, onwards to Singapore			
	Milan	2	originates in Riyadh			

	Milan	1	originates in Jeddah			
	Mumbai	1	orginates in Los Angeles and Chicago, onwards to Singapore			
	New Guinea	1	onwards to Seoul			
	New York	1	originates in Jeddah			
	New York	1	originates in Jeddah, onwards to Houston			
	New York	6	originates in Dubai			
	Riyadh	1				
	Riyadh	1	onwards to Jeddah			
	Seoul	1	orginates in New York			
	Seoul	2	originates in New York			
	Sharjah	2	originates in Dallas, onwards to Singapore			
	Sharjah	1	originates in Chicago and Dallas, onwards to Singapore			
	Taipei	1				
	Tianjin	1	onwards to Seoul			
	Vienna	2	originates in Riyadh	36	36	118
Liege	Accra	2	onwards to Lagos and Addis Ababa			
	Addis Ababa	5				
	Bahrain	11	originates in New York			
	Bucharest	1	onwards to Tel Aviv			
	Dubai	12	onwards to Hong Kong			
	East Midlands	4	onwards to Keflavik			
	Entebbe	1				
	Istanbul	5				
	Keflavik	4				
	Keflavik	1	onwards to New York			
	Lagos	2	onwards to Addis Ababa			
	Lagos	1	onwards to Ougadougou			
	Lagos	1	onwards to Port Harcourt			

	Lome	2	onwards to Congo, Addis Ababa			
	Luxembourg	1	originates in Tel Aviv			
	New York	1	originates in Tel Aviv			
	New York	2				
	New York	5				
	Ougadougou	1	onwards to Congo			
	Shanghai	1				
	Shanghai	2				
	Siauliai Lithuania	1				
	Singapore	1				
	Tel Aviv	3	originates in New York			
	Tel Aviv	1	originates in Chicago			
	Tel Aviv	6				
	Vienna	5		82	82	118
Luxembourg	Abidjan	1	onwards to Accra			
	Abu Dhabi	1	onwards to Taipei			
	Almaty	1	onwards to Hong Kong			
	Atlanta	1	onwards to Atlanta			
	Atlanta	1	Chicago			
	Atlanta	2	originates in Doha, onwards to Houston			
	Baku	1	onwards to Almaty and Shanghai			
	Baku	1	onwards to Hong Kong			
	Baku	4	onwards to Shanghai			
	Baku	1	onwards to Singapore and Hong Kong			
	Baku	1	onwards to Singapore and Kuala Lumpur			
	Baku	2	onwards to Taipei and Bangkok			
	Beijing	1	onwards to Xiamen			
	Beirut	1	onwards to Amman and Hong Kong			

			onwards to Amman and
	Beirut	1	Istanbul
	Chicago	1	onwards to Atlanta
	Chicago	1	onwards to Los Angeles
	Congo	1	originates in Liege, onwards to Addis Ababa
	Dallas	1	
	Dammam	1	onwards to Saigon and Hong Kong
	Doha	1	onwards to Hanoi and Hong Kong
	Doha	1	onwards to Singapore and Kuala Lumpur
	Doha	1	originates in Houston
	Doha	1	originates in Chicago
	Dubai	1	onwards to Bangkok and Hong Kong
	Dubai	1	onwards to Hong Kong
	Frankfurt Hahn	3	originates in Shanghai
	Indianapolis	1	onwards to Chicago
	Indianapolis	1	onwards to Los Angeles, Calgary
	Johannesburg	3	
	Komatsu	2	onwards to Seoul
	Kuwait	2	onwards to Hanoi and Hong Kong
	Lagos	1	onwards to Port Harcourt and Kinshasa
	Libreville	1	onwards to Brazzaville
	Libreville	1	onwards to Kinshasa
	Los Angeles	1	onwards to Seattle
	Los Angeles	1	
	Mexico City	1	
	Mexico City	1	onwards to Guadalajara
	Miami	2	onwards to Houston
	Milan	1	onwards to New York and Chicago
	Milan	4	

	Ndjamena	1	onwards to Lagos			
	New York	1	originates in Tel Aviv			
	New York	1	orginates in Tel Aviv, onwards to Chicago			
	New York	1	onwards to Atlanta			
	New York	1	onwards to Houston			
	New York	1	onwards to Mexico City and Guadalajara			
	Prague	2	originates in Chengdu			
	Prestwick	1	onwards to Los Angeles and Seattle			
	Prestwick	1	onwards to Seattle and Calgary			
	Riyadh	1	onwards to Dammam and Hong Kong			
	Sao Paulo	1				
	Sao Paulo	2	onwards to Curitiba			
	Sao Paulo	1	onwards to Manaus			
	Seoul	1				
	Sharjah	1	onwards to Karachi			
	Singapore	1	onwards to Kuala Lumpur			
	Taipei	2				
	Tbilisi	2	onwards to Baku and Shanghai			
	Yerevan	1		80	80	80
Paris	Beirut	1				
	Cairo	1	onwards to Reunion			
	Chicago	5				
	Cologne	2	onwards to Istanbul			
	Delhi	1	originates in Heathrow, onwards to Hong Kong			
	Djibouti	1	onwards to Reunion			
	Hannover	4				

	Heathrow	1				
	Istanbul	1				
	London Luton	2	onwards to Istanbul			
	Mexico City	6				
	Milan	1	onwards to Delhi and Hong Kong			
	Mumbai	2	onwards to Hong Kong			
	Mumbai	1	originates in Amsterdam, onwards to Hong Kong			
	New York	1	onwards to Chicago			
	Niamey	1	onwards to Ouagadougou and Bamako			
	Njamena	1	onwards to Bangui, Brazzavile and Port Harcourt			
	Porto	1	onwards to Mexico City			
	Seoul	2				
	Shanghai	2	originates in Copenhagen			
	Shanghai	2				
	Tokyo	2		41	41	41
Cologne	Basle	4				
	Berlin	5				
	Bucharest	4				
	Bucharest	2				
	Istanbul	2	originates in Paris			
	Istanbul	2				
	Katowice	4				
	Keflavik	5				
	Ljubljana	4				
	Ljubljana	1	onwards to Zagreb			
	London Luton	2	originates in Istanbul			
	London Luton	2	onwards to Istanbul			
	Madrid	1	originates in Stansted			
	Prague	5				
	Sofia	1				
	Tblisi	1	originates in Stansted			

	Tblisi	1	originates in Stansted, onwards to Delhi			
	Tel Aviv	12				
	Zagreb	4		62	62	304
Frankfurt Hahn	Almaty	1	originates in New York			
	Almaty	6	originates in New York, onwards to Shanghai			
	Amsterdam	1	onwards to Tokyo			
	Amsterdam	1	originates in Tokyo			
	Atyrau	1	onwards to Almaty			
	Baku	3				
	Beijing	3				
	Chatearoux	1	onwards to Kabul			
	Doha	2				
	Johannesburg	2				
	Milan	1	onwards to Tokyo			
	Toronto	1	onwards to Mexico City			
	Yerevan	1		24	242	304
Frankfurt	Abu Dhabi	5				
	Almaty	1				
	Almaty	1	onwards to Guangzhou			
	Almaty	1	onwards to Hong Kong			
	Almaty	2	onwards to Shanghai			
	Amman	2				
	Amsterdam	1	originates in Hong Kong and Chennai			
	Atlanta	4				
	Baku	1	onwards to Bangkok and Kuala Lumpur			
	Baku	2	onwards to Kuala Lumpur			
	Bangalore	3	onwards to Chennai			
	Bangalore	1	onwards to Hyderabad and Guangzhou			
	Bangkok	2				
	Beijing	3	onwards to Shanghai			
	Brussels	1	onwards to Dubai and Hong Kong			

	Cairo		3		
	Chicago		7		
	Chicago		1	onwards to Los Angeles	
	Chicago		4	onwards to Mexico City	
	Chicago		2	onwards to Mexico City and Guadaljara	
	Chicago		1	originates in Stansted	
	Coventry		10		
	Dakar		3	originates in Dubai, onwards to Sao Paulo	
	Dammam		2	onwards to Sharjah and Hong Kong	
	Delhi		4	onwards to Singapore and Bangkok	
	Delhi		1	originates in Atlanta and Stansted, onwards to Hong Kong	
	Detroit		2		
	Doha		1		
	Dubai		1	originates in Lagos and Accra	
	Dubai		4	originates in Sao Paulo and Dakar	
	Dubai		3		
	Dubai		1	originates in Dusseldorf	
	Dubai		1	originates in Manchester, onwards to Hong Kong	
	East Midlands		1		
	Heathrow		1		
	Helsinki		1		
	Hong Kong		3		
	Hong Kong		1	originates in Stansted	
	Istanbul		6		
	Istanbul		1	onwards to Tel Aviv	
	Jeddah		1	onwards to Sharjah, Hyderabad and Guangzhou	
	Kabul		1		
	Krasnojarsk		1		
	Krasnojarsk		6	onwards to Beijing and Seoul	
	Krasnojarsk		1	onwards to Seoul and Shanghai	
	Krasnojarsk	y		onwards to Shanghai	

	Krasnojarsk	7	onwards to Tokyo and Osaka
	London Luton	3	
	Madrid	4	
	Malta	1	
	Milan	1	originates in Hong Kong and Dubai
	Milan	1	onwards to Dubai and Hong Kong
	Milan	1	onwards to Hong Kong
	Moscow	10	
	Moscow	2	onwards to Tokyo
	Moscow	1	onwards to Tokyo and Seoul
	Mumbai	1	
	Mumbai	1	onwards to Chennai
	Mumbai	3	onwards to Hong Kong
	Mumbai	1	onwards to Hyderabad
	Mumbai	1	originates in Amsterdam, onwards to Hong Kong
	Nairobi	5	onwards to Johannesburg
	New York	5	
	Riyadh	3	
	Riyadh	1	onwards to Dammam
	Riyadh	1	onwards to Sharjah and Hong Kong
	Sao Paulo	3	
	Sao Paulo	1	onwards to Curitiba
	Sao Paulo	1	onwards to Curitiba, Quito and Puerto Rico
	Sao Paulo	2	onwards to Manaus, Quito and Puerto Rico
	Sao Paulo	2	onwards to Montevideo and Buenos Aires
	Seoul	1	originates in Vienna
	Seoul	2	originates in St Petersburg
	Seoul	12	

	Seoul	2	originates in Atlanta and Stansted			
	Seoul	1	originates in Moscow and Vienna			
	Shanghai	1	originates in Chicago, Atlanta and Stansted			
	Shanghai	18				
	Sharjah	2	onwards to Kolkata and Hong Kong			
	Stockholm	1	onwards to Dubai and Hong Kong			
	Stockholm	4	onwards to Seoul			
	Taipei	3				
	Tel Aviv	3	onwards to Istanbul			
	Toronto	1	onwards to Houston	218	242	304
Milan	Abu Dhabi	2				
	Almaty	1	onwards to Osaka and Hong Kong			
	Baku	1				
	Dammam	1				
	Delhi	1	originates in Paris, onwards to Hong Kong			
	Doha	2				
	Dubai	2	onwards toHong Kong			
	Dubai	1	originates in Frankfurt, onwards to Hong Kong			
	Heathrow	5				
	Hong Kong	1	originates in Frankfurt			
	Hong Kong	2	originates in Heathrow			
	Hong Kong	1	originates in Manchester			
	Istanbul	1				
	Istanbul	2	originates in Lagos			
	Istanbul	1	orginates in Tirana			
	Jeddah	1				
	Luxembourg	1	originates in Chicago and Los Angeles			
	Luxembourg	4				
	Luxembourg	1	orginates in Chicago and New York			
	Madrid	1				
	Moscow	2	originates in Amsterdam			

	New Guinea	1	onwards to Seoul			
	Osaka	1	onwards to Hong Kong			
	Riyadh	1				
	Sao Paulo	1				
	Seoul	1	originates in Uzbekistan			
	Seoul	9				
	Shanghai	4				
	Tokyo	4	originates in Amsterdam			
	Tokyo	1	originates in Frankfurt Hahn	57	57	57
Vienna	Amman	1				
	Copenhagen	2	orginates Seoul			
	Frankfurt	1	orginates Seoul			
	Istanbul	2				
	Kiev	5				
	Liege	5				
	Milan	3	orginates Seoul			
	Moscow	2	orginates Seoul and onwards to Gothenburg or Frankfurt			
	Oslo	3	orginates Seoul			
	Oslo	6				
	Riyadh	2				
	Seoul	1	via Frankfurt			
	Seoul	3	via Gothenburg			
	Seoul	1	via Tel Aviv			
	Seoul	4	via Copenhagen			
	Seoul	1	originates Moscow			
	Shanghai	3	originates Amsterdam			
	St Petersburg	1	orginates Seoul and onwards to Gothenburg			
	Tel Aviv	1	orginates Seoul			
	Timosoara	5		52	52	52