

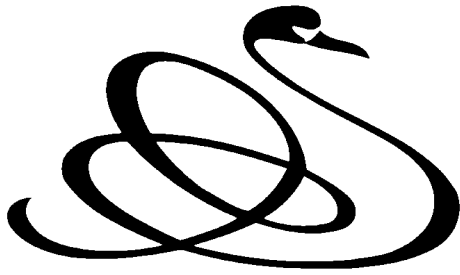
York Aviation

MANSTON AIRPORT

ECONOMIC IMPACT OF NIGHT FLYING POLICY

Final Report

August 2011



York Aviation

Originated by: Richard Connelly

Dated: 1st August 2011

Reviewed by: Louise Congdon

Dated: 1st August 2011

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1 INTRODUCTION

Background

- 1.1 Manston Airport (MSE) has recently submitted a Night Flying Policy to Thanet District Council under the obligations set out in a Section 106 agreement signed with the Local Authority in 2000¹. We understand that this Section 106 was not a result of any planning application or change in planning status at the Airport, but was essentially an agreement for best practice in respect of its operations, particularly in relation to noise.
- 1.2 The commitment for the Night Flying Policy was that such a scheme would be put in place at least 6 months before the commencement of regular night time services. There was no indication within the Section 106 that night flying would not be permitted by Thanet District Council, and indeed we understand that there were no restrictions on such operations prior to the signing of the Agreement. However, since the signing of the Agreement, it has not been possible to schedule regular operations within the Night Time Period, although ad hoc operations have been permitted.
- 1.3 The night time period was defined as being from 23.00-07.00 (11pm through to 7am the following morning). The plan proposed by the Airport would allow scheduled passenger and freight services in the night time period, with no limit on total movements, but instead with the limit based on a total permitted Noise Quota Count, in which operating aircraft are assigned a Quota Count value and these are totalled over the year with an upper limit set.
- 1.4 Following the submission of the proposed Night Flying Policy and following consultations and a review by Bureau Veritas, Thanet District Council requested further information on the economic benefits that would be derived from the plan as proposed.

¹ 26th September 2000, Section 106 Agreement between Thanet District Council and Kent International Airport Ltd.

York Aviation Assessment

- 1.5 York Aviation LLP (YAL) was commissioned by Manston Airport (MSE) to provide an overview of the likely economic benefits which could be derived by Thanet District and the wider East Kent region by allowing the Airport to implement its proposed Night Flying Policy. YAL is a leading European consultancy providing advice in relation to the Economic Impact of Aviation.
- 1.6 Importantly, the Airport has identified that the night noise policy needs to be put in place at this time as attracting additional regular air freight services, some of which will need to operate at night, is critical to improving the financial viability of the Airport. Without such operations, and the revenue which they bring, there is a risk that the Airport will not be in a position to sustain its operations and attract additional passenger services over the medium to long term. The growth in forecast passenger numbers over time will also help the viability of the Airport, but whilst such services may reduce the dependency on airfreight overall, the Airport is unlikely to be financially viable without the forecast mix of both traffic types as set out in the Airport's Master Plan.
- 1.7 We have worked, in the first instance from the forecasts contained in the Master Plan of November 2009, and adjusted these to reflect market specifics.
- 1.8 Within this report, we identify our view of the potential benefits of permitting the proposals as outlined by MSE. The assessment compares the status-quo situation with no permitted regular night time flights with the level of flying proposed by the Airport. We have not directly attempted to consider the impacts of a greater or lesser level of night time activity, although prima facie these would be broadly pro rata.
- 1.9 However, we have considered the nature of the traffic overall in order to establish what elements of the projected traffic growth may be at risk if more structured night operations are not permitted. In undertaking this review, we have verified the level of operations shown within the noise assessment included within the Policy submitted by MSE as consistent with the levels necessary to achieve the Airport's Master Plan forecasts.

1.10 This report is split into three sections to review the Night Flying Policy as follows:

- **Section 2** reviews the likely nature of the forecasts for passengers and freight and establishes what may be at risk if no night flying is permitted;
- **Section 3** considers the economic impact of the Airport at present and compares the potential economic impacts under two scenarios with and without agreement to regular night operations in the future; and
- **Section 4** is our independent review of the business case for the introduction of the Night Flying Policy in terms of the implications for the viability of the Airport and its role as a catalyst for economic growth within the area.

2 AIR TRAFFIC FORECASTS

2.1 The Airport produced both Passenger and Freight forecasts within their November 2009 Master Plan, these are summarised in **Table 2.1**.

Table 2.1: Master Plan Forecast Passenger and Freight Growth		
Year	Passengers	Freight Tonnage
2010	<50,000	31,600
2011	50,000-100,000	45,200
2012	206,000	57,300
2013	295,000	62,500
2014	527,000	107,000
2015	1,268,000	138,400
2018	2,286,000	167,500

Source: Manston Master Plan, November 2009

2.2 Despite the economic downturn which led to overall reductions in demand for air travel in the UK, MSE handled close to 26,000 passengers in 2010, up from approximately 5,500 passengers in 2009. This was in line with the Master Plan and passenger numbers will increase again in 2011, which will be the first complete year of scheduled services by Flybe.

2.3 Freight tonnage for 2010 was slightly down on the figure handled in 2009 and therefore slightly below the Master Plan forecast for the year, although this must also be considered against the backdrop of weakened demand for air freight services resulting from the economic downturn. Growth is now resuming in the air freight market globally.

2.4 We have not attempted to produce new forecasts for this study, but have instead relied upon those within the Master Plan. We have, however, reviewed the likely traffic mix for passenger and freight services in order to understand the possible impact of restricted night flying activities; these are considered in detail below.

- 2.5 We have chosen to test the impact of the night flying policy at 2018 to reflect a date when recovery in the wider aviation market should have been realised. Although the current passenger performance is in line with the Master Plan, it is anticipated that the potential for volatility in air transport demand more generally may mean the Airport's short term performance could fall short of the forecasts over the next couple of years.
- 2.6 However, as the market stabilises and grows again then MSE should be able to return to growth in line with the Master Plan. Whilst we refer to the figures for 2018, it is possible that that these forecasts may slip by a year or two given the depth of the recent recession.

Passenger Forecasts

- 2.7 In the early years of the Master Plan, it is expected that passenger growth will be delivered by inbound aircraft, i.e. those based at other airports and operating to MSE as the destination from the airlines' hubs and/or bases. This pattern has already been established through the services currently provided by Flybe, which see aircraft arrive from their bases in Belfast² and Edinburgh in the late morning and early afternoon periods. Charter services are anticipated to grow initially through the use of W-Patterns³ or through inbound aircraft, again operating into the Airport during the daytime. Low fares services would be expected to follow a similar pattern initially, being operated by inbound (as opposed to based) aircraft and it would be expected that the arrival of such carriers could move some traffic from charter to scheduled services over time

² Belfast City Airport connections will be launched on 26th May 2011 to replace the Manchester service which was suspended by Flybe on 4th April, but also operated by an inbound aircraft.

³ W-Patterns involve an aircraft leaving its base in the UK for a foreign destination, then returning to another airport in the UK, from here they fly back to the same foreign destination and from there return back to their home base.

- 2.8 In order to meet the forecast passenger demand, it is anticipated that the Airport will need to attract some based aircraft by 2018, either from low fare carriers (such as Ryanair, easyJet, Jet2, bmibaby etc.), from charter airlines (such as Thomas Cook and Thomson Airways) or a mixture of both. These will supplement inbound services which are anticipated to prove the market exists before airlines will commit to a base. It is likely that, at this point, some services will change from being served by inbound aircraft to being served by based aircraft. This is a familiar pattern, particularly for low fares carriers, when a base is established.
- 2.9 Based aircraft, particularly those of low fare airlines, will tend to diversify an airport's route portfolio. During the initial growth of MSE, services are likely to be dominated by domestic routes and those which serve larger volume outbound leisure markets. When aircraft are based at MSE, the airlines will need to offer a more rounded network for two key reasons:
- the airlines will need to operate their aircraft for as long as possible each day, and therefore will require a mix of shorter and longer flight times to maximise the use of the aircraft;
 - it will not be possible to just add more frequencies and capacities to a limited number of destinations because the market will be saturated.
- 2.10 Additionally, low fares airlines rely to some extent on stimulating new passengers and on encouraging travel to new destinations in order to capture the discretionary travel market, as many travellers will visit a destination but not return for a second visit, and will instead seek new places to visit. The benefit for MSE of having based aircraft is that it is likely to bring more city orientated destinations, and more destinations which could generate inbound travel as well as outbound passengers.
- 2.11 By comparison, an airport which is reliant on inbound aircraft is likely to have a route network which is dominated by higher volume more traditional leisure routes which are less of a risk for the carriers. This means that such airports will tend to have fewer destinations, lower frequencies and overall less capacity (and therefore passengers).

The Impact of Night Flying Restrictions

- 2.12 Although it is reasonable to assume the majority of passenger services will operate between the daytime hours of 07.00 and 23.00, there is likely to be some need for services just outside of these hours. Operations between 23.00-07.00 are unlikely to be necessary for inbound aircraft and, therefore, the early years of growth are unlikely to generate much passenger traffic in the night time period. However, the ability to carry out some operations at the start and end of the night period will become extremely important if the Airport is to be able to attract based aircraft from either low fares or charter carriers.
- 2.13 As highlighted earlier, these airlines aim to operate for as long as possible during the day, and so their typical operating pattern will involve multiple services from each aircraft throughout a day. The average number of daily departures per based aircraft has reduced for low fare carriers from previous very high levels. Historically, they operated between 3-4 departures per aircraft per day, this has now dropped to around 2.5-3 departures per day average as they are now flying a higher proportion of longer sectors. However, this does still lead to a typical operating pattern that sees the first departures between 06.00-07.00 and the last arrivals in the period between 22.00-00.00 as aircraft return home. Such an operating pattern would also apply to based charter aircraft.
- 2.14 As a result, there may be some movements in the allotted night period. It is likely that the departures by based low fares and charter services would depart in the period 06.00-07.00, but it is not necessarily the case that they will all arrive back after 23.00. However, for these carriers to seriously consider a base operation they will need the flexibility of knowing that they can schedule some movements after 23.00 if needed to maintain the integrity and viability of the operation. A restriction or penalty on arrivals after this time would reduce the options open to the carriers to maximise the use of the aircraft and would be likely to act as an impediment to them basing aircraft at MSE. The resultant effects would be:
- fewer destinations served as the carriers would focus only on inbound services from higher volume destinations, thereby reducing the likelihood of key European city links and services to destinations which could increase inbound travel;

- fewer overall passengers for MSE as the airlines would operate at a lower overall frequency and, therefore, offer less capacity for sale.

2.15 From our experience, we believe that it would be extremely difficult for MSE to attract a based carrier with restrictive night flying policy of this nature in place. We do not believe that the pattern of services previously operated by EUJet is representative of what would be operated by another low fare carrier as the joint ownership of the airline and the Airport resulted in compromises to the schedule, which may have been a factor in the airline's demise. There would be little incentive for an independent carrier to structure their schedule to suit the Airport because this would probably mean they could use their aircraft to greater financial advantage by basing them at another airport where they could take advantage of longer flying hours.

2.16 If a carrier based aircraft at MSE, they would be likely to use these to substitute for some inbound services. If aircraft are not based at MSE, this does not preclude all operations by such airlines. Hence, impediments to basing of aircraft do not mean that all the traffic associated with these airlines would be lost without based aircraft. We reflect this in our assessment of how much of the forecast growth within the Master Plan is at risk without the ability to schedule regular night flights.

2.17 We have also taken into account the possible effects on a service to feed a hub, which will bring high value wider economic benefits through international connectivity, both to Long Haul and Short Haul destinations via a hub. Typically these services require an aircraft to be based overnight away from the home base and will involve an early morning departure to the hub and potentially a late night arrival back from the hub in order to meet the wave patterns of long haul services. This would therefore of course require the flexibility of operating hours to allow early and late movements.

2.18 In establishing the nature of traffic within the Master Plan forecasts, we have estimated the level of traffic which would be lost if airlines were restricted from operating in the night time period. For comparison, this is shown against the Master Plan forecasts in **Table 2.2**. This has been compiled by removing activities associated with based aircraft and not removing inbound services which would have been replaced by based aircraft.

Table 2.2: Comparison of Passenger Forecasts With and Without Night Movements (23.00-07.00)

Airline/Service Type	2013		2014		2015		2018	
	With Night Movements	Without Night Movements	With Night Movements	Without Night Movements	With Night Movements	Without Night Movements	With Night Movements	Without Night Movements
Flybe/Regional Services	83,000	83,000	121,000	121,000	177,000	177,000	447,000	447,000
Hub Feeder Service*	48,000	48,000	71,000	48,000	71,000	48,000	71,000	48,000
Based Low Fares Services	0	0	0	0	644,000	0	1,287,000	0
Inbound Low Fares Services	67,000	67,000	232,000	232,000	272,000	272,000	95,000	329,000
Based Charter Services	0	0	0	0	0	0	231,000	0
Inbound Charter Services**	97,000	97,000	103,000	103,000	104,000	104,000	155,000	165,000
Total Passengers	295,000	295,000	527,000	504,000	1,268,000	601,000	2,286,000	989,000
Lost Passengers	-	0	-	23,000	-	667,000	-	1,297,000

Notes:

*To a European hub such as Frankfurt or Amsterdam

**Either operated inbound by foreign aircraft or on W-Pattern by UK charter operators

Source: MSE Master Plan, York Aviation

Freight Forecasts

- 2.19 Freight services at MSE are currently dominated by those bringing perishable products such as fruit, vegetables and flowers into the UK, mainly from Africa, although these services are supplemented by ad-hoc freight flights carrying more general cargo. Additionally, the Airport has recently invested in a new equine facility for the air transport of horses, adding a further niche specialism to their offer.

- 2.20 The forecasts within the Master Plan reflect on-going discussions with freight carriers which are aimed at attracting services which will diversify the portfolio, and it is unlikely that the freight forecasts could be achieved without this diversification. Such services would be likely to bring flights from points in Asia, the Middle East, the USA and also from within Europe and would expand the range of freight handled, for example with perhaps high value electronics to and from Asia.

- 2.21 World freight forecasts produced by Boeing and Airbus both estimate that average worldwide freight will grow at around 5.9% per annum⁴ over the period to 2029. **Table 2.3** shows the Boeing forecast growth rates for freight between world regions relevant to MSE.

Table 2.3: Forecast Annual Air Cargo Growth Rates by Region Flows 2009-2029	
Regional Flow	Annual Growth Rate
Latin America-Europe	5.6%
Europe-North America	4.2%
Intra-Europe	3.6%
Middle-East-Europe	6.0%
Africa-Europe	5.1%
Europe-Asia	6.6%
South Asia-Europe	6.5%
Source: Boeing	

⁴ World Air Cargo Forecast 2010-2011, *Boeing* and Global Market Forecast, 2010, *Airbus*

- 2.22 MSE stands to benefit from these levels of growth within the South East of England due to the likely growth of constraints in airport capacity in the region. Whilst the Government has not yet published its wider strategy for aviation, it is already known that they do not support additional runways being provided in the South East, namely at London Heathrow, Gatwick and Stansted. As runway capacity constraints start to take effect, it is likely that certain types of traffic, and most notably freight, will be pushed out of these airports and will require alternatives. Currently, there are still significant numbers of freight aircraft movements at London Heathrow and it is unlikely that this would remain sustainable in the future if no additional runway capacity is provided there.
- 2.23 Therefore, whilst the MSE Master Plan indicates growth rates above the worldwide average forecast by Boeing and Airbus, it is expected that some of the growth will come from the relocation of existing services from other London region airports. It is for the relocation of these services that MSE is ideally geographically positioned. Furthermore, the greatest opportunities are foreseen in the markets which are growing above the 6% p.a. average, such as the Middle East and points in Asia and South Asia.
- 2.24 With the exception of British Airways World Cargo (BAWC), there are very few large scale freight operators based in the UK (excluding integrators such as DHL and TNT). Consequently, it is expected that much of the freight growth will come from inbound aircraft, although the Airport intends to continue to seek a major based operator. Indeed, discussions have been held previously with BAWC about relocating at least a part of its operation to MSE.
- 2.25 Currently, the average freight carried per arriving aircraft movement is 80-100 tonnes, although many aircraft depart with no freight on board. The forecasts estimate a similar level of average load per movement, although it is likely that there will be some increase in outbound freight overall. It is also anticipated that as the nature of the network diversifies, so will the range of aircraft types operating freight movements in order to suit the needs of the wider range of markets served.
- 2.26 The Airport also believes that, in addition to scheduled freighter services, they should be able to increase the level of ad-hoc freight charter flights which can be very valuable to an airport. It is anticipated that these will contribute to the freight forecast within the Master Plan.

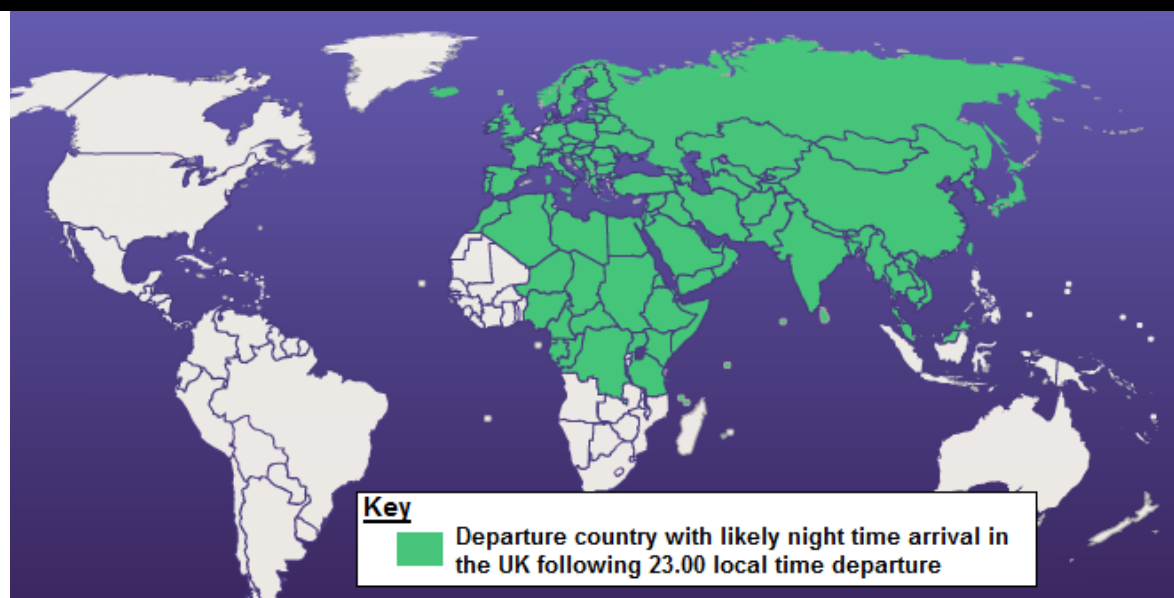
The Impact of Night Flying Restrictions

- 2.27 Restrictions on night flying would be likely to have a significant negative impact on freight growth at the Airport, although the exact impact is less easy to measure than on the passenger forecasts.
- 2.28 Currently, the scheduled freighter services at MSE are timed to arrive and depart during the day time period. However, the services do not always follow the published schedules, which is common for freight services. Passenger flights will aim to adhere strongly to their schedules to suit passenger demand and because the carriers will earn money from travellers even if they miss their flight. By comparison, freight airlines, such as those seen at MSE, are more able to operate off schedule in order to suit their customers' needs and to ensure that aircraft are full before departing (as the carriers will not receive payment if they do not carry the freight). This is an important aspect of the air freight market as it requires the maximum flexibility possible for operators, both with respect to the times they would like to schedule flights, but also for an airport to be able to handle services if they depart after the planned time. Clearly, flexibility is less with more perishable cargoes.
- 2.29 The desire of the Airport to diversify the range of markets which it serves with air freight services to include other global regions, and the nature of freight handled, is likely to come under pressure if night time movements are heavily restricted. Whilst the flights current from Central and Southern Africa can be timed to suit the customer at the origin and the airport at the destination, this is unlikely to be the case when new destinations are sought as new services are likely to serve a wider variety of customers than the niche fresh produce services currently dominating MSE.
- 2.30 In many cases, there is a need for freight services to leave their origin point at the end of a working day once freight can be collected and taken to an airport. This often leads to flight departures in the late evening, or early hours of the morning. Furthermore, for European services, there is likely to also be a desire for aircraft to return to the origin before the start of the next working day so that freight from the UK can be distributed.

2.31 In some cases, airlines provide feeder freight services at their origin, and a good example of this is MNG Airlines of Turkey who currently serve London Luton Airport. This airline provides feeder flights to its services to the UK at the end of the working day, and then the flight departs for the UK. The departure from the UK is then timed to allow an arrival in Turkey in time to move freight back onto the feeder aircraft to be distributed beyond the airline's Istanbul hub. Such an operation would not be viable at MSE with night time restrictions on scheduled activities.

2.32 **Figure 2.1** shows countries from which a direct departure at 23.00 hours (11pm) local time would lead to an arrival in the UK at some point between 23.00-07.00.

Figure 2.1: Countries Leading To Arrivals Between 23.00-07.00 In The UK After 23.00 Departure From Origin



Note: All times are local.

Source: York Aviation

2.33 Whilst not all flights will operate directly, particularly from Asian origins, the map does illustrate the scale of the markets which could be at risk if MSE cannot offer the flexibility for scheduling movements in the night time period. It is important to recognise that the regions with the greatest forecast growth in freight demand to Europe all fall within the regions which may generate services during the night period.

- 2.34 The major airlines of the Middle East such as Etihad, Qatar Airways and Emirates have historically focused on the growth of their passenger business, but each of these airlines has now seriously moved into the pure freight business with dedicated fleets of aircraft, both in service and with more on order. Airlines such as Turkish Airlines are also now focusing more on this aspect of their business with orders for new larger dedicated freight aircraft. Carriers such as these, covering Turkey, the Near East and Middle East would not be able to operate direct late night departures to MSE if a night flying policy prohibited the scheduling of services between 23.00-07.00.
- 2.35 This restriction would also apply to the fast growing Indian sub-continent. Currently, there are limited based carriers in these countries with dedicated freighter aircraft, but it would be difficult to imagine that this sector will not grow in line with the economies of this region, and particularly that of India. Indeed, within the Boeing freight forecasts, South Asia-Europe freight is expected to have the second highest growth rate of all those relevant to MSE over the period to 2029. Services from India are currently operated by airlines from other nations who provide stops in India to pick up and drop off freight on the way between Europe and the Far East. This would potentially be a significant market that MSE would not be able to serve with night flying restrictions in place.
- 2.36 Currently, around 9% of scheduled freight flights (arrivals and departures), excluding those by integrators, operate within the period of 23.00-07.00 in the UK⁵. However, it is likely that this proportion of traffic will increase as demand for services grows within the regions shown in green in Figure 2.1. MSE's Master Plan projections rely on the ability to diversify its network to be representative of the UK market as a whole. If it cannot do so, 9% of demand could not be fulfilled based on the current characteristic of the air freight market. However, as growth from regions affected by night time restrictions is likely to outstrip growth from countries which would not be, then this proportion is likely to increase over the period to 2018.

⁵ Source: OAG for week commencing 2nd May 2011

2.37 Furthermore, this may understate the impact of such restrictions because this applies only to the scheduled network and does not include the effects on ad-hoc freight services. Currently, the Airport has a relatively low number of such services and within the Infratil Group of airports in the UK, such services have tended to be focussed at Glasgow Prestwick Airport. This is because the latter does not have night time restrictions, and many of these services operate during the night period. The Group has confirmed that airlines have been keen to use MSE but that the current night time policy means they tend to offer them Prestwick as an alternative, particularly as any charges imposed through the Section 106 agreement at MSE would need to be passed through to the airline, making MSE less attractive. At present, Prestwick handles around 10-15 such flights in a busy month.

2.38 Additionally it is likely that to achieve the freight forecasts the Airport will need to attract a based freighter operation which, and this may not be possible if night flying restrictions are in place, for similar reasons to those seen with the passenger operation, namely issues of reliability and a marginal number of flights being in the night time period. Freight operators will feel restrictions in two ways if night flying restrictions are applied:

- They will not be able to schedule services in the night period, but may need to do so to meet the demands of the air freight business;
- These carriers will not always fly to the prescribed schedule as described earlier, requiring maximum flexibility.

2.39 With restrictions in place, freight airlines would be likely to seek to base their aircraft in other locations where they can operate with flexibility, both in scheduling and the ability to operate off schedule easily where necessary. This does not just lead to a loss of night freight activity but also to the loss of freight operations which would be handled during the day, meaning that the effect would be proportionally greater on the total throughput than simply not handling the night freight.

2.40 Whilst we have not attempted to calculate an exact level of freight lost, we believe that based on these points the threat is credible and significant. For the purposes of our economic assessment we have assumed that 40% of freight traffic would be lost. In truth we feel this may be conservative given the levels of ad-hoc freight activity seen at Prestwick, the likely growth of demand from markets which would require an element of scheduled night flying, and the scale of base likely to be needed to achieve the forecasts but lost if night time flying restrictions were sufficiently stringent to prevent regular freight flights between 23.00-07.00.

2.41 It is also worth highlighting the potential disbenefits of such a policy on trying to attract a large based operator such as BAWC. A key requirement of such carriers, as with based passenger carriers, is the ability to have flexibility in scheduling. It is possible that such a based carrier may have very few services in the night time period, but if it simply did not have the ability to schedule services at night, particularly as it sought to change its network over time to suit changing markets, then a potential based carrier may see night restrictions as a barrier to basing aircraft at MSE at all. We understand, through discussions with MSE, that although this may not have been the only factor in the failure to attract BAWC, it appeared to be a factor the airline considered significant in their decision not to relocate to the Airport.

2.42 **Table 2.4** provides a comparison of the MSE Master Plan freight tonnage forecast with the estimated reduced freight tonnage arising from having night movements restrictions.

Table 2.4: Comparison of Freight Tonnage With and Without Night Movements (23.00-07.00)			
Year	With Night Movements	Without Night Movements	Difference
2013	57,300	48,705	-8,595
2014	107,000	80,250	-26,750
2015	138,400	89,960	-48,440
2018	167,500	100,500	-67,000
Source: KIA Master Plan, York Aviation			

3 ECONOMIC IMPACT

3.1 Air services contribute to an economy in broadly two ways:

- **operational impacts** – those impacts related to the economic activity supported by the operation of an airport – i.e. the direct, indirect and induced effects; and
- **impact on the wider economy** – the benefits derived by users of passenger and freight services from access to the connectivity provided by an airport’s services. These can manifest themselves in terms of impacts such as increased inward investment, trade, improved productivity or increased inbound tourism.

3.2 The overall approach that we have adopted in order to consider the economic impact of MSE is based on a framework of five categories of effect as set out in **Table 3.1**. This is the standard framework for analysis advocated by ACI EUROPE, the trade body for European airports, and is commonly used in a wide range of economic impact assessments.

Table 3.1: Economic Impacts Associated with Airports		
Impact Category	Definition	Examples
Direct On-Site	Employment and GVA and wholly or largely related to the operation of an airport and generated within the Airport Operational Area	Airport operator, airlines, handling agents, control authorities, concessions, freight agents, flight caterers, hotels, car parking, aircraft servicing, fuel storage
Direct Off-Site	Employment and GVA wholly or largely related to the operation of an airport and generated within the local area.	Airlines, freight agents, flight caterers, hotels, car parking
Indirect	Employment and GVA generated in the chain of suppliers of goods and services to the direct activities	Utilities, retailing, advertising, cleaning, food, construction
Induced	Employment and GVA generated by the spending of incomes earned in the direct and indirect activities	Retailing, restaurants and entertainment
Catalytic/Wider	Employment and GVA generated by the attraction, retention or expansion of economic activity as a result of the airport's activity	Inward investors, exporting companies and visitor attractions including off-site hotels
Source: York Aviation		

- 3.3 It is possible to generate robust quantitative estimates of the first four categories of impact shown in the table (direct on-site, direct off-site, indirect and induced). These represent the employment and Gross Value Added (GVA) supported through the operation of the Airport as an economic activity. We present our estimates in relation to these impacts below.
- 3.4 The issue of catalytic or wider benefits is, however, considerably more complex. The impact of an airport, in this case, is accrued by users of the services. The ability to travel or the connectivity offered by an airport enables business sectors that use air services to operate more effectively, increasing productivity and output and thereby supporting GVA and employment in the wider economy. In the context of a modern developed economy, it is our view that these wider impacts are of considerably greater importance than the direct, indirect and induced impacts.
- 3.5 However, quantification of this wider impact in terms of GVA and employment is not possible. The relationship between air travel and economic activity is an indirect one. It is not possible to say that, for instance, a 10% increase in business passengers leads to a corresponding increase in GVA and employment through inward investment or greater productivity. It is, therefore, necessary to consider these issues through qualitative analysis and the use of broader indicators of an airport's impact.

Assessment Methodology

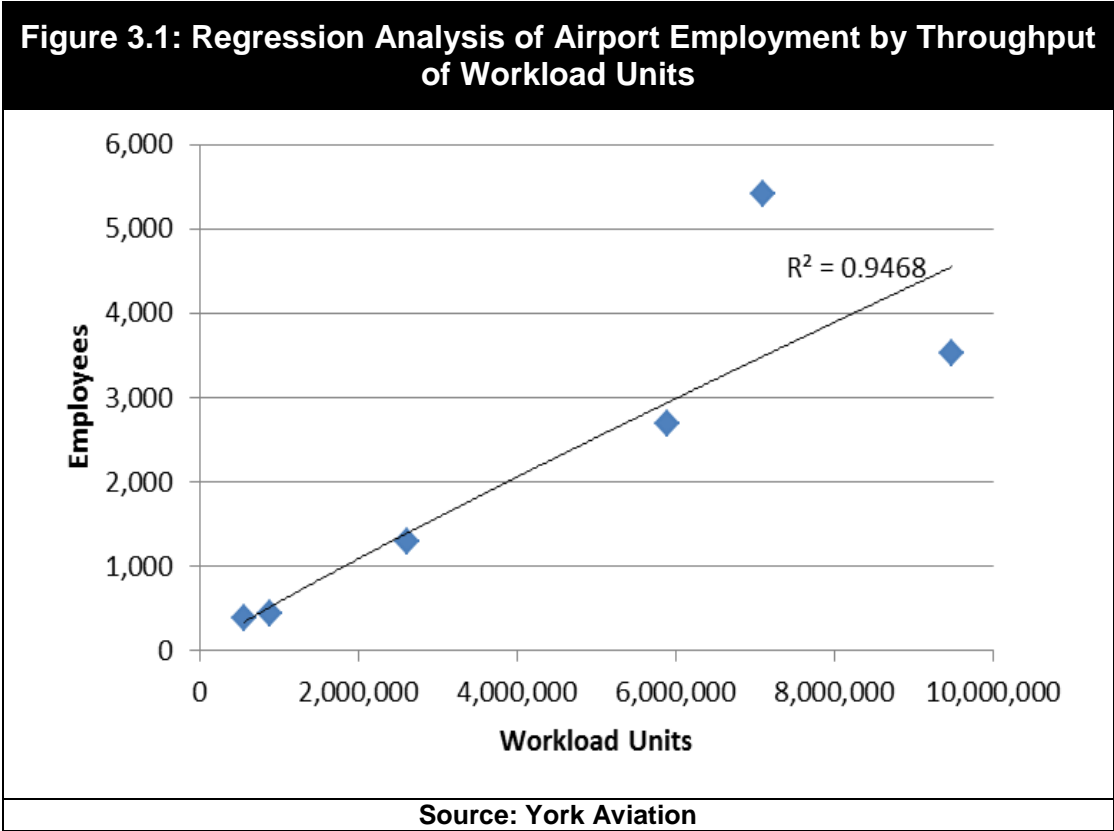
- 3.6 We have prepared an assessment of the airport's economic value to the region for a single year, 2018, under two scenarios:
- **Without Night Flying Restrictions:** a scenario in which the night flying policy proposed by the Airport is considered suitable and controlled night flying is permitted to take place; and
 - **With Night Flying Restrictions:** a scenario in which all commercial flying in the night time period of restricted⁶.

⁶ We have not attempted to define this in detail and typically airports with such restrictions may make themselves available for emergency or specialist flights by exception.

- 3.7 We have not tested a scenario in which the Airport would experience completely unlimited activity during the night time period as this is not foreseen as likely or necessary to enable the Airport to realise its potential. The measures proposed by the Airport to operate under a Night Time Noise Quota system are understood to be adequate to suit the likely demand for services from MSE.
- 3.8 Although we have provided an indication of the current economic value of the Airport, we have focused on the future impacts under each scenario and provide a quantitative assessment of the direct, indirect and induced employment and GVA. We have also provided a qualitative description of the nature of the employment benefits. Additionally, we have provided some qualitative assessment of how severe night flying restrictions could impact on the Airport's ability to support growth in the regional economy.
- 3.9 Assessing the future direct employment on site has been achieved by undertaking a regression analysis of comparator airports to calculate the employment generated per million workload units⁷ for the Airport under both scenarios. The density of employment is likely to be different for both scenarios for a number of reasons including, among others:
- airports with based aircraft tend to be more efficient for passenger handling because the spread of passengers through the day is greater resulting in higher productivity measured in passengers handled per employee;
 - this is partially offset by the fact that airports with based aircraft will generate additional employment for pilots, cabin crew and perhaps airline station management, which would not exist if all services were operated by inbound aircraft;
 - airports without based aircraft may still require shift patterns for staff, but potentially over shorter working days.

⁷ A workload unit at an airport is defined as one passenger or 100kg of freight. By assessing workload units instead of pure passengers, we can fully assess the impact of restrictions on freight and passenger activity.

3.10 The regression analysis was undertaken based on the actual employment of six UK airports that we have previously studied in detail and the graph for this analysis is shown in **Figure 3.1**. Importantly, the very high R^2 number, which is a measure of goodness of fit of the relationship, should be noted as it provides confidence that there is a discernable pattern to employment associated with growth in passenger and freight throughput.



3.11 We have used the relationship illustrated in Figure 3.1 to estimate future employment at MSE. In relation to direct employment, we have not attempted to estimate how much of this would be on-site and how much off-site as defined in Table 3.1 because there is no clear basis for doing this at MSE. Typically an on-site survey of current employment would give an indication of this, but the very low throughput at MSE means that there are very few employers and most of the operational activities are currently undertaken by the airport operator. At small airports, we expect the vast majority of direct employment to be located on-site.

- 3.12 In relation to indirect and induced employment, we have used a multiplier of 0.5 for each direct employee. This multiplier is taken from our work for ACI EUROPE⁸ and applies to the sub-regional level, which in this case will cover Kent and areas immediately adjacent to this.
- 3.13 Finally, for the GVA calculations, we have undertaken a simple analysis based on the local GVA per capita in the South East of £20,923 per head, taken from the Office for National Statistics⁹. This is similar to the average salary per employee in Thanet of around £21,000¹⁰. This gives an inherently conservative view of the contribution to GVA given that it assumes that operating surpluses are only captured locally to a limited degree. This is a simplified approach due to the absence of hard data about GVA added by employees at MSE today.
- 3.14 It would be reasonable to assume that not all of the GVA benefit will be directly contributed to Thanet, with some of the benefits of the Airport likely to be felt in the wider South East region where goods and services may be sourced.

Current Economic Impact

- 3.15 With the current low throughput of passengers, employment on the Airport is relatively low, albeit there is a high density of employment per workload unit because of the number of job positions which would exist regardless of throughput. In other words, the current productivity is low in terms of the volume of traffic handled per employee as a result of the low density of aircraft operations.
- 3.16 Most of the operational functions on site are undertaken by employees of the Airport, and some employees undertake several roles. An example would be the airport firemen who also act as baggage and freight handlers, undertaking these activities with their vehicles close at hand to allow them to go to an emergency if needed. This is typical at small airports and helps maintain costs at a viable level.

⁸ *The Social and Economic Impact of Airports in Europe*, January 2004, Airports Council International/York Aviation

⁹ 2009 GVA/Head

¹⁰ *Annual survey of hours and earnings - workplace analysis*, 2008, NOMIS

3.17 There are also a number of companies which are tenants of the Airport but only a small number of these are directly involved in activities associated with an Airport. **Table 3.2** summarises the on-site tenants and their employment, and indicates how many jobs are associated with the activity of the Airport.

Table 3.2: Current Direct Employment Associated with Manston Airport, Full Time Equivalent (FTE)	
Operational Employment	
Employer	FTE Employees
Manston Airport	100
Avis Rent-A-Car	1
AvMan Ltd	30
Fly-Me-Now	2
Polar Helicopters	3
Snax Group	2
TG Aviation	6
Total Airport Operational	144
Aviation-Related Businesses and Tenant Employment	
Employer	FTE Employees
AVIA Services	36
Hanover Aviation Consultants	4
Heli-Charter/Sky Charter UK Ltd	20
Hunglish Ltd	1
RAF History Museum	Unknown
Safety & Management Solutions	Unknown
Spitfire & Hurricane Museum	5
Summit Aviation	40
Taft International Transport	0
Trailblazer Travel Ltd	2
Total Other Tenant Employment	108
Total Overall Direct Employment	252
Source: York Aviation	

- 3.18 MSE currently employs around 117 total staff, or 100 Full Time Equivalent employees (FTEs). Growth of passengers and freight would lead to direct growth in employment with the Airport, and is likely to lead to growth for the likes of Avis Car Rental and the Snax Group, which operates the café within the terminal. Some operators may not directly see growth in employment associated with increased throughput of the Airport, such as the two flying schools and possibly AvMan Maintenance which has a specialism of undertaking heavy maintenance on aircraft which are not based at MSE.
- 3.19 There are also some tenants on site which have activities related to aviation or the Airport, but who are not directly operational, for example Hanover Aviation Consultants (who act as a freight broker) and AVIA Services (who undertake component maintenance).
- 3.20 The current indirect and induced jobs associated with the operational activity of the Airport, as calculated through our methodology highlighted in Paragraph 3.12, amounts to 72 FTE. The total GVA associated with the operational activity of the Airport is calculated as £4.52m of which just over £3m is associated with direct employment. At regional airports, most employees typically live within a drive time area of approximately 30-60 minutes from Airport, and this will mean most employees will live within Thanet or the immediate area. There is little evidence of the local impact at a district level for airports and, whilst the 0.5 multiplier for indirect and induced employment is a sub-regional level, if it was assumed that the multiplier for the travel to work area was 0.25 then it would suggest that £3.8m¹¹ of the direct, indirect and induced GVA would be within the travel to work area, likely to mainly cover Thanet. We would make clear, however, that this is only based on this assumption and not on detailed evidence so this may understate the precise local impact.

¹¹ Assumed to be all of the direct employment and half of the indirect/induced employment.

Future Economic Impact

Direct, Indirect and Induced Employment

3.21 As highlighted earlier, we have assessed two scenarios of future throughput based on the extent to which night movements may or may not be permitted at the Airport. **Table 3.3** summarises the projected total throughput by scenario for passengers, freight tonnage and workload units.

Scenario	Passengers	Freight (tonnes)	Workload Units
With Night Movements	2,286,000	167,500	3,961,000
Without Night Movements	989,000	100,500	1,994,000
Difference	1,297,000	67,000	1,967,000
Source: York Aviation			

3.22 In considering the economic impact under the two scenarios, we have taken into account the different employment densities relative to passenger numbers associated with having based aircraft against those associated with not having based aircraft. Having based aircraft will lead to a lower density of employment per million workload units, i.e. it takes less staff to handle a million passengers. This is because the based aircraft may undertake 3-4 flights (two departures and one or two arrivals) during an airport work shift pattern, whereas a non-based aircraft is only likely to arrive and depart once during the same time period.

3.23 However, the benefits in relation to MSE will be derived through the sheer volume of total passengers associated with having based aircraft, i.e. whilst the staff can be used more efficiently, there needs to be more of them because the overall passenger volumes are much higher. It is likely that an airport which opens ready for passengers departing at 6am, and having the last passengers arriving back after 11pm will need more shift patterns than one that opens at 8am and closes at 8pm.

3.24 Furthermore the level of direct employment will be increased through the need to base pilots, cabin crew and potentially station managers at the Airport. There is also likely to be a need for some line maintenance employees, either directly employed by an airline, or provided by a third party firm. These jobs will bring the benefit of typically higher salaries than some of other jobs created at the Airport. Hence, in addition to operational staff which are needed under both scenarios, the region will gain the benefits of a small number of higher value employees.

3.25 **Table 3.4** shows the number of direct, indirect and induced jobs and the GVA associated with each future scenario.

Table 3.4: Direct, Indirect and Induced Employment, and GVA Effects by Scenario 2018		
	With Night Movements	Without Night Movements
Direct Employment	2,070	1,102
Direct Employment Density*	523	553
GVA Associated with Direct Employment	£43,315,167	£23,058,125
Indirect and Induced Employment	1,035	551
GVA Associated with Indirect/Induced Employment	£21,657,583	£11,529,062
Total Employment	3,105	1,653
Total GVA	£64,972,750	£34,587,187
Total Employment Lost with No Night Flying	1,452	
Total GVA Lost with No Night Flying	£30,385,562	
Notes:		
*Employees per million passengers		
Source: York Aviation		

3.26 It is unlikely that the lost employment and GVA would be taken out of the economy altogether as almost certainly most of the freight and the all of the passengers will be handled through other airports in the South East (although the effects associated with any stimulated passengers will be lost completely). However, it is probable that most of this impact will be lost from Thanet, the surrounding districts and possibly Kent as a whole and instead will benefits other parts of the South East.

3.27 The **total cost** of imposing stringent night movement restrictions (such as an outright ban) would be over **1,450 jobs** and approximately **£30.4m** at current values in 2018. Using our assumed multiplier for the travel to work area (covering mainly Thanet and surrounding areas), the **cost to the local economy** would be approximately **1,200 jobs** and **£25.3m** at current values in 2018.

3.28 With the night flying policy in place, the net increase in GVA over the current would be £60.5m, whilst restrictions on night flying would reduce this to a net increase of £30m at the sub-regional level.

Wider Economic Impact

- 3.29 As we have described earlier in this section, the issue of the employment and income supported by catalytic benefits is a more complex issue and needs further consideration in relation to the proposals for night flying at MSE. The difficulty lies in the complicated nature of these benefits. Unlike the link between the direct, indirect and induced effects, where economic activity links directly to the operation of an airport, these wider benefits accrue to businesses and sectors with no direct relationship to the operation of an airport but who are users of the services it provides or whose customers, suppliers or partners are users of those services.
- 3.30 However, the available connectivity provided by an airport is only one factor, although for many a very important one, in the success or otherwise of these wider businesses and consequently only an indefinable fraction of the employment or income generated in these other sectors can be said to be supported by an airport. Therefore, it is not possible to make effective estimates of employment and income supported by this wider catalytic effect.
- 3.31 The mechanisms through which this catalytic impact can operate include the following:
- as an important element in **company location decisions**, the presence of an international airport can be a important factor in:
 - attracting new investment from outside the area, and especially companies from overseas;
 - retaining existing companies in the area, whether they had previously been inward investors or indigenous operations;
 - securing the expansion of existing companies in the face of competition with other areas;
 - promoting the **export success** of companies located in the area by the provision of passenger and freight links to key markets;
 - enhancing the **competitiveness** of the economy, and the companies in it, through its fast and efficient passenger and freight services;
 - attracting **inbound tourism**, including both business and leisure visitors, to the area.

- 3.32 As we have discussed above, the catalytic impact of airports is primarily dependent on the connectivity that the airport provides. However, it is not simply about the number of destinations served and the frequencies to those destinations that is important. One destination is not necessarily of the same ‘value’ to business users as another. For example, a service to Milan or Frankfurt is likely to be substantially more highly valued by the regional business base than a service to a major leisure destination such as the Palma or Tenerife.
- 3.33 Research undertaken by the Globalisation and World Cities (GaWC) network based at Loughborough University identifies a hierarchy of world cities based on the location decisions of leading advanced service firms, such as accountants, advertising and legal firms. This ranking can be seen as a proxy for the value of a city as a business destination. The results of the analysis by GaWC are set out in **Table 3.5**.

Table 3.5: Globalisation and World Cities Network	
Inventory of World Cities	
Alpha World Cities	
London, Paris, New York, Tokyo, Chicago, Frankfurt, Hong Kong, Los Angeles, Milan, Singapore	
Beta World Cities	
San Francisco, Sydney, Toronto, Zurich, Brussels, Madrid, Mexico City, Sao Paulo, Moscow, Seoul	
Gamma World Cities	
Amsterdam, Boston, Caracas, Dallas, Düsseldorf, Geneva, Houston, Jakarta, Johannesburg, Melbourne, Osaka, Prague, Taipei, Washington, Bangkok, Beijing, Montreal, Rome, Stockholm, Warsaw, Atlanta, Barcelona, Berlin, Buenos Aires, Budapest, Copenhagen, Hamburg, Istanbul, Kuala Lumpur, Manila, Minneapolis, Munich, Shanghai	
Evidence of World City Formation	
<i>Relatively Strong Evidence</i>	
Athens, Auckland, Dublin, Helsinki, Luxembourg, Lyon, Mumbai, New Delhi, Philadelphia, Rio de Janeiro, Tel Aviv, Vienna	
<i>Some Evidence</i>	
Abu Dhabi, Almaty, Birmingham, Bogota, Bratislava, Brisbane, Bucharest, Cairo, Cleveland, Cologne, Detroit, Dubai, Ho Chi Minh City, Kiev, Lima, Lisbon, Manchester, Montevideo, Oslo, Rotterdam, Riyadh, Seattle, Stuttgart, The Hague, Vancouver	
<i>Minimal Evidence</i>	
Adelaide, Antwerp, Arhus, Baltimore, Bangalore, Bologna, Brazilia, Calgary, Cape Town, Colombo, Columbus, Dresden, Edinburgh, Genoa, Glasgow, Gothenburg, Guangzhou, Hanoi, Kansas City, Leeds, Lille, Marseille, Richmond, St Petersburg, Tashkent, Tehran, Turin, Utrecht, Wellington	
Source: <i>‘Introducing GaWC: Researching World City Network Formation’</i> by P.J. Taylor, D.R.F Walker and J.V. Beaverstock.	

3.34 Therefore, an airport needs to develop a network of routes which will be attractive to businesses and inbound tourists. In our view, the restrictions on the network which would be put in place at MSE without night flying would reduce the overall catalytic benefits to Thanet and East Kent. As described in Section 2, if an airline bases aircraft at MSE they will need to maximise its use and spread the available flying hours over a mix of route types. These services are likely to benefit the area for a number of reasons:

- the need to serve some shorter sectors may generate flights to cities which are important to the business community;
- flights to city destinations are likely to be timed in either the morning or evening period (before or after a flight has undertaken one or two longer leisure sectors) meaning they are of increased value to business travellers than inbound services which may be in the middle of the day. There is also a greater chance that day return business trips may be possible to and from some destinations, than if served by inbound aircraft;
- whilst there may be some limited city destinations served without a based aircraft they may not offer the number or diversity that a based aircraft would bring. For inbound tourism this would then mean only a limited number of markets from which to attract inbound air passengers.

3.35 It is likely therefore that the full catalytic benefits of MSE will only be achieved if a full programme of flying can be provided, which will require night time operations in line with the plan proposed by the Airport.

4 BUSINESS CASE

Current Position

- 4.1 The Airport relies on a number of sources of income including aeronautical income from passenger, freight and general aviation charges, commercial income from car parking and retail, property rental and aviation fuel sales.
- 4.2 Presently charges associated with air freight activity make up around 51-52% of the total income for the Airport, and this increases when fuel sales are taken into account as freight aircraft upload the majority of the fuel sold at MSE. Presently, the income from aeronautical charges associated with passenger services is relatively low, with the forecast for the 2011/12 financial year indicating that around 8% of the Airport's total income comes from this source. The passenger services do increase the commercial incomes associated with car parking and retail, although in 2011/12 it is anticipated that this will amount to only approximately 3% of total incomes. This clearly illustrates the importance of the freight business to MSE.
- 4.3 Presently MSE, as with many UK regional airports, is a loss making business, however unlike others, the Airport has a wider array of income sources which, in our experience, is the most prudent strategy to reducing losses at a smaller airport. In many cases in the UK, regional airports are very reliant on passenger services which do not always deliver sufficient income to cover the costs.
- 4.4 Freight services can be of more value to smaller airports because these airlines put less pressure on them for heavily discounted fees in order to deliver services, which is often the case when low fares airlines start services from an airport. The role of freight is already clear at MSE and, without this activity, the losses at the Airport would be likely to increase substantially.
- 4.5 In keeping the Airport fully operational to the current standards, necessary in order to attract further freight and passenger growth, there are unlikely to be substantial opportunities to reduce operating costs further. However, the Airport may be capable of increasing throughput without increasing costs in the short term. Therefore, in order to stabilise the business, it is important that the Airport can find ways of attracting new traffic in the short term.

- 4.6 As freight is an already established sector at the facility, it would be logical to use this strength as leverage to attract further freight operators. Airlines will view this Airport as established in this market and take confidence from this that it can suitably serve the catchment area in the South-East of England. We understand that some discussions are on-going and that, in some cases, the airline(s) are unable to operate to the schedule they require in the absence of the night flying policy because some of their movements will fall in the designated night time period.
- 4.7 Growth in passenger services is likely to be slower in the short term as airlines will wait to judge the success of the recently re-introduced scheduled services. The past failure of EUjet may have dented confidence in the local market and, therefore, it will be easier for the Airport to market to a wider variety of carriers once there is a track-record of successful passenger services at the Airport again.
- 4.8 It is unlikely that short term growth in freight (and passenger) services will lift the Airport out of the current loss-making position. However, regional airports are long term investments for their owners, hence it is not clear cut to assume that the Airport will be closed if profits cannot be achieved in the immediate future, because it is possible that by 2018 the Airport will be providing a return. However, it is reasonable to assume that the losses must be reduced in order to secure the viable operation of the Airport over the medium-longer term. It is for this reason that new services, most likely through freight, need to be attracted now to contribute to reducing losses so that the Airport remains operational and able to deliver the benefits to the economy in the longer term.

Future Position

- 4.9 It is clear from the Master Plan forecasts that passenger numbers are expected to grow at a faster rate than freight over the period to 2018. We have undertaken some basic calculations to establish the potential level of income associated with this at 2018 (in current values). We anticipate that potentially, with 2.2 million passengers per annum (mppa), passenger income could increase to 36-40% of total income, up from the current 8%. Without night movements, and therefore with the lower passenger figure of 0.99mppa, the income could be around 25-28% of total income. The dependence on freight income would be expected to reduce proportionately from the current 51% to 35% and 48% respectively under each of the scenario. We believe that, while operating costs would increase with night movements, there is scope for revenues to be 40-45% higher if the full passenger forecast can be achieved.
- 4.10 The figure of 2.2mppa with night movements permitted will equate to an airport comparable with Cardiff (1.6mppa in 2009) and Leeds/Bradford (2.5mppa in 2009). In 2009/10, Cardiff Airport made an operating profit (£1.2m¹²) whilst Leeds/Bradford Airport incurred an operating loss (£4.1m¹³) despite its higher passenger throughput, although this was partly influenced by a step change in depreciation charges following capital investment. This illustrates well the need to have a diverse portfolio of incomes to bring an Airport to profit. Leeds/Bradford Airport is reliant on passenger services and some general aviation, by comparison Cardiff Airport features a large maintenance facility operated by British Airways. The latter facility will lead to aircraft movements which are not at discounted rates associated with passenger flights. This is therefore comparable to freight flights which are forecast to grow at MSE.
- 4.11 We believe that MSE will need to retain the mix of freight and passenger services in the future in order to achieve profitability and therefore be able to support the regional economy most effectively. Reduced freight services and reliance on passenger flights could put the Airport in the same loss making position as airports such as Doncaster/Sheffield (£6.8m loss in 2009/10) and Durham Tees/Valley (£8.3m loss in 2009/10)¹⁴.

¹² *UK Airports Performance Indicators 2009/2010*, December 2010, Leigh Fisher (formerly published by Centre for the Study of Regulated Industries – CRI), Table 9.3b

¹³ *Ibid*

¹⁴ *Ibid*

4.12 As considered in Section 2, the ability to attract and retain the full mix of passenger and freight services will be dependent upon the ability to schedule into the night time period, both now and in the future. It would seem likely that our forecasts with night movements restrictions would still require the Airport to increase its cost base, but without the extra volumes of traffic which could be delivered for more marginal increases in cost. Therefore the risk of night flight restrictions is that the losses at the Airport could in fact increase and this would most likely be an untenable situation for any owner.

5 CONCLUSION

- 5.1 Our analysis of the economic impact of the Night Flying Policy proposed by MSE shows that without the policy, or with stringent night flying restrictions or a ban, the Airport is unlikely to be able to achieve the forecast proposed in the Master Plan.
- 5.2 The nature of the Airport, and the types of traffic it can serve, means that restricted night time operations may reduce potential passenger numbers in 2018 by 55% over those projected in the Master Plan and could reduce the quality of the network which the Airport can support. This impact would occur despite only a small number of the daily services needing to fall within the night time period as night restrictions would remove the flexibility for based operators such that the full benefits of based aircraft would not be achieved.
- 5.3 The importance of freight, both now and in future, must also be considered. It plays a valuable role in providing revenue to the Airport as well as supporting the local economy. The future scope for the Airport to become profitable will continue to be reliant on air freight which means this sector must be encouraged to grow. The Night Flying Policy proposed by the Airport would create the circumstances which would allow this growth, by offering the greatest flexibility to carriers, even if, as with passenger services, the majority of flights may still take place during the day time period.
- 5.4 The combined impact of night time restrictions is not only a measurable loss of 1,450 jobs and £30.3m from the regional economy, but also the risk that the full wider economic benefits of having an airport are not realised, taking away the attractiveness for wider business growth associated with air travel access. Furthermore, the risk may be greater in that if the Airport cannot be made profitable with the restricted operations, then its long term future may be put in jeopardy, along with all the jobs and GVA created by it locally.